Comparing Internally Displaced Persons with Those Left Behind: Evidence from the Central African Republic

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Abstract: Global poverty is increasingly becoming concentrated in conflict-affected settings. Therefore, assessing the welfare of those people displaced by conflict is of growing policy importance. Collecting and analyzing data on displaced people is challenging because sampling them is difficult, standard welfare metrics may not reflect their experiences, and they are highly heterogeneous. Assessing the welfare effects of displacement also hinges on constructing counterfactuals that show how internally displaced persons would have fared had they stayed in place. Displaced people typically come from a nonrandom subset of communities affected by conflict or other shocks, so comparing them with the rest of the population may be misleading. This paper addresses this issue using data from the Central African Republic, which recorded detailed information on displacement histories to isolate the communities from which those living in internally displaced person camps originated. Using these "catchment areas" for internally displaced person camps as a counterfactual suggests that although displaced households have lower monetary consumption and higher monetary poverty than the overall population, they may be no worse off on many key metrics than those left behind in the communities originally affected by conflict. Moreover, those left behind enjoy none of the benefits of being in camps, such as additional access to water and sanitation services. These results underline the importance of tailoring policies and data collection to consider those in communities originally affected by conflict, just as practitioners are doing for displaced populations.

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1. Introduction

More than 100 million people are forcibly displaced by conflict and violence worldwide (UNHCR, 2022). Global poverty is increasingly becoming concentrated in fragile and conflict-affected settings (Corral, Irwin, Krishnan, Mahler, & Vishwanath, 2020). Therefore, understanding the unique poverty profile of displaced people is vital for designing poverty-reducing policies.

Is not clear, a priori, how internally displaced persons (IDPs) fare compared to other people living in conflict-affected countries. While moving typically leads to loss of assets, networks, and livelihoods, they at least remain within the same country – unlike refugees – and they have in some sense managed to escape areas where conflict is concentrated – unlike those left behind. How best to target poverty-reducing interventions to reach IDPs, refugees, those left behind, and those ostensibly outside the orbit of conflict's effects remains an open question.

However, collecting and analyzing the data needed on forcibly-displaced people is challenging for at least three key reasons. First, sampling and fieldwork logistics are not straightforward; displaced people are moving by definition, so it is difficult to sample them, while displacement is often driven by conflict which complicates fieldwork logistics. Second, "standard" questionnaires need to be tailored to reflect the experiences of displaced people better (EGRISS, 2020). Third, there is crucial variation among forcibly displaced people, between refugees – those crossing national borders – and IDPs, between those in official camps and those in host communities, and between those affected by conflict or other shocks, including climate-related shocks (UNDP, 2022). This, in turn, makes standardizing statistics on displacement across countries difficult because the drivers of displacement in each country are so different (Pape & Sharma, 2019).

One further question that arises when trying to assess the welfare of displaced people is to ascertain how they would have fared had they not been displaced. In other words: what is an appropriate counterfactual? Answering this question can help to quantify the welfare costs of forced displacement – in terms of monetary and non-monetary dimensions of welfare – as well as the situation of those people left behind. This helps to design and implement countervailing policies.

Comparing displaced and non-displaced people offers one avenue for assessing the welfare effects of displacement, but such comparisons will not always provide a reliable picture of what being forcibly moved does to households. Within countries, there is anyway geographical variation in living standards between different regions, between rural and urban areas, and so on. Displaced people are not drawn randomly from the population. First, their origins are concentrated in specific communities affected by conflict, natural disasters, or other shocks. Second, certain types of households *within* conflict-affected communities – depending on assets, education, and existing networks – may be more willing or able to move than others. Therefore, it is important to carefully select *which* types of non-displaced people offer a suitable comparison group for displaced people.

This paper seeks to address this question using data on internal displacement in the Central African Republic (CAR). CAR has endured decades of political instability and violence, experiencing as many as seven coup d'états attempts, of which five have resulted in changes in power, since gaining independence in 1960. Conflict has remained elevated since the outbreak of political-military conflict in 2012 (UNHCR, 2022). This means that more than 700,000 Central Africans are displaced outside the country's borders as

refugees – mainly in Cameroon, the Democratic Republic of Congo, and Chad – and around 500,000 are internally displaced within the country's border (UNHCR, 2023).

Against this backdrop, this paper seeks to assess the welfare of internally-displaced Central Africans living in official camps by comparing them with different samples of people living outside camps. To provide a benchmark, the paper first makes simple comparisons between those residing in camps and the whole of the rest of the population. Yet recognizing that displacement does not simply affect a random sample of the population, the paper also seeks to compare IDP in camps with those households left behind, in the camps' "catchment areas" – the regions and communities affected by conflict and violence in the first place. To do this, the paper uses detailed information on the origin communities of those living in camps recorded in CAR. Further details on the data and methods are provided below.

The paper finds that, for monetary welfare indicators and most non-monetary welfare indicators, in-camp households are worse off than the full out-of-camp population, but this difference narrows or even disappears when comparing with the camps' catchment areas. For these indicators, the origin communities fare as badly or nearly as badly as those in IDP camps. However, the deprivation gap between in-camp and out-of-camp households in terms of sanitation and especially water, indicators where those in camps are *better* off, is actually wider using the catchment-area approach. These services can be provided directly by humanitarian organizations in camps, but not in origin communities. Overall, the results reflect the fact that those people living in the places from where those in camps originate also face more extreme monetary and non-monetary deprivation than the rest of the country. Targeting IDPs in camps is certainly a good strategy for lifting the very poorest out of poverty, but those in the communities where people stayed behind – or were left behind – must not be forgotten.

The paper is organized as follows. Section 2 outlines the relevant literature. Section 3 describes the data and methods. Section 4 presents the main results. Section 5 discusses the main findings and concludes.

2. Related literature

This paper builds on a growing literature, addressing the challenges associated with assessing the welfare and hence the policy needs of IDPs and refugees. This section reviews four key elements of this literature.

First, since the underlying data on which this paper builds explicitly include IDPs, there are strong links to existing work on the sampling and fieldwork logistics associated with collecting information on forcibly displaced populations. Traditional household surveys risk missing displaced populations because they live in specific locations – like camps – that may not be in traditional sample frames, they are still on the move, they may settle in areas previously unsettled, or because they may be too small in number unless they are explicitly oversampled (Pape & Verme, 2023). Summarizing possible solutions, Eckman and Himelein (2022) outline nine ways to sample IDPs and refugees, ranging from screening respondents in the field and adapting the sampling accordingly to using innovative techniques involving satellite imagery and mobile phone trace data. The latest recommendations from the Expert Group on Refugee, Internally Displaced Persons, and Statelessness Statistics (EGRISS) also emphasize additional logistical considerations when conducting fieldwork with displaced populations, including assessing the risks associated with entering conflict-affected areas, ensuring enumerators are able to communicate effectively with respondents, and undertaking field visits to assess the viability of potential sampling strategies (EGRISS, 2022).

Second, much existing work considers which indicators to collect and construct when assessing the welfare of displaced people. In part this means designing survey questionnaires that can accurately identify different types of displaced populations, including the drivers behind someone fleeing and their migration history (EGRISS, 2023). Yet more relevant to this paper is the literature on choosing appropriate welfare indicators for displaced populations and assessing whether measures of monetary income or consumption commonly used to estimate poverty can work. For example, some previous work focuses on finding ways to estimate monetary income or consumption, even when only very few questions are asked: this is discussed in detail by Verme et al. (2016) for Syrian Refugees in Jordan and Lebanon. Yet more fundamentally, Pave Sohnesen and Schmieding (2021) underline how monetary income may not be a tenable welfare indicator for displaced populations who are entirely dependent on humanitarian assistance while even monetary consumption may be distorted because displaced populations do not participate in typical markets for the food and non-food items they need. As discussed by Verme (2023), this motivates going beyond monetary welfare metrics and considering access to jobs, services, and basic infrastructure when assessing the living standards of refugees and IDPs.

