WORLD BANK GROUP

Family allowances:
Proposed Reform Options to Pilot
in Syrdarya

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Table of contents

List of tables and figures

List of Abbreviations

ESC	Employment Support Centre
L2CU	Listening to the Citizens of Uzbekistan
Mahalla	Local self-government community
MW	Minimum Wage
PWD	Persons with disabilities
UZS	Uzbek Som

Acknowledgments

Executive summary

The Government of Uzbekistan intends to establish a new approach to identify and select beneficiaries of family allowances by piloting the implementation of a single registry in Syrdarya region (and its related procedures and implementation processes). The Government drafted provisional regulations that will be applied and tested starting July 2019[1], with the intention to then scale them up nationally from January 2020 onwards.

As part of the collaboration between the Government of Uzbekistan and the World Bank in improving the effectiveness of the social protection system, the Bank has conducted some analysis to simulate the possible impact of the provisional regulations and has identified a number of potentially critical issues. This note contributes to the discussion and provides a set of recommendations on the proposed regulation.

The changes proposed in the draft regulations are very significant and involve four main dimensions: the application process, the eligibility determination and verification rules and the institutional responsibilities. In Syrdarya the Government intends to pilot the use of a 'Unified Register of Social Protection', the starting point to develop a social registry. Through the unified register the application process would be simplified and automated; wherever possible checks on income sources and the conditions of the applicants will be done electronically through available databases.

The objectives of the reform are three: 1) increase the coverage of the poor; 2) address issues of transparency in the application and selection process; 3) develop a more flexible and dynamic system.

While issues of transparency and flexibility are addressed by the adoption of a simplified on demand application process and the taking up of clear protocols, the first aspect of increased coverage of the poor is more complicated, and is the focus of this study which relies on quantitative analysis of the Listen to the Citizens of Uzbekistan (L2CU) household survey data[2] collected between April and August 2018 with the support of the World Bank and UNICEF.

As the Targeting Assessment paper[3] showed, the combined total coverage of three family allowances is 12 percent and the coverage of the poor[4] is 37 percent based on the L2CU 2018 data. The analysis shows that there are large exclusion errors as 63 percent of the poor are not reached by low-income allowances.

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[1] "On measures to improve the system of social protection of the population using interdepartmental electronic interaction", draft order of the Cabinet of Ministries of the Government of Uzbekistan (which was approved as Cabinet Resolution 308). The analysis and recommendations of the paper are based on the draft resolution shared with the team on December 2018.

[2] The data collection approaches used in the L2CU study have been acknowledged and agreed to by government counterparts. An advisory committee that reviewed the implementation and results of L2CU data collection included representatives of the statistical agency, several local research institutes, and most of the relevant Ministries.

[3] "Uzbekistan Social Assistance Targeting Assessment", World Bank 2019.

[4] The poor defined as those whose per capita consumption is below the international poverty line of US$3.2 PPP. The poverty line in Uzbekistan is defined by the State Statistical Committee based on a minimum consumption basket, not based on income.

In order to increase the coverage of the poor (hence reduce exclusion errors), increase the transparency of the selection process and develop a more flexible and dynamic system, the provisional regulation proposes a set changes in four main dimensions of the low-income family allowances: the application process, the eligibility determination and verification rules and the institutional responsibilities. Figure 1 provides a schematic representation of the current eligibility assessment according to Cabinet Resolution No. 44 (CR #44) and the proposed new assessment in the draft regulations for Syrdarya (expected to be approved by end of March 2019 at the latest).

Figure 1: Eligibility for family allowances based on current and provisional regulations
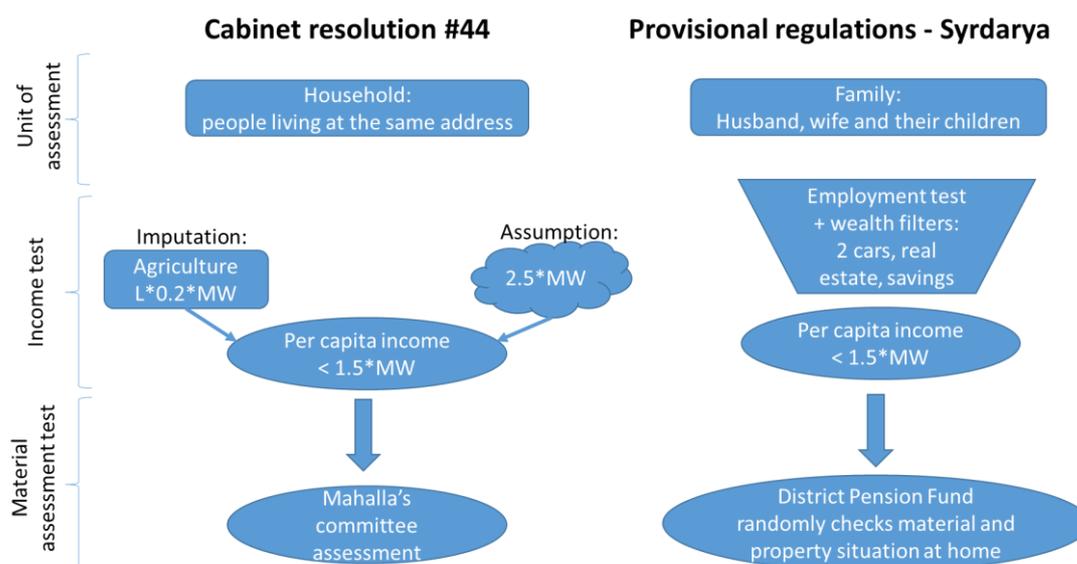
The first significant difference is that the provisional regulations are proposing to change the unit of assessment from "household" to "family". Preliminary analysis based on the L2CU 2018 - which is the main data source for the analysis in this paper - suggests that changing the unit of assistance from household to family could significantly affect the number of eligible units (and the budget) as well as increase the inclusion error. While further analysis on this aspect needs to be conducted, our recommendation would be to maintain the household as unit of reference based on these preliminary findings and to introduce the change only after a careful assessment based on the analysis of pilot data[5].

