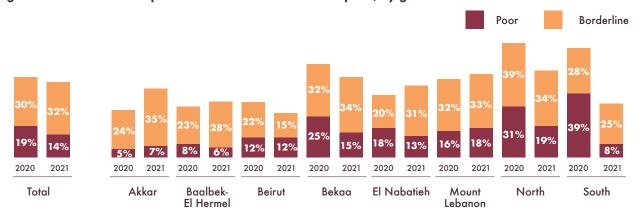


Figure 1: Households with poor and borderline food consumption, by governorate



In 2021, based on the FCS, 46% of Syrian refugee households had inadequate diets (poor and borderline food consumption).

The food consumption levels of Syrian refugees improved in some governorates and drastically deteriorated in others. In 2021, households with poor consumption level decreased slightly to 14% from 19% in 2020 but up from 5% in 2019. However, the households with borderline food consumption level increased slightly to 32% in 2021, up from 30% in 2020 and 20% in 2019.

Poor and borderline food consumption increased in households in some governorates in 2021 compared to 2020, with the highest inadequate diet reported in the North, Mount Lebanon, and Bekaa at 53%, 51%, and 49% respectively. The increase in poor and borderline food consumption was significant in Akkar, reaching 42% in 2021 compared to 29% in 2020. El Nabatieh witnessed a 7 percentage points increase in inadequate food consumption, reaching 44% in 2021. On the other hand, a

noticeable decline in the level of poor and borderline food consumption was found in the South, where the prevalence was halved in 2021 (from 67% in 2020 to 33% in 2021), and in the North from 70% in 2020 to 53% in 2021.

Forty-eight percent of female-headed households had inadequate food consumption, slightly higher than that of male-headed households (45%). Households in non-residential shelters had the highest share of poor food consumption (17%), compared to non-permanent (11%) and residential (14%) shelters. Households in the bottom expenditure quintile had the highest inadequate food consumption at 63% (poor: 23%, borderline: 40%). In fact, as the expenditures decreased, the inadequate food consumption increased accordingly (top quintile: 33%, fourth quintile: 37%, third quintile: 46%, second quintile: 52%, bottom quintile: 63%). This indicates that the most economically vulnerable households had to compromise on the quality and diversity of food eaten, making them more prone to malnutrition and to experience hunger.

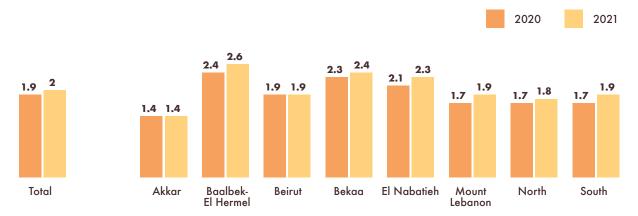
Number of meals

Number of meals consumed by adults slightly increased from 1.9 meals per day in 2020 to 2 meals per day in 2021. This figure, however, varied across governorates. In fact, households across all governorates reported consuming slightly more meals in 2021 with the largest increase of 0.2 meals per day in Baalbek-El Hermel, El Nabatieh, Mount Lebanon, and the South. Similar to 2019, households living in non-permanent shelters were consuming more meals (2.3 meals/day) than those living in non-residential or residential shelters (1.9 and 2 meals/day respectively).

Figure 2: Number of meals consumed by adults and children per day



Figure 3: Number of meals consumed by adults per day, by governorate

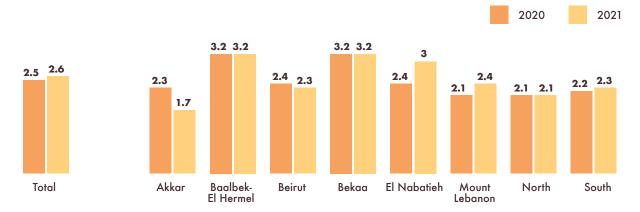


The number of meals consumed by children slightly increased from 2.5 in 2020 to 2.6 in 2021. Households across all governorates witnessed an increase in the number of meals consumed by children per day, except in Akkar (decrease of 0.6) and Beirut (slight decrease of 0.1). The largest increase was reported in El Nabatieh (2.4 in 2020 vs. 3.0 in 2021). Overall, the governorate with the least number of meals consumed by children per day in 2021 was Akkar at 1.7 meals. Similar to 2020, children living in non-permanent shelters were consuming 2.9 meals per day, higher than those

living in non-residential (2.3 meals) and residential shelters (2.5 meals).