Third, even if a sampling strategy and a reliable set of welfare metrics can be established, there is wide-ranging evidence that IDPs and refugees are highly heterogeneous. One especially important distinction is between those displaced people living in bespoke camps, established by humanitarian agencies to provide support, or outside camps in host communities. This has direct implications for the services and livelihood opportunities to which displaced people have access, as JIPs (2021) show in South Sudan. Such distinctions also matter for social empowerment, as Vinck et al. (2022) show using data from Iraq, the Philippines, and Uganda. Moreover, the initial reason for displacement – be that conflict, natural disasters, or other factors – can determine how IDPs and refugees fare after they have moved (Pape & Sharma, 2019; UNDP, 2022).

Fourth, there is a growing literature on how to construct a suitable "counterfactual" for displaced populations: ascertaining the welfare effects of displacement relies on estimating what the welfare of displaced people would have been had they, in fact, stayed in place. Two streams of literature have emerged in response to this issue.

The first stream – which is where this paper's contribution primarily fits – operates at the community level, recognizing that those communities from which displaced people originate are not a random sample of all communities in the country. Since displaced people come disproportionately from those communities affected by conflict and natural disasters, just comparing IDPs and refugees with everyone else might be misleading. Fialla (2015) addresses this issue using a geographical discontinuity design, comparing initially similar households on either side of a sharp geographical cutoff on one side of which displacement was enforced by local authorities and on the other side of which it was not.

The second stream goes further still, recognizing that, even within communities affected by conflict or natural disasters, household- and individual-level characteristics may still determine who is forcibly displaced. This can be addressed by explicitly modeling households' decision to move – as Ibáñez and Vélez (2007) demonstrate in the context of Colombia – or by using panel data to track households' movements and welfare outcomes over time – as Lendorfer, Etang-Ndip, and Hoogeveen (2016) and Hoogeveen, Rossi, and Sansone (2019) show in the context of Mali. Descriptive statistics on these sorts of household-level determinants of displacement are considered in the analysis below, but this is not the main part of the literature to which this paper contributes.

3. Data and methods

This section outlines the main microdata source and the method used to construct a suitable counterfactual for those internally displaced Central Africans living in official camps.

3.1. Data

The main data source used in this paper is the 2021 *Enquête Harmonisée sur le Conditions de Vie des Ménages* (EHCVM, Harmonized Survey on Household Living Standards). These data were collected across CAR in two distinct waves – from April to June 2021 and from October to December 2021 – therefore capturing information on Central African households at different points in the agricultural cycle. The survey questionnaire included detailed questions on household consumption, making it possible to construct monetary measures of welfare and poverty, but there were also questions on education, basic infrastructure, and other non-monetary welfare metrics.

The 2021 EHCVM's sampling strategy ensures the survey is representative of CAR's displaced people. The sample covered 6,437 households and was designed to be representative of CAR's seven regions and urban and rural areas. To account for displacement, 496 of the 6,437 households were sampled explicitly from IDP camps, using official lists of displaced households provided by the United Nations High Commissioner for Refugees (UNHCR). The other 5,941 non-displaced households were sampled from 500 enumeration areas taken from CAR's last census, which was completed in 2003. The weights were constructed such that the results can be disaggregated according to whether or not households lived in official IDP camps. The information on the food consumed was insufficient for 26 households so they were dropped from the analysis, and the weights were adjusted accordingly; this leaves a final sample of 6,411 households (Table 1).

Table 1. 2021 EHCVM sample composition

	Urban		Rural		Total
	Out of camp	In camp	Out of camp	In camp	
1. Plateaux	287	0	660	0	947
2. Equateur	348	10	594	0	952
3. Yadé	144	171	935	0	1,250
4. Kagas	228	61	540	87	916
5. Fertit	108	68	275	0	451
6. Haut Oubangui	168	89	583	0	840
7. Bangui	1,071	10	0	0	1,081
Total	2,354	409	3,587	87	6,437

Source: 2021 EHCVM and authors' calculations.

3.2. Constructing comparison groups for displaced people living in camps

This paper focuses specifically on assessing the welfare of those displaced people living in camps. Previous work using the 2021 EHCVM data – as shown in World Bank (2023) – has already assessed the welfare of displaced people outside camps well, using the IDP-identification questions in the questionnaire. This is possible because the 2021 EHCVM collected individual-level data on displaced persons, in line with guidance from the International Recommendations on IDP Statistics (IRIS). However, out-of-camp IDP

households are not explicitly separated from other out-of-camp households in this paper. This helps make the comparisons between camp and out-of-camp households more parsimonious.

Simply comparing camp households with all out-of-camp households is a useful starting point for steering overall policy, as it helps to identify which groups are most deprived along different dimensions of welfare. Countervailing programs can be targeted using this information.

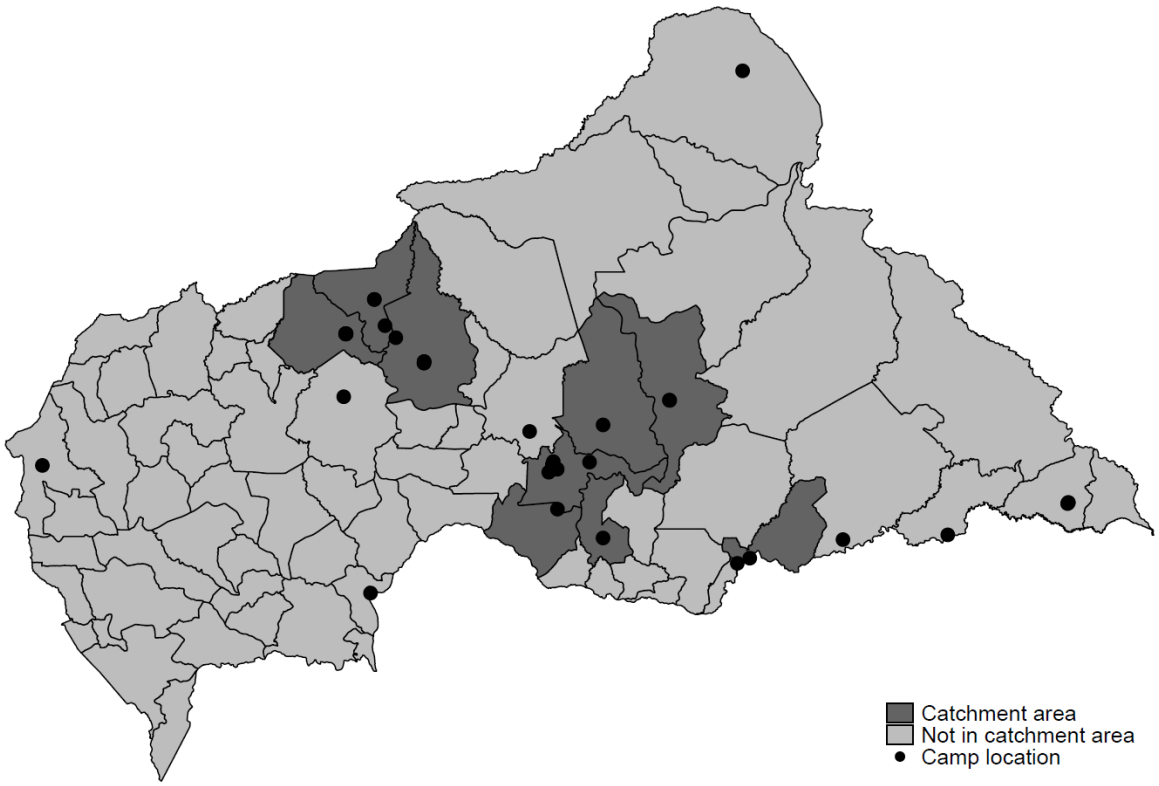
However, the basic comparison between in-camp and all out-of-camp households does not account for the fact that those living in camps likely represent a non-random sub-sample of the population at large. The conflict that drives displacement is unlikely to affect everyone in the country equally. First, displaced people are likely to come from communities that have been disproportionately affected by conflict or other shocks. People in these communities could have different demographic, socioeconomic, and other characteristics from the rest of the country. Second, among those in communities affected by conflict, there may be further pre-existing household- and individual-level differences between those that were displaced to camps and those that stayed behind. Therefore, any differences between those in and out of camps seen in the simple comparisons could reflect this non-random selection. This is important because, those left behind in conflict-affected areas could also endure lower living standards than the rest of the population; policies may need to be designed and targeted with them in mind too.