The second significant change concerns what we call the "income test" to determine eligibility to family allowances. According to the draft regulations, the imputation rules for agricultural income as well as of the "assumed income" (2.5 times the minimum wage) for work-able family members who appear to under-report or do not declare any income are removed. Instead, the draft regulation introduces an "employment test": work-able family members who do not have a formal income must register as unemployed with the

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[5] The household living arrangements in Uzbekistan are complex. As documented in the paper we find that 60% of households are nuclear, 20% are family with grandparents, and another 2% are complex multi-family households.

Employment Support Center (ESC); failing to do that results in the ineligibility to family allowances. Furthermore, it also introduces a set of asset filters that would automatically disqualify the family if the family members together own two or more cars and if members in the family have a second home or a bank account with savings for a value of more than 40 times the minimum wage.

Our simulations show that these two combined changes[6] could substantially increase the number of units that pass the income test: 53% of the population would become eligible, but the impact on the budget would be even bigger since there would be multiple families within the same household qualifying for family allowances. The resulting increase in the absolute number of qualifying units would increase the coverage in the lower deciles, but this would also come with a very significant inclusion error: 36% of all beneficiaries would be in the top 50% of the distribution. The draft regulation is unclear on whether and how the inclusion errors will be controlled.

Simulations of the current income test (based on resolution #44) show that, assuming income for work-able members with no declared income, 29% of the population would pass the current income test, based on L2CU, but 12% of the population is *actually* receiving family allowances (any of the three types). The fact that less than half of eligible households based on the means test (MT) actually receive the benefits is a result of both the *mahallas*' home assessment and implementation problems. For instance, applying just the current means test would yield several inclusion errors; combining the MT with community-based assessment and home visits (through mahallas) play a critical role in improving the targeting accuracy.

The correlation between consumption expenditure and imputed income (by assigning 2.5 times the minimum wage to capable working members) based on L2CU 2018 is negative[7], thus it does not help in the identification of the poor. Instead, income imputed based on the amount of land managed by the household has a positive correlation with consumption[8], thus it supports the identification of those more in need. Critically, the imputation of agricultural income is an important eligibility determination factor because it also determines the employment status of people working in farming, exempting them from the registration in employment offices. In fact, while the mandatory registration in the ESC could prevent some of the better-off households from applying, it is not in itself a pro-poor discriminant factor. Much depends on how registration in the ESC is managed, making registration and permanence in the list of unemployed particularly

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[6] The simulations include the use of the family as unit of assistance, the removal of assumed income for work able household members with no declared income and of the imputed agricultural income, and the assumption that all people who need to register with the ESC do so (we cannot predict who would fail to register (hence assigning zero income to those members).

[7] The correlation between consumption and income is relatively low, the r2 is around .09. Compared to few other countries in Central Asia, this is among the lowest, but not by a huge amount (the next r2 is .11). The relationship is stronger in urban areas, where we expect less reliance on agricultural income.

[8] The L2CU questionnaire was modelled after the Living Standard Measurement Surveys (LSMS) design, and put a large emphasis on accurately capturing consumption. There are limitations in the way income is measured due to the context in which the study was undertaken – in particular for agricultural income from land and livestock which tend to have strong seasonal fluctuations that could not be fully captured in this instrument. The interviews were also conducted with an "omniscient" household-level respondent, which means that the individual level data on incomes is more approximate than a survey design that collects these data individual-by-individual. However, the income measure is informative on specific sources including social protection payments, formal wage income, pensions, and is consistent with administrative data on the amounts of these payments.

stringent (for example by de-listing people who refuse job offers) could hurt the poor more than those relatively better-off.

The third significant change pertains the home visits. Home visits are currently carried out by the *mahallas*, who are responsible to verify that those households who pass the income test are actually found to be in need of support. According to the draft regulations home visits will be done on a random basis, with a minimum of 3% of all applications. Moreover, the home visit eligibility assessment will be done by staff of the district pension fund, who do not have experience in conducting such visits and interacting with poor and vulnerable households.

Given the current low quality and lack of completeness of the proposed administrative data to conduct the automated cross-checks for the eligibility verification, the recommendation is to keep the role of *mahallas* and of home visits as a critical process for the eligibility assessment and verification in the short term. In the draft regulation there is no explanation on how such assessments should be done. If the proposed institutional arrangements remain as in the draft resolution, the pension fund district officers will need to be trained to register applications, assess, verify and determine eligibility also through home visits. In addition, home visits currently serve as a way to correct the inclusion errors purely based on the MT, by complementing it with direct observation and community networks. Excluding home visits, our simulations show that the number of eligible families and the related required budget would be substantially higher than the actual allocated budget. In such scenario, program administrators are often able to curb applications in a non-transparent way. In the absence of home visits, a likely method of curbing the high number of eligible would be through specific extra requirements, as for example the registration with the employment office as prescribed in the draft resolution.

The analysis in the paper simulates the budget and performance of three approaches to select beneficiaries of family allowances: (1) the current eligibility determination and verification procedures for the selection of beneficiaries under the Cabinet Resolution #44, (2) the proposed procedures under the draft regulation for the Syrdarya pilot (draft available to the team in December 2018) and (3) a proposed approach based on the MT (with agricultural income imputation) as the targeting approach to identify beneficiaries and a PMT score to rank those who pass the MT and match the allocated budget (equivalent to a total coverage of 20 percent of the population).