Households in the bottom expenditure quintile reported the lowest number of meals consumed by both adults (1.9) and children (2.2) compared to 2.1 and 2.7 respectively for households in the top quintile. This again indicates that economic vulnerability reflects negatively on the frequency of food consumed by both adults and children.

Figure 4: Number of meals consumed by children under 5 per day, by governorate



Dietary diversity

The dietary diversity continued to decrease in 2021 from 2019 and 2020. The percentage of households consuming 6.5 or more food groups on a daily basis witnessed a 2 percentage points decrease in 2021 further to the 10 percentage points decrease in 2020 from 2019 (21% in 2021, 23% in 2020, and 33% in 2019). The share of households with poor daily dietary diversity (<4.5 food groups per day) almost tripled from 8% in 2019 to 21% in 2020 and 22% in 2021.

The share of households with poor daily dietary diversity in 2021 increased in several governorates compared to 2020, with the largest increase reported in El Nabatieh. Households with the highest percentage were found in Mount Lebanon (35%), the North (32%), and El Nabatieh (29%). It is worth noting that poor dietary diversity dropped significantly in the South, from 53% in 2020 to 16% in 2021. The highest

percentages of households with a high dietary diversity were in El Nabatieh (38%), the South (37%), and Beirut (36%).

A quarter (25%) of female-headed households had a poor daily dietary diversity in comparison to 21% of male-headed households.

In terms of expenditures quintiles, households in the bottom quintile had the highest share of poor daily dietary diversity at 31%, compared to 18% of households in the top quintile. Similarly, 33% of households in the top quintile consumed more than 6.5 food groups per day, nearly four times the share of households in the bottom expenditure quintile (9%).

On a weekly basis, the percentage of households consuming 9 or more food groups slightly increased in 2021 compared to 2020 (48% vs. 44%), but still a substantial drop from 74%

in 2019. Although poor weekly dietary diversity in 2021 decreased to 11% from 16% in 2020, it is still almost triple the prevalence in 2019 (4%).

The share of households in the bottom quintile who consumed less than 6 food groups per week was three times that of households in the top expenditure quintile (19% vs. 6%).

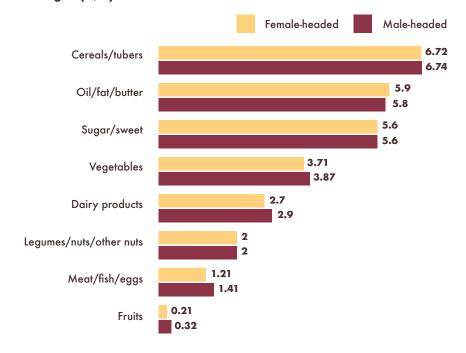
Table 1: HDADD and HWDD groups and mean (2019-2021)

	Household Daily Average Diet Diversity (HDADD)		HDADD Catego	ory	Household Weekly Diet Diversity (HWDD)	HV	VDD Categ	ory
	Mean	<4.5 food groups	4.5-6.4 food groups	>=6.5 food groups	Mean	<= 6 food groups	7-8 food groups	>= 9 food groups
2019	6	8%	60%	33%	9	4%	21%	74%
2020	5	21%	56%	23%	8	16%	40%	44%
2021	5	22%	57%	21%	8	11%	41%	48%

