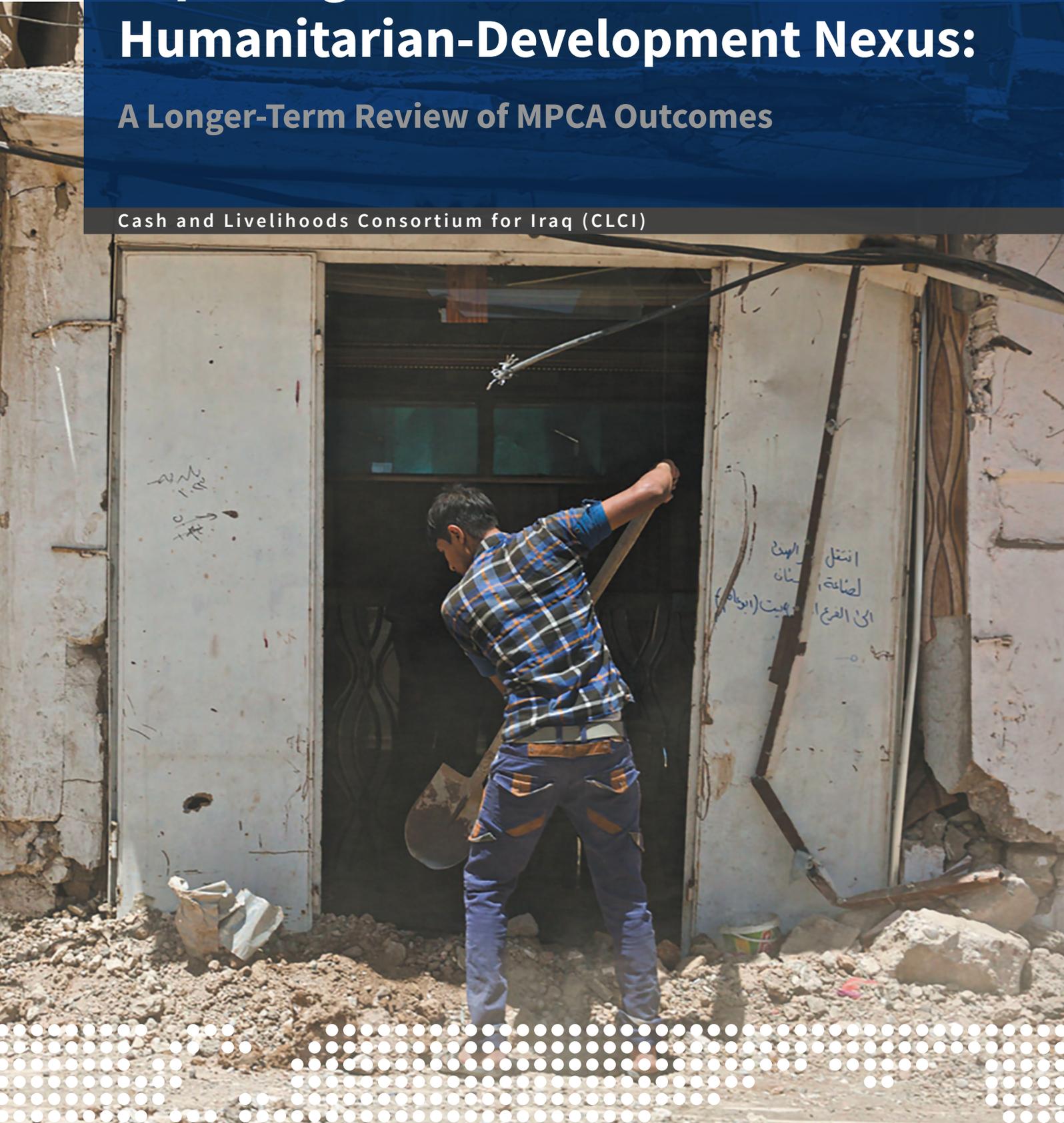


# Exploring Self-Reliance at the Humanitarian-Development Nexus:

## A Longer-Term Review of MPCA Outcomes

Cash and Livelihoods Consortium for Iraq (CLCI)





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## ABOUT SREO

SREO Consulting is an independent, non-partisan research and monitoring and evaluation consultancy based in Istanbul, Turkey. SREO Consulting is committed to serving humanitarian and development actors operating in the most challenging environments around the world by providing unbiased and actionable data, analysis and research. The SREO team has experience working in Syria, Turkey, Iraq, Lebanon, Jordan, Tunisia, Libya, Yemen, Mali, Afghanistan, and Pakistan.

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## ABOUT THE DANISH REFUGEE COUNCIL

Danish Refugee Council (DRC) is a private humanitarian organization that provides protection and life-saving humanitarian assistance. DRC was founded in Denmark in 1956, employs 9,000 staff and is supported by 7,500 volunteers in Denmark. Danish Refugee Council is an umbrella organisation, including member organisations and volunteer groups. National or humanitarian organisations are eligible for the Danish Refugee Council, and all member organisations are non-political. As an NGO DRC's work is based upon a vision, a mission and five values. These values include humanitarian approach, respect, independence and neutrality, inclusion, as well as honesty and transparency.

## ABOUT THE CASH AND LIVELIHOODS CONSORTIUM FOR IRAQ (CLCI)

The Cash and Livelihoods Consortium for Iraq (CLCI), previously known as the Cash Consortium for Iraq (CCI), is a multi-donor, multi-program partnership that has implemented over \$160,000,000 USD in humanitarian and recovery funding since its formation in 2015. The CLCI is comprised of the Danish Refugee Council (DRC), the International Rescue Committee (IRC), the Norwegian Refugee Council (NRC), Oxfam and Mercy Corps as lead.

The CLCI focuses on harmonized implementation at scale to meet basic needs and support the self-reliance of vulnerable populations with cash- and market-based livelihoods approaches.

## ACRONYMS

<b>ARB</b>	Arabic language
<b>CCI</b>	Cash Consortium for Iraq
<b>CLCI</b>	Cash and Livelihoods Consortium for Iraq
<b>DRC</b>	Danish Refugee Council
<b>EFA</b>	Exploratory Factor Analysis
<b>ENG</b>	English language
<b>FR</b>	Field Researcher
<b>GOI</b>	Government of Iraq
<b>HH</b>	Household
<b>IRC</b>	International Rescue Committee
<b>KII</b>	Key Informant Interview
<b>MPCA</b>	Multi-Purpose Cash Assistance
<b>MFI</b>	Microfinance institutions
<b>NCS</b>	Negative Coping Strategies
<b>NRC</b>	Norwegian Refugee Council
<b>ODK</b>	Open Data Kit
<b>PLW</b>	Pregnant and lactating women
<b>PMT</b>	Proxy means test
<b>PWD</b>	People with disabilities
<b>SEVAT</b>	Socio-Economic Vulnerability Assessment Tool
<b>SREO</b>	Syria research and evaluation organization
<b>ToR</b>	Terms of Reference

## EXECUTIVE SUMMARY

The Cash and Livelihoods Consortium for Iraq (CLCI) has been providing multipurpose cash assistance (MPCA) to vulnerable low-income households in Iraq since March of 2015. MPCA is provided to extremely poor individuals in order to alleviate the urgency of financial hardship. MPCA programming operates on the assumption that after a period of “shock”, cash recipient households are able to recover and attend to their basic needs by establishing reliable sources of employment or enrolling in public social safety net programs. MPCA is intended to act as consumption support so that households may eventually return to income-generating activities after the period of shock has passed. In Iraq, the long-term effects of the protracted armed conflict have led to sustained levels of unemployment and the social safety net system cannot support the 1.7 million people that are still in need of humanitarian assistance. The CLCI has prioritized research as part of its strategy in order to advance the understanding of cash as a modality for humanitarian and development assistance in settings like Iraq. For this reason, SREO conducted this study with the CLCI in order to expand the understanding of the long-term outlook of beneficiaries including the socioeconomic profile of MPCA recipient households 9-12 months after assistance and the percentage of MPCA recipients who were no longer eligible for assistance. This study examined the factors associated with both achieving self-reliance and increased vulnerability.

To examine this, surveys and key informant interviews were conducted with MPCA recipients 9 to 12 months after assistance. For the household surveys, the baseline survey conducted 9 to 12 months included the same questions which were asked to the same households in this study. Consequently, these two datasets functioned as panel data because the same beneficiary households were interviewed twice which allowed the analysis to link the households and enabled an individual comparison over time. There was no control group included in this study thus limiting the possibility of comparing households to a counterfactual situation where no assistance was received. Instead, an exploratory factor analysis and logistic regression were conducted to examine the economic changes experienced by these beneficiaries over time and to identify the characteristics associated with households whose economics situations improved or worsened.

In order to assess changes in eligibility, the same scoring system which was used to determine eligibility at baseline was used to assess household MPCA eligibility for this study known as the Socio-Economic Vulnerability Assessment Tool (SEVAT), which is a Proxy Means Test (PMT) and for this study the model for the Northern Iraqi governorates was used. The model predicts the consumption per month per capita to determine level of socio-economic vulnerability and therefore eligibility for MPCA assistance. The higher the PMT score the lower the vulnerability. Households are divided into three vulnerability categories based on their PMT score: R1, R2, and R3. These three groups determine how many rounds of MPCA HHs can receive. The R3 group is the most vulnerable and receives 3 rounds of cash assistance. The change in this score allowed us to assess which households were no longer eligible 9 to 12 months after assistance due to an improvement in their PMT score categorization in addition to the change in R1/R2/R3 categorization for HHs who remained eligible.

The socioeconomic profile of MPCA recipients 9 to 12 months after assistance was defined by predominantly returnees with low educational backgrounds. Roughly 75% of these households had a household member living with a disability or a chronic disease. Only about a third of households anticipated finding work in the upcoming month and the employment rate was 12.5%. The dominant source of income was daily wage labour. Debt and expenses exceeded incomes as the median income over the past month was 150,000 IQD, the median amount of total expenses was 547,000 IQD, and the median debt was 500,000 IQD. A quarter of beneficiaries had poor quality WASH or shelter infrastructure such as shelters with a lack of privacy or security, limited access to water, or precarious shelter arrangements. Negative coping strategies were used by 33% of households in the last 30 days in order to purchase food while the majority of households (86%) used food-related coping strategies over the last seven days.

As was hypothesised, most beneficiaries (75.4%) remained eligible for MPCA assistance 9 to 12 months later based on their SEVAT scores. Nearly one quarter (24.6%) of beneficiaries, who received cash assistance 9 to 12 months ago, were no longer eligible at the time of this study due

to an improvement in their financial situation reflected in their SEVAT score. Those households that were no longer eligible had more stable incomes as they more often had regular employment, depended less on temporary labour, and less frequently took out loans than households that remained eligible. Households who remained eligible for MPCA more often had larger families (more than eight members), had pregnant or lactating women (PLW) in the household or family members with chronic diseases.

Based on individual household SEVAT scores (also referred to as vulnerability score in this report) compared to their levels at baseline, the MPCA recipient population became slightly less vulnerable 9-12 months after assistance. The distribution of vulnerability scores has changed and become more concentrated because there are fewer extremely vulnerable households in this cohort. This does not mean that all circumstances have universally improved as only 50% of households saw an improvement in their vulnerability score while the remaining 50% became more vulnerable. This was not immediately discernible from the slight improvement seen in the mean vulnerability for the entire group. Due to the lack of a control group, it is not possible to determine whether or not this would have still happened without the intervention.

In addition to considering the differences between MPCA recipients who were eligible and non-eligible 9 to 12 months later based on their SEVAT scores, this study conducted a factor analysis to determine which households achieved self-reliance. Within the exploratory factor analysis, 55 variables were used including two questions related to perceived self-reliance in the household. When these two questions had answers which reflected improvements in economic status and self-reliance, variables which were more strongly associated with these positive responses were used to define the 'self-reliant' group. A quantitative cut off was then established to differentiate the 'self-reliant' households from 'not self-reliant' households. It is worth noting that this exploratory factor analysis did not assess causal inference. Throughout this report, all analyses of self-reliance are based on SREO's quantitative definition of self-reliance examined through the factor analysis which was predominantly based on survey responses about household characteristics and practices. Despite this, two questions which subjectively assess self-reliance are included in this score as well. Any mention of self-reliance in this report which is from the quantitative data refers to the results of the factor analysis unless clearly stated.

According to the quantitative cut off used in this study to divide HHs into 'self-reliant' and 'not self-reliant' groups from the factor analysis, only 8.3% of households had achieved self-reliance as defined by this study. Self-reliant groups were less likely to have a chronically ill or disabled family member, more likely to have a household member generating income via employment, more likely to have a higher level of educational attainment, and more likely to live in the district of Baiji compared to the other districts analysed in this report. It is worth noting that determining whether this is due to differences in the employment market in Baiji or due to other factors is beyond the scope of this study. Self-reliant households had more reliable sources of water and less frequently shared shelters with other families. Likewise, they had more dependable, more diversified incomes and were able to prioritise healthcare, food, and household repairs in that order. Self-reliant households less frequently depended on negative coping strategies, and had access to food and essential items more often than 'not self-reliant' households.

These findings stood in stark contrast to the two subjective measures of self-reliance in this study: the question in the survey that asked whether HHs considered themselves to be self-reliant and the qualitative findings. Despite the low percentage of self-reliant households determined through the factor analysis, 76% of households considered themselves to be self-reliant when asked if they would describe themselves in those terms in the quantitative data. Qualitative data from the key informant interviews suggests that, while aid programs may view beneficiaries as dependent on assistance, many beneficiaries view the MPCA as a brief moment in their overall survival narrative. Since beneficiaries have persevered in such a volatile context over a sustained period of time, they may be more likely to identify with the many difficult decisions that they have had to make to survive as constituting self-reliance as opposed to a confined period in which they received cash assistance.

The regression analysis identified similar themes concerning which indicators increase the probability of being in the group that we defined as self-reliant for the purpose of this study. Stable sources of income were key whether this was reflected in high employment rates, regular access to employment, or assistance from the government or NGOs. These findings corroborated

the importance of diversified income sources associated with self-reliance. Similar to what was seen in the factor analysis, higher levels of education, and household repairs being cited as a top priority both were associated with self-reliance. This may be due to additional cognitive bandwidth being available to HH members when more immediate needs are taken care of as many surveyed individuals described immediate needs such as food acquisition as highly stressful to manage. Adequate WASH infrastructure including safe and private shelters with access to functional, private latrines was also observed as increasing the probability of self-reliance. Likewise, an increased SEVAT score, which means decreased vulnerability, was associated with self-reliance.

Surprisingly, the COVID-19 score established in this study did not seem to have an effect on the self-reliance of households in the regression analysis. We anticipate that this is because many of the variables in the model had already been affected by COVID-19 which may mute the distinct effects of the COVID-19 score itself on the probability of self-reliance. When asked directly, 83% of households identified that they were affected by COVID-19 based on their responses to the questions which comprised the COVID-19 score<sup>1</sup>. MPCA eligible households were more strongly affected than households who were non-eligible for MPCA based on the COVID-19 score developed in this study. Households that were more vulnerable were seen to have been most affected by COVID-19 which may account for why 50% of the sample became more vulnerable since baseline. These differences suggest that the COVID-19 score may have been a better method to observe the effects of COVID-19 than the regression analysis due to the intrinsic challenge of isolating the effects of COVID-19 from the other variables in the model.

## Recommendations

### Programme

- Implement a graduation approach that helps facilitate access to a variety of possible income-generating activities
- Reconsider the strategic duration of cash assistance
- Promote an integrated approach to programming that facilitates access to different sectoral interventions to meet the variety of needs of vulnerable households
- Adapt targeting to tailor type of assistance based on different household characteristics and capacities
- Equip households with financial management strategies to help manage the household's cash flow and enable prioritisation of longer-term outcomes

### Donor

- Continue to fund MPCA to provide consumption support to vulnerable households
- Fund long-term graduation approach programming (24-36 months) to support vulnerable households to become more self-reliant
- Enable the implementation of an integrated approach that encourages and facilitates the referral of participants between programmes
- Finance further research on perceptions of self-reliance and resilience of participants

### Government

- Provide and expand access to social protection for households without capacity for income generation

<sup>1</sup> This is because 83% of households had a COVID-19 score above 2 which indicates that their household was strongly affected. Further detail will be provided in the methods section as well as the COVID-19 section of that report.

- Enact economic reform priorities as outlined within White Paper to ensure private sector growth to create job opportunities

### Further Research Areas

- Personas and Pathways
- Saving and borrowing behaviour
- Durable Solutions, displacement status and socio-economic vulnerability

## BACKGROUND

The Cash and Livelihoods Consortium for Iraq (CLCI) was established in March 2015 in order to provide conflict-affected households in Iraq with multipurpose cash assistance (MPCA), and is comprised of DRC, IRC, Mercy Corps, NRC, and Oxfam. By January of 2020, the CLCI had already provided cash assistance to over 90,000 households in Iraq<sup>2</sup>. The current state of the humanitarian crisis in Iraq is considered to be situated between emergency response and development programming, which has been classified as the humanitarian-development nexus (HDN)<sup>3</sup>. MPCA programming operates on the assumption that after a period of “shock”, cash recipient households are able to recover and attend to their basic needs or enroll in public social safety nets, where available<sup>4</sup>. MPCA is intended to act as consumption support for households who are unable to achieve autonomy so that they may eventually return to income-generating activities after the period of shock has passed. MPCA is provided to extremely poor individuals in order to alleviate the urgency of financial hardship. This is done by enabling households to address basic needs such as food so that households can better prepare themselves to address longer term investments such as adequate schooling and break the cycle of poverty. In Iraq, the long-term effects of the protracted armed conflict have resulted in sustained levels of unemployment; the social safety net system cannot, at present, support the 1.7 million people that are still in need of humanitarian assistance. The presence of cash as a modality for humanitarian and development assistance in settings like Iraq is still growing, which is why the CLCI included research as a key component of their strategy.