Under the proposed approach (third option), the total *actual* coverage is proposed to increase to 20 percent to improve the coverage of the poor while maintaining the total budget within acceptable parameters; the household is kept as unit of reference, the agricultural income imputation is maintained through the land managed by the household as in CR #44, while the wage income imputation is excluded and the employment test is included as in the proposed draft regulation[9]. Simulations show that under the third scenario 43% of the population could pass the income test. This percentage is lower than in the scenario proposed in the draft regulations (53%), but still quite significant. As

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[9] As in option 1 we assume that all work able family members who do not report a formal income register with the ESC (which is an extreme assumption as informal earners won't have the incentive to register with ESC and apply to the family allowances).

a comparison, the percentage of people who pass the income test based on the current CR #44, is simulated to be 29% of the population.

Under the proposed approach, a standardized tool based on a PMT would aid as an objective instrument to cut the higher part of the distribution of those who pass the MT and avoid the potential use of non-transparent ways "to control the total coverage" to stay within budget. A PMT is not recommended for targeting/identifying the poorest 20 percent. Rather, a PMT might be as an objective method to rank families who pass the MT and ration the upper part of the distribution to match available budget[10].

The World Bank developed and piloted[11] a standardized assessment tool for conducting household visits. By collecting information on a set of proxies of living conditions it is possible to indirectly assess whether the income declared by the household corresponds to their living standards and generate a score (PMT) correlated with poverty measured on a consumption aggregate as nationally defined. Each household who pass the MT will be assigned living standards score and only those below a certain threshold would qualify. The threshold can be more or less stringent, allowing ample flexibility and set depending on the overall target coverage and related budget. In our proposal the total coverage of family allowances is simulated to be 20% of the population.

The three approaches result in very different performance and expenditure for the low-income family allowances. Under the first approach (MT and community-based targeting through mahallas), the government spent about 1.6 billion UZS on the 3 family allowances and the total combined coverage was 12% of the population. Under the second approach (MT) according to the draft resolution (under the extreme assumption that everyone who, passing the income test, applies and work-able applicants not earning a formal income register with the ESC) the simulated coverage would be 53% and the required budget would be 8.6 billion UZS; and under the proposed alternative approach (MT+ PMT to cut the highest part of those who pass the MT to keep the total coverage at 20%) the required budget would be 3.3 billion UZS[12].

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[10] The means test (MT) formula under CR #308 would imply a substantially larger budget than what is currently provided (assuming that the benefit amounts remain at their current levels, and that every eligible family is provided with the benefit). In such a context, rationing may be required where the budget constraint is binding, and a PMT is one method that could avoid bias in how this rationing is conducted. The proposal is to still use the MT (but by reintroducing the imputed income from land and livestock), rank those eligible households who pass the MT (simulated to be 43% of all households comply with eligibility rules) over their PMT score and cut the richest part to match allocated budget.

[11] The household characteristics that should be part of the Proxy Means Test (PMT) model as well as the required coefficients were preliminary estimated through a regression-based model on the L2CU 2018 household survey data, the only survey data available to the team. A short questionnaire to collect the relevant information was developed and tested in early December 2018 to ensure that the questions are clearly understood and verify an optimal flow as well as estimating the duration of the assessment. 11 households (4 in Akhangaran city and other 7 in a rural areas in Akhangaran district) were interviewed.

[12] The 20% coverage threshold is an example of increased coverage with respect to the current 12% still maintaining the budget within accepted parameters. We did also simulate a scenario that maintains the current budget. However, simulations of this approach would generate the same level of coverage currently achieved in the poorest decile, while the objective here is to increase the coverage of the poorest decile within acceptable budget increases.

Compared to the current status quo, the third approach would have the advantage of increasing significantly the overall coverage and the coverage in the poorest decile - while containing leakage to the non-poor. This would be achieved at a higher cost with respect to the current system, and at a lower cost with respect to the second approach. Moreover, this approach would offer an instrument to control the budget using a tool that by design would remain pro-poor.

Figure 2 summarizes the simulation results of the different beneficiary selection procedures under the current cabinet resolution, the draft regulations for Syrdarya (with assumptions) and the proposed alternative approach respectively. As performance indicators, we report the percentage of eligible people, the coverage in bottom and top consumption deciles, the leakage to the top 50% of the distribution and the required overall annual budget. The alternative proposal would have the advantage of increasing significantly coverage in the poorest decile - while containing leakage to the non-poor - at a higher cost with respect to the current system. Moreover, this approach would offer an instrument to control the budget using an instrument that by design would remain pro-poor.