Similar to 2020, the food group most consumed by households on a weekly basis was cereals/tubers (6.73) followed by oil/ fat/butter (5.8) and sugar/sweets (5.6). The least consumed food groups were meat/fish/eggs (1.3) and fruits (0.3). Akkar and the North witnessed the lowest consumption of meat/fish/eggs (0.95 and 0.96 respectively). Male-headed households consumed more dairy products (2.9), including fresh/sour milk/yogurt/Lebneh/cheese, than female-headed households (2.7). Similarly, for meat/fish/eggs and vegetable (1.4 and 3.9 for male-headed vs. 1.2 and 3.7 for femaleheaded respectively), indicating a lower dietary diversity in female-headed households.

Households below the Survival Minimum Food Basket (SMEB) had the lowest consumption of meat/fish/eggs (1.35) compared to other S/MEB categories.² Households in the bottom expenditure quintile consumed the least food items compared to other expenditure quintiles.

Figure 5: Mean of the food groups, by sex of the head of household



² S/MEB categories are the following

^{1. &}gt;= 125% MEB (>= LBP 692,191) 2. MEB - 125% MEB (LBP 553,753 – LBP 692,191) 3. SMEB-MEB (LBP 490,028 – LBP 553,753)

^{4. &}lt; SMEB (LBP 490,028)

Food consumption score nutrition

In terms of key nutrients intake, there was a substantial decline in heme iron consumption, with the share of households that never consumed heme iron increasing from 63% in 2020 to 82% in 2021. Moreover, the number of households that consumed heme iron 1 to 6 times per week was halved in 2021 (18%) compared to 2020 (36%). This implies that around eight out of ten Syrian refugee households are at risk of developing iron-deficiency anemia. On the other hand, consumption of Vitamin A and protein slightly increased from 2020 to 2021, with the proportion of households that never consumed Vitamin A and protein declining from 15% and 10% in 2020 to 12% and 4% in 2021 respectively. Moreover, daily consumption of Vitamin A and protein slightly increased from 32% and 42% in 2020 to 36% and 44% in 2021 respectively. Male-headed households consumed a more diverse diet per day than female-headed ones, with daily intake of Vitamin A at 37% and protein at 45%, compared to 30% and 40% respectively. Female-headed households that never consumed iron was at 85%, slightly higher than male-headed households (81%). The North and Baalbek-El Hermel recorded the lowest daily consumption of Vitamin A (29%) while Bekaa had the lowest daily consumption of protein (36%). The majority of governorates (Akkar, Baalbek-El Hermel, Bekaa, Mount Lebanon, the North, and the South) had no households consuming iron on a daily basis.

Households in residential shelters consumed Vitamin A and protein on a daily basis at 37% and 46% respectively, slightly higher than those in non-residential (31% and 40%) and non-permanent shelters (31% and 41%).

Households below the SMEB never consumed Vitamin A and iron at 13% and 82% respectively, higher than the levels reported for other SMEB categories. Households below the SMEB reported to consume protein on a daily basis the least at 44%.

In terms of expenditures quintiles, households in the bottom expenditure quintile that never consumed Vitamin A, protein, and iron were at 21%, 8%, and 90% respectively, compared to the top quintile (6%, 2%, and 73% respectively). Similarly, households in the top quintile consumed Vitamin A and protein on a daily basis, twice as much than those in the bottom quintile (49% vs. 21% and 59% vs. 28% respectively).

Never consumed Consumed 1 to 6 times a week Daily consumption

32% 36% 42% 44% 36% 18% 52% 53% 48% 51% 63% 82% 2020 2021 2020 2021 2020 2021

Protein

Figure 6: Food consumption score nutrition (FCS-N), by category

Vitamin A

Annex 13: Food consumption score

The food consumption score (FCS) is based on dietary diversity (number of food groups consumed by households during the 7 days prior to the survey), food frequency (number of days on which each food group is consumed during the 7 days prior to the survey) and the relative nutritional importance of each food group. A weight was attributed to each food

group according to its nutrient density. The FCS is calculated by multiplying the frequency of consumption of each food group (maximum of seven if a food group was consumed every day) by each food group weight and then averaging these scores.