SREO Consulting worked with the CLCI to contribute to this growing body of literature by exploring the long-term effects of cash assistance on beneficiaries 9 to 12 months after assistance. This study explored to what extent MPCA beneficiaries receiving only cash assistance can achieve self-reliance or if humanitarian partners need to facilitate this through a graduation approach where MPCA is provided along with livelihoods support activities. This could increase the resilience of households to future shocks due to a better integration into the market economy. The graduation approach is a specialized, multisectoral intervention aimed at helping the lowest income and most vulnerable households get out of poverty<sup>5</sup>. This approach consists of interventions such as seed capital, skill development, financial literacy support, mentorship, and employment opportunities which are meant to serve as steppingstones to more secure employment<sup>6</sup>. This study took place in the fall of 2020 during the COVID-19 pandemic which had resulted in 521,542 confirmed cases with 11,712 deaths in Iraq by November 2020.<sup>6</sup> While this study meant to observe some of the effects of the COVID-19 crisis on beneficiaries, this was not the primary goal. In contrast, this study aimed to produce more information about the factors associated with self-reliance seen in beneficiaries 9 to 12 months after assistance after providing a broad description of household economic profiles within this cohort.

<sup>2</sup> Figure provided by the CCI in January of 2020 via e-mail correspondence.

<sup>3</sup> Oxfam (2019) Confidential Briefing Note: Iraq Humanitarian-Development Nexus Context

<sup>4</sup> Cash Consortium for Iraq (2020). MPCA in Iraq: Perspectives of Beneficiaries on Impact. Available here: <https://reliefweb.int/sites/reliefweb.int/files/resources/cci-mpca-in-iraq---perspectives-of-beneficiaries-on-impact.pdf>

<sup>5</sup> World Bank (2016). Graduation Pathways: Increasing Income and Resilience for the Extreme Poor. Available here: <http://documents1.worldbank.org/curated/en/130091504769730602/pdf/119209-BRI-PUBLIC-Brief-Graduation-Pathways-Dec-2016.pdf>

<sup>6</sup> Iraq COVID Food Security Monitor (2020) Bi-Weekly Update. Issue 2. Available here: <https://reliefweb.int/sites/reliefweb.int/files/resources/iraq%20Biweekly%20report%20Issue%2022-%20English%20.pdf>

## STUDY METHODOLOGY

### Hypothesis & Research Question

Due to outstanding gaps in existing literature on the sustainability and relevance of MPCA in the context of stabilization and recovery, this research investigated long-term effects of relief assistance and explored self-reliance in order to inform the design of programs aimed at promoting beneficiary resilience and achieving self-reliance after assistance. This study intended to:

- Explore the hypothesis that, in the long term, most beneficiaries receiving relief assistance still rely on negative coping mechanisms, and have not achieved self-reliance;
- Identify the factors that may allow some households to achieve self-reliance solely through relief assistance;
- Provide an evidence base which can help link MPCA programming to livelihoods programming.

The following research questions were considered:

1. What is the socio-economic profile of MPCA recipient HHs 9-12 months after assistance?
2. What are the factors and characteristics of MPCA recipient households (HH) that are able to achieve self-reliance?
3. What % of MPCA recipient households achieved self-reliance 9-12 months after assistance?
4. What is the socio-economic profile of MPCA recipient HHs that are no longer MPCA eligible 9-12 months after assistance?
5. How has the COVID-19 crisis affected households with different characteristics?

### Study phases

The study was composed of three basic phases of 1) inception, 2) data collection, and 3) data translation, cleaning, and analysis. **The inception phase** included a thorough desk review, collective data collection tool development as well as training of field researchers on methodologies, research standards, and study-specific sampling. **The data collection phase** included collecting 1,322 phone surveys via Kobo ODK and 20 key informant interviews (KII) over a period of 6 weeks. Surveys were modelled on the CLCI MPCA Vulnerability Assessment Forms. These were conducted with beneficiaries who received assistance 9 to 12 months ago from various CLCI distributing partners. The survey enquired about key indicators providing essential information on vulnerability level, demographic, socio-economic factors, assistance received, coping strategies used, and other behavioural changes that help elucidate the factors linked with achieving self-reliance among MPCA beneficiaries. **The data translation, cleaning, and analysis phase** included translation and review of data for completeness and quality according to SREO's data cleaning protocols. The quantitative dataset was also cleaned and checked for appropriateness in order to ensure optimal data analysis. SREO researchers then used R to conduct the quantitative analysis which involved iterative processes to carefully define self-reliance and identify factors associated with it.

### Sampling

SREO researchers used a mixed-methodology consisting of household surveys and key informant interviews with beneficiaries that received MPCA 9 to 12 months ago in Anbar, Diyala, Kirkuk, Ninewa, and Salah Al-Din governorates<sup>7</sup>. The household data sample is representative of the caseload of

<sup>7</sup> In terms of generalizability, this sample is representative of the northern parts of Iraq where the beneficiaries were located, but this may not be the case for other regions of Iraq. The sample size is sufficient as it had a 97% confidence interval and a 3% margin for error. Beneficiaries were randomly selected through the random sort feature of Excel from within the larger cohort of CCI MPCA beneficiaries who received assistance 9 to 12 months ago.

households that the CLCI assisted with MPCA 9-12 months ago, with a 97% Confidence Level/3% Margin of Error. Baseline data were collected 9 to 12 months before using the MPCA vulnerability assessment survey which was used as the baseline data for comparison to the endline data collected by SREO in this study. The baseline surveys were conducted between 10/09/19 and 12/23/19 while SREO's surveys were conducted between 11/9/20 and 11/24/20. The endline included 172 questions if all questions were asked based on the skip logic of the survey. All of these questions were asked at baseline with the exception of 14 additional questions which were asked related to COVID-19 vulnerability, and three questions related to self-reliance (two quantitative and one qualitative). No control group was used in this study. These two datasets functioned as panel data because the same beneficiary households were interviewed twice which allowed the analysis to link the households. This enabled individual comparison over time. The variables used in the questionnaire were based off of the CLCI targeting system for cash assistance using the PMT model score for Northern Iraq determined for each household<sup>8</sup>. The PMT score<sup>9</sup> includes multiple variables which are weighted differently to affect the final score<sup>10</sup>. These variables either have a positive or negative impact on the score by making it higher or lower. The higher the PMT score, the lower the vulnerability as the score represents predicted per capita, monthly consumption. After these scores are established for each household, the table below shows how these scores are split into three groups based on vulnerability which determines the level of cash assistance received:

**Table 1: MPCA eligibility based on PMT model score for Northern Iraq**

Score	Predicted Consumption (IQD)	Group	Transfer Value (IQD)
<b>4.96-5.04</b>	92,000-110,000 IQD	R1	1 x 400 USD
<b>4.85-4.96</b>	70,000-92,000 IQD	R2	2 x 400 USD
<b>&lt;4.85</b>	<70,000 IQD	R3	3 x 400 USD

R1 is the lowest vulnerability category which receives only one round of cash assistance while R3 is the highest vulnerability and receives three rounds of cash assistance. The value of the cash assistance is 400 USD (480,000 IQD), which is derived from the calculation of the Survival Minimum Expenditure Basket.<sup>11</sup>

SREO used simple random sampling across these locations to estimate the sample size which was stratified according to the provinces of interest. Roughly 7,250 households received MPCA 9 to 12 months ago. To have a 97% Confidence Level / 3% Margin of Error, the minimum representative sample was 1,109. To account for any errors, an oversampling of 20% was applied so that the final sample size of the study was a total of 1,322 households. By governorate, the number of surveys conducted was then calculated based on the proportion of beneficiaries by location.

**Table 2: Beneficiary distribution by location**

Governorate	# of BNF HH per location	% of total sample	Survey sampling
<b>Anbar</b>	2,152	30%	386
<b>Diyala</b>	158	2%	50
<b>Kirkuk</b>	922	13%	165
<b>Ninewa</b>	2,838	39%	509
<b>Salah Al-Din</b>	1,180	16%	212
<b>Total</b>	7,250	100%	1,322

8 CCI (2019) CCI Vulnerability Scoring Model Brief. This document is not available to the public and was created for internal use by the CCI team.

9 Please note that the PMT score is also referred to as the vulnerability score throughout the document.

10 The variables in the model include household responses to the following indicators for Northern Iraq: forced marriage, has standard dwelling/shelter, attending social events for food, child labour, secure water source, shared latrine, reduce non-food spending, hosting a PLW, household size, HH has difficult working, spend savings, CSI score is low, and employment rate.

11 [https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/4.2.\\_annex\\_iv.ii\\_survival\\_minimum\\_expenditure\\_basket\\_technical\\_guidance\\_note\\_june\\_2018.pdf](https://www.humanitarianresponse.info/sites/www.humanitarianresponse.info/files/documents/files/4.2._annex_iv.ii_survival_minimum_expenditure_basket_technical_guidance_note_june_2018.pdf)

In addition to these surveys, four beneficiaries were selected in each location to participate in key informant interviews. Two women and two men were interviewed in each location. The key informant interview (KII) used was based on CLCI interviews with questions added about COVID-19 and how individuals think about self-reliance. All data were collected over the phone by SREO field researchers based in Iraq.

## Data analysis

### Descriptive statistics to represent the socio-economic profile of the sample HH

Descriptive statistics were produced to describe the household profile and common trends observed across the sample. This helped establish the socio-economic profile of MPCA recipient households in different categories. A variety of analyses were used and are described below.

### Financial status baseline comparison to understand evolution of HH vulnerability

To understand how MPCA recipients' vulnerability status has evolved since baseline data collection 9 to 12 months ago, the proxy means testing (PMT) North model was calculated a second time for each household in order to re-estimate the vulnerability score in the sample since baseline. Based on the CLCI Vulnerability Scoring Model Brief, the new vulnerability score of households was computed and assessed across different categories such as location<sup>9</sup>. The evolution of the score was compared to the baseline survey results for each household. Since most of the questions were asked in the survey used by SREO at baseline as well, answers to the same questions were matched and the score was computed with the coefficient of the model. The lower the score, the more vulnerable the household. This comparative assessment allowed SREO researchers to understand the change in financial status for HHs over the past 9 to 12 months and assessed the change in eligibility status for MPCA by HH.

### Factor analysis to define self-reliance and acknowledge the role of COVID-19

To facilitate data analysis, two indices were constructed by the factor analysis using variables in the panel data. These indices were added to the dataset as additional variables and each household was assigned a score for each index. The first index represents a measure of a household's level of self-reliance. The second index represents a measure of a household's vulnerability to the negative socioeconomic effects of the COVID-19 pandemic (see Annex 3 for additional methodological details). These index variables were used at various points in the data analysis.

*Self-Reliance Index:* A factor analysis comprised of 55 indicators associated with household vulnerabilities and economic indicators was conducted to examine the concept of self-reliance in conjunction with the opposite of self-reliance. The subset of variables captured 47% of the vulnerability variance across surveyed beneficiaries. This indicated that the index is useful for gauging vulnerability and self-reliance levels for different households. Indicators highly positively and negatively correlated with recipient vulnerability scores formed the basis of a definition of "self-reliance". Indicators that were strongly positively correlated with high vulnerability were those that were associated with fragile economic circumstances and a heavy reliance on negative coping mechanisms. Indicators that were strongly negatively correlated with vulnerability scores were selected to define self-reliance and a lack of reliance on negative coping mechanisms. Indicators defining self-reliance are those with the highest negative coefficients (coefficients < - 0.20). A threshold for establishing self-reliance was determined based on the cumulative sum of those coefficients to divide households into "self-reliant" vs "not self-reliant". This cut-off between 'self-reliant' and 'not self-reliant' households was based on combining all the indicators associated with self-reliance and establishing a threshold. The pros and cons of using this threshold are further discussed in the limitations section.

It is worth noting that responses to the question “Do you consider yourself to be self-reliant?” were included in the calculation of the self-reliance score which was ultimately subjected to a cut off. This had a large influence on the final scores<sup>12</sup>.

*COVID-19 Index:* A factor analysis was also conducted to establish a COVID-19 vulnerability score for HHs. This was done using the additional 12 COVID-19 questions from the survey that assessed whether HHs felt less financially secure, cut back on essential expenditures, if daily labour income decreased, and if debt has increased. These variables capture 45% of the variance. The COVID-19 score was created to determine the extent of the impact on HH vulnerability scores. A score of 0 implies that the COVID-19 pandemic has had no impact on households, while any score above 0 suggests that households were affected. A score between 0 and 2 suggests that households were moderately affected (10.5 % of the population), while a score above 2 signified that the households have been affected by all the aforementioned COVID-19 indicators (83%).

### Logistic regression to identify factors affecting self-reliance

After the factor analysis established the concept of self-reliance, a logistic regression was conducted to identify indicators that contribute to the probability of HHs becoming self-reliant as defined by the aforementioned factor analysis. Regression is a statistical tool and data analysis method that helps present the relationship between variables and how they influence each other. This analysis helped estimate which parameters contributed to an increased likelihood of HHs becoming self-reliant. Variables in the regression model are selected in an iterative process to maximize fit and highlight the direction and strength of influence of various variables on HH self-reliance. Overall, 156 variables were tested in the model and 29 were selected.

## Study limitations

Some limitations need to be considered when reviewing this study. Oversampling during data collection prepared us for the potential need to remove surveys from analysis that included errors while still maintaining a sufficient sample size. This allowed the data collection process to take place with ease without compromising the timeline. Respondent and researcher bias should be acknowledged.

All surveys and KIIs were conducted over the phone. The data collection tools took time to administer as many took between 45 minutes and one hour to complete. Respondents may become less engaged during this process and may give less accurate information over the course of the discussion. Additionally, SREO FRs are unable to pick up on additional information such as body language or facial expression which may guide the intuitive probing dimension of qualitative interviewing when interviews take place in person. The phone interviewing process may affect data quality due to a combination of respondent fatigue and the lack of non-verbal communication.

A degree of respondent bias should also be expected since these participants were asked to discuss sensitive matters such as their ability to feed themselves and the daily realities of poverty. Sensitive questions about negative coping strategies about topics such as child labour and forced marriage were also asked. These are traumatic experiences which people may feel differing levels of ease describing in depth.

In terms of how this study defined self-reliance based on the indicators in the survey, a quantitative cut-off was chosen to differentiate the ‘self-reliant’ versus ‘not self-reliant’ groups. One advantage of this was to enable a comparison between these binary categories for the sake of discussion. Although determining the cut-off was a data driven process, it is worth noting that SREO researchers subjectively selected the level of correlation associated with the self-reliance factor. This decision

<sup>12</sup> SREO’s quantitative definition of self-reliance examined through the factor analysis is predominantly based on survey responses about household characteristics and practices. Despite this, two questions which subjectivity assess self-reliance are included in this score as well. These two questions are “What is your economic situation like compared to what it was like before you received MPCA? (Improved/Worsened)” and “Do you consider your household to be self-reliant? (Yes/No).” Any mention of self-reliance in this report which is from the quantitative data refers to the results of the factor analysis with the exception of the figure that 76% of individuals considered themselves to be self-reliant when asked directly. Likewise, all qualitative findings are subjective.

is further described in Annex 3. Additionally, using a binary cut-off does not allow for observing self-reliance on a scale which would present a spectrum of self-reliance or intermediary categories. Despite this, SREO believed in the value of being able to have a binary comparison between a more self-reliant group to a less self-reliant group for discussion purposes.

This study was first designed before the onset of the COVID-19 pandemic. This study examines MPCA recipient HH experiences and realities during a pandemic period which is overlaid on a pre-existing economic crisis in a politically unstable setting. Vulnerable HHs across the world have been affected by the economic repercussions of the COVID-19 pandemic. MPCA recipient HHs in Iraq are no different and their self-reliance also interacts with these realities. To attempt to mitigate this effect, SREO created a COVID-19 index aiming to “isolate” and identify the effect of COVID-19 on negative coping mechanisms, vulnerability, and self-reliance. This helps statistically model and imagine, to a limited extent, the impact of MPCA on self-reliance and HH behaviour if COVID-19 had not impacted households. The wide-ranging effects of such a complex and unprecedented global crisis are difficult to measure and there are many effects which our methodology may not have taken into consideration. Consequently, there could be additional effects which were not built into the COVID-19 index.

The logistic regression examined how factors can lead to self-reliance or not. The analysis used strong and rigorous statistical methods, but is also limited in the sense that some of the same variables in the model are also incorporated into how the self-reliance score was built (problem of endogeneity). This is mitigated by testing the introduction of 100 more variables in the model and ultimately only 12 variables out of 29 overlapped within the factor analysis and the logistic regression. Inferences can still be made on findings, and tests of rigor and accuracy which were conducted. The explanatory limitation of the analysis means that, because variables in the model are also used to define self-reliance, coefficients should be interpreted in terms of strength rather than impact/causality. The statistical limitation of the analysis means that there is a reverse causality issue (multicollinearity of variables) where the direction of cause and effect may not be easy to discern. This was controlled for through stepwise regression. These considerations mean that causal relationships between self-reliance and the other variables in the dataset should be inferred tentatively, although the predictive capacities of the model are not affected by these considerations. There was no control group which bars the opportunity to observe a causal attribution relationship due to the effects of the intervention. By observing the panel dataset comprised of the baseline data and the data collected for this study, factors such as context deterioration could not be controlled for directly. In terms of the effects of COVID-19, the COVID-19 index was an attempt to address one component of the environmental effects.

Readers should keep in mind that researcher bias is inevitable. Researcher bias affects all stages of research including tool design, data translation, data cleaning, and data analysis. For instance, the factor analysis is based on the correlation of indices with a threshold selected by SREO. To mitigate and reduce researcher bias as much as possible, SREO’s multi-disciplinary team assessed thresholds, categorization cut-offs, and whether to include/exclude variables as a team. For each step of analysis, decisions made considered existing research and grey literature as well as ongoing studies conducted by other researchers. The findings present certain realities of recipient HHs, but researcher bias is implicit in some of these analysis processes. Future qualitative studies could better examine some of these nuances.