Figure 2: Simulated eligibility, coverage of the poor, leakage and budget
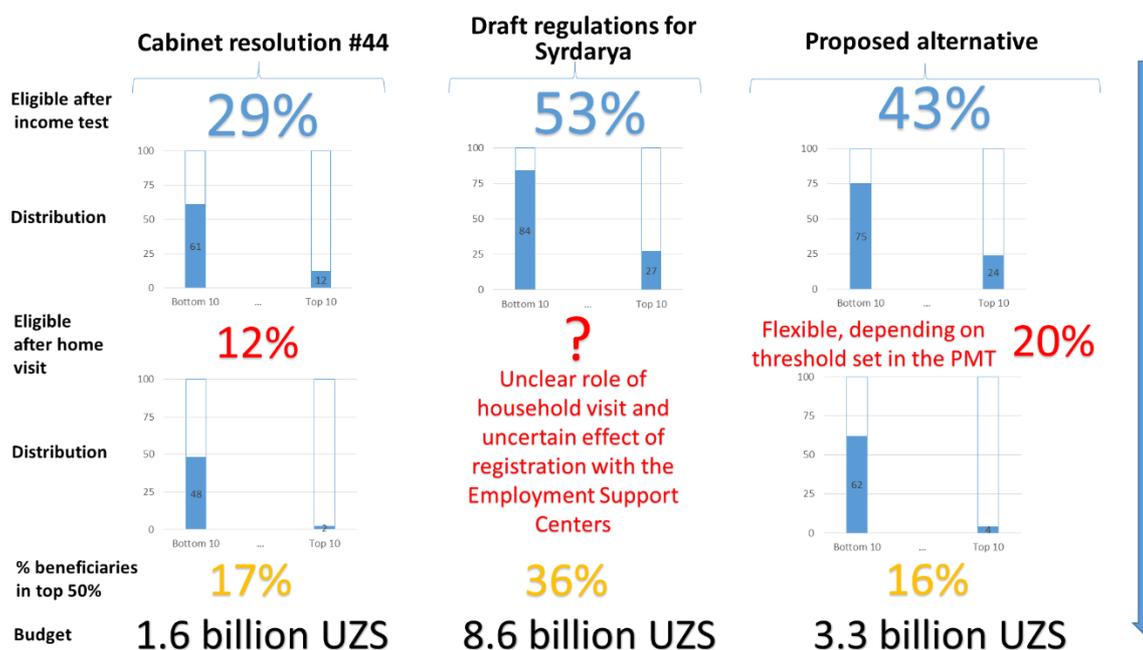
A key recommendation of the paper is to increase the overall coverage of the family allowances to 20%. Increased investment in outreach activities, including through mobile teams to reach the hardest to reach) and communication, is needed to remove information barriers. Develop regular information campaigns that not only make use of social media to raise awareness on recent changes in the legal framework (i.e. the need and the reasons of registering to ESC), especially among previous beneficiaries in the transition to the new application and eligibility procedure system.

To correct possible inclusion errors that may arise under the proposed regulations to be piloted in Syrdarya a set of recommendations is presented including:

- Maintain the household, not the family, as unit of eligibility assessment, but potentially consider the entitlement at a family level, so that if in one eligible

household there are two families with qualifying children they could both receive support;

- Keep imputing agricultural income based on the amount of land managed by the household;
- In the medium term, improve the type of imputation, including quality of land, livestock and number of family members working in the farm;
- Exempt family members engaged as self-employed in the family farm from the obligation of registering to the ESC;
- Leverage the single registry pilot in Syrdarya to also pilot the indirect living standards assessment tool (the PMT) to: a) control the overall number of beneficiaries by ranking eligible applicants who pass the MT and assign the benefits to the poorest to match the allocated budget; b) use the information collected through the PMT questionnaire as a basis to develop a risk-profiling tool to manage cases of fraud and errors; the pilot data collected through the tool would aid to identify the profiles of households who are more likely to under-report or mis-report their income/assets and to develop an algorithm for the identification of high risk cases that should be subject to home visit inspections (hence best targeting administrative expenses on such higher risk cases). c) analyze to what extent the lack of mandatory registration with the ESC excludes poor or relatively better-off households and how such requirement should be enforced and managed. We recommend including within the planned single registry pilot in Syrdarya, the pilot of such PMT tool with the above mentioned objectives to be tested. The usefulness of such PMT instrument should be carefully assessed before national scale up, weighting costs and benefits;

Other recommendations for a smooth transition to the new application and selection procedures include:

- Strengthen the capacity of the ESCs to manage and administer a very likely increase in the requests for registration, job search assistance and ALMPs from a population who is likely to have different skills, employment history, labor market participation constraints and motivations;
- Develop regular information campaigns and raise awareness on recent changes in the legal framework (i.e. the need and the reasons of registering to ESC), especially among previous beneficiaries;

Finally, it is important to establish clear rules for the selection of beneficiaries of the financial aid allowances (as opposed to the other two allowances) and a consolidated benefit structure, where the benefit amount should follow a more intuitive approach and be based on the number of qualifying members/categories within the household. The paper points to an inconsistency between how the family income is assessed (in the same way according to MT for the three types of allowances) and the benefit structure (different across the three allowances). Currently, the amount of support does not depend on the number of household members. For instance, a family with five children more than two years old receives a much lower support than a household with the same level of income and one child less than two years old.

1   Introduction

As part of the collaboration between the Government of Uzbekistan and the World Bank in improving the effectiveness of social protection, the Bank has conducted further analysis to inform the new procedures for the identification and selection of households eligible to receive family allowances.

Indeed, from July 2019 the Government of Uzbekistan intends to pilot a new approach to select beneficiaries of the three means-tested family allowances, learn from it and eventually scale up nationwide the revised new procedures from January 2020. The pilot will include the establishment of a single registry of applicants in Syrdarya region regulated by a presidential resolution currently in draft[13] and expected to be approved by end of March 2019.The provisional regulations for Syrdarya region have been drafted and will substitute the current cabinet resolution no. 44 (CR #44). The changes are significant and involve three main spheres: the application process, the eligibility rules and the institutional responsibilities.

More specifically the main innovations of the provisional regulations are the following:

- Simplification and automation of the application process through the "Unified Registry of Social Protection";
- Change of unit of assessment from household to family: who is to be considered a member of the family for the calculation of income and eligibility;
- No imputation of agricultural income based on amount of land owned;
- No imputation of incomes for employable family members who do not declare adequate personal income, but requirement to register with the district employment support center (ESC);
- Extension and clarification of family members without obligation of work: mother with a child less than 3 (it used to be less than 2), person with disability of 1st or 2nd degree, career of a family member who needs nursing care, person with serious illnesses;
- Introduction of filters that automatically disqualify households with 2 or more cars, having a second home, having savings for an amount equivalent to 40 times the minimum wage (MW);
- Random household visits (for only 3% of beneficiaries) at the place of residence to verify the material conditions of the family performed by the District Pension Fund personnel;
- *Mahalla* no longer has a decision role in determining and verifying eligibility to family allowances, but they still play an intermediary role in application intake. Instead the Pension Fund will take decision on households' eligibility.