Iron

Food groups	Weight	Justification
Main staples	2	Energy dense/usually eaten in large quantities, protein content lower and poorer quality (lower protein energy ratio, or PER) than legumes, micronutrients (bounded by phytates).
Pulses and nuts	3	Energy dense, high amounts of protein but of lower quality (PER less) than meats, micronutrients (inhibited by phytates), low fat.
Vegetables	1	Low energy, low protein, no fat, micronutrients.
Fruits	1	Low energy, low protein, no fat, micronutrients.
Meat and fish	4	Highest quality protein, easily absorbable micronutrients (no phytates), energy dense, fat. Even when consumed in small quantities, improvement to the quality of diet are large.
Milk	4	Highest quality protein, micronutrients, vitamin A, energy. However, milk might be consumed only in very small amounts and in that case should be treated as a condiment, needing re-classification in such cases.
Sugar	0.5	Empty calories. Usually consumed in small quantities.
Oil	0.5	Energy dense but usually no other micronutrients. Usually consumed in small quantities.
Condiments	0	These foods are by definition eaten in very small quantities and not considered to have an important impact on overall diet.

The FCS can have a maximum value of 112, implying that each food was consumed every day for the last 7 days. Households are then classified into three categories (poor, borderline, and acceptable) on the basis of their FCS and standard thresholds. The cut-off points have been set at 28 and 42, as recommended by the WFP Emergency Food Security Assessment Handbook. This is to allow for the fact that oil and sugar are consumed extremely frequently among all households surveyed; the cut-off points have been heightened to avoid distorting the FCSs of those surveyed.

Food consumption score nutrition (FCS-N)

The way in which the FCS is analyzed does not explicitly provide information on the main macronutrient (carbohydrate, fat, and protein) and micronutrient (vitamins and minerals) adequacy and consequent potential risks of deficiencies of these nutrients, but the data recorded in the FCS module provides enough information to shed light on the consumption of these nutrients.

WFP has developed an analytical method to utilize this data and provide information on specific nutrients – a tool called the Food Consumption Score Nutrition (FCS-N). While it does not identify individual nutrient intake, the 'FCS-N quality analysis' fills this gap at the household level and attempts to improve the link between household food access/consumption and nutritional outcomes.

The analysis looks at how often a household consumes foods rich in a certain nutrient. The thesis of the FCS-N is that although the nutrient, for example Vitamin A, can be obtained from many foods, the number of times a household consumes food particularly rich in this nutrient can be used to assess likely adequacy of that nutrient. The FCS-N analysis is complementary to the standard FCS estimation.

The following two steps illustrate this analytical method using a hypothetical example.

- **Step 1.** Aggregate the individual food groups into nutrient rich food groups. As the purpose of the analysis is to assess nutrient inadequacy by looking at the frequency of consumption of food groups rich in the nutrients of interest, we first need to create the nutrient-rich food groups. This is done by summing up the consumption frequency of the food sub-groups belonging to each nutrient-rich food group, following the FCS module table above:
- 1. Vitamin A rich foods: dairy, organ meat, eggs, orange vegetables, green vegetables, and orange fruits.
- 2. Protein rich foods: pulses, dairy, flesh meat, organ meat, fish and eggs.
- 3. Hem iron rich foods: flesh meat, organ meat, and fish. The first three groups above (Vitamin A, iron, and protein) are mandatory to be able to perform FCS-N.
- Categorize the Vitamin A rich groups (dairy, organ meat, orange vegetables, green vegetables, orange fruits) and sum up the frequencies of consumption of foods rich in Vitamin A.
- Categorize the protein rich groups (pulses/ nuts, dairy, meat, organ meat, fish, eggs) and sum up the frequencies of consumption of foods rich in protein.
- Categorize the hem iron rich group (flesh meat, organ meat and fish) and sum up the of consumption of foods rich in hem iron.