The paper uses detailed information on Central Africans' displacement histories to ascertain whether the welfare of those in living in camps differs from the welfare of those living in the places from which camp dwellers originally came. In the 2021 EHCVM, each displaced person living in a camp reports the préfecture, sous-préfecture, and commune where they were typically living before they were displaced.[1] This helps address the first concern about non-random selection, that those living in camps come from a specific set of conflict- or shock-affected communities which may have different socioeconomic characteristics from the rest of the population.

These displacement histories can be used to establish "catchment areas", which comprise the most common préfectures, sous-préfectures, and communes where those living in camps – that is, *all* those people in the sample in camps – used to live. Separate catchment areas are constructed at the préfecture, sous-préfecture, and commune level, to test the robustness of the results, with the full sets of results being reported in Annex B. However, the main results in Section 4 focus on the catchment areas constructed at the sous-préfecture level, as this produces a large enough sample of catchment-area households without being so large that the comparison group becomes too diluted by households that would not have been affected by conflict or other shocks. To construct the catchment areas, the sous-préfectures from which camp dwellers originate are written down in order from most common to least common. Then the sous-préfectures at the top of this list that comprise the sous-préfectures of origin for 90 percent of camp dwellers are included in the catchment area. This leaves 10 sous-préfectures in total, mapped out alongside the location of the camps included in the 2021 EHCVM sample in Figure 1. The same process is repeated at the préfecture level, leaving a list of six préfectures, and at the commune level, leaving a list of 21 communes; their corresponding maps are shown in Annex A. The names of the préfectures, sous-préfectures, and communes included in each of the three types of catchment areas are also listed in Annex A.

[1] Préfectures, of which there are 20 in CAR, represent the Admin 1 level. Sous-préfectures, of which there are 84 in CAR, represent the Admin 2 level. Communes, of which there are 176 in CAR, represent the Admin 3 level.

Figure 1. Map of internally displaced person camps in the sample and the sous-préfecture-level catchment areas



Source: Humanitarian Data Exchange (for shapefiles), 2021 EHCVM, and authors' calculations.

With these catchment areas in place, welfare among those in camps can be compared both with the population at large and with the specific areas from where camp dwellers were originally displaced. For continuous measures of welfare (such as log of monetary consumption) and binary measures of welfare (such as poverty), these comparisons are effected using a simple regression of the following form:

(1) $$y_{ij} = \beta_0 + \beta_1 camp_{ij} + \varepsilon_{ij}$$

where y_{ij} is the welfare measure of interest for household i in enumeration area j, $camp_{ij}$ is a dummy variable taking 1 if a household is in a camp and 0 otherwise, and ε_{ij} is the error term. The coefficient of interest is β_1 and β_0 is the constant. When y_{ij} is a binary variable, this regression takes the form of a linear probability model, where β_1 can be read directly as a marginal effect.

3.3. Descriptive statistics: The challenge of household-level selection

While the approach described above helps address the fact that in-camp households come from certain types of communities, there may in theory be further household-level differences that would have determined whether they were displaced. For example, they may have needed assets to sell in order to cover the costs associated with moving or they may have relied on networks in order to know how and where to move. Given the severity violence in CAR (see for example ACLED (2015)), the extent to which moving would have been a true decision dependent on household-level characteristics is unclear. In many

instances, entire communities appear to have been affected by violence, rather than subsets of households within those communities (MINUSCA, 2022). Yet it is still useful to look at how at household-level differences between those in camps and in catchment areas to gauge the extent of this issue.

The challenge of trying to assess household-level determinants of displacement after the fact is that virtually all household-level characteristics could themselves be affected by being forced to move. This includes variables – such as household demographics, household head characteristics, and features of the main dwelling – which would otherwise be more stable. Comparing in camp households with those in catchment areas constructed at the sous-préfecture level confirms this is the case (Table 2). While the differences in terms of household size appear to be minimal, it emerges that household heads for those in camps are more likely to take on non-agricultural work and the quality of their dwellings is significantly worse than those in the camp catchment areas.

Table 2. Comparison of household characteristics between camps and sous-préfecture-level catchment areas

	Catchment area (mean)		Camp (mean)		Difference	
Overall household size	5.349	(2.807)	5.003	(2.492)	-0.346	(0.152)
Number of dependents	3.001	(2.137)	2.914	(2.129)	-0.087	(0.620)
Household head is male	0.789	(0.408)	0.701	(0.458)	-0.088***	(0.005)
Household head age	41.114	(12.403)	39.539	(11.746)	-1.576**	(0.046)
Household head has primary education	0.589	(0.492)	0.548	(0.498)	-0.041	(0.464)
Household head is working	0.914	(0.281)	0.874	(0.332)	-0.040	(0.259)
Household head works outside of agriculture	0.219	(0.414)	0.323	(0.468)	0.103**	(0.032)
Adequate material for walls	0.977	(0.149)	0.402	(0.490)	-0.575***	(0.000)
Adequate material for roof	0.284	(0.451)	0.033	(0.179)	-0.251***	(0.000)
Adequate material for floor	0.128	(0.334)	0.007	(0.083)	-0.121***	(0.000)
Observations	883		495		1,378	

Note: * p<0.10, ** p<0.05, *** p<0.01. p-values in parentheses. Standard errors clustered at the enumeration area level. Individual-level weights applied for all variables except household size and number of dependents. Source: 2021 EHCVM and authors' calculations.

These differences arise because these household-level characteristics are being measured after displacement has already happened. Getting around this would rely either on having reliable recall data from displacement took place or panel data that could track displacement status over time, as in the literature reviewed in Section 2. Since this information is not available in the 2021 EHCVM, this paper focuses on addressing the community-level selection issue rather than household-level determinants of displacement.

Nevertheless, to assess whether controlling for household-level characteristics would alter the results, the paper reruns the main regressions for monetary consumption and monetary welfare while including controls that could plausibly be stable even as a household is displaced. The control variables included are overall household size, number of dependents, and the sex, age, and education of the household head.

3.4. Welfare indicators

To measure welfare, the paper first focuses on monetary consumption and poverty. The consumption aggregate constructed from the 2021 EHCVM includes both food and non-food items and is deflated spatially and temporally and adjusted to per capita terms to allow different households to be compared across CAR. Poverty is calculated using the national food poverty line of 197,990 XAF per person per year – which is the cost of purchasing 2,300 calories per person per day if households devote all of their consumption to food – and an overall national poverty of 263,485 per person per year – which takes the food poverty line and adds on the cost of purchasing basic non-food items.[2] The national food poverty line corresponds to 1.59 USD in 2017 Purchasing Power Parity (PPP) terms per person per day, while the overall national poverty line corresponds to 2.12 USD 2017 PPP per person per day, slightly below the international extreme poverty line of 2.15 USD 2017 PPP.