These are very significant changes, which could have both positive and negative consequences. The objective of this note is to critically assess the possible impact of such changes and, where applicable, propose possible alternative solutions to be adopted during the pilot in Syrdarya.

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[13] "On measures to improve the system of social protection of the population using interdepartmental electronic interaction", draft order of the Cabinet of Ministries of the Government of Uzbekistan, draft December 2018.

Pilots are opportunities to experiment and collect substantial information that could be used not only to assess whether the specific experiment reaches the policy objectives, but also provide enough information for possible corrective actions during the future national scale-up.

The structure of the note is as follows: the next section aims to clarify the ultimate policy objectives of the reform, the third section presents the performance analysis of the simulated means test procedures under the current approach based on the CR #44 and the proposals put forth in the provisional regulations for the single registry pilot in Syrdarya. The fourth section investigates the role of community targeting (through mahallas) and of the visit at the place of residence of the applicant. This section compares the targeting performance and required budget of the current and proposed new procedures with a third approach based on the combination of the income test and the use of a standardized living standards assessment form (a PMT) to correct for inclusion errors in an objective way to stay within the allocated budget. The fifth section proposes alternative benefit structures to calculate the allowance amount to better reflect the household needs; the objective being not to increase the overall budget, but to provide allowance amounts that are more equitable and could have a stronger impact on poverty reduction. The final section provides some policy recommendations and advice on actions to be taken during the pilot.

2   Policy objectives

Before undertaking the analysis of the pilot, it is very important to be clear about the key objectives of the new approach and the fundamental motivations behind the significant changes that the Government wants to implement.

The Government of Uzbekistan is aware that while the economic reforms will prove beneficial in the medium and long term, certain population sub-groups could be badly affected in the short term. In this context, it is important to ensure that there are flexible and fair social assistance mechanisms in place in order to support people during this transition.

Family allowances are one of these important policy instruments to increase households' resilience to economic shocks – and other types of idiosyncratic shocks as evidence proves -, but their coverage is relatively limited, they are implemented through the *mahallas* sometime raising issues of transparency in procedures and fairness across different locations. Specifically, in Tashkent and some urban areas the selection of beneficiaries through *mahallas* is strongly criticized (based on qualitative evidence, "An assessment of the Uzbekistan Targeting System", WB 2019).

Using the Listening to Citizens of Uzbekistan (L2CU) survey data and the qualitative study conducted in the summer of 2018, the assessment of the ability to reach the poor using family allowances showed a relatively high degree of accuracy, but coverage of the poor and transparency of approach are confirmed to be a problem (Uzbekistan Targeting Assessment, 2019).

The main objectives of the proposed reforms regulated by the draft presidential resolution "On measures to improve the system of social protection of the population using interdepartmental electronic interaction" are the following:

- Increase the coverage of the poor, while maintaining support within a certain budget;
- Tackle issues of transparency in the process of identification and selection of beneficiaries;
- Develop a system that can more flexibly respond to higher demands.

While issues of transparency and flexibility are addressed by the adoption of a simplified on-demand application process and the taking up of clear protocols, the objective of increasing the coverage of the poor is more complicated.

How to achieve higher coverage of the poor? This requires reducing both the exclusion errors (through outreach activities and increase coverage of those households who are eligible but did not apply) and reducing the inclusion errors by improving the design and implementation of the eligibility determination as well as verification criteria, which in turn may inevitably affect the overall budget. Does the Government intend to increase the budget in real terms and by how much?

Based on the program administrative data in 2018 the *planned* total coverage of households was supposed to be a bit less than 9%[14]. For 2019 the Government has increased the budget allocation by 50%, but a significant percentage of such increase is due to the higher amount that will be paid for each allowance[15]. Therefore, we estimate that the actual budget

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[14] There is a discrepancy between the total coverage estimate from the L2CU survey (12%) and the administrative planned coverage based on budget allocation (9%) for 2018.
[15] Since October 2018 the monthly minimum wage was increased by 7%, from 172240 to 184300 UZS and family allowances not only increased to reflect the higher minimum wage but were also raised by an extra amount to account for the higher price of wheat flour as a consequence of the withdrawal of subsidies.

increase is approximately 30%. Given that the three types of family allowances provide different amounts, the budget increase could result in an overall population coverage significantly higher or lower than 30% depending on which group receives higher coverage.

Since the pilot will take place in Syrdarya region the impact of the new resolution is expected to have a very limited effect on the overall national coverage and budget. Indeed, Syrdarya is the smallest region of the country with about 2.5% of the population, and the number of beneficiaries of low-income family allowances is less than 14 thousand (about 2.4% of overall beneficiaries). Therefore, the budget allocation for 2019 is not indicative of the Government plans for the full roll-out and expected future coverage. For the purpose of this analysis we will consider how different eligibility rules could result in various scenarios of coverage: the current level of coverage of about 12% of the population and increased overall coverage under alternative scenarios.

We can conceptualize eligibility as being determined by a set of tests that the household must pass in order to be considered eligible for the family allowances. Both the current CR #44 and the provisional regulations for Syrdarya are made up of two tests: the income test and the material assessment tests, but the two types of tests are constructed differently.

The unit of assessment is the household in the CR #44 and the family for the provisional regulations. Furthermore, the income test in CR #44 includes not only incomes declared by the applicant, but also imputed agricultural income and imputed wage incomes for work able members who do not formally declare income and are not registered unemployed with the ESCs. In the draft regulations for Syrdarya, there are no imputations or assumptions: workable members who do not declare formal incomes must be registered with the ESC; failing to do so results in the ineligibility to family allowances (we call this the "employment test"). In addition, there are simple filters in the draft regulation based on an asset test: if the family members own two or more cars, then they are disqualified, and the same applies if they own a second dwelling or savings for an amount above 40 times the minimum wage. Finally, while under the current CR #44 all applicants are visited at the place of residence to make an assessment of the household material conditions, under the provisional regulations this will only occur on a random basis.