Step 2. Build categories of frequency of food consumption groups. Based on the validation tests, frequency groups are classified according to the consumption frequency of:

- Never: 0 day

- Sometimes: 1-6 days

- At least daily: 7 (and/or more) days

For the purposes of analysis, the consumption frequencies of each nutrient rich food group are then recoded into three categories:

- 1 = 0 times (never consumed)
- 2 = 1-6 times (consumed sometimes)
- -3 = 7 times or more (consumed at least daily)
- 2.1 Build the category of frequency of the Vitamin A rich group
- 2.2 Build the category of frequency of the protein rich group
- 2.3 Build the category of frequency of the hem iron rich group

Reference: https://resources.vam.wfp.org/node/87

Annex 14: Diet diversity annex

Household food access is defined as the ability to acquire a sufficient quality and quantity of food to meet all household members' nutritional requirements for productive lives. Household dietary diversity, defined as the number of unique foods consumed by household members over a given period, has been validated to be a useful proxy for measuring household food access, particularly when resources for undertaking such measurements are scarce.

The number of different foods or food groups eaten over a reference period are recorded (in the VASyR, questions were asked about food groups consumed over the 7 days prior to data collection), without regard to frequency of consumption. Household weekly diet diversity is equal to the number of food groups consumed over the previous 7 days. Household daily average diet diversity equal to the number of food groups consumed over the previous 24 hr (for this assessment, the number of food groups consumed was divided by 7 to determine equivalency for one day).

For a better reflection of diet quality, the calculation is based on the number of different food groups consumed and not on the number of different foods consumed. The more food groups households consume, the more diversified the diet is. For example, an average of four different food groups implies that their diet offers some diversity in both macroand micronutrients. This is a more meaningful indicator than knowing that households consume four different foods, which might all be cereals.

The following set of 12 food groups is used to calculate the household dietary diversity score (HDDS):³

- 1. Cereals
- 2. Roots and tubers
- 3. Vegetables
- 4. Fruits
- 5. Meat/poultry/organ meat
- 6. Eggs
- 7. Fish and seafood
- 8. Pulses/legumes/nuts
- 9. Milk and milk products
- 10. Oils/fats
- 11. Sugar/honey
- 12. Miscellaneous

Key concerns: The dietary diversity score does not take into account the nutrient value of food items eaten. The questionnaire should properly account for food items consumed in very small quantities. For instance, if a spoon of fish powder is added to the pot, this should be treated as a condiment rather than a day's consumption of fish. The same is true for a teaspoon of milk in tea.

Reporting: Mean dietary diversity score; compare mean between different groups.

Descriptive procedure: compare means; descriptive statistics.

Interpretation: Dietary diversity is positively linked with adequacy of food intake. Hence, a smaller value indicates poor quality of diet.

For a detailed discussion on the dietary diversity indicator, see the following websites

http://www.fantaproject.org/downloads/pdfs/HDDS_v2_Sep06.pdf

http://documents.wfp.org/stellent/groups/public/documents/manual guide proced/wf p203208.pdf

³ This set of food groups is derived from the UN Food and Agriculture Organization Food Composition Table for Africa. Rome, Italy, 1970. [www.fao.org/docrep/003/X6877E/ X6877E00.htm] For a more thorough discussion of the differences between measures of dietary diversity from the socioeconomic compared with the nutritional perspective, see Ruel, Marie. Is Dietary Diversity an Indicator of Food Security or Dietary Quality? A Review of Measurement Issues and Research Needs. FCND Discussion Paper 140, International Food Policy Research Institute, Washington, DC. 2002. [www.if pri.org/divs/fcnd/dp/papers/fcndp140.pdf]