Since those living in IDP camps may receive some income from humanitarian assistance directly from organizations that run the camps, the analysis also considers how the results differ if such assistance is excluded. To do this, consumption and poverty are recalculated but food items acquired through "gifts" or "donations" are removed.[3]

To complement the monetary measures of consumption and poverty, the paper also considers a more direct measure of food security. This is based on the World Food Programme's (WFP's) Food Consumption Score (FCS). The FCS measures the frequency with which households consumed difference food groups over the previous seven days, and then assigns households as having poor, borderline, or acceptable food security (WFP, 2015). Households with FCSs less than 35 are classed as having poor food security while households with FCSs less than 42 are classed as having borderline food security.

The analysis also considers non-monetary welfare measures, taken from the components of the World Bank's Multidimensional Poverty Measure (MPM). These non-monetary welfare measures are all at the household level and cover both education – in terms of enrolment and attainment – and basic infrastructure – in terms of access to electricity, at least limited-standard water, and at least limited-standard sanitation. Combining the information on monetary poverty, education, and basic infrastructure, it is also possible to identify whether a household is multidimensionally poor.[4]

4. Results

This section presents the main results, comparing monetary and non-monetary measures of welfare among Central Africans living in IDP camps with both the overall population and camp catchment areas.

4.1. Monetary consumption and monetary poverty

Monetary consumption levels are lower for Central Africans in IDP camps when comparing them with the whole of the rest of the country, but this difference largely disappears when comparing them with those living in camps' catchment areas; the types of places from where camp dwellers originate. Taking logs of

[2] Further details on the construction of CAR's consumption aggregate and national poverty lines can be found in the World Bank poverty assessment (World Bank, 2023).

[3] The poverty lines themselves are not recalculated when gifts and donations removed.

[4] The overall principles underlying the construction of the MPM and its constituent indicators are described in the World Bank's 2022 Poverty and Shared Prosperity Report (World Bank, 2022). The specific approach used in CAR is described in the country's 2023 World Bank poverty assessment (World Bank, 2023).

real[5] per capita consumption and regressing it on whether a household is in an IDP camp, there is a consumption gap of approximately 23.7 percent when comparing those in camps with everyone outside of camps, a gap which is statistically significant at the 1 percent level. Yet this gap is no longer statistically significant, even at the 10 percent level, when comparing in-camp households with those living in communities from where in-camp households originated, with a point estimate of just 2.7 percent when using the catchment areas constructed at the sous-préfecture level (Table 3). This does not change substantially if the catchment areas are constructed at the préfecture or commune level (Annex B).

Table 3. Regression comparing in-camp and out-of-camp households in terms of the log of real per capita consumption

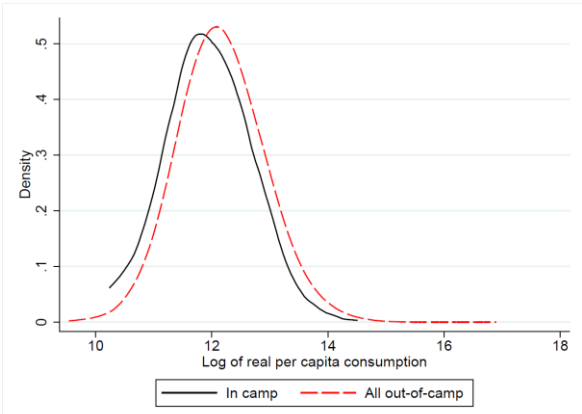
	Compared to all out-of-camp households	Compared to sous-préfecture catchment area
In camp (1=Y;0=N)	-0.2369***	-0.0267
	(0.0029)	(0.7786)
N	6411	1378
R-squared	0.0043	0.0003

Note: * p<0.10, ** p<0.05, *** p<0.01. p-values in parentheses. Dependent variable: Log of real per capita consumption. Standard errors clustered at the enumeration area level. Source: 2021 EHCVM and authors' calculations.

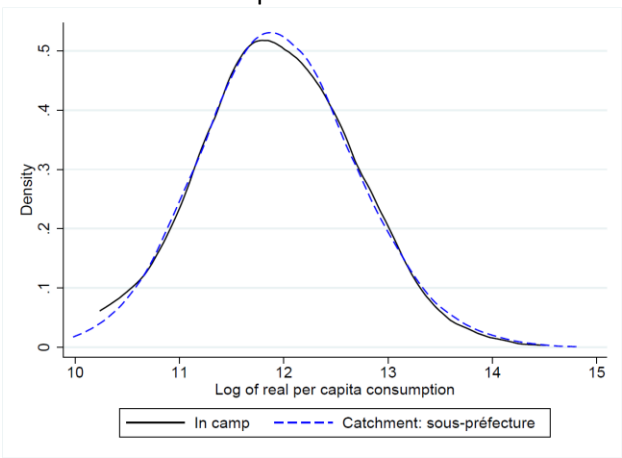
Looking across the full consumption distribution tells a similar story: there is a clear difference between the consumption distribution for those in camps and all out-of-camp households, but this difference is less obvious when comparing those in camps with those living in camps' catchment areas (Figure 2).

Figure 2. Comparing the full consumption distribution for in-camp and out-of-camp households

Panel A: Compared to all out-of-camp households



Panel A: Compared to out-of-camp households from camp catchment areas



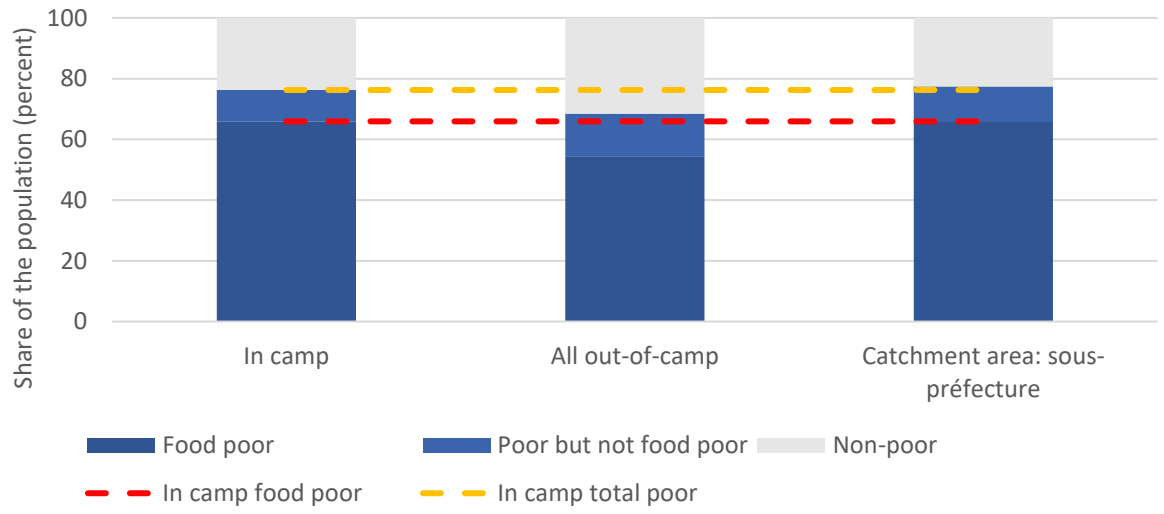
Note: Epanechnikov kernel density function used. Bandwidth set to 0.3. Source: 2021 EHCVM and authors' calculations.