It is important to assess the possible implications of these changes, starting by looking at the income test and then the role of the household visit.

3 Reproducing the income test

Eligibility to low-income family allowances is determined by the income test, which essentially stipulates that per capita monthly income must be below a set threshold of 1.5 times the minimum wage (MW). This basic rule is the same in the current regulations as well as in the provisional regulations, but as discussed in the previous section the way income is computed and who is considered part of the family has changed. Below we discuss in more depth these differences and try to simulate their impact on the L2CU data.

3.1 Income test according to CR #44

The current calculation of income includes both actual income reported by household members, imputed income based on the amount of land in use by the household and "assumed" income for work able family members who do not report or under-report income.

Incomes to be considered include wages, self-employment income, agricultural income, property income, pensions and social transfers (excluding low-income family allowances), and foreign remittances. While the definition of income is comprehensive, in practice there is not easy way to assess whether income obtained from informal sources is properly reported. Therefore, CR#44 resorts into making imputations and assuming some income.

The calculation of imputed income for agriculture is straightforward and simply based on the amount of land. The assumption is that the household will obtain a monthly amount of 20% of the MW for every 100 square meters of land. We call this an imputation because it is based on the amount of land managed by the household[16].

Furthermore, all work-able family members who have not reported any income or have reported monthly incomes lower than 2.5 times the MW are automatically assigned such value. However, there are exceptions to this rule: family members excluded from this calculation are mothers of children less than 2, retired pensioners, students in educational institution, family members engaged in *dehkan* farming, and people registered in the ESC as unemployed. While it is not clearly spelled out in CR#44, we interpret 'work-able family members' as excluding persons with disabilities, although the degree of disability is not specified. In this case we speak of "assumed" incomes because the calculation is not based on any actual observation.

To the extent possible we simulated such approach using the L2CU 2018 data. First, we considered declared labor income from wage employment or self-employment non-agricultural activities (hence excluding farming income from land managed by the household). Second, pensions and other social transfers, as well as property income (from renting own dwelling or interest from savings) included in the income aggregate. Third, we include the agricultural income estimated using the imputation formula and the amount of land declared by the household[17]. Foreign remittances and other inter-household transfers are not included as are unlikely to be reported correctly. There is a low correlation between

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[16] The calculation is extremely simple since it does not consider the quality of the land, livestock owned by the household and the number of family members working the land. Simplicity is both a strength and a weakness of such approach. The current regulations also state that *mahallas* can make exceptions if the quality of the land is poor, but in practice this is difficult to implement if no more detailed instructions are provided.
[17] It must be said that overall the L2CU appears to be seriously under-reporting the percentage of households who managed farming land, and also agricultural and self-employment income do not appear to have been properly captured.

the consumption expenditure and the income aggregate in the L2CU. It should be recognized that the L2CU has some limitations, especially in the way income is captured (this is especially true for self-employment income).

We have then imputed incomes of 2.5 times the MW for all work-able family members under-reporting or not reporting personal incomes[18] following as much as possible the instructions of the CR #44.

Based on L2CU data, about 30% of people in the country would pass the income test, though there are other eligibility conditions that need to be met in order to be eligible including the presence of at least a child less than 14, a disabled, or a single pensioner. However, such demographic requirements are not very stringent since 82% of the population live in households satisfying such demographic conditions, a percentage that increases to 95% in the poorest decile.

In fact, when we combine income test and the demographic eligibility conditions, 29% of the population would qualify as eligible to the family allowances.

In practice the *mahallas* are responsible for eligibility verification and beneficiary selection. Partly because of the mahallas' direct assessment and partly because of various implementation problems, the actual coverage decreases very significantly to 12 percent of the population. While we cannot replicate in the data the *mahalla* selection process, just by excluding households who own a car results in decreasing the number of eligible population to 24%.

It is important to note that, households with children less than 2 appear to have a significantly lower simulated income than other households receiving or eligible to receive family allowances based on the income assumptions regulated in CR#44[19]. However, such difference does not exist based on the actual reported income data or the level of expenditure in the L2CU (see Table 1).

Table 1: Median values of per capita income and consumption among actual recipients and eligible households

	Income based on CR#44	Reported income without family allowances	Consumption expenditure per capita
Recipients of family allowances			
Child care allowance (<2)	165512	128190	204569
Families with children (2-13)	229440	125500	196181
Financial aid	217672	143241	218804
Eligible to family allowances			
Child care allowance (<2)	159322	125000	204087
Families with children (2-13)	200434	98033	214771
Financial aid	182995	100000	250143

[18] We have excluded from this calculation the exemption categories (mother of child under 2, children below 18 and people above pension age, people in working age but attending educational institution, family members engaged in dehkan farming, and those registered with the ESC), and also not included all people considered disabled in the L2CU.
[19] Mainly because the mother with child under 2 years old is part of the exempted categories and is assigned zero income in the MT calculations.

Moreover, the income assumption is responsible for wrongly excluding some eligible households. In fact, without assuming an income of 2.5 times the MW for workable members, the population eligibility based on income and demographic tests would increase to 43%, with 75% of people in the lowest decile now eligible to assistance.

3.2 Income test based on the provisional regulations for Syrdarya region

In the provisional regulations for Syrdarya region two very substantial changes are made: Firstly, the unit of assessment is no longer defined by the people residing at a certain address, but only considers the family. Secondly, no income imputation or assumption is made, but people without formal income declarations are required to register with the ESC. These changes require further explanation and assessment.