Annex 6: Food consumption

	Number of meals consumed by adults	Number of meals consumed by children under 5	Food consumption score	Food con	Food consumption groups	sdn
	Mean	Mean	Mean	Poor	Borderline	Acceptable
				ROW N %	ROW N %	ROW N %
Total	2.0	2.6	46.15	14%	32%	54%
Governorate						
Akkar	1.4	1.7	46.78	%/	35%	28%
Baalbek-El Hermel	2.6	3.2	49.61	%9	28%	%99
Beirut	1.9	2.3	54.94	12%	15%	73%
Bekaa	2.4	3.2	46.93	15%	34%	%15
El Nabatieh	2.3	3.0	52.88	13%	31%	26%
Mount Lebanon	1.9	2.4	42.99	18%	33%	46%
North	1.8	2.1	41.30	19%	34%	47%
South	1.9	2.3	52.09	%8	25%	%29
MEB/SMEB categories						
>=125% MEB (>= LBP 692,191)	1.9	2.6	46.54	14%	32%	54%
MEB - 125 % MEB (LBP 553,753- 692,191)	2.0	2.7	49.08	12%	30%	28%
SMEB - MEB (LBP 490,028- 553,753)	2.0	2.4	48.19	13%	26%	%19
< SMEB (LBP 490,028)	2.0	2.6	45.92	14%	32%	54%
Expenditure quintiles						
First quintile - Lowest expenditure (< LBP 800,000)	1.9	2.2	39.52	23%	40%	37%
Second quintile (LBP 800,000 - LBP 1,174,137)	2.0	2.4	43.15	17%	35%	48%
Third quintile (LBP 1,174,137 - LBP 1,500,000)	2.0	2.6	45.77	13%	33%	54%
Fourth quintile (LBP 1,500,000 - LBP 1,900,000)	2.1	2.7	49.88	10%	27%	%89
Fifth quintile - Highest expenditure (LBP 1,900,000 - LBP 4,425,000)	2.1	2.7	51.96	%8	25%	%29
Gender of head of household						
Female	2.1	2.7	44.72	%91	33%	52%
Male	2.0	2.5	46.45	14%	32%	25%
Shelter type						
Residential	2.0	2.5	46.08	14%	31%	54%
Non-residential	1.9	2.3	44.31	17%	31%	52%
Non-permanent	2.3	2.9	47.17	11%	34%	54%

Annex 6: Food consumption

	Household Daily Average	_	HDADD category	>	Household Weekly Diet	_	HWDD category	ry
	Diet Diversity (HDADD)	<4.5 food groups	4.5-6.4 food groups	>=6.5 food groups	Diversity (HWDD)	<= 6 food groups	7-8 food groups	>= 9 food groups
	Mean	ROW N %	ROW N %	ROW N %	Mean	ROW N %	ROW N %	ROW N %
Total	5.38	22%	22%	21%	8.33	11%	41%	48%
Governorate								
Akkar	5.75	11%	%69	20%	7.90	12%	%95	32%
Baalbek-El Hermel	5.67	10%	%29	23%	8.92	4%	27%	%69
Beirut	5.60	25%	36%	36%	9.46	10%	19%	71%
Bekaa	5.79	%6	%89	29%	8.36	11%	43%	46%
El Nabatieh	5.74	75%	33%	38%	8.87	%6	34%	28%
Mount Lebanon	4.81	35%	24%	10%	8.26	11%	43%	46%
North	4.95	32%	26%	12%	7.73	22%	42%	36%
South	5.93	%91	48%	37%	8.65	4%	38%	28%
MEB/SMEB categories								
>=125% MEB (>= LBP 692,191)	5.23	27%	52%	21%	8.37	11%	43%	46%
MEB - 125 % MEB (LBP 553,753- 692,191)	5.57	22%	%05	78%	8.54	%6	42%	46%
SMEB - MEB (LBP 490,028- 553,753)	5.31	28%	48%	24%	8.35	14%	38%	48%
< SMEB (LBP 490,028)	5.39	21%	26%	20%	8.32	11%	41%	48%
Expenditure quintiles								
First quintile - Lowest eExpenditure (< LBP 800,000)	4.87	31%	%09	%6	7.76	19%	44%	37%
Second quintile (LBP 800,000 - LBP 1,174,137)	5.20	25%	%69	15%	8.04	15%	46%	36%
Third quintile (LBP 1,174,137 - LBP 1,500,000)	5.38	20%	%2%	18%	8.36	%8	45%	47%
Fourth quintile (LBP 1,500,000 - LBP 1,900,000)	5.64	%91	25%	28%	8.67	%/	36%	21%
Fifth quintile - Highest expenditure (LBP 1,900,000 - LBP 4,425,000)	5.76	18%	20%	33%	8.81	%9	34%	26%
Gender of head of household								
Female	5.26	25%	28%	17%	8.19	12%	41%	46%
Male	5.40	21%	22%	21%	8.36	11%	41%	48%
Shelter type								
Residential	5.32	24%	25%	21%	8.38	10%	41%	48%
Non-residential	5.28	23%	28%	%61	8.09	17%	38%	45%
Non-permanent	5.62	14%	%59	21%	8.31	11%	45%	47%