## FINDINGS

### Socio-economic profiles of MPCA recipient HHs 9 to 12 months after assistance<sup>13</sup>

Vulnerable households who received MPCA 9 to 12 months ago are predominantly returnee households with low educational backgrounds. Two thirds of these HHs have a HH member living with a disability or chronic illness, often diabetes or heart disease. The employment rate in this group is 12.5% while most of these individuals were employed in daily wage labour<sup>14</sup>. Only a little more than a third of households anticipate finding work in the month following the survey. The median income among beneficiaries over the past month is 150,000 IQD while the median amount of total expenses is 547,000 IQD and median debt is 500,000 IQD. Only 9.7% of respondents cited having incomes higher than their expenses. The gap between income and expenses is likely filled by taking on household debt or relying on support from others. A quarter of MPCA recipient households also live with deficient WASH infrastructure and/or lacked appropriate shelter. These HHs live in spaces that lack privacy or security, where living situations may be precarious, and where access to water is limited. Overall, 33% of households resorted to negative coping strategies to buy food in the last 30 days while 86% of households have used food-related coping strategies over the last 7 days. The section below gives a more detailed overview of socio-economic profiles of households 9 to 12 months after MPCA assistance.

#### Household demographics

The majority of respondents are returnees (70%) while 14% are remainees, and 11% are displaced. The mean age of respondents is 41, 18% of households are headed by women and 21.6% of respondents are female while the remaining 78.4% are men. Half of respondents had received only primary level education while 23% had had no education, and 18% had received a secondary education. Households are mainly located in the following sub-districts: Mosul (34%), Baiji (13.1%), Ramadi (12%), and Hawija (7.4%). Most households (49%) have between 5-8 household members while 32% have more than 8 people, and 19% have less than 5 people.

It was common for surveyed households to have vulnerable members as 61% of households have a household member living with disabilities or suffering from chronic illness and 30% of HHs have a pregnant or lactating woman (PLW) in the household. The majority of households with a member suffering from chronic illness specified that the chronic illness is either diabetes and/or heart disease. The burden of disease is relatively high among recipient households and may limit the ability of all household members to partake in income-generating activities and find sustainable livelihood activities. Beneficiaries in interviews described diverse chronic conditions and disabilities which made their households more vulnerable including heart disease, spinal injuries, and undiagnosed chronic pain.

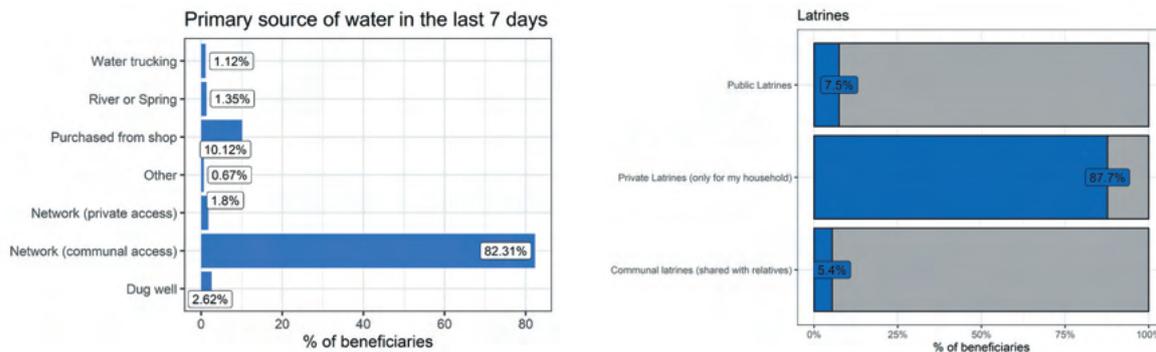
#### Deficient WASH infrastructure & inadequate shelter

Overall, 25.8% of respondents indicate not having a shelter that provides sufficient space, security or privacy, and 16.1% of respondents are facing eviction. Additionally, 16% of households do not have access to a water network and 12% do not have private latrines. Out of all respondents, 10% of households need to purchase water to cover their basic needs. In terms of respondent shelters, 14% do not live in a house or apartment while 17% are facing eviction.

<sup>13</sup> The socio-economic profile section only includes descriptive statistics for the data collected by SREO and does not refer to the baseline data unless explicitly stated.

<sup>14</sup> As was used in the baseline study, the employment rate was calculated by taking the number of the members of the household who are working divided by the number of members in the household for the entire sample. This was done per household and then an average was produced.

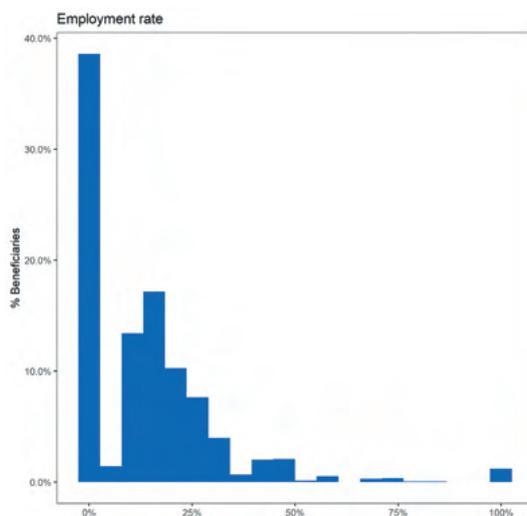
**Figures 1 and 2. WASH infrastructure available within respondent households**



**Unstable sources of income and precarious employment**

Among surveyed households, fewer than 1/8 household members are working as the median employment rate was only 12.5%<sup>15</sup>. The largest employment sector is construction (34.6%), followed by the service industry (8%), and taxi drivers (7%). As represented below in Figure 3, 39% of households do not have any member working. In total, 37% of households do not anticipate working at least one day in the next 30 days.

**Figure 3. Employment rates within respondent households**



Among the households with at least one member working in the past month, the working family member is more often male which was represented 88% of the time by male adults and 11% of the time by underaged boys. Female employment represents only 4% of working household members..

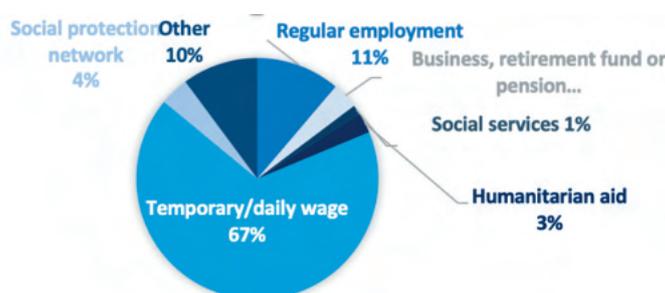
<sup>15</sup> The employment rate was calculated for the entire sample. This was done since child labour was present in the sampled population.

**Table 3. Household members who have worked in the last 30 days<sup>16</sup>**

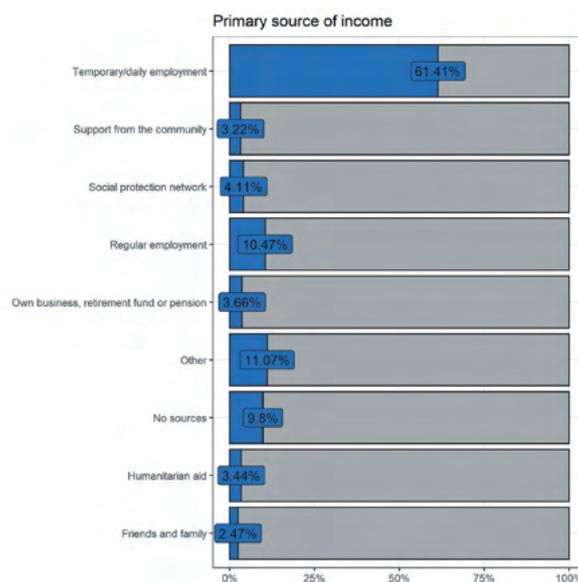
Age	Male	Female
0-5	1.5% <sup>17</sup>	0.4%
6-17	4.8%	1.5%
18-59	87.8%	2.1%
> 60	0.3%	0.0%

The sources of income are mainly temporary/daily labour (on average 67% of total income) and regular employment (11%). Social safety nets play a non-negligible role with an average of 8% of total income which included social protection networks, social services, and humanitarian aid).

**Figure 4. Mean % of income sources compared to total income**



**Figure 5. Primary sources of income within respondent households**



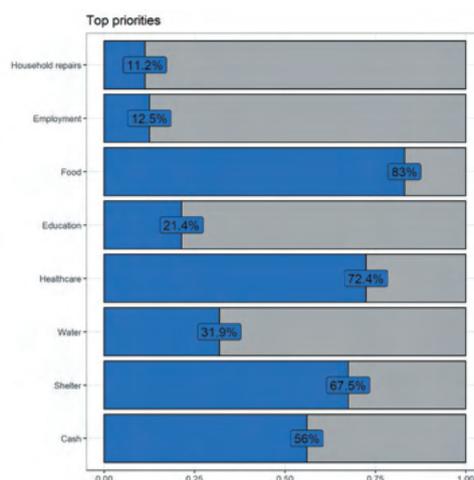
**Priority needs and HH spending**

Within the sample surveyed by SREO, households identify their top priority needs as food (83%), healthcare (72%), water (32%) and shelter (67%). On average, they use their money for food

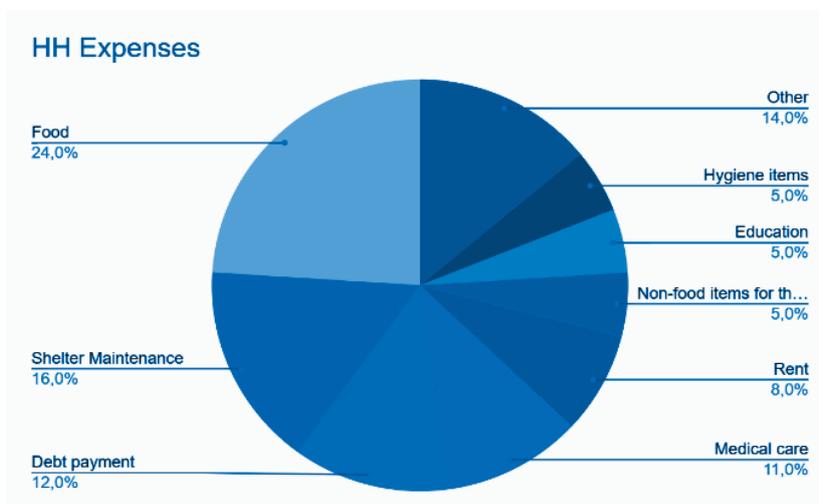
<sup>16</sup> Please note that results do not add up to 100% because this was a multiple-choice question in the survey.  
<sup>17</sup> While this is a concerning figure, it was clearly identified in the dataset. Within the dataset, 52 boys between the age of 0-5 were identified by survey respondents as working. Some of the qualitative interviews mentioned young family members engaging in income generating activities like helping family members at work.

(24%), shelter maintenance (16%), debt repayment (12%), healthcare (10%), and rent (8%). While healthcare came before shelter in the priority needs, spending habits consistently reflected spending prioritization on shelter, while key informant interviews consistently highlighted shelter problems as a key source of stress. Some interviewed beneficiaries who lived with chronic disease or pain frequently described a habituation to these limitations which may make delaying medical care easier since poor health status is the norm for these beneficiaries.

**Figure 6. Top priorities within respondent households**



**Figure 7. Household expenses identified by respondent households**



**Expenses commonly exceed income**

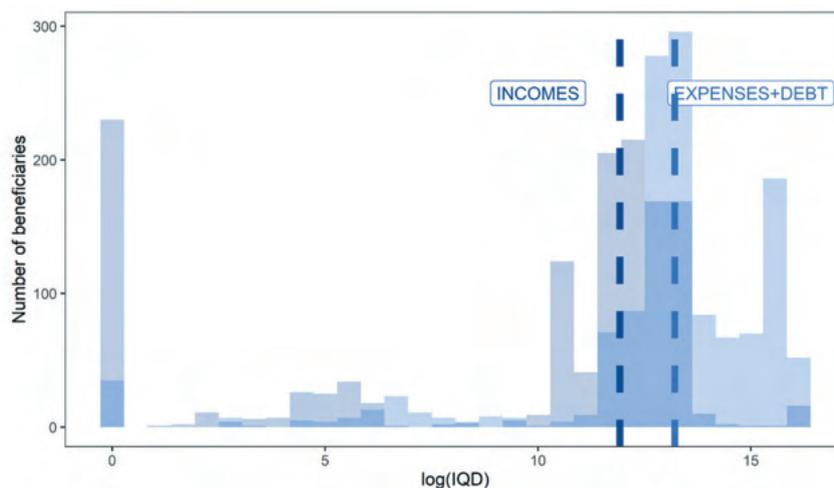
The median income among beneficiaries over the past month was 150,000 IQD while the median amount of total expenses (547,000 IQD) plus debt (500,000 IQD) was 1,264,000 IQD<sup>18</sup>. Figure 8 below shows the distribution of income and the sum of expenses plus debt (amounts are on a logarithmic scale<sup>19</sup>) across respondents. The distribution of income and expenses is heavily skewed towards the right. Within this, 65% of the households have earned more than 50,000 IQD (10 log(IQD) or 35 USD)

18 Determining how households who have more expenses than income cover this difference was beyond the scope this analysis. This study collected binary data on whether new loans were acquired, but did not include detailed information at the specific time point at which loans were taken out.

19 This is represented with a logarithm base 10 in order to mitigate the highly skewed distribution.

in the past month while 90% of the households have spent (including debt) more than 50,000 IQD. The amount of expenses and debt are on average 10 times larger than the income.<sup>20</sup> There is also a cluster of extremely low-income people (17%) around zero with no income. Beneficiary interviews echoed the challenges of having negative cash flow where beneficiaries rarely cited the ability to save. Beneficiaries commonly cited purchasing food on credit as a common way of depending on debt in order to continue to provide for basic needs despite having higher expenses than income.

**Figure 8. Household income, expenditures, and debt identified by respondent households**



### Coping Strategies Used

Overall, 33% of households resorted to coping strategies to buy food in the last 30 days while 86% of households used food-related coping strategies over the last 7 days.<sup>21</sup> Interview participants most frequently described food related coping mechanisms including reducing the quality of food items purchased, restricting the size and frequency of meals, and restricting adult food intake to prioritize the needs of children in the household. One beneficiary described their food related coping strategies by saying “*I reduced my meals, and I bought the Iranian goods, because they are cheaper. I borrowed from friends and relatives, and I consumed less food on behalf of my children.*”

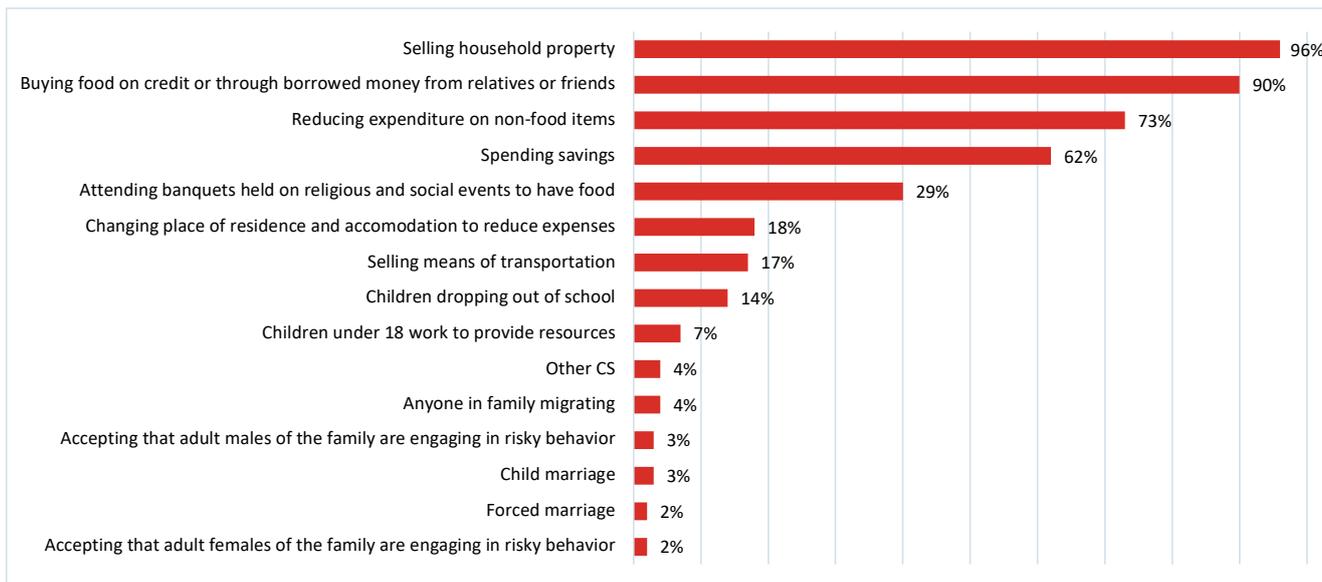
The most frequently used coping strategies in the past 30 days were: selling household property (96%), buying food on credit (90%), reducing expenses on non-food items (73%), and/or spending savings (62%). Likewise, 29% reported attending banquets held for religious and social events to have food, thus highlighting the importance of social networks. More extreme coping strategies were sometimes used such as children dropping out of school (14%), child marriage (3%), and forced marriage (2%). In the last 7 days, households who have used a coping strategy related to food consumption have mainly resorted to shifting towards cheaper and lower quality food items (82%), borrowing food or asking for assistance from relatives and friends (74%), and curbing the adults’ need for food to prioritise the children (73%).

<sup>20</sup> It is worth noting that self-reported income and consumption data are often accompanied by inaccuracies. In this study, this was calculated by comparing the mean of expenses and debt to the mean income in the sample. More granular information on expense categories such as the likelihood of spending money on different categories is beyond the scope of this study.