3.2.1 From households to families

The unit of assessment is no longer the household, but it becomes the family, defined as father, mother and their children, including children 18 and above provided they have not yet formed their own families. In Uzbekistan this can have a very significant impact. In fact, while about 60% of households are already 'nuclear' (father/mother and children), i.e. the definitions of family and household coincide, about 20% of households are three generation households, whereby one or two 'grandparents' live with the family, and another 20% is represented by complex multi-family structures.

Under the current legislation in most cases households, defined as people living at the same address and sharing expenses, are considered to be one family. Therefore, in a three-generation household, grandparents are considered to be part of the family, their income is included, but they are also factored in the denominator when computing per capita income.

Using the L2CU data we have identified families within households and tested their income eligibility to family allowances.

It should also be said that the current definition of family is relatively simplistic since it does not consider more complicated cases that are faced in practice. For example, children living with their grandparents, or situations where a person with disabilities lives with their brother or sister, etc.

3.2.2 Imputed and assumed incomes and registration with the ESC

The provisional regulations also ignore not only the income assumption among work-able family members, but also the income imputation for agricultural income.

The overall effect of the lower imputed income and considering families as units of assessment is that 53% of population would be eligible to receive family allowances, and the coverage in the poorest decile could increase to 84% of people. However, this would also entail a significant leakage to better-off households: 36% of the overall beneficiaries would be in the top 50% of the distribution.

However, if people are capable to work, but do not report any formal income, they would be compelled to register with the ESC in order to be eligible to assistance, else their family would automatically disqualify. The implicit assumption is that if people do not register at the ESC is because they have other informal sources of income and so they do not need a job.

Poor people could still lose out of support because they are mis/not-informed or do not properly understand the need to register with the ESC and aspects of the regulation. For instance, registered jobseekers lose the registration status if they refuse a job offer they cannot take (for example being too far off their place of residence). This rule might not be so relevant now, though it could be used incorrectly in the future.

Making the registration with the employment office mandatory is being prescribed in several countries in the region to promote the activation of work able social assistance beneficiaries. International experience shows that this mandatory requirement needs to be properly implemented, managed and communicated. An information campaign strategy needs to be developed and adopted; importantly the capacity of ESC needs to be strengthened to serve a significant increase in demand of employment services and ALMPs, also considering the different profile and labor market constraints this specific group of the population have (lower educated, mobility constraints, participation constraints because of caring duties, cultural norms and lower motivation/job readiness).

Currently the provisional regulations expect to provide information through electronic means (e-mail and mobile phone), but alternative mechanisms need also be considered such as social media, mobile teams reaching out to hard to reach areas, communication material. In fact, not all poor people have a mobile phone (only 39% of people aged 15+ have a mobile phone in the first decile) and 32% of households in the poorest quintile does not use a mobile phone (the percentage is 13% in the top decile).

Concerning self-employment in agriculture, jobs on land managed by the household should also be treated differently. It is recommended to maintain the imputation of agricultural income based on land, and ideally developing a more comprehensive approach that includes livestock and family labor. An important consequence of doing this is that it will also identify some family members, who can be considered exempt from registering in the ESC because they are engaged in the family farm.

In sum, using families as units of assessment and without income imputations and assumptions, but relying on reported income, and if we assume that everyone who needs to register with the ESC, then about 53% of all population would be eligible to family allowances.

In this hypothetical scenario, the coverage of the poorest decile of the distribution would increase significantly, but so the leakage to the non-poor (see Figure 3). Moreover, the overall budget in this scenario would increase to about 8.6 billion UZS per year. If this level of expenditure is beyond what is allocated by the Ministry of Finance, the number of beneficiaries need to be somehow controlled.

Figure 3: **Distribution of beneficiaries by consumption deciles according to the provisional regulations and assuming full take-up**
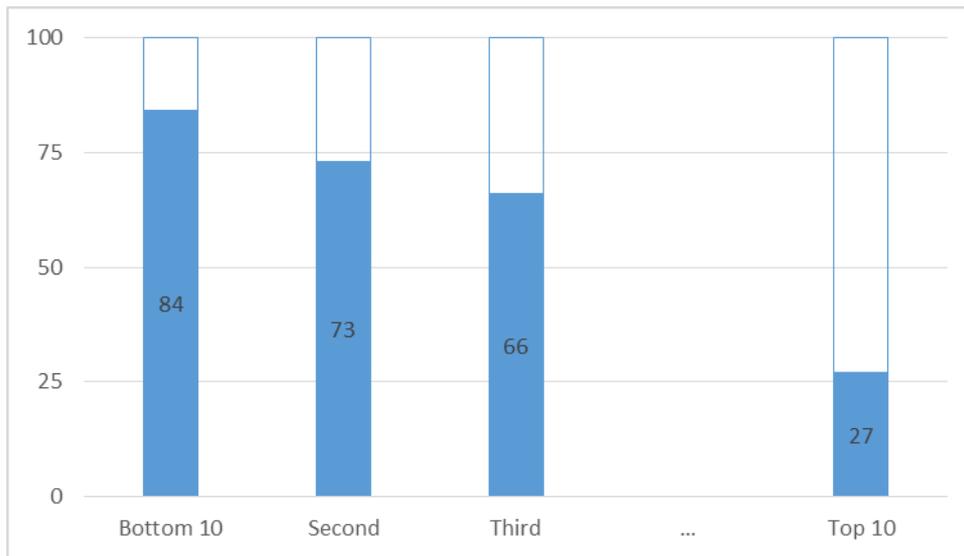
Source: Analysis of the L2CU 2018.