In line with the overall monetary consumption results, there is a clear gap in monetary poverty rates between in-camp and all out-of-camp households, which is reduced or even eliminated when comparing

[5] "Real" means that consumption has been spatially and temporally deflated.

in-camp households with those in camp catchment areas. The share of Central Africans living in food poverty is 11.5 percentage points higher for in-camp households than all other households in the country, a difference which is statistically significant at the 1 percent level (Figure 3 and Table 4). Yet the difference in the food poverty rate is much smaller – just 0.2 percentage points when using the sous-préfecture-level catchment areas – and is not statistically significant even at the 10 percent level when comparing in-camp households with those in camps' catchment areas. A qualitatively similar story arises at the overall national poverty line (Table 5).

Figure 3. Comparing monetary poverty for in-camp and out-of-camp households



Source: 2021 EHCVM and authors' calculations.

Table 4. Regression comparing in-camp and out-of-camp households in terms of food poverty

	Compared to all out-of-camp households	Compared to sous-préfecture catchment area
In camp (1=Y;0=N)	0.1148***	0.0018
	(0.0097)	(0.9742)
N	6411	1378
R-squared	0.0021	0.0000

Note: * p<0.10, ** p<0.05, *** p<0.01. p-values in parentheses. Dependent variable: Household is below the national food poverty line (1=Y, 0=N). Standard errors clustered at the enumeration area level. Source: 2021 EHCVM and authors' calculations.

Table 5. Regression comparing in-camp and out-of-camp households in terms of overall poverty

	Compared to all out-of-camp households	Compared to sous-préfecture catchment area
In camp (1=Y;0=N)	0.0776*	-0.0115
	(0.0859)	(0.8273)
N	6411	1378
R-squared	0.0011	0.0001

Note: * p<0.10, ** p<0.05, *** p<0.01. p-values in parentheses. Dependent variable: Household is below the overall national poverty line (1=Y, 0=N). Standard errors clustered at the enumeration area level. Source: 2021 EHCVM and authors' calculations.

Removing gifts and donations from the consumption basket does not qualitatively affect the results. The difference between in-camp households and all out-of-camp households is larger in magnitude and more statistically significant than the difference between in-camp households and catchment-area households (Table 6).[6] However, the point estimate for the difference between in-camp households and catchment area households is larger when gifts are removed. This resonates with the idea that gifts and donations comprise a more important component of consumption in camps.

Table 6. Regression comparing in-camp and out-of-camp households in terms of the log of real per capita consumption, removing gifts

	Compared to all out-of-camp households	Compared to sous-préfecture catchment area
In camp (1=Y;0=N)	-0.3652***	-0.1360
	(0.0000)	(0.1596)
N	6411	1378
R-squared	0.0099	0.0060

Note: * p<0.10, ** p<0.05, *** p<0.01. p-values in parentheses. Dependent variable: Log of real per capita consumption, with gifts removed. Standard errors clustered at the enumeration area level. Source: 2021 EHCVM and authors' calculations.

Controlling for household-level characteristics that could plausibly be stable before and after displacement occurs has little qualitative impact on the main results for monetary consumption and monetary poverty. When household demographics and basic household head characteristics are added into the regressions, the gap between in-camp and all out-of-camp households is reduced, because these variables absorb some of the socioeconomic differences between camp dwellers and the rest of the population. However, there is no evidence that excluding these controls distorts the comparisons between camps and their catchment areas significantly. If anything, the point estimates for the difference between camp dwellers and catchment areas are even closer to zero when these controls are added (see Annex C).

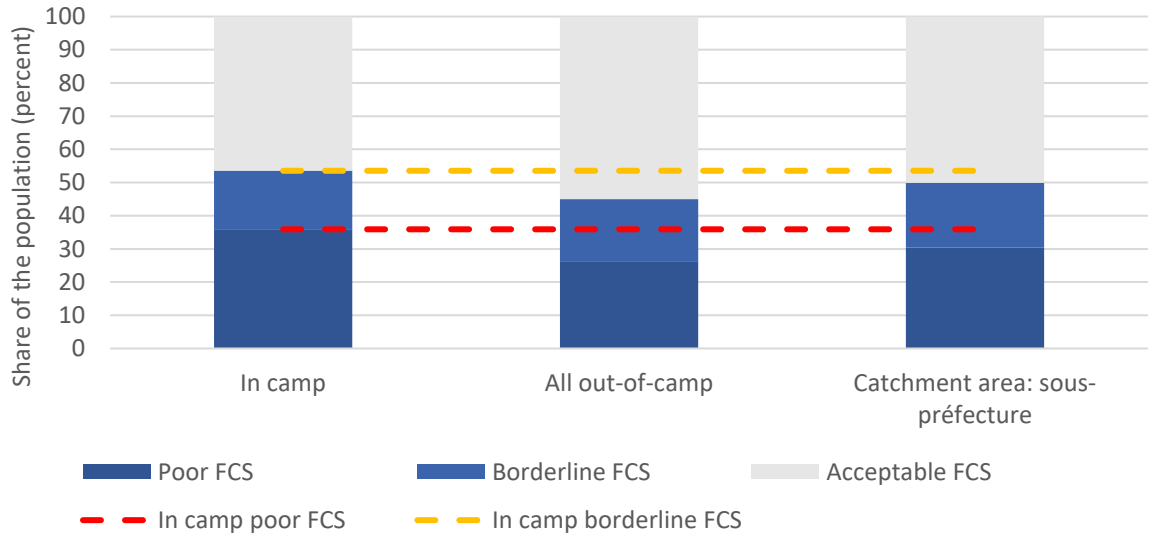
4.2. Food security

The WFP's FCS also shows a larger gap when comparing in-camp households to all out-of-camp households than when comparing in-camp households to those in camp catchment areas. This is an

[6] Similar results emerge for food poverty and overall poverty.

important check as the FCS provides an independent metric of a key element that monetary poverty is trying to measure, namely, whether or not households have adequate food access.[7] The share of in-camp households with poor or borderline food security is 8.6 percentage points higher than the share among all out-of-camp households, with this difference being statistically significant at the 10 percent level (Figure 4 and Table 7). Yet when comparing in-camp households to those in the camp catchment areas constructed at the sous-préfecture level, this difference is just 3.6 percentage points and is not statistically significant at the 10 percent level. The difference is even smaller when the catchment areas are constructed at the préfecture and commune level (see Annex B).

Figure 4. Comparing food security for in-camp and out-of-camp households



Source: 2021 EHCVM and authors' calculations.

Table 7. Regression comparing in-camp and out-of-camp households in terms of food security

	Compared to all out-of-camp households	Compared to sous-préfecture catchment area
In camp (1=Y;0=N)	0.0856*	0.0358
	(0.0949)	(0.5573)
N	6411	1378
R-squared	0.0011	0.0009

Note: * p<0.10, ** p<0.05, *** p<0.01. p-values in parentheses. Dependent variable: Household has a poor or borderline FCS (1=Y, 0=N). Standard errors clustered at the enumeration area level. Source: 2021 EHCVM and authors' calculations.

4.3. Non-monetary poverty

The narrowing of the welfare gap between in-camp and out-of-camp households that emerges when comparing in-camp households with camp catchment areas rather than all out-of-camp is far less clearcut – and in some cases reversed – when turning to non-monetary poverty indicators. Table 8 condenses the

[7] For a discussion of the relationship between measures of food security and monetary poverty see, for example, Jensen and Miller (2010).

results by reporting only the key coefficients from a set of regressions comparing in-camp and out-of-camp households.

Table 8. Coefficients from regressions comparing in-camp and out-of-camp households in terms of non-monetary poverty indicators

Deprivation indicator (1=deprived, 0=not deprived)	Compared to all out-of-camp households	Compared to sous-préfecture catchment area
Educational enrolment	0.0513	-0.0055
	(0.3191)	(0.9252)
Educational attainment	0.0825*	0.0073
	(0.0806)	(0.8967)
Water	-0.1407***	-0.2372***
	(0.0041)	(0.0003)
Sanitation	-0.0303	-0.0413
	(0.6749)	(0.5973)
Electricity	0.1068***	0.0583***
	(0.0000)	(0.0076)

Note: * p<0.10, ** p<0.05, *** p<0.01. p-values in parentheses. Coefficients for different dependent variables shown in each row. Standard errors clustered at the enumeration area level. Sample sizes and R-squared values not reported for parsimony. Source: 2021 EHCVM and authors' calculations.