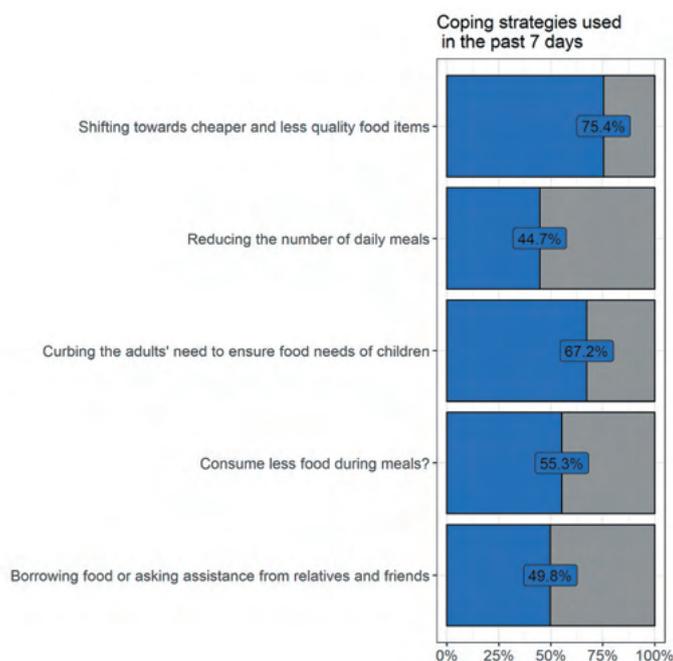
<sup>21</sup> Among the HHs who have used at least one food related coping strategy in the past 7 days:

- 86.4% who are non-eligible have been shifted towards cheaper and less quality food items (vs. 79% for eligible HHs)
- 84.7% who are non-eligible have borrowed food or asked assistance for from relatives and friends (vs. 68.2% for eligible HHs)
- 57.6% who are non-eligible have curbed the adults’ need for food to ensure that children have adequate food (vs. 78.3% for eligible HHs)
- 50.0% who are non-eligible have reduced the number of daily meals that they consume (vs. 58% for eligible HHs)
- 48.3% who are non-eligible have consumed less food during meals (vs. 65.4% for eligible HHs)

**Figure 9. Coping strategies used by respondent households in the past 30 days<sup>22</sup>**



**Figure 10. Food coping strategies used within respondent households in the past 7 days**



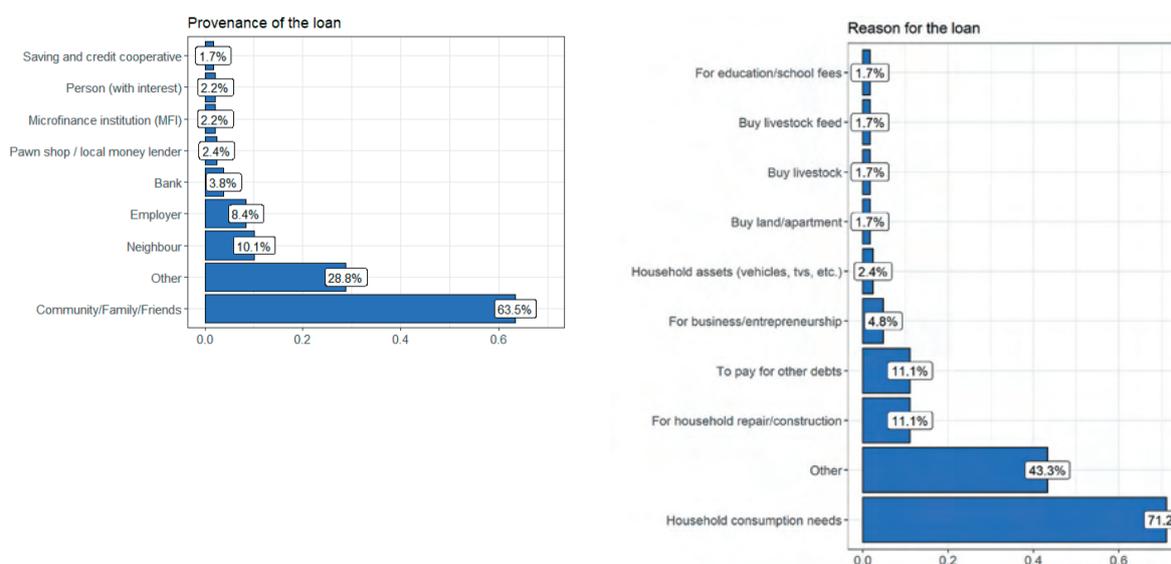
**Financial coping strategies**

Within the last month, 31% of households took out a new loan which was reported to be 66,705 IQD on average while the median was 75,000 IQD. Within the population, loans were mainly from community sources including local grocers or shop owners, friends or family (63.5%), neighbours (10%) and employers (8.4%). Only 8% of loans were from financial institutions (banks, microfinance institutions (MFIs), or credit cooperatives). Household consumption needs were cited as the primary reason for procuring the loan by 71% of respondents. In addition to this, diverse needs were cited

<sup>22</sup> These percentages were computed for households that had used at least one coping strategy in the past 30 days.

by 43.3% of respondents who took out loans while 11% used the loan to pay for household repairs. Loans were also procured to pay for debt by another 11% of respondents while 4.8% were taken out to pay for businesses. Key informant interviews corroborated these findings as many participants described incurring debt to pay for food or medical expenses. Buying food on credit was frequently cited by interview participants and was described as a key strategy for being able to provide sufficient food for the household.

**Figure 11 and 12. Sources of loans and reasons for loans within respondent households**



**HH vulnerability and change in HH vulnerability since baseline**

Household vulnerability scores (PMT scores) were calculated for households surveyed for this study and compared to their individual scores calculated from the survey collected 9 to 12 months ago. These calculations were done in the same way that they were at baseline using the results of the PMT model<sup>23</sup>. The vulnerability score reflects higher vulnerability when a lower score is produced, such that a score of 2 is more vulnerable than a score of 4.

**Table 4. The distribution of the vulnerability scores compared to baseline**

	Min	1st Qu.	Median	Mean	3rd Qu.	Max
<b>Baseline vulnerability score</b>	4.051	4.855	4.927	4.893	4.993	5.041
<b>Nexus study vulnerability score</b>	3.957	4.798	4.930	4.905	5.038	5.281

When compared to the baseline data, sampled households show a slight, statistically significant increase and upward shift in mean vulnerability score from 4.893 at baseline to 4.905 currently with an increase spread around the median value.<sup>24</sup> This difference is statistically significant meaning that surveyed households are overall less vulnerable compared to 9-12 months ago (p-value=0.03). The range of vulnerability scores has decreased significantly from baseline because there are fewer extremely vulnerable households than there were at baseline. The highest vulnerability scores shifted

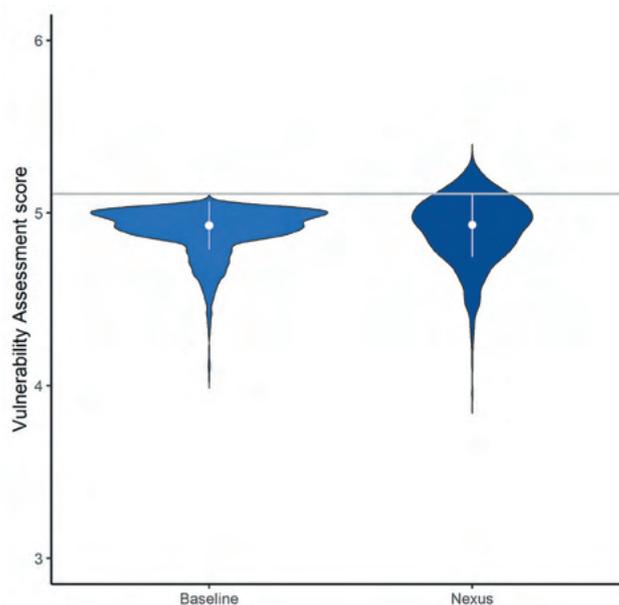
23 Based on the previously used CCI Vulnerability Scoring Model Brief, the new vulnerability score of households was computed by region. The new score was compared to the baseline survey results. Since most of the same questions were asked in the survey as used by SREO, answers to the same questions were matched and the score was computed with the coefficient of the model.

24 The cut off for eligibility is a score of 5.04

from 5.041 to 5.281. This means that the vulnerability of this group has become less concentrated since baseline. Based on the eligibility criteria from baseline, 24.6% of households are now no longer eligible to receive cash assistance. This means that, using the SEVAT vulnerability criteria, 24.6% of the households who were eligible for assistance 9-12 months before are no longer found to be socio-economically vulnerable.

In terms of direction of change, only 50% of households have shown an improvement in the vulnerability score while the other 50% have a slightly lower vulnerability score. This reflects that while there are fewer extremely vulnerable households and the average vulnerability score has improved, decreased vulnerability was not unilaterally experienced<sup>25</sup>. Figure 13 is a visualisation of the full distribution of the two scores for both samples. The white dot represents the median value and the white segment represents the inter-quartile range which is an indicator of dispersion. The grey line helps visualize the proportion of households that are no longer eligible as they fall above this line. The blue area is a symmetrical representation of the number of households by level of vulnerability score. The shape of the blue area since baseline shows the spread of the distribution around the median value observed in this study.

**Figure 13. Vulnerability assessment score distribution**



When asked specifically about the impact of the MPCA on the household, all interview participants emphasized the helpfulness and utility of the cash grant. One participant stated that *“When we received the grant, we were able to provide for our needs for some months.”* Cash grants were most commonly used to pay off debts usually due to purchasing food on credit, to pay for medical expenses, and to purchase food. One beneficiary described how they used their grant in a way that was fairly standard for interviewed beneficiaries by saying, *“It was very helpful as we paid back part of our debt and rehabilitated the house in addition to buying medications for myself.”* Some beneficiaries were able to spend on rehabilitating their homes, and pay for school fees or clothes for children. Assets were infrequently purchased by interviewed beneficiaries, although some described purchasing refrigerators or televisions. All interviewed beneficiaries in the KIIs described improvements to their mental health due to the utility of the MPCA grant for alleviating some of their financial stress. One beneficiary described this experience by saying, *“The cash has alleviated my anxiety and psychological pressure as it helped me pay back part of my debt and buy medicines. Debt caused my anxiety and was alleviated by this.”* These statements were universal across all locations and demographics interviewed.

<sup>25</sup> There was no control group available representing non-eligible households at baseline to determine whether those households experienced a deterioration in their financial situation.

Improvements were seen in many indicators which reflected decreased vulnerability. More specifically, decreased vulnerability was observed through statistically significant changes in the following indicators:

- Households attended social events for food less often (29% vs. 40% at baseline).
- Households living in houses or apartments has increased from 79.7% at baseline to 86.1%.
- Number of households having no access to private latrines has dropped from 28.3% to 13.5% since baseline.
- 60.4% of households had to reduce their non-food expenses in the past 30 days in contrast to 64.7% at baseline.
- 43% of heads of households have difficulties working as opposed to 46% at baseline.
- 38% of households have a low coping strategy index in contrast to 53% at baseline.

Despite many of these positive signs, increased vulnerability was observed in the following indicators:

- The median employment rate is lower (12.5% vs. 14.3% at baseline).
- 55.2% of households have spent their savings in the past 30 days in contrast to 48.2% at baseline.
- 30.7% of households are hosting pregnant or lactating women as opposed to 24.2% at baseline.<sup>26</sup>

**Table 5. Vulnerability score distribution compared to baseline<sup>27</sup>**

Score	Result	% of HH at baseline (9-12 months ago)	% of HH in the NEXUS survey
>5.04	Non-eligible	0%	24.6%
4.96 - 5.04	R1	38.4%	19.2%
4.85 - 4.96	R2	39.5%	21.9%
<4.85	R3	22.1%	34.3%

There is an overall decrease in vulnerability as the mean and the median vulnerability score improved, however the size of the most vulnerable group, the R3 category, ultimately increased from 22.1% to 34.3%. Nearly a quarter of households (24.6%) now have a vulnerability score indicating that they are no longer eligible to receive MPCA and, as such, can be categorized as no longer needing immediate and urgent cash assistance. While many households became less vulnerable, this indicates a notable increase in households who became more vulnerable according to the SEVAT in the sample. These findings should be considered with the local economic context during a global pandemic. Many individuals cited in the interviews that their households have tried to self-isolate over the course of the COVID-19 crisis, it is possible that some behaviours related to public life such as attending social events for food may have changed due to personal behavioural adaptations as a result of the COVID-19 crisis. Their ability to meet their basic needs has also worsened. The government-imposed restrictions to curb the spread of the virus, such as curfews and movement restrictions, have reduced economic activity and have particularly impacted vulnerable groups, including casual and low-income workers, who often lack a safety net to accommodate for a sudden drop in income generating activities<sup>28</sup>. For this reason, some of these findings must be considered in the context of this ongoing crisis which has both affected individual behaviours as well as prices of food and NFI. This was reflected by 56.8% of beneficiaries saying that products that they normally buy have become more expensive since the start of the COVID-19 outbreak.

<sup>26</sup> While having a pregnant or lactating woman in the household is not inherently a vulnerability it does add burdens, responsibilities, costs, expenses, and more challenges to employment.

<sup>27</sup> The R1, R2 and R3 categories were determined by the PMT model for Northern Iraq and represents how household vulnerability was classified based on the vulnerability score. R3 is the most vulnerable group which receives the most assistance. Additional detail was provided in the methodology section.

<sup>28</sup> REACH (2020) Iraq, "Overview of the humanitarian situation and the impact of the COVID-19" Available here: <https://reliefweb.int/report/iraq/covid-19-context-iraq-overview-humanitarian-situation-and-impact-covid-19>

### Vulnerability score differences observed between eligible and non-eligible households<sup>29</sup>

This analysis showed that 24.6% of households' vulnerability scores made them no longer eligible from baseline. Within this group, 18.7% of non-eligible HHs are headed by women. HHs who were found no longer eligible to receive MPCA have a standard dwelling/shelter (80% for non-eligible HH vs. 74% eligible households), have a secure water source, do not share latrines, have a higher employment rate (median rate at 17% vs 12.5%), and less frequently resorted to negative coping strategies. Within this, 23% of non-eligible households have used at least one coping strategy in the last 30 days in contrast to 35% for eligible HHs.<sup>30</sup>

In terms of the socio-economic profiles of those who are no longer eligible, the incomes of non-eligible HHs were more diversified, less precarious, and more sustainable in relation to longer-term objectives. The median employment rate is higher in non-eligible HHs (17%) compared to eligible HHs (12.5%). Non-eligible HHs anticipated working two more days on average in the next month than eligible HHs. Non-eligible HHs were less dependent on economically precarious income-generating activities and also had greater potential to generate higher incomes. For example, 15% of non-eligible HHs have regular employment vs. only 9% for eligible households, 57% of non-eligible HHs depend on temporary income whereas a higher proportion of eligible HHs do (63%), and 7% of non-eligible HHs own a business and/or retirement fund or pension vs. only 3% for eligible HHs. Additionally, 10% of non-eligible HHs are integrated into a social protection network whereas only 2% of eligible households are. A smaller proportion of non-eligible HHs have debt (12.4%) compared to eligible HHs (13.3%). Similarly, only 21% of non-eligible HHs have taken out a loan of some sort in the past month mainly to address basic HH needs such as food, healthcare, and shelter compared to 35% for eligible HHs.

In addition, of those no longer eligible 61.1% of surveyed households are returnees while 22% are remainees. Only 0.3% of non-eligible households have more than 8 household members while 44% of vulnerable households had more than eight family members. Larger households were less likely to no longer be eligible for MPCA. This finding may suggest that larger households may not experience sustained benefits from MPCA in the way that smaller households may be able to.

Differences were also seen in the presence of PLW in non-eligible households versus eligible households. Only 16.4% of non-eligible HHs had PLW while 37% of eligible HHs had PLW in their households. Similarly, proportions of HHs with members living with chronic illness or disability represents a larger percentage and proportion in eligible and more vulnerable households (63%) than in non-eligible and more self-reliant HH (54%).

Additionally,

Despite these trends, some contradictory results were also observed. For instance, 12% of non-eligible HHs have no source of income while only 9% of eligible HHs do. Additionally, many non-eligible HHs that no longer can receive MPCA still rely on NGO or charity and humanitarian aid as a

29 This section merely presents the descriptive dimension of what this decrease in vulnerability has looked like per indicator for the non-eligible group compared to the eligible group. These changes are reflective of the decrease in vulnerability, but do not include any causal inference.