Annex 6: Food consumption

	Vita	Vitamin A consumption	ption	Prof	Protein consumption	u o	7	Iron consumption	u o
	Never consumed	1 to 6 times a week	At least daily	Never	1 to 6 times a week	At least daily	Never	1 to 6 times a week	At least daily
	ROW N %	ROW N %	ROW N %	ROW N %	ROW N %	ROW N %	ROW N %	ROW N %	ROW N %
Total	12%	23%	36%	4%	21%	44%	82%	18%	.2%
Governorate									
Akkar	17%	20%	33%	4%	21%	45%	%26	3%	%0
Baalbek-El Hermel	%9	%59	29%	2%	45%	23%	74%	26%	%0
Beirut	2%	21%	74%	%9	24%	71%	25%	41%	3%
Bekaa	17%	52%	31%	4%	%09	36%	%62	21%	%0
El Nabatieh	13%	38%	20%	3%	44%	23%	%89	32%	1%
Mount Lebanon	10%	54%	37%	2%	22%	42%	%08	20%	%0
North	14%	%25	29%	%/	54%	36%	%16	%6	%0
South	%9	46%	48%	1%	41%	28%	85%	15%	%0
MEB/SMEB categories									
>=125% MEB (>= LBP 692,191)	2%	25%	38%	2%	21%	46%	77%	22%	1%
MEB - 125 % MEB (LBP 553,753- 692,191)	%9	52%	42%	4%	20%	47%	%82	22%	%0
SMEB - MEB (LBP 490,028- 553,753)	%6	%05	41%	2%	42%	53%	%62	21%	%0
< SMEB (LBP 490,028)	13%	23%	35%	2%	25%	44%	82%	18%	%0
Expenditure quintiles									
First quintile - Lowest expenditure (< LBP 800,000)	21%	28%	21%	%8	64%	28%	%06	10%	%0
Second quintile (LBP 800,000 - LBP 1,174,137)	17%	52%	31%	%/	23%	36%	85%	14%	%0
Third quintile (LBP 1,174,137 - LBP 1,500,000)	10%	21%	33%	4%	25%	41%	83%	17%	%0
Fourth quintile (LBP 1,500,000 - LBP 1,900,000)	%9	52%	43%	2%	46%	52%	%9/	23%	1%
Fifth quintile - Highest expenditure (LBP 1,900,000 - LBP 4,425,000)	%9	45%	46%	2%	36%	26%	73%	27%	%0
Gender of head of household									
Female	13%	%25	30%	4%	%95	40%	85%	15%	.1%
Male	12%	25%	37%	2%	%05	45%	81%	19%	.3%
Shelter type									
Residential	11%	25%	37%	4%	%05	46%	%08	16%	%0
Non-residential	15%	24%	31%	%9	23%	40%	85%	15%	%0
Non-permanent	13%	26%	31%	2%	23%	41%	83%	17%	%0