For educational enrollment, educational attainment, and electricity the results are at least qualitatively similar to the monetary welfare and food security indicators shown above. However, the reduction of the gap between in-camp and out-of-camp households when switching to the catchment-area approach is not as pronounced. Indeed, for electricity, the share of Central Africans living who lack access is still statistically significantly higher in camps compared to those outside of camps, even when compared with camp catchment areas.

For water and sanitation, the gap between in-camp and out-of-camp households appears, if anything, to be wider when using the catchment-area approach. For example, the share of Central Africans living in camps who are deprived in terms of water access is 14.1 percentage points *lower* than for the entire out-of-camp population, with this difference being statistically significant at the 1 percent level. This reflects the fact that certain services, including drinking water, can be supplied directly by humanitarian agencies in IDP camps. Yet the gap between in-camp and out-of-camp households is even larger when comparing with camp catchment areas, with the difference also being statistically significant at the 1 percent level and rising to 23.7 percentage points when the catchment areas are constructed at the sous-préfecture level. Therefore, for those services – like water – that can more easily be directly supplied in camps, the gain from being in a camp is even larger when compared with those communities from which displaced camp dwellers originated.

Notwithstanding the results for water and sanitation, the results for overall multidimensional poverty – captured by the World Bank's MPM – follow the monetary welfare results above. The share of in-camp households who are multidimensionally poor is 7.3 percentage points higher than the share among all out-of-camp households, with this difference being statistically significant at the 1 percent level (Table 9) Yet using sous-préfecture-level catchment-areas, this is just 0.5 percentage points and is not statistically significant at the 10 percent level.

Table 9. Regression comparing in-camp and out-of-camp households in terms of multidimensional poverty

	Compared to all out-of-camp households	Compared to sous-préfecture catchment area
In camp (1=Y;0=N)	0.0729***	0.0050
	(0.0032)	(0.8856)
N	6411	1378
R-squared	0.0013	0.0000

Note: * p<0.10, ** p<0.05, *** p<0.01. p-values in parentheses. Dependent variable: Household is multidimensionally poor (1=Y, 0=N). Standard errors clustered at the enumeration area level. Source: 2021 EHCVM and authors' calculations.

5. Discussion

The main policy implication of these results is that poverty-reducing interventions should carefully consider those in the communities from where displaced people originate just as they consider displaced people themselves. While Central Africans living in camps have higher monetary poverty and food insecurity than the rest of the population overall, their post-displacement welfare appears similar to those left behind.

Moreover, access to some services appears to be higher in camps than in origin communities. Those in origin communities may lack access to water and sanitation services, which organizations running IDP camps can provide. This underscores the challenge of supporting such conflict-affected communities – especially when they are remote, as in CAR – and emphasizes the trade-offs policy makers face in trying to reach the most in need while also targeting communities where implementation of poverty-reducing policies is possible. One response to this could be to sequence interventions, supporting those in camps first – because they are still worse off than the general population – but then targeting origin communities when security permits.

The results also highlight the importance of adapting data collection to consider those left behind, just as efforts have accelerated to track the welfare of displaced populations. Following the results shown above, this could involve sampling in two steps, first interviewing IDPs and then constructing samples of conflict-affected communities based on what IDPs themselves report about their displacement histories. Yet the results also underline the value of longitudinal data, which can track people over time; before, during, and after displacement. Such data can help address one of the gaps identified in this paper, namely that understanding and then adjusting results for household- and individual-level drivers of displacement remains a work progress.

Yet even if applying two-step sampling approaches or collecting longitudinal data are not possible, the results show that adapting questionnaires to collect more information on households' pre-displacement characteristics could be beneficial for analyzing the effects of displacement. If information on the assets and living conditions of displaced households from before the time they moved were available, it would be easier to track what determines whether households move or stay and then adjust for this in the analysis. Information on such pre-displacement characteristics could be used to control for any systematic differences between those who are displaced and those left behind, which could influence welfare

estimates. This is similar to development agencies collecting recalled pre-program data when conducting impact evaluations (see, for example, Oxfam (2016)).

With international conflicts persisting and proliferating, the nexus of poverty, conflict, and displacement is likely to be of growing policy importance in the coming years. Better collecting and analyzing data on displaced populations as well as those left behind can provide policy makers with crucial guidance for addressing poverty in conflict-affected settings.