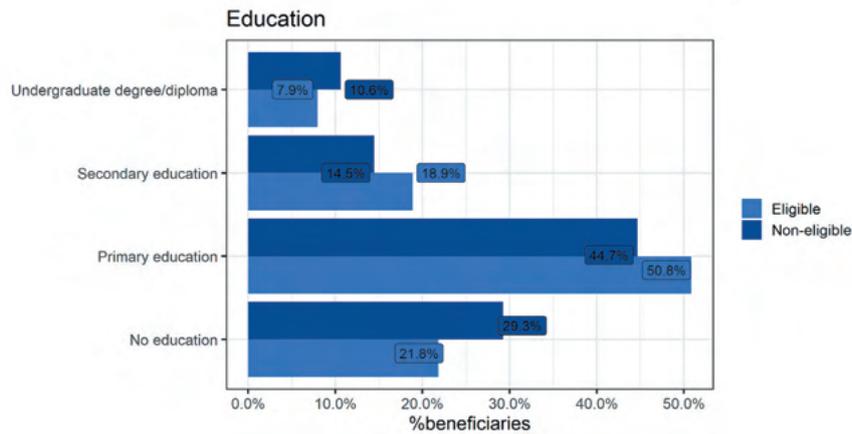
30 Among the HHs who have used at least one coping strategy in the past 30 days:

- 97% who are non-eligible have sold HH property (vs. 99% for eligible HHs)
- 82% who are non-eligible have bought food on credit or through borrowed money (vs. 93% for eligible HHs)
- 59% who are non-eligible have reduced expenditures on food items (vs. 76% for eligible HHs)
- 49% who are non-eligible have been spending savings (vs. 66% for eligible HHs)
- 0% who are non-eligible have been spent savings (vs. 48% for eligible HHs)
- 10% who are non-eligible have changed their place of residence/accommodation to reduce expenses (vs. 19% for eligible HHs)
- 13% who are non-eligible have sold their means of transportation (vs. 16% for eligible HHs)
- 4% who are non-eligible have had their children drop out of school (vs. 14% for eligible HHs)

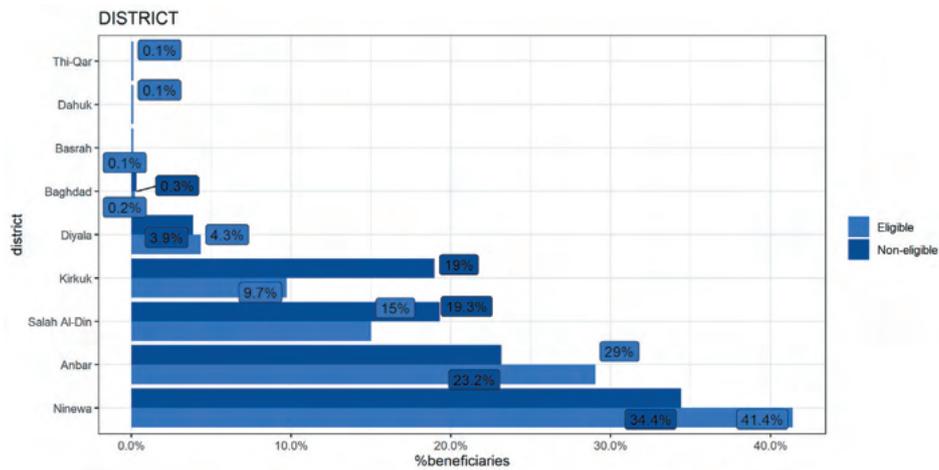
primary source of income.<sup>31</sup> It may be that non-eligible HHs are able to generate more income from being more involved and embedded in different social and formal networks of support which enables access to informal borrowing opportunities. Another interpretation may be that non-eligible households, as a group, manage their assets differently compared to others even if they have no source of income. These questions could be further explored in future research.

Likewise, a larger proportion of non-eligible HHs do not have an education (29%) vs. only 22% in HHs that are still eligible for MPCA.

**Figure 14. Eligible versus non-eligible beneficiaries by educational level**



**Figure 15. Eligible versus non-eligible beneficiaries by location**



31 Please see the below information for sources of income in eligible vs. non-eligible HHs:  
 Primary income sources of the last 30 days?/Social protection network:  
 2.1% vs. in 8.4% of non-eligible HHs  
 Primary income sources of the last 30 days?/Humanitarian aid  
 2.5% vs. in 3.9% of non-eligible HHs  
 Primary income sources of the last 30 days?/MoDM cash assistance  
 0.7% vs. 1.6% of non-eligible HHs  
 Primary income sources of the last 30 days?/Social services (disability allowance)  
 1.6% vs. in .06% of non-eligible HHs  
 Primary income sources of the last 30 days?/NGO or charity assistance  
 0.4% vs. in 0% of non-eligible HHs

## Observing HH self-reliance

### Self-reliance as explored through the factor analysis

The dataset was divided into ‘self-reliant’ and ‘not self-reliant’ categories using an exploratory factor analysis methodology with 55 variables including the two questions related to perceived self-reliance in the household<sup>32</sup>. When these two questions had answers which reflected perceived improvements in economic status and self-reliance, variables which were more strongly associated with these positive responses were factored into defining the self-reliant group. The exploratory factor analysis does not indicate cause and effect. It highlights factors that are most strongly linked with extreme vulnerability (embodied by lowest vulnerability scores) and self-reliance/less vulnerability (embodied by highest vulnerability scores).

This process allowed us to establish a quantitative cut off between ‘self-reliant’ and ‘not self-reliant’ households. Within the factor analysis, the threshold for dividing all respondents into ‘self-reliant’ vs. ‘not self-reliant’ groups was computed by summing the coefficients (the loading score) of the indicators most correlated with the self-reliance factor (the first factor) within the analysis. The first factor captures the most variance at 47%. This factor analysis helped set a threshold (-3.74) for self-reliance which determined that **8.3% of households are self-reliant**, while the remaining 91.7% were not considered to be self-reliant. For a detailed explanation on the cut-offs set and the analysis conducted, please refer to Annex 3. The variables associated with the ‘self-reliant’ and ‘not self-reliant’/extremely vulnerable households are displayed below:

**Table 6. Variables associated with self-reliance and vulnerability**

	Variables associated with self-reliance	Variables associated with extreme vulnerability
<b>WASH &amp; Shelter</b>	Adequate shelter that provides space, privacy and security	Facing risk of eviction Sharing shelter with another family Large number of families sharing a shelter
<b>Income &amp; Expenses</b>	Expected to work 7+ days in the upcoming month Top household priority needs included HH repairs	No source of income in the last 30 days
<b>Coping Strategies</b>	Access to adequate quantities of food in the past week Adequate access to essential hygiene items (ex. soap, toothbrush, shampoo) in the past week Adequate access to clothing, fuel and basic household items (ex. bedding, cooking items) in the past week	Borrowing food or asking assistance from relatives and friends Reducing the number of daily meals Consuming less food during meals Shifting towards cheaper and less quality food items
<b>Vulnerability &amp; Self-Reliance</b>	Self-perception of being self-reliant	Hosting children who do not belong to the family Large number of children hosted in the household not belonging to the family

Based on this factor analysis, this study highlighted key differences in ‘self-reliant’ and ‘not self-reliant’ households in the following categories:

**Vulnerability in HH structure:** While the size of the household and the presence of a PLW were relatively similar for self-reliant vs. not self-reliant households, one major difference is the lower number of households with a disabled or chronically ill member. This rate is 62% for the not self-reliant HHs while it is 45% for the self-reliant group. This does not necessarily indicate that these households are expected to experience additional barriers to self-reliance, but it is worth noting that less self-reliant households may carry an additional burden of disease or vulnerability.

<sup>32</sup> These two questions were “What is your economic situation like compared to what it was like before you received MPCA? (Improved/Worsened)” and “Do you consider your household to be self-reliant? (Yes/No).”

**Employment:** Overall, 80% of self-reliant HHs have at least one member working whereas only 59% of not self-reliant HHs have a working HH member. Self-reliant households tend to have a higher level of education with 25% having a university degree, which could potentially lead to more employment opportunities or regular employment, reliable social networks or social capital. The primary source of income in the past 30 days in self-reliant households was temporary jobs (66%), regular employment (32%) and owning business or retirement (10%). This characteristic is also reflected by the higher employment rate in this group (median rate at 14% for self-reliant HHs vs 12.5% for not self-reliant HHs). Additionally, there was a smaller proportion of fully unemployed households as only 5% of unemployed HHs are self-reliant and these self-reliant households who are fully unemployed anticipated working twice as many days next month as the not self-reliant group. This was seen with 50% of the self-reliant households anticipating working more than 15 days while 50% of the not self-reliant reported only 8 days.

**Income:** Self-reliant households more often have income from labour, government social assistance, and/or humanitarian sources and, overall, the proportion of higher incomes is larger in the self-reliant group. When comparing the 3<sup>rd</sup> quartile of the two groups, the self-reliant group earned more than 600,000 IQD in contrast to 300,000 IQD in the not self-reliant group. The debt structure is also substantially different between the two groups as 22% of the self-reliant households had no debt while 14% of the not self-reliant group did. Debt is used as a supplementary tool, which alongside income and humanitarian assistance, is used when gaps in cash flow must be filled. These loans are mostly provided through informal, community sources (family members, friends, and familiar local businesses) and were used by households almost solely to cover basic needs such as food, shelter repairs, and medical costs and therefore are used in a way almost interchangeably with income. Very few households in these communities have loans through formal institutions, largely due to the lack of collateral needed to obtain institutional loans.

**HH priorities and needs:** A CLCI report on top priority needs of MPCA recipients in August 2020 showed that food, cash, healthcare, and shelter (in that order) were top priorities for recipient HHs<sup>33</sup>. This pattern was observed in not self-reliant HHs whereas self-reliant HHs prioritise healthcare, food, cash, and HH repairs in that order. These findings could be clear indications that MPCA's objective to act as consumption support is partially achieved in the sense that self-reliant HHs no longer have to immediately address survival-level issues. This instead allows them to address longer-term livelihood strategies such as investing in health and shelter repair.

**Shelter and WASH infrastructure:** A larger proportion of self-reliant HHs (98% vs. 94%) report having sufficient access to water compared to not self-reliant HHs, and better shelter and infrastructure that provides space, privacy, and security (95% for self-reliant households vs. 72%). More precisely, 4% of self-reliant HHs share their shelter with another family in contrast to 36% for not self-reliant households, only 1% face a risk of eviction in contrast to 17% of not self-reliant households. Additionally, only 1% rely on communal latrines compared to 6% if not self-reliant households.

**Coping strategies:** Drastic differences in coping strategies were observed between self-reliant and non self-reliant HHs. All HHs categorized as self-reliant report having adequate access to food, hygiene and other items. Self-reliant HHs consistently reported less reliance on negative coping mechanisms to access food. Similarly, self-reliant HHs rely less on taking out new loans as a financial coping mechanism (26% in self-reliant vs. 31% in not self-reliant households). Please see other key differences observed in the below table:

33 CCI (2020) CCI socio-economic vulnerability pre and post COVID comparison brief. Data were collected for this brief from May 1st, 2020 and August 31st, 2020.

Table 7. Coping strategies index

Coping Strategies Index (rCSI)	Not Self-reliant	Self-reliant
Shifting towards cheaper and less quality food items	78.7%	36.9%
Curbing the adults' need to ensure food needs of children	70.6%	27.0%
Consuming less food during meals	59.4%	7.2%
Reducing the number of daily meals	47.9%	4.5%
Borrowing food or asking assistance from relatives and friends	54.0%	2.7%

### Logistic regression analysis

Given these major socio-economic demographic differences between self-reliant and not self-reliant HHHs, a logistic regression was conducted to understand what parameters positively or negatively influence and may contribute to self-reliance in beneficiary HHHs. SREO hypothesized that variables defining self-reliance in the factor analysis would emerge as positive and significant predictors of self-reliance. For example, better living and economic conditions were expected to have a positive impact. On the other hand, SREO expected that indicators associated with poor circumstances and fragility would have the opposite effect by negatively impacting the probability of a HH being self-reliant. For example, a lack of education or greater reliance on negative food coping mechanisms would increase the probability of not being self-reliant. Additional variables were also tested in the model. The gender of the head of household was anticipated to potentially be negative and significant, since female-HHH were less likely to consider themselves self-reliant compared to male respondents. Finally, SREO expected a strong negative impact of the COVID score because the pandemic has reduced job opportunities, particularly those usually available to more vulnerable HHHs. Some of these hypotheses were confirmed, but not all were.

The following list of variables increased the probability of MPCA HHHs being self-reliant:<sup>34</sup>

- Receiving assistance, including government social assistance as well as assistance from NGOs and charities.
- Employment rate and access to regular employment. It should be noted that access to regular employment is rare among the HHHs examined and these findings highlight the importance of diversified and stable sources of income.
- Young male household members working, including child labour.
- The higher the level of education of the head of household, the higher the probability of being self-reliant.
- Having shelter with adequate privacy, security, and space.
- Access to functional, private latrines.
- Household repairs considered a top HH priority and need. This suggests that self-reliant HHHs may have shifted their economic and consumption behaviours.
- Increased PMT score which indicates decreased vulnerability<sup>35</sup>.

<sup>34</sup> These are variables that are significantly associated with self-reliance and therefore can be considered as 'facilitators' of self-reliance. They are not intentional and inevitable triggers of self-reliance but rather their presence increases the likelihood of self-reliance for the household in the study sample.

<sup>35</sup> Please note that this p-value was slightly above threshold for significance (0.052) at 0.060.

The following list of variables reduced the probability of MPCA HHs being self-reliant:

- One or more HH members living with a disability and chronic illness.
- Sharing a shelter. While this was observed, the precise causal pathway is not clear<sup>36</sup>.
- Engaging in any coping strategies. All coping strategies that have negative coefficients can be considered predictors for a lower probability of self-reliance. In line with existing research on MPCA pathways and researcher predictions for this analysis, coping mechanisms used in the past week were the strongest influencing factor. The strongest negative impact on the probability of self-reliance was observed in borrowing food or asking for assistance. More socially discrete coping mechanisms, such as consuming less food or reducing the number of daily meals, also had a substantial impact.
- Taking out loans for HH consumption needs in the past month.
- Taking a loan from a source which was outside of the community, from MFIs or from banks.

The following list of variables did not demonstrate any significant impact on HH self-reliance:

- COVID-19 score. Despite several specifications tested, the COVID score (which is a score meant to reflect the extent to which households were negatively affected by COVID-19 and will be described in detail later in this report) had no significant impact on the probability of becoming self-reliant. One hypothesis is that the COVID-19 pandemic has affected all HHs and that each of the variables within the score may have already been affected by COVID-19. Hence, the regression does not successfully control for the impact of COVID-19 and is not sensitive enough to capture the subtle differences.<sup>37</sup>
- Gender of the head of household.

A detailed table with coefficients and findings of significance can be found in Annex 4. Self-reliant groups were not fully “autonomous” from assistance. The definition of self-reliance that emerges is inherently linked with a stable and sufficient source(s) of income which is largely in line with the definition given by surveyed HHs themselves when asked about their self-perception of self-reliance. Receiving social assistance is a strong predictor of self-reliance advocating for follow-up programs after MPCA.

### Self-reliance as perceived by households

Despite the fact that 60% of beneficiaries felt that their economic circumstances worsened since the start of the COVID-19 pandemic, 76% of households considered themselves to be self-reliant in their own terms when asked directly. Within the overall sample, 67% of female headed households considered themselves to be self-reliant versus 78% of male headed households. When asked about the evolution of their situation compared to 9-12 months ago, 23% of female headed households indicated that their economic situation has improved in contrast to 5% of male headed households. This was found to be statistically significant.

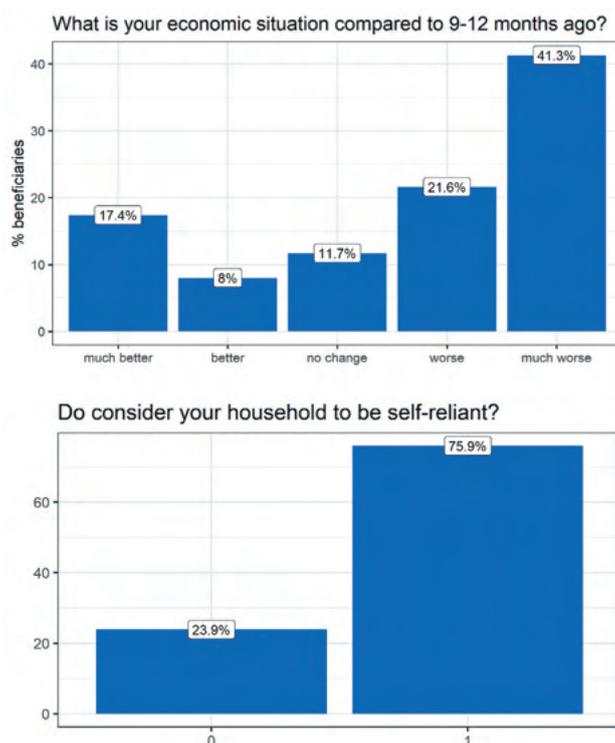
While the percentage of households identifying as self-reliant was dramatically higher than anticipated, this is less surprising through an analysis of the qualitative data. While SREO FRs were trained to present standardized probes when asking beneficiaries about whether or not they considered themselves to be self-reliant, the key informant interviews revealed that beneficiaries view self-reliance in multi-faceted ways. Beneficiaries were less inclined to identify as aid recipients

<sup>36</sup> The strength and direction of this variable was long debated by the researchers and should be interpreted with care. It could be a cause and/or consequence of self-reliance.

<sup>37</sup> These outstanding questions could be addressed through further research. For instance, a more dynamic analysis could be undertaken by estimating the self-reliant households at baseline and measuring the impact of COVID-19 on the HHs who are not self-reliant 9-12 months after assistance. Further research could also include more descriptive statistics on the COVID-19 score for each distinct sub-group such as the socio-economic profile of HHs not affected by the COVID. Another hypothesis would be that the strength or extent to which COVID-19 impacted MPCA recipient HHs that were extremely vulnerable to start off with may not have been as noticeable. A large share of households did not have any source of income or had very low employment rates. Consequently, the change experienced would be minimal compared to others who would have experienced a drastic change/decrease in income or employment due to the outbreak.

when exploring the concept of self-reliance and more frequently cited relying on themselves, family members and religious beliefs. One beneficiary expressed this experience of self-reliance by saying “*I rely on myself and God.*” Other categories were also considered in how people defined self-reliance including getting help with transportation needs from extended family members or adopting coping strategies.

**Figure 16 and 17: Beneficiary perception of self-reliance and economic situation compared to baseline**



One interpretation for this may be that beneficiary receipt of MPCA occurred at a singular moment in their broader narrative of survival which has been comprised of many difficult changes and choices. While aid organizations may view beneficiaries as receiving assistance, many beneficiaries cited how the cash assistance alleviated some of their financial difficulty but did not transform their overall circumstances long-term. Receiving cash assistance did not appear to make a definitive impact on how beneficiaries view their own survival narrative and how they form their identities. One beneficiary who considered themselves to be self-reliant expressed this by saying this was because they “*used to receive 200,000 IQD from the government, but now I only receive 98,000 IQD.*” This recipient clearly states that they view themselves to be self-reliant since they are receiving less assistance than previously which suggests that their progress is a distinct contributor to their perception of feeling capable of improving their circumstances. Consequently, merely being a recipient of social safety net funding or cash assistance did not mean that beneficiaries identified as dependent on external support.

### Impact of COVID-19 on HH self-reliance

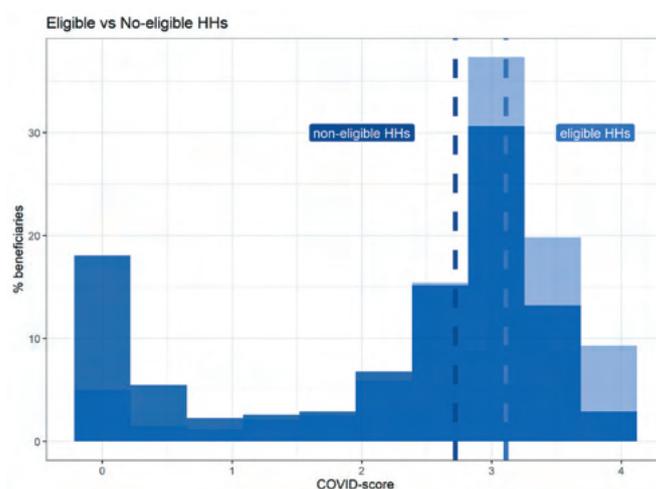
A COVID-19 vulnerability score for households was created based on a factor analysis using an additional 12 COVID-19 questions from the survey to understand how COVID-19 has affected households in these following ways:

- HHs feel less financially secure
- HHs cut back on essential expenditures
- HHs daily labour income has decreased
- HHs debt has increased

These four outcomes were identified in the factor analysis as those with the largest coefficients of correlation with HH vulnerability. Using the data collected, each household was given a COVID-19 score to determine the extent to which their household was affected by COVID-19. A score of 0 implies that the COVID-19 pandemic had no impact on households. Any score above 0 means that households are affected. A score between 0 and 2 meant that the household was moderately affected and represented 10.5 % of the population. A score above 2 signifies that the households have been affected by all of the aforementioned COVID-19 indicators.

The survey revealed that 83% of surveyed HHs indicate having been affected by COVID-19 in some way which is indicated by them having a COVID-19 index score above 2. High HH vulnerability was strongly correlated with a large impact of COVID-19. Based on the scoring methodology used, the impact of COVID-19 was lower on less vulnerable households. The mean and the median of the COVID-19 score is lower for the non-eligible households (the median score was 2.7 for non-eligible households vs 3.1 for eligible households).

**Figure 18. COVID-19 Score in eligible versus non-eligible households<sup>38</sup>**



According to this measure, COVID-19 had a stronger negative effect on the most vulnerable HHs which can be observed in figure 19. A surprising finding was that female headed households seemed to have been less negatively affected than male headed households by COVID-19 in certain ways. This was seen by 86% of female headed HHs having been impacted strongly by COVID-19 (COVID-19 score >2) in contrast to 92% for male headed HHs<sup>39</sup>. Only 55% of female headed households indicated having fewer opportunities for daily casual labour since the start of the outbreak in contrast to 72.7% of male headed households. Additionally, fewer female headed households have become less financially secure since the outbreak (87% vs 76% for men)<sup>40</sup>. Female-headed HHs were less affected by reductions in employment at 11% in contrast to 28.4% of men, but were more affected by termination of employment (19% vs. 8.6% for men) which should be interpreted in relation to their initial employment situation. These differences may be due to the fact that female headed households tended to have lower per capita incomes and more barrier to employment which may mean that they had less to lose than male headed households<sup>41</sup>.

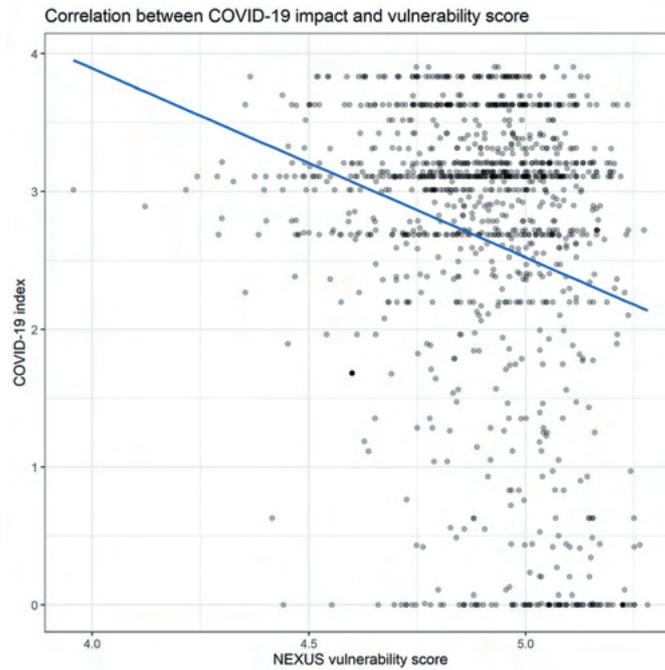
<sup>38</sup> This graph plots the distribution of eligible HHs vs. non-eligible households. The distribution is skewed to the right. Non-eligible households tend to be less affected (median value of non-eligible=2.71 vs 3.1 for eligible households). More often non-eligible HHs were not affected by COVID-19 (15.8% of non-eligible HHs experienced no impact vs. 4.1% for eligible HHs). Likewise, 16.1% of non-eligible HHs experienced a moderate impact vs. 8.9% for eligible HHs. Additionally, 68% of non-eligible HHs experienced a large impact vs. 87% for eligible HHs).

<sup>39</sup> 12% of female headed households have a COVID-19 score between 0 and 2 which shows a moderate impact vs. 7% for male headed households. Likewise, 2% of female headed households had a COVID-19 score of 0 which shows no impact vs. 1% for male headed households.

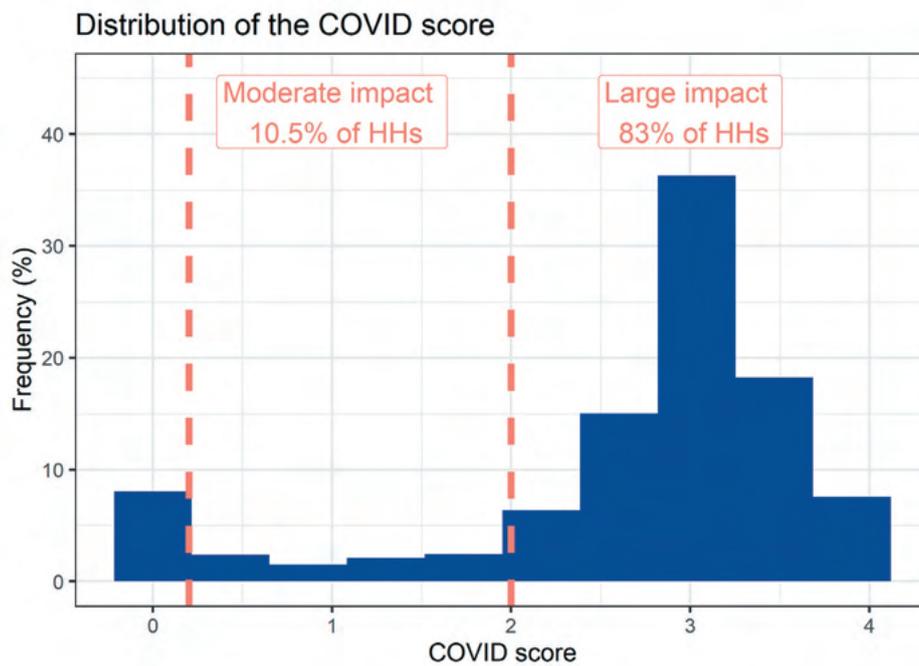
<sup>40</sup> Please note that this study did not verify whether certain vulnerability categories such as female headed households received targeted COVID-19 support which could have influenced these figures.

<sup>41</sup> DRC (2019) Household debt in Iraq: Borrowing in a time of crisis. Available here: <https://reliefweb.int/report/iraq/household-debt-iraq-borrowing-time-crisis>

**Figure 19. Correlation between COVID-19 impact and vulnerability score**



**Figure 20. COVID-19 impact on households<sup>42</sup>**



<sup>42</sup> This graph represents the distribution of the COVID-19 score among respondents. We split up the score into 3 segments based on the distribution:

- 0: 6.5% of HHs
- 0-2 : 10.5% of the HHs
- >=2: 83% of the HHs

The qualitative data revealed a diversity of narratives about how COVID-19 amplified financial hardships. While a few individuals interviewed stated that their financial situation had not changed since the pandemic started, most beneficiaries stated that their situation had worsened. A beneficiary who said that their situation had not changed explained that this was due to having so few economic opportunities at the start of the pandemic. They expressed this by saying, “No one works in my household. There is no difference for us whether there is COVID 19 or not. All the days are the same for us.” Some beneficiaries gave specific examples by citing the financial difficulty of purchasing supplies to take COVID-19 preventative measures at home. One beneficiary described this by saying “Our debt increased, because we bought protective equipment such as masks, gloves, and sterilizers from the pharmacy.” Many beneficiaries described how fear of contracting COVID-19 led them to make other difficult financial decisions like asking vulnerable members to stop working which worsened their economic situations. Some beneficiaries even cited the financial hardship of financing medical care for households members who were infected by COVID-19. Interview participants consistently expressed that the labour market had drastically deteriorated since the start of the pandemic and that there were no employment opportunities outside of the home. Regardless of whether households stated that their circumstances had remained constant or worsened and even when recipients felt pressure alleviated by MPCA grants, all interviewed beneficiaries expressed strong trepidation about the future. Fears concerning future job prospects were shared by all interviewed beneficiaries.

## Discussion and Recommendations

While 24.6% of households became non-eligible since baseline according to their PMT score, the majority of the sample at 75.4% remained eligible for MPCA<sup>43</sup>. All individuals interviewed cited the utility and helpfulness of the MPCA, but none of them described their circumstances as radically altered or structurally improved due to the MPCA grant. Receiving cash assistance helped recipients pay off debts, purchase food, and commodities which were useful for their homes. The usefulness of MPCA for paying off debts was described in previous research<sup>44</sup>. As the largest source of loans were from community members such as friends, family and local business owners, many individuals in the interviews described paying off debts to local grocers which reflects the informal debt market previously described by the CLCI in Iraq<sup>36</sup>. Beneficiaries concurrently experienced improvements to their psychological well-being which has also been noted in previous CLCI research as well<sup>17</sup>. These improvements, however, were cited as short lived by most beneficiaries. Based on this, the majority of beneficiaries could benefit from additional programming to support their resilience.

While previous research conducted on MPCA vulnerability during the COVID-19 crisis in Iraq indicated that the COVID-19 crisis had a negative effect on key indicators such as food security, our study revealed that this was not universally experienced by all beneficiaries<sup>45</sup>. Overall, the beneficiaries in this sample became less vulnerable based on the change in the mean vulnerability score. While this aggregate change is positive, it did not reflect a universal improvement of circumstances as roughly 50% of the surveyed beneficiaries became more vulnerable while the remaining 50% became less vulnerable. These variable outcomes since the start of the COVID-19 outbreak were observed in other literature as well. While CLCI data collected in August 2020 showed that incomes had declined and debts had increased, only 4% of beneficiaries had poor food consumption scores in contrast to 9% before the outbreak<sup>46</sup>. These differences may be partially accounted for due to the differential effects of COVID-19. Our analysis of the COVID-19 scores revealed that the most vulnerable households were the most affected by the COVID-19 pandemic. Additionally, this study did not examine whether beneficiary circumstances had changed due to the presence of COVID-19 specific aid programming. While the regression analysis also included the COVID-19 score, it did not demonstrate any statistically significant impact on the probability of HHs achieving self-reliance. This may be because many of the variables in the model were affected by COVID-19 which may not have controlled for the impact of COVID-19 and could not adequately differentiate these influences. This led us to more

43 These changes in eligibility are based on the characteristics outlined in the HH socio-economic profile section.

44 DRC (2019) Household debt in Iraq: Borrowing in a time of crisis. Available here: <https://reliefweb.int/report/iraq/household-debt-iraq-borrowing-time-crisis>

45 Cash Consortium for Iraq (2020) “The Impact of COVID-19 on Vulnerability Levels” Internal briefing document.

46 CCI (2019) CCI Vulnerability Scoring Model Brief. This document is not available to the public and was created for internal use by the CCI team.

closely consider the qualitative data from the interviews concerning COVID-19 and the COVID-19 score to try to examine the effects of COVID-19.

The study revealed that 55.2% of households have spent their savings in the past 30 days in contrast to 48.2% at baseline. Beneficiary interviews echoed the challenges of having negative cash flow where beneficiaries rarely cited the ability to save. The absence of savings may be due to the absence of financial surpluses from available incomes. Local rotational savings and credit associations (Jamayaat/Silfa) should be identified to encourage a savings culture among MPCA recipients, strengthen social cohesion, improve loans practices, and develop inclusive financial services. Such associations should be linked from an early stage with existing financial institutions such as businesses, cooperatives, or banks to ensure their sustainability.

Certain categories and themes emerged through our analyses which increase the probability of improvements in financial status. A strong contributor to both MPCA non-eligibility and self-reliance were income streams whether this was from regular employment, government financial assistance or humanitarian aid. While qualitative interviews cited the dismal job market in Iraq as one of the primary reasons that their circumstances were difficult, additional programming to support facilitating MPCA recipient access to more reliable sources of income could support better long-term outcomes for MPCA recipients. This points to the importance of having stable and sufficient sources of income more so than economic autonomy from aid or government assistance. While it may seem contradictory that households who receive aid could be self-reliant, this was a clear result of the logistic regression. These HHs may also generate more income from being more involved and embedded in different social and formal networks of support.

Other indicators which increased the probability of self-reliance were higher levels of education for the head of household and having young male household members working. This observation was possible due to the surprisingly high number of young, male children in HHs who were working. This concerning finding is not indicative of a need for young males and children to work, but further highlights the importance of income availability and stable revenue streams identified above. Many young Iraqis drop out of formal education because of their family's financial difficulties while others do not have the requisite literacy and numeracy skills to reintegrate into the formal system. While the immediate necessity for income is important to recognise, the fact that higher levels of education of a head of household also increases the probability of self-reliance means that both educational achievement and income generation for youth should be viewed as joint aims. Integrated programmes should be provided to young people so that they can receive formal education. Alternatively, market-driven vocational skills trainings can be followed by job placements and/or apprenticeships. Adult members of these highly vulnerable families should be supported simultaneously to gain livelihoods through business development support, mentoring, job placement, and/or asset transfers in order to secure a household income and allow youth to remain in school.

Access to higher quality WASH infrastructure was also highlighted including having a shelter with adequate privacy, security, and space, and access to functional, private latrines. Listing household repairs as a top priority was seen to be associated with the probability of being self-reliant. Initial results from a randomized control trial conducted with the CLCI revealed that cash transfers allowed beneficiaries to focus on more immediate survival needs as well as to invest in critical longer-term needs, including health, education and shelter repairs.<sup>47</sup> This research was able to show that household repairs were prioritised in groups that received the cash assistance in a lump sum in contrast to receiving the cash assistance in multiple instalments<sup>48</sup>. One interpretation of this is that households that had already prioritized more immediate needs were better prepared to prioritise longer term investments such as household repairs. This may be why households that prioritised household repairs may be more likely to become self-reliant. These findings suggest that MPCA's objective to act as consumption support is partially achieved in the sense that self-reliant HHs were no longer as concerned about immediate survival needs. The additional cognitive bandwidth available to beneficiaries when these immediate survival needs are taken care of allows individuals

47 Cash Consortium for Iraq (2020) "Can Cash Transfers Drive Economic Recovery in Conflict-Driven Crises? Experimental Evidence from Iraq" presentation

48 Cash Consortium for Iraq (2020) "Can Cash Transfers Drive Economic Recovery in Conflict-Driven Crises? Experimental Evidence from Iraq" presentation

to devote energy to longer term investments and their overall stability which has been described in previous CLCI research<sup>49</sup>. This suggests that additional programming support which allows a greater proportion of beneficiaries to shift from being concerned about more immediate needs could boost their likelihood of achieving self-reliance. Graduation support is one means of bridging beneficiary households to more stable income streams which could help them shift towards a set of factors which could lead to self-reliance.

Key informant interviews consistently highlighted shelter problems as a main source of stress and 11% of survey respondents who took out loans used the money to pay for household repairs. Rehabilitation assistance could be provided to private shelters with light to medium maintenance needs. The repairs would be based upon average Bills of Quantities (BoQs) developed through joint technical and vulnerability assessments. Based on SREO's previous experience and reflecting on priorities highlighted by respondents, rehabilitation work could include filling holes in roofs to ensure watertightness, repairing external walls and internal partitions, installing or repairing doors and windows, rehabilitating WASH and kitchen facilities, and electrical infrastructure. Eligibility to receive private shelter repairs would be assessed using selection criteria focused on the level of dilapidation of the building, household employment, debts, food assistance, incomes, and assets.

While healthcare came before shelter in the priority of needs, spending habits consistently reflected spending prioritization on shelter, and key informant interviews consistently highlighted shelter problems as a key source of stress. It may be that, with limited resources, households do not consider health needs to be as urgent as shelter needs. The risk of eviction, particularly for large households may take precedence over medical needs which can be seen in delays in seeking medical care. Furthermore, it may be that the marginal gain and value of spending on shelter and debt repayment create more medium-term opportunities and prioritize safety than the perceived value of medical attention for long-term health concerns. Some individuals interviewed who lived with chronic disease or pain frequently described a habituation to these limitations which may make delaying medical care easier since poor health status is the norm for some beneficiaries. The CLCI could reinforce its referral system to external health actors. Many survey respondents have unmet medical needs and may benefit from specialised support for physical health and mental health needs. Programs could include mapping the health services and stakeholders available for returnees and IDPs by liaising with the relevant regional coordination mechanisms such as health working groups. Individuals living with chronic disease or pain could receive guidance from outreach officers on how to access key health services for free in the surrounding area and through referral pathways for specialized services.