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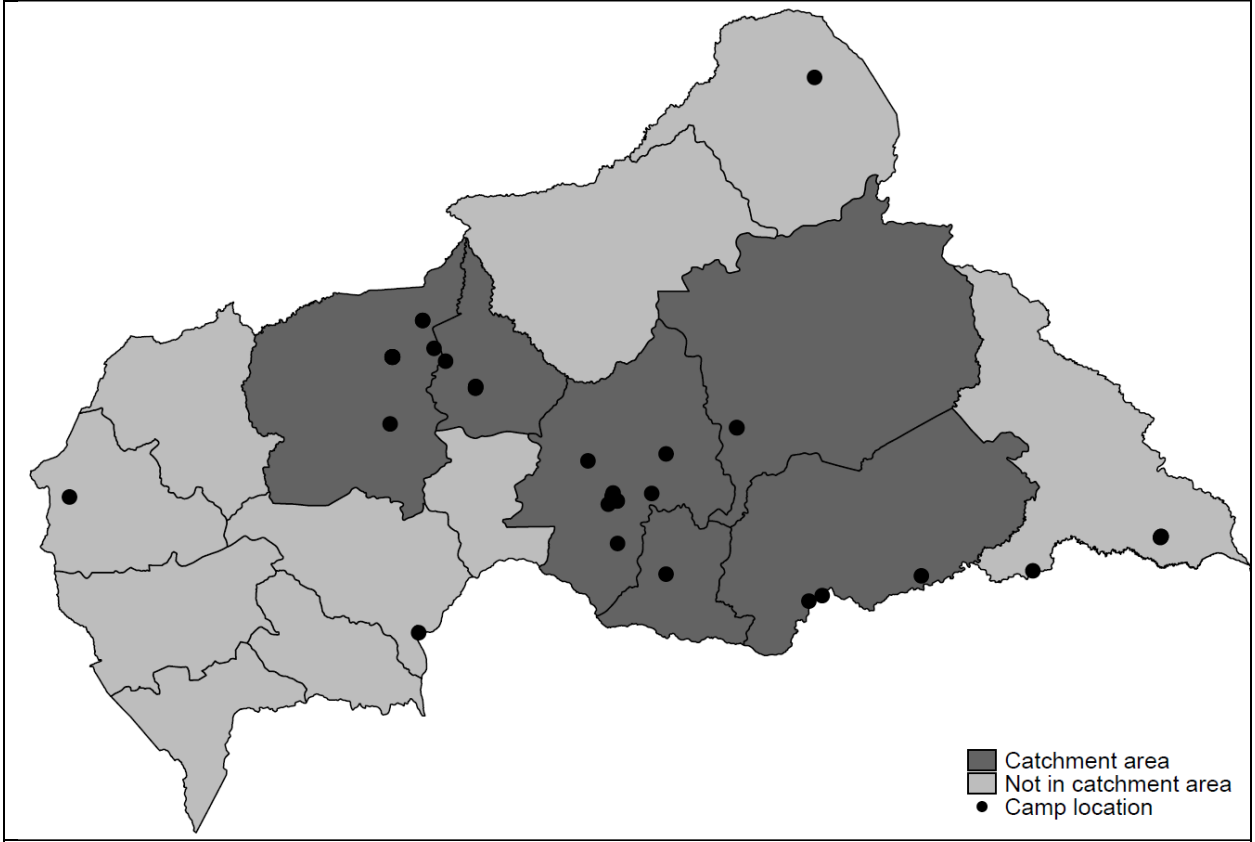
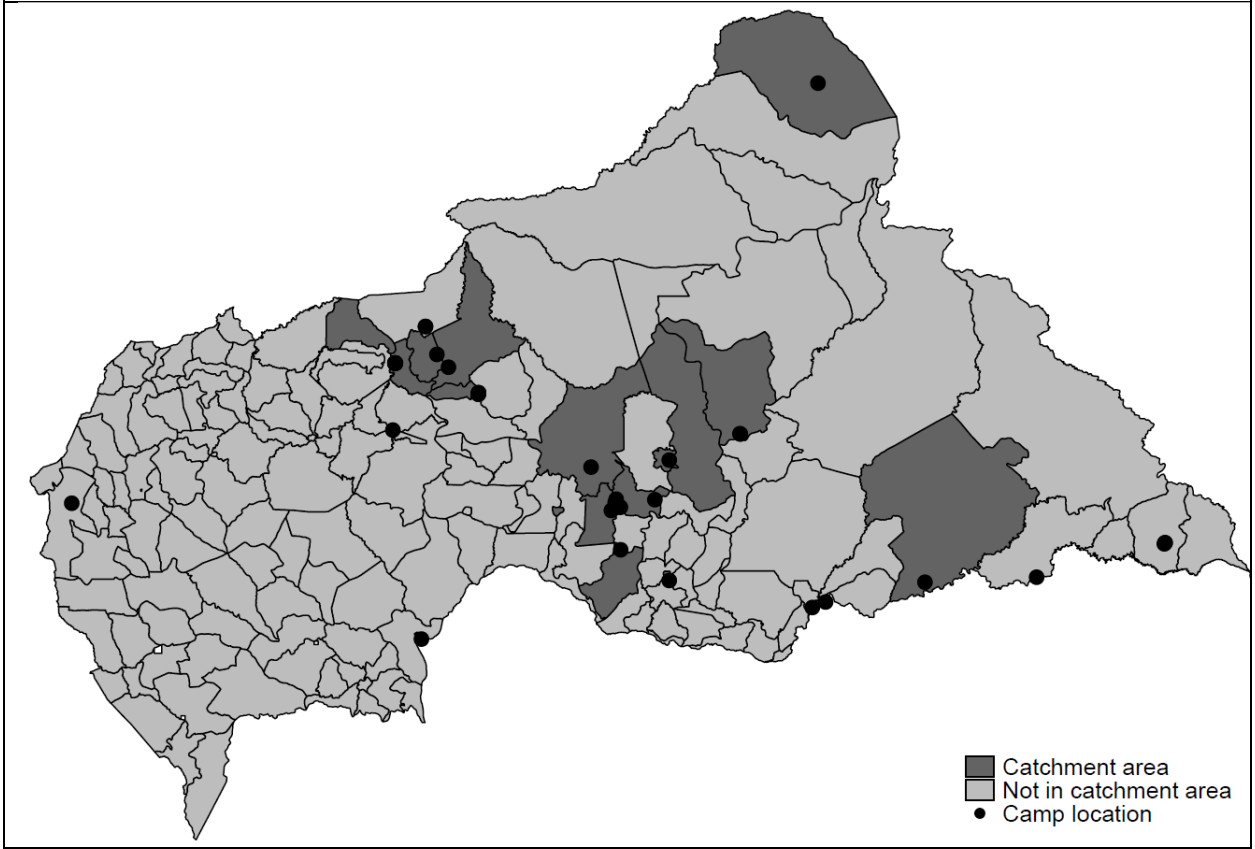
Annex A. Catchment areas

Figure 5. Map of internally displaced person camps in the sample and the préfecture-level catchment areas



Source: Humanitarian Data Exchange (for shapefiles), 2021 EHCVM, and authors' calculations.

Figure 6. Map of internally displaced person camps in the sample and the commune-level catchment areas



Source: Humanitarian Data Exchange (for shapefiles), 2021 EHCVM, and authors' calculations.

Table 10. Catchment areas at the préfecture, sous-préfecture, and commune level

Préfecture		Sous-préfecture		Commune	
Code	**Name**	**Code**	**Name**	**Code**	**Name**
32	Ouham	326	Bantangafo	3261	Batangafo
42	Nana-Grebizi	327	Kabo	3264	Ouassi
43	Ouaka	421	Kaga-Bandoro	3265	Bakassa
52	Haute-Kotto	431	Bambari	3272	Ouaki
62	Mbomou	434	Kouango	4211	Kaga-Bandoro
61	Basse-Kotto	435	Ippy	4212	Botto
		521	Bria	4213	Nana-Outa
		612	Alindao	4311	Bambari
		621	Bangassou	4312	Danga-Gboudou
		712	2ème arrondissement	4314	Pladama-Ouaka
				4321	Koudou-Bego
				4331	Grimari
				4343	Cochio-Toulou
				4351	Ippy
				4352	Yengou
				5211	Samba-Boungou
				5311	Ridina
				6121	Alindao
				6211	Bangassou
				6241	Rafai
				7121	2ème arrondissement

Source: 2021 EHCVM and authors' calculations.

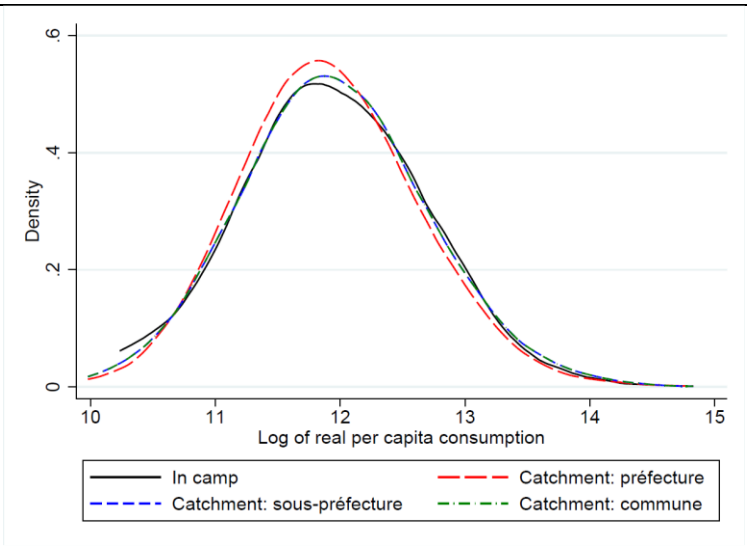
Annex B. Results using préfecture- and commune-level catchment areas

Table 11. Regression comparing in-camp and out-of-camp households in terms of the log of real per capita consumption, with all catchment area levels

	Compared to all out-of-camp households	Compared to préfecture catchment area	Compared to sous-préfecture catchment area	Compared to commune catchment area
In camp (1=Y;0=N)	-0.2369***	0.0167	-0.0267	-0.0883
	(0.0029)	(0.8427)	(0.7786)	(0.4152)
N	6411	2307	1378	1151
R-squared	0.0043	0.0001	0.0003	0.0027

Note: * p<0.10, ** p<0.05, *** p<0.01. p-values in parentheses. Dependent variable: Log of real per capita consumption. Standard errors clustered at the enumeration area level. Source: 2021 EHCVM and authors' calculations.