There was a noteworthy disconnect between how the factor analysis posited households as self-reliant vs. how beneficiaries defined self-reliance in their own terms. While 76% of beneficiaries identified themselves as self-reliant when asked in the survey, only 8.3% were self-reliant based on the cut-off established with the factor analysis. The qualitative interviews revealed how dynamic and nuanced these subjective definitions of self-reliance are for beneficiaries. Even beneficiaries in interviews who were dependent on aid consistently described themselves as self-reliant based on a complex combination of factors including their religious beliefs and their problem-solving skills<sup>50</sup> over the course of Iraq's protracted crisis. This finding highlights the potential for further research to shed additional light on the complexities of how MPCA recipients perceive their agency, and personal empowerment after cash assistance. These findings could reveal how programming could further empower beneficiaries and better support their psychosocial wellbeing as similar recommendations have been made in previous cash assistance research<sup>51</sup>.

These findings demonstrate the promising potential for graduation support to increase the likelihood of self-reliance. The findings of this study could be used to help tailor graduation support so that it benefits those that are most in need<sup>52</sup>. Certain vulnerability categories could benefit from receiving more targeted or tailored graduation support including households who have chronic ill or disabled

49 DRC (2019) Household debt in Iraq: Borrowing in a time of crisis. Available here: <https://reliefweb.int/report/iraq/household-debt-iraq-borrowing-time-crisis>

50 Problem-solving skills were alluded to in the KIIs, including the ability to be resourceful and make things work

51 Samuels & Stravropoulou (2016) 'Being Able to Breathe Again': The Effects of Cash Transfer Programmes on Psychosocial Wellbeing. *The Journal of Development Studies*. Available here: <https://www.tandfonline.com/doi/abs/10.1080/00220388.2015.1134773?journalCode=fjds20>

52 Trickle Up (2019) Graduation and Refugee Standards: A Guide for UNHCR Operations & Implementing Partners. Available here: [https://trickleup.org/wp-content/uploads/2020/10/GraduationRefugeeStandards\\_2019.pdf](https://trickleup.org/wp-content/uploads/2020/10/GraduationRefugeeStandards_2019.pdf)

family members in the household, households that share shelters, households with over eight family members, households that are engaging in food related coping strategies, and households that have had to take out recent loans. This may be especially important for households with chronically ill family members as 61% of households in this sample were a part of this category. This is also the case for individuals who are engaging in food related coping strategies (83%) especially for individuals who have recently borrowed food. An awareness of these factors may allow graduation support to reach the individuals who need it most in order to secure the beneficial effects experienced after receipt of MPCA and support long-term resilience.

## Recommendations

### Programme

- **Implement a graduation approach that helps facilitate access to a variety of possible income-generating activities**  
The definition of self-reliance that emerges is inherently linked with a stable and sufficient source of income. Income generation and expected upcoming employment are critical components of achieving self-reliance in both subjective and objective measures. Cash assistance is also viewed as a component of self-reliance among vulnerable households suggesting the validity and possible successes that could come from pairing consumption support with opportunities for income generation through employment. While it is key to secure employment outcomes for the head of household, the research also suggests that involving youth in income generation can improve self-reliance of the household. While those with no source of income should be prioritised, those households relying on only one source of income should not be excluded from income-generating opportunities.
- **Reconsider the strategic duration of cash assistance**  
Most households were found to still be eligible for MPCA 9-12 months after assistance. While up to three months of assistance was established as part of the MPCA emergency response, as the context shifts into recovery programming the duration of cash assistance could be reconsidered. Discussions to understand different household profiles in terms of vulnerabilities and capacities will be a critical component of decision-making on the duration of MPCA assistance, to inform how best to assist those households who have the capacity for income generation immediately, those who require a graduation approach consisting of longer term MPCA layered with livelihoods support and those who have substantial and chronic barrier to income generation.
- **Promote an integrated approach to programming that facilitates access to different sectoral interventions to meet the variety of needs of vulnerable households**  
While income generation is a critical component of self-reliance, so too are other characteristics of the household including WASH, shelter and protection deficits. This suggests that implementing an integrated approach that refers households who are being assisted with consumption support to sectoral interventions that can help households to secure those pivotal characteristics, such as adequate shelter and access to essential items, will increase the likelihood of the household becoming self-reliant. Increasing coordination both within and between organisations will promote access to holistic support most efficiently.
- **Adapt targeting to tailor type of assistance based on different household characteristics and capacities**  
The most socio-economically vulnerable populations are those most in need of immediate consumption support without delay. Targeting should evolve to identify and trigger different tracks of assistance depending on household vulnerabilities and capacities. For example, households with specific vulnerabilities that decrease the probability of achieving self-reliance such as chronically ill or disabled household members, recent loans for consumption, low levels of education attainment and engaging in food related coping strategies, could benefit from tailored interventions to account for characteristics in a way that may secure positive, longer-term outcomes for the household.

- **Equip households with financial management strategies to help manage the household's cash flow and enable prioritisation of longer-term outcomes**  
The effect of diversified income sources can be supplemented by improving the household's budgeting skills through teaching financial management strategies to programme participants. In addition to financial education, enhancing saving and borrowing practices through encouraging or supporting saving circles and access to finance, where relevant, could be beneficial. In this way, households may be better able to manage expenses, savings and debt to smooth consumption when facing future shocks. When immediate survival consumption can be met, households will be better able to make longer-term financial decisions for their futures.

## Donor

- **Continue to fund MPCA to provide consumption support to vulnerable households**  
Receiving assistance has beneficial outcomes for households and is considered part of self-reliance. The largest impacts are at a specific point in time. In the absence of an enabling environment for finding employment and income generating activities, MPCA plays a critical gap-filling function to enable households to meet their essential needs in the immediate term.
- **Fund long-term graduation approach programming (24-36 months) to support vulnerable households to become more self-reliant**  
Stable, sufficient and diverse sources of income were intrinsically linked to the definition of self-reliance in this study, by both subjective and objective measures. MPCA is critical as a gap-filling measure to ensure households are able to meet immediate basic needs, where possible attempts should be made to purposefully layer MPCA with complementary, income generating activities to graduate households out of poverty.
- **Enable the implementation of an integrated approach that encourages and facilitates the referral of participants between programmes**  
Understanding that self-reliance can only be achieved through a variety of interlinked economic, material and well-being factors, encourage and allow for participants to be referred internally and externally for complementary assistance to be able to meet the diverse needs of the household and encourage self-reliance.
- **Finance further research on perceptions of self-reliance and resilience of participants**  
The noteworthy disconnect between the coverage of the objective (factor analysis) definition of self-reliance as compared to the subjective (self-reported) definition of self-reliance suggests that further research on the perceptions of participants and communities on vulnerabilities and capacities could reap interesting and useful results. Programme selection criteria and programmatic outcomes could both benefit from further exploration of the themes of self-reliance, resilience and the ability to meet basic needs. As the study showed, receiving some form of assistance (either government, humanitarian or both) had a higher probability of being in the self-reliant group. Although it may appear contradictory that receiving external assistance could be in line with the concept of self-reliance, the study shows that it is receiving money, not necessarily only from working, that enables self-reliance.

## Government

- **Provide and expand access to social protection for households without capacity for income generation**  
Many households are in need of consumption support and view the receipt of government assistance as a component of their self-reliance. Ensure access to social protection in particular for households who are unable to access long term income generation and who are the most vulnerable to individual or collective shocks.
- **Enact economic reform priorities as outlined within White Paper to ensure private sector growth to create job opportunities**  
For vulnerable households in Iraq to secure stable, sufficient and diverse sources of income, the job market needs to be revitalised. If the reform pillars in the Government of

Iraq's White Paper are enacted, the private sector could grow to provide more and better job opportunities. In addition to job creation, the rehabilitating of the financial sector could lead to improved access to financial services and thus inclusion.

#### Further Research on:

- **Personas and Pathways**

Using Process Tracing methodologies in order to enhance our understanding of how cash mediates different outcomes depending on the household's or individuals' characteristics.

- **Saving and borrowing behaviour**

The trend of participants being unable to save and spending their savings was observed during the course of this study and associated with households who remained eligible for cash even 9-12 months after assistance and was also mentioned frequently as self-reported definition of self-reliance. Being able to save is a critical behaviour that can lead to smoothing household consumption and being resilient to shocks, though there is little evidence for the Iraqi context on saving behaviour on which to base 'help to save' or saving circles schemes.

#### Durable Solutions, displacement status and socio-economic vulnerability

Displacement status was neither found to be significant in the factor analysis conducted to define self-reliance nor in the regression analysis as strong predictors of being self-reliant or not being self-reliant. That is to say, displacement status did not emerge as an important variable when it comes to self-reliance. Displacement status was not a specific focus of this research so dedicated research exploring the relationship between displacement status and socio-economic vulnerability would prove useful for programme design and progress measurement within the Durable Solutions framework.

## ANNEXES

### Annex 1: Scope of work

Please see the below information outlined in the terms of reference:

#### The proposed study shall answer the research questions below:

1. What is the socio-economic profile of MPCA beneficiaries 3 and 6 months after receiving assistance? This question will also analyse how the current Covid19 crisis affected the different profiles.
2. What is the socio-economic profile of HHs assessed for MPCA and found not eligible 3 and 6 months after the assessment?
3. What % of MPCA beneficiaries achieved self-reliance 3 and 6 months after receiving assistance?
4. What are the factors (social cohesion aspects, specific socio-economic characteristics of the beneficiaries, etc.) that have allowed some households to achieve self-reliance compared to those who couldn't?
5. What is the socio-economic profile of beneficiaries that have graduated from MPCA support to livelihoods activities?

**Proposed methodology:**

- Factor analysis to determine characteristics of the sample of beneficiaries to contact for follow up survey. These should include baseline vulnerability level, demographic, socio-economic and geographical factors, assistance received by the household following the final disbursement of MPCA and other coping strategies used.
- Quantitative data collection using tailor-made follow up household survey on sample of MPCA beneficiaries who received assistance 3 and 6 months before the study in various locations of Iraq with the support of IRC in Mosul city, Kirkuk city, Hawija city and Sinjar city.
- Logistic regression analysis to identify factors linked to achieving self-reliance among MPCA beneficiaries.
- Qualitative data collection with selected sample of MPCA beneficiaries to explore findings from household survey

**KEY RESPONSIBILITIES****Scope of consultancy**

The successful applicant will design and plan the analysis, conduct interviews, oversee the development of additional supporting data collection, as well as draft the final report over the course of a four-month period.

The following outputs are to be delivered during the implementation period:

**Study deliverables include:**

1. An in-depth report covering the research questions detailed above

**The report shall include the following sections:**

- A. Executive Summary
- B. Research methodology
- C. Presentation of findings
- D. Recommendations for programme implementation

**Methodology & division of responsibilities**

All references to data collection (proposed methodology) referenced are provisional plans; the consultant will be in charge of developing an appropriate methodology that fits the research. A desk review will provide information and analysis, incorporating secondary resources during this initial phase. The methodology will employ primarily quantitative techniques, such as factor analysis and household surveys, and a qualitative component to complement/verify the quantitative data analysis is expected. The consultant shall work closely with CLCI focal points and will be expected to provide weekly updates (verbal) on progress and have bi-weekly meetings.

CLCI enumerators are available to be contracted as part of data collection and Arabic-speaking staff will be available for coordination support. As required, DRC is also able to draw on its Safety Coordination Officer to collate third party data on security incidents relevant to the assessment objectives.

The resulting report and recommendations should reflect the need to promote broad participation in, work within and build upon existing systems, spur more inclusive dialogues, and determine what approaches best suit the context at this time.

## Annex 2: Data cleaning protocol

For continuous variables, extreme values were imputed at the median if the median was above 0. Otherwise, the extreme values were winsorized at the 0.95th percentile. The continuous variables are variables of expenses, income and debt, this method was chosen to preserve values above 0 even when most of the respondents do not declare any value. No cleaning per se was performed on categorical variables, variables with incoherent values were discarded from the analysis.

As part of the data cleaning, it was chosen to work with two datasets to address the duplicates individual identifiers in the data. The full dataset (1337 obs) and a reduced dataset that can be matched with the baseline data (1258 obs).

## Annex 3: Study Indices

### Self-Reliance Index

Additional questions were integrated into the survey to understand **self-reliance as perceived by the respondents themselves**. These include:

- What is your economic situation currently like compared to what it was like before you received MPCA/cash assistance 9-12 months ago?
- Do consider your household to be self reliant?<sup>53</sup>
- What would you consider self-reliance to be for your household?<sup>54</sup>

These questions are subject to personal interpretation such as what “before receiving MPCA” means and “self-reliance” as a concept. Surprisingly, despite around 60% having indicated that their situation worsened since the start of the pandemic, 76% of households defined themselves as self-reliant.

To further understand how to further **conceptualise of self-reliance, for the purpose of CLCI programming and integration of MPCA and the graduation programme, we conducted a factor analysis**. This exploratory statistical method helps extract common variance of a set of indicators into different factors and combines indicators that have a similar response patterns into different factors (high intercorrelation and high confounding).

Out of the survey, indicators associated with household vulnerabilities and economic indicators were extracted to further examine self-reliance and vulnerability. Within this, 55 variables were included in the analysis covering all the sections of the survey.

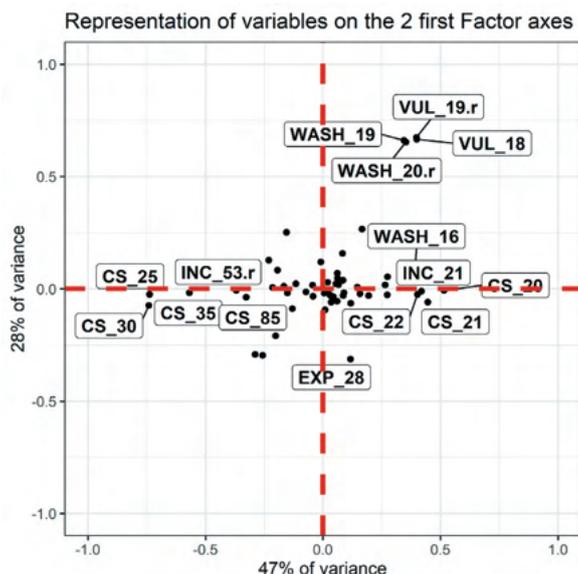
<sup>53</sup> These descriptive statistics are included in the body of the report with graphical representation on page 25.

<sup>54</sup> This answer had a text option and was therefore qualitative. Therefore, this was not included in the factor analysis.

The table below presents the variables included in the factor analysis:

<p><b>Background Information &amp; documentation</b></p> <p>Status: is a remainee or returnee</p> <p>Location</p> <p>Are you currently registered for a government social assistance program?</p> <p>Has your family received any type of assistance in the past 30 days?</p> <p><b>Household vulnerability</b></p> <p>Including yourself, how many people reside in this household?</p> <p>What is the education level of the head of household?</p> <p>Does the Head of HH have a physical, visual, auditory or mental disability?</p> <p>Do you have PLW ?</p> <p>Is your household hosting any children (under 18 years old) who not belong to your family?</p> <p>HH Vulnerabilities/If yes, how many?</p> <p><b>Self-reliance</b></p> <p>Current economic situation has not changed or is better than before you received MPCA/cash assistance 9-12 months ago</p> <p>Do consider your household to be self-reliant?</p> <p><b>Top (4) priority needs:</b></p> <p>Shelter /Food/Healthcare/ Water/ Education/ Household repairs/ Employment/ Cash</p> <p>WASH and Shelter status</p> <p>What has been your household's primary source of drinking water over the past 7 days?</p> <p>Do not live in a standard shelter (house or appt)</p> <p>Do you currently face risk of eviction?</p> <p>Do you share a shelter with another family?</p> <p>If yes, how many families do you share a shelter with (not including your own family)?</p> <p>Does your shelter provide your family with adequate space, privacy and security?</p> <p>Do not have access to private latrines</p> <p><b>Income</b></p> <p>Primary source of Income in the last 30 days: Temporary or daily wage-earning employment/No source of income/ Regular employment (Private or government job)</p> <p>Anticipate working more than 7 days in the next 30 days</p>	<p><b>Coping strategies</b></p> <p>Accepting that adult females of the family are engaging in risky behavior</p> <p>Children under 18 work to provide resources?</p> <p>Anyone in the family migrating?</p> <p>Attending banquets held on religious and social events to have food?</p> <p>Child marriage?</p> <p>Forced marriage (for adults)?</p> <p>During the past 30 days, did anyone in your household have to do any other things that are not listed here because there was not enough food or money to buy it?</p> <p>Selling household property</p> <p>Spending savings?</p> <p>In the last month has anyone in your household taken out any new loans?</p> <p>Selling means of transportation?</p> <p>Children dropping out of school?</p> <p>Reducing expenditure on non-food items?</p> <p>Changing place of residence and accommodation to reduce expenses?</p> <p>Accepting that adult males of the family are engaging in risky behaviour</p> <p><b>Coping strategy - Food</b></p> <p>Shifting towards cheaper and less quality food items</p> <p>Borrowing food or asking assistance from relatives and friends</p> <p>Reducing the number of daily meals</p> <p>Consume less food during meals</p> <p>Curbing the adults' need to ensure food needs of children</p> <p>Do you have adequate access to essential hygiene items (ex. soap, toothbrush, shampoo)?</p> <p>Do you have adequate access to clothing, fuel and basic household items (ex. bedding, cooking items)?</p> <p>In the past 7 days, did your family have access to adequate quantities of food?</p>
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A first factor was able to capture 47% of the variance across beneficiaries. While this was not perfect, it covers the largest proportion within this sample. The indicators driving the first factor are those that have the highest coefficient of correlation (positive or negative) with respondent the vulnerability score. This first factor establishes a separation between indicators of economic and social stability, labelled as self-reliance, in contrast to indicators of extreme vulnerability. Indicators defining self-reliance are those with the highest negative coefficients (coefficients < - 0.20). A threshold for establishing self-reliance was determined based on the cumulative sum of those coefficients in order to divide households into “self-reliant” vs “not self-reliant”.



As such, “self-reliance” is associated with the set of variables strongly negatively correlated with the vulnerability score of households and combined with households’ self-perception of self-reliance. We did so in the hopes that this definition and categorisation encompasses a holistic definition of self-reliance beyond just a set of indicators. On the contrary, extreme vulnerability is associated with another set of variables. A threshold was then set as a cut-off to establish which households we would consider as self-reliant or not.

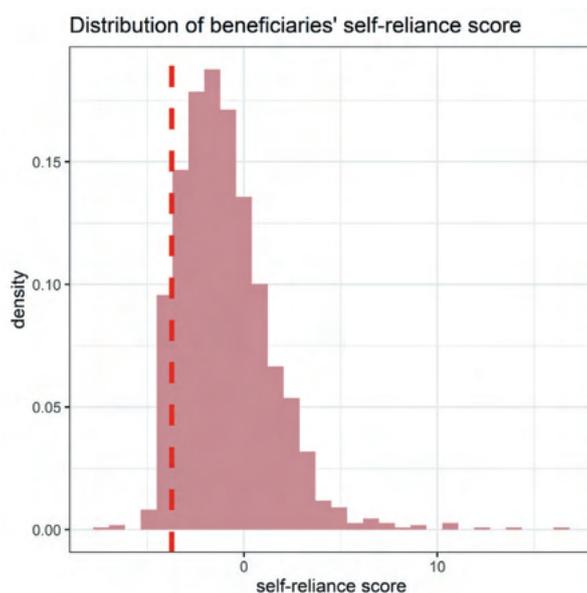
The following tables provides an overview of the definition of “self-reliant” households:

DEFINING VARIABLES	
Indicators associated with self-reliance	Indicators associated with extreme vulnerability
<p>WASH and shelter:</p> <ul style="list-style-type: none"> <li>Does your shelter provide your family with adequate space, privacy and security? (WASH_23)</li> </ul>	<p>WASH and Shelter:</p> <ul style="list-style-type: none"> <li>Do you currently face risk of eviction? (WASH_16)</li> <li>Do you share a shelter with another family? (WASH_19)</li> <li>If yes, how many families do you share a shelter with (not including your own family)? (WASH_20)</li> </ul>
<p>Income and expenses:</p> <ul style="list-style-type: none"> <li>Anticipate working 7 days or more in the next 30 days? (INC_53)</li> <li>What are your family’s top (4) priority needs?/Household repairs (EXP_24)</li> </ul>	<p>Income:</p> <ul style="list-style-type: none"> <li>No source of income in the last 30 days? (INC_21)</li> </ul>
<p>Coping strategies:</p> <ul style="list-style-type: none"> <li>In the past 7 days, had access to adequate quantities of food (CS_35)</li> <li>In the past 7 days, had adequate access to essential hygiene items (ex. soap, toothbrush, shampoo)(CS_25)</li> <li>In the past 7 days ,had adequate access to clothing, fuel and basic household items (ex. bedding, cooking items) (CS_30)</li> </ul>	<p>Coping strategies:</p> <ul style="list-style-type: none"> <li>Borrowing food or asking assistance from relatives and friends (CS_20)</li> <li>Reducing the number of daily meals (CS_21)</li> <li>Consume less food during meals (CS_22)</li> <li>Shifting towards cheaper and less quality food items (CS_19)</li> </ul>
<p>Self-reliance:</p> <ul style="list-style-type: none"> <li>Do consider your household to be self-reliant?(CS_85)</li> </ul>	<p>HH vulnerabilities:</p> <ul style="list-style-type: none"> <li>Is your household hosting any children (under 18 years old) who do not belong to your family? (VUL_18)</li> <li>If yes, how many? (VUL_19)</li> </ul>

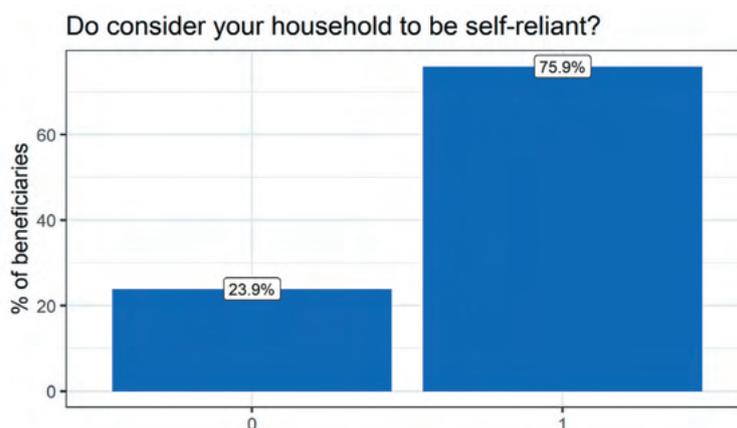
The variables in the table are the indicators used in the factor analysis that have a loading factor >

0.20 on the first factor. The other indicators, which were weakly correlated with the first factor, were discarded. A set of variables negatively correlated with the factor relate to households in which basic needs are met (food, hygiene, basic household items, etc.), WASH infrastructure is sufficient, and HH members anticipate working in the next 30 days. Moreover, those households identify as self-reliant. Conversely, variables positively correlated with the factor are those of extreme vulnerability such as having no source of income in the past 30 days or facing eviction (see the below figure displaying the indicators with higher loading levels out of the 55 used in the factor analysis).

Household responses were then scored on the first factor. A threshold split these households between self-reliant and not self-reliant. We computed the threshold by summing the coefficients of the indicators most correlated with the first factor (each indicator has a loading score measuring its impact on the definition of the factor -see the table below). The threshold was therefore set to -3.74.



According to this definition of self-reliance, only 8.3% of beneficiaries met these criteria.



We also considered some other ways of defining self-reliance, including combining conditions on identified indicators. We considered using the two indicators of self-assessed self-reliance above combined with indicators of vulnerability and employment. We selected households with a low CSI below the median in the 4th quartile of expenses (proxy for consumption) who anticipated to work more than 7 days in the next month. With this method, around 3% of households were considered “self-reliant” by this definition. The advantage of defining self-reliance by this method is that it is possible to pre-select indicators of interest. However, the major limitation is that the definition of self-reliance according to this selection of indicators is ultimately not data-driven and might not appropriately discriminate between households.

The factor analysis methodology allows us to have a first-step which is completely data-driven while the interpretation comes in the second step when we label the factors based on the correlation of indicators. We decided to keep the factor analysis results because they were richer in terms of the variables that emerged, and they were largely coherent with the indicators that we identified as important. Moreover, the continuum defined between self-reliance and extreme vulnerability can be exploited for further analysis.

### COVID-19 Vulnerability Score

The COVID-19 vulnerability score for households was also created based on the factor analysis using the additional 12 COVID-19 questions from the survey. We understand that COVID-19 has affected households in these four main outcomes:

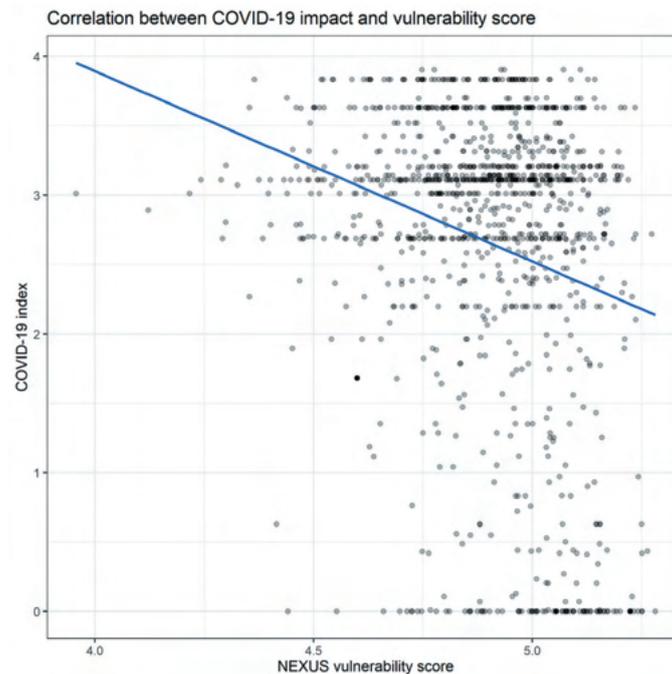
- HH feel less financially secure
- HH cut back on essential expenditures
- HH daily labour income has decreased
- HH debt has increased

These four outcomes are identified in the factor analysis as those with the largest coefficients of correlation with the first factor.

The HH scoring was meant to elucidate the extent of the impact on HH vulnerability scores. A score of 0 implies that the COVID-19 had no impact on households. Any score above 0 meant that households were affected. Scores between 0 and 2 meant that households are moderately affected (10.5 % of the population). Above 2 signified that the households were affected by all of the aforementioned COVID-19 indicators (83%). We observed that HH vulnerability is strongly correlated with the COVID-19 factors. We predict that the index may have a significant impact on self-reliance and HH vulnerability.

The table below presents the coefficients of the 12 indicators which comprise the COVID-9 index:

Question	Coefficients
Has your family become less financially secure since the start of the COVID-19 outbreak in March 2020?	0.84
Has your family had to cut back on essential expenditures since the start of the COVID-19 outbreak in March 2020?	0.73
Has your household income been negatively impacted since the start of the COVID-19 pandemic in March 2020 in any of the following ways?/Less Daily casual labour	0.63
Have you had to borrow money due to some of the economic effects of the COVID-19 pandemic on your household since March 2020?	0.49
Since the COVID-19 pandemic began in March 2020, has your debt increased	0.42
Are products that you normally buy less available since the start of the COVID-19 outbreak in March 2020?	0.21
Has your household income been negatively impacted since the start of the COVID-19 pandemic in March 2020 in any of the following ways?/Reduction in working hours or days	0.20
If yes, has this made it more difficult for you to make necessary purchases?	0.17
Are products that you normally buy more expensive since the start of the COVID-19 outbreak?	0.14
Has your household income been negatively impacted since the start of the COVID-19 pandemic in March 2020 in any of the following ways?/Reduction in salary	0.07
Has your household income been negatively impacted since the start of the COVID-19 pandemic in March 2020 in any of the following ways?/Termination of employment	0.01
Has your household income been negatively impacted since the start of the COVID-19 pandemic in March 2020 in any of the following ways?/No impact	-0.81



Strength of the correlation between vulnerability score and COVID-19 score

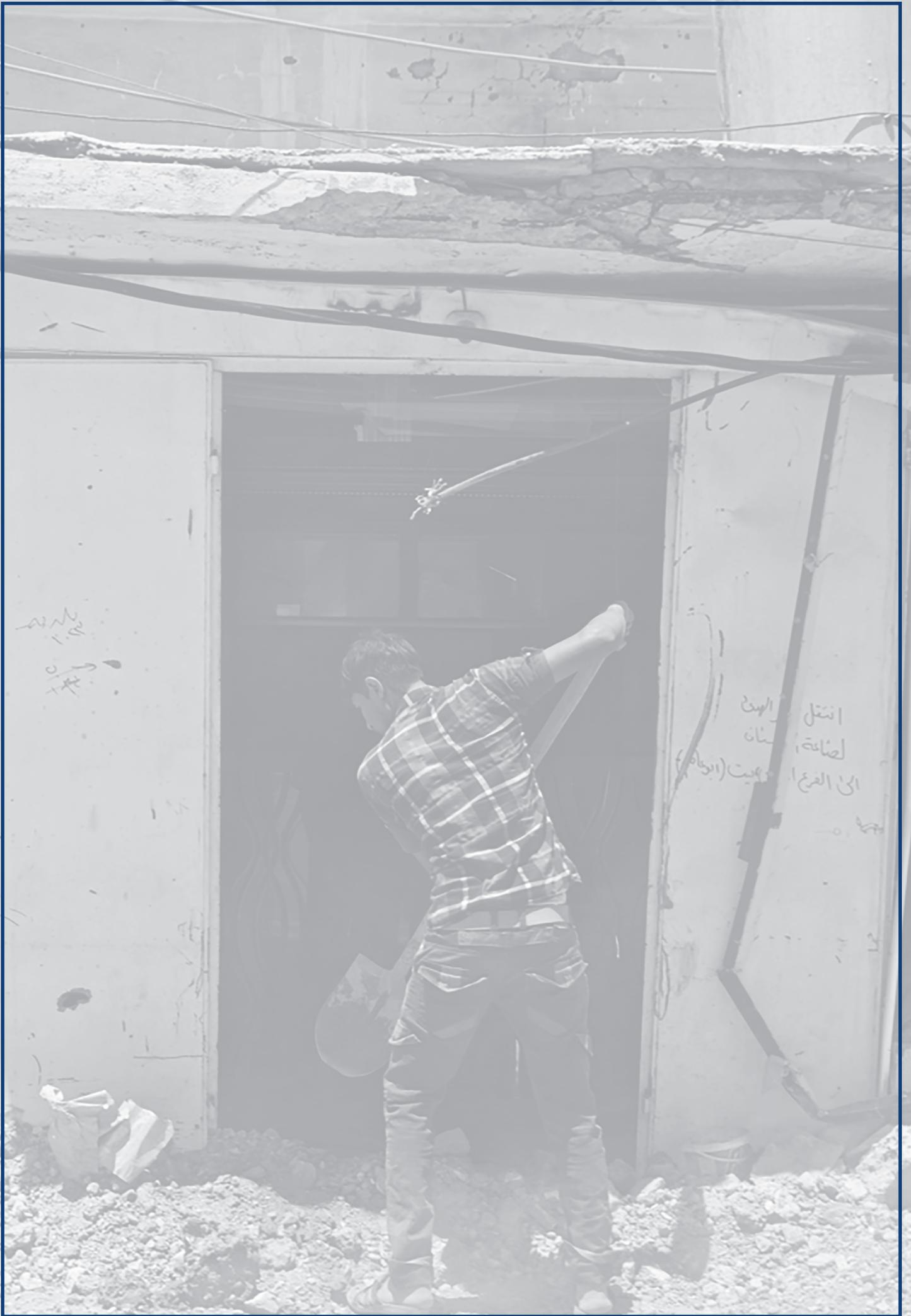
After finalising the regression analysis incorporating the COVID-19 index, we hoped to understand whether or not COVID-19 had significantly impacted household self-reliance. The regression should help separate that COVID-19 outbreak effects from other key factors/variables which could potentially help better outline actionable programmatic areas of change.

## Annex 4: Logistic regression methodology and findings tables

We performed a stepwise logistic regression with most of the variables from the survey and the variables constructed of employment rate, PMT score and COVID-score. The insights from backwards and forwards selection models were combined, and the variables of interest were added (COVID score, PMT score, and gender of the HHH). Only significant variables ( $p$ . value < 0.1) were kept in the model (see table below).

Researchers expected that the variables that helped defined self-reliance in the factor analysis would be positive and significant in the regression. Indicators of vulnerabilities would then have a negative impact on the probability to be self-reliant while indicators of better living and economic condition would have a positive impact. Particular attention was be given to the gender of HHH, the variation of the PMT vulnerability score from baseline and the respondent COVID-19 score. Based on the descriptive analysis, researchers expected that the gender of the head of households would be negative if significant, as female-HHH were less likely to consider themselves self-reliant. The variation of the PMT score would be positively associated with self-reliance. Finally, researchers expected a strong negative impact of the COVID score because the pandemic has reduced job opportunities. Because this was an exploratory analysis, we decided to only include the statistically significant variables from the stepwise regression in this annex. Because we cannot expect a strong causal narrative from this analysis due the limitations described, the below table was compiled for strictly informational purposes.

Variables	Coeff	Std. Error	z value	Pr(>  z )
Intercept	-9.396	1.7	-5.5	0.000
<b>Household information and structure</b>				
District: Mosul	-1.319	0.6	-2.2	0.028
Size of the HH >= 5	1.868	0.8	2.4	0.015
Are you currently registered for a government social assistance program?	1.078	0.5	2.0	0.042
Has your family received any type of assistance in the past 30 days?	3.463	0.8	4.6	0.000
Do any of your household members have any disabilities (excluding the head of household)?	-1.593	0.6	-2.8	0.006
Does the Head of HH have a Chronic Illness?	-0.935	0.5	-1.9	0.052
Education of the HHH: Primary Education	1.561	0.6	2.5	0.013
Education of the HHH: Secondary Education	2.911	0.7	4.1	0.000
Education of the HHH: Graduate Education	4.928	0.9	5.7	0.000
<b>WASH and Shelter Status</b>				
Do you share a shelter with another family?	-4.406	0.8	-5.7	0.000
Does your shelter provide your family with adequate space, privacy and security?	2.695	0.8	3.6	0.000
What types of functional toilets do you have access to?/Private Latrines	2.364	0.8	2.9	0.003
<b>Income and expenditures</b>				
Employment rate	2.846	1.4	2.0	0.046
Income earned through regular employment (private or government job)?	0.531	0.2	2.6	0.009
Main occupation : Construction	-1.685	0.6	-2.8	0.006
Primary income sources of the last 30 days/Social services (disability allowance)	4.759	1.4	3.3	0.001
Primary income sources of the last 30 days/Temporary or daily wage earning employment	2.585	0.7	3.8	0.000
Primary income sources of the last 30 days/Own business, retirement fund or pension	1.800	0.9	1.9	0.052
Household members who worked over the course of the last 30 days?/Males (6 - 17)	4.032	1.4	2.9	0.003
What are your family's top (4) priority needs for the past 30 days?/Healthcare	1.123	0.5	2.2	0.028
What are your family's top (4) priority needs?/Water	1.542	0.5	2.9	0.003
What are your family's top (4) priority needs?/Household repairs	3.489	0.6	5.8	0.000
<b>Coping strategies</b>				
Food/Shifting towards cheaper and less quality food items	-2.691	0.5	-5.2	0.000
Food/Borrowing food or asking assistance from relatives and friends	-4.461	0.9	-5.0	0.000
Food/Reducing the number of daily meals	-3.442	0.8	-4.2	0.000
Food/Consume less food during meals	-3.704	0.7	-5.1	0.000
Finance/Where did the new loans come from?/Other	-2.002	0.6	-3.3	0.001
Finance/What did you take out the loans for?/Household consumption needs	-1.350	0.5	-2.5	0.013
<b>Other</b>				
Variation of PMT score	2.132	1.1	1.9	0.060





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