Figure 7. Comparing the full consumption distribution for in-camp and out-of-camp households from camp catchment areas



Note: Epanechnikov kernel density function used. Bandwidth set to 0.3. Source: 2021 EHCVM and authors' calculations.

Table 12. Regression comparing in-camp and out-of-camp households in terms of food poverty, with all catchment area levels

	Compared to all out-of-camp households	Compared to préfecture catchment area	Compared to sous-préfecture catchment area	Compared to commune catchment area
In camp (1=Y;0=N)	0.1148***	-0.0399	0.0018	0.0356
	(0.0097)	(0.3958)	(0.9742)	(0.5702)
N	6411	2307	1378	1151
R-squared	0.0021	0.0008	0.0000	0.0011

Note: * p<0.10, ** p<0.05, *** p<0.01. p-values in parentheses. Dependent variable: Household is below the national food poverty line (1=Y, 0=N). Standard errors clustered at the enumeration area level. Source: 2021 EHCVM and authors' calculations.

Table 13. Regression comparing in-camp and out-of-camp households in terms of overall poverty, with all catchment area levels

	Compared to all out-of-camp households	Compared to préfecture catchment area	Compared to sous-préfecture catchment area	Compared to commune catchment area
In camp (1=Y;0=N)	0.0776*	-0.0408	-0.0115	0.0430
	(0.0859)	(0.3838)	(0.8273)	(0.4798)
N	6411	2307	1378	1151
R-squared	0.0011	0.0011	0.0001	0.0018

Note: * p<0.10, ** p<0.05, *** p<0.01. p-values in parentheses. Dependent variable: Household is below the overall national poverty line (1=Y, 0=N). Standard errors clustered at the enumeration area level. Source: 2021 EHCVM and authors' calculations.

Table 14. Regression comparing in-camp and out-of-camp households in terms of the log of real per capita consumption removing gifts, with all catchment area levels

	Compared to all out-of-camp households	Compared to préfecture catchment area	Compared to sous-préfecture catchment area	Compared to commune catchment area
In camp (1=Y;0=N)	-0.3652***	-0.0946	-0.1360	-0.2093*
	(0.0000)	(0.2568)	(0.1596)	(0.0568)
N	6411	2307	1378	1151
R-squared	0.0099	0.0020	0.0060	0.0140

Note: * p<0.10, ** p<0.05, *** p<0.01. p-values in parentheses. Dependent variable: Log of real per capita consumption, with gifts removed. Standard errors clustered at the enumeration area level. Source: 2021 EHCVM and authors' calculations.

Table 15. Regression comparing in-camp and out-of-camp households in terms of food security, all catchment area levels

	Compared to all out-of-camp households	Compared to préfecture catchment area	Compared to sous-préfecture catchment area	Compared to commune catchment area
In camp (1=Y;0=N)	0.0856*	0.0025	0.0358	0.0275
	(0.0949)	(0.9640)	(0.5573)	(0.6795)
N	6411	2307	1378	1151
R-squared	0.0011	0.0000	0.0009	0.0006

Note: * p<0.10, ** p<0.05, *** p<0.01. p-values in parentheses. Dependent variable: Household has a poor or borderline FCS (1=Y, 0=N). Standard errors clustered at the enumeration area level. Source: 2021 EHCVM and authors' calculations.

Table 16. Coefficients from regressions comparing in-camp and out-of-camp households in terms of non-monetary poverty indicators, all catchment area levels

Deprivation indicator (1=deprived, 0=not deprived)	Compared to all out-of-camp households	Compared to préfecture catchment area	Compared to sous-préfecture catchment area	Compared to commune catchment area
Educational enrolment	0.0513	-0.0658	-0.0055	-0.0245
	(0.3191)	(0.2250)	(0.9252)	(0.6966)
Educational attainment	0.0825*	0.0075	0.0073	0.0783
	(0.0806)	(0.8833)	(0.8967)	(0.1690)
Water	-0.1407***	-0.2865***	-0.2372***	-0.2037***
	(0.0041)	(0.0000)	(0.0003)	(0.0014)
Sanitation	-0.0303	-0.1051	-0.0413	-0.0334
	(0.6749)	(0.1626)	(0.5973)	(0.6863)
Electricity	0.1068***	0.0479***	0.0583***	0.0908***
	(0.0000)	(0.0034)	(0.0076)	(0.0023)

Note: * p<0.10, ** p<0.05, *** p<0.01. p-values in parentheses. Coefficients for different dependent variables shown in each row. Standard errors clustered at the enumeration area level. Sample sizes and R-squared values not reported for parsimony. Source: 2021 EHCVM and authors' calculations.

Table 17. Regression comparing in-camp and out-of-camp households in terms of multidimensional poverty, all catchment area levels

	Compared to all out-of-camp households	Compared to préfecture catchment area	Compared to sous-préfecture catchment area	Compared to commune catchment area
In camp (1=Y;0=N)	0.0729***	-0.0402	0.0050	0.0313
	(0.0032)	(0.1164)	(0.8856)	(0.4804)
N	6411	2307	1378	1151
R-squared	0.0013	0.0020	0.0000	0.0015

Note: * p<0.10, ** p<0.05, *** p<0.01. p-values in parentheses. Dependent variable: Household is multidimensionally poor (1=Y, 0=N). Standard errors clustered at the enumeration area level. Source: 2021 EHCVM and authors' calculations.

Annex C. Results for monetary consumption and monetary poverty adding simple controls

Table 18. Regression comparing in-camp and out-of-camp households in terms of the log of real per capita consumption, including household-level controls

	Compared to all out-of-camp households		Compared to sous-préfecture catchment area	
	No controls	With controls	No controls	With controls
In camp (1=Y;0=N)	-0.2369***	-0.1686**	-0.0267	-0.0091
	(0.0029)	(0.0441)	(0.7786)	(0.9229)
N	6411	6411	1378	1378
R-squared	0.0043	0.1753	0.0003	0.1625

Note: * p<0.10, ** p<0.05, *** p<0.01. p-values in parentheses. Dependent variable: Log of real per capita consumption. Controls include household size, number of dependents, and the sex, age, and education of the household head. Standard errors clustered at the enumeration area level. Source: 2021 EHCVM and authors' calculations.

Table 19. Regression comparing in-camp and out-of-camp households in terms of food poverty, including household-level controls

	Compared to all out-of-camp households		Compared to sous-préfecture catchment area	
	No controls	With controls	No controls	With controls
In camp (1=Y;0=N)	0.1148***	-0.0399	0.0018	0.0356
	(0.0097)	(0.3958)	(0.9742)	(0.5702)
N	6411	2307	1378	1151
R-squared	0.0021	0.0008	0.0000	0.0011

Note: * p<0.10, ** p<0.05, *** p<0.01. p-values in parentheses. Dependent variable: Household is below the national food poverty line (1=Y, 0=N). Controls include household size, number of dependents, and the sex, age, and education of the household head. Standard errors clustered at the enumeration area level. Source: 2021 EHCVM and authors' calculations.

Table 20. Regression comparing in-camp and out-of-camp households in terms of overall poverty, including household-level controls

	Compared to all out-of-camp households		Compared to sous-préfecture catchment area	
	No controls	With controls	No controls	With controls
In camp (1=Y;0=N)	0.0776*	0.0463	-0.0115	-0.0169
	(0.0859)	(0.3415)	(0.8273)	(0.7487)
N	6411	6411	1378	1378
R-squared	0.0011	0.1022	0.0001	0.0951

Note: * p<0.10, ** p<0.05, *** p<0.01. p-values in parentheses. Dependent variable: Household is below the overall national poverty line (1=Y, 0=N). Controls include household size, number of dependents, and the sex, age, and education of the household head. Standard errors clustered at the enumeration area level. Source: 2021 EHCVM and authors' calculations.