4 The role of home visits and the assessment of material conditions

4.1 *Mahallas*' assessments under CR #44

As explained in section 3, 29% of the population would be eligible to family allowances based on the income test and complying with demographic eligibility conditions as prescribed in CR#44. This would result in a coverage of the poorest decile of 61% of the population, but with a considerable leakage to non-poor households. If everyone were to take-up the allowance, we estimate that the budget would need to more than triple (we take as reference the planned budget expenditure for 2018).

The actual estimated coverage of family allowances in 2018 is of 12% of households[20], with coverage in the poorest decile of the per capita consumption without social assistance transfers of 48%, who represent 40% of all beneficiaries. The difference between the actual coverage and intended coverage based on eligibility rules is due to both the community assessment through mahallas and to implementation bottleneck such as lack of information or wrong information about eligibility criteria and application process. Therefore, while the community assessment has its limitations (in terms of transparency), analysis suggests it does perform relatively well in terms of targeting accuracy and correcting inclusion errors. Community-based targeting has scope for improvement and may play a role in the identification of the poorest.

In a context where informality represents an important share of the economy, relying exclusively on the income test (MT) would increase coverage above what appears feasible based on current budget allocations. Just relying on the MT would increase the total coverage without necessarily reducing inclusion and exclusion errors significantly.

4.2 Filters and Pension Fund checks

Under the proposed regulations for Syrdarya, it is estimated that 53% of population would pass the income test. However, the proposal is to introduce some filters that could reduce such numbers and also conduct some random tests to verify peoples' 'material conditions'.

The proposed filters include the ownership of 2 cars by members of the family, the ownership of real estate beyond the dwelling where people live, and the presence of a saving account with an amount 40 times higher than the MW. Unfortunately, the filters cannot be simulated in the L2CU as information was not collected[21]. The analysis of available data suggests that these filters will affect only a very limited number of families[22].

Concerning the checks to be carried out by the staff of the District Pension Fund the proposal is for household visits to be random. More concerning is that nothing is specified

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[20] This is significantly higher than the administrative coverage of 9% of households provided by planned budget allocations and number of beneficiaries. Possible explanations for this difference is that survey estimates include also some households who used to receive the allowance and are no longer beneficiaries, or that actual coverage has increased beyond the original budget allocation.

[21] The L2CU has information on whether households own a car, but not their number. There is no information on real estate ownership beyond the dwelling where people live, and we only know whether people have a saving account, but not the amount of savings.

[22] Overall 25% of households own at least one car, and X% of households passing the income test have at least one car, but numbers are likely to be significantly smaller for ownership of 2 or more cars. Moreover, in the L2CU only less than 1% of households report having a saving account.

on what these checks at the place of residence will consist of. Unlike *mahallas* who have gained experience in such assessments and have the inside knowledge of living in the same settlement of the applicants, district pension funds staff will need to be trained and would need specific guidance on how to conduct such assessment. It is unlikely that the random checks will serve as a deterrent for relatively better-off households, also considering that the increase in number of beneficiaries is expected to be very significant as the income test allows most households to qualify.

Under the current draft regulation, the binding filter will be the mandatory registration with the ESC. This mandatory requirement is unlikely to be pro-poor, at least in the short term, since usually poor people living remotely are more likely to be affected due to lack of awareness and distance to the ESC. If communication is not properly implemented, there is a risk that this requirement would become a non-transparent way to reduce eligibility to family allowances, at least in the short term. The ESC 's capacity to absorb higher demand for employment services and programs should be strengthened. In the medium term, assuming that potential beneficiaries comply with this mandatory registration, the budget allocations to the family allowances would need to increase substantially.

Finally, international experience in the region shows that mandatory registration with ESC is a first step but not a necessary condition to promote labor market activation. Local labor market conditions, the capacity of public employment centers, the active behavior of registered unemployed as well as the beneficiaries' incentives to work/accept job offers depending inter alia on the labor taxation and its intersection with social benefit entitlements matter to increase labor market participation and employment.

4.3 The possible role of a standardized assessment form

In order to avoid the potential problems discussed above, it is recommended to experiment as part of the single registry pilot in Syrdarya the use of a standardised assessment tool to be filled in at the place of resident of the applicant. The tool had been developed based on a proxy means test (PMT) empirical methodology based on the L2CU data.

In Uzbekistan the proposed use of the PMT assigned score is meant to complement the measurement of income and would aid as an objective instrument to cut the higher part of the distribution of those who pass the MT to avoid the potential use of non-transparent ways "to control the total coverage" and stay within budget. The PMT is not recommended for targeting/identifying the poorest 20 percent. Rather, a PMT might be used as an objective method to rank eligible families[23].

The PMT is a way to indirectly assess households' living standards. Whereas with 'means testing' household conditions are assessed directly by measuring household incomes and elements of households' wealth, with "PMT" means are measured using some proxies such as household demographic composition, household assets, housing conditions, etc. Proxy means formulae put together these different variables assigning a weight to each of them and calculating an overall score, which is then taken as an estimate of the welfare of the household.

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[23] The means test (MT) formula under CR #308 would imply a substantially larger budget than what is currently provided (assuming that the benefit amounts remain at their current levels, and that every eligible family is provided with the benefit). In such a context, rationing may be required where the budget constraint is binding, and a PMT is one method that could avoid bias in how this rationing is conducted. The proposal is to still use the MT (but by reintroducing the imputed income from land and livestock), rank those eligible households who pass the MT (simulated to be 43% of all households comply with eligibility rules) over their PMT score and cut the richest part to match allocated budget.

The calculation of the PMT should be done using high quality and nationally representative household surveys – preferably official surveys regularly collected by the national statistical offices - and using statistical measures of association between a welfare indicator and the proxies. For this exercise we have used the Listening to Citizen of Uzbekistan 2018 (L2CU) as the only source of data available and accessible. However, in future it would be necessary to use a national and regular source of data, such as the Household Budget Survey collected by the State Statistics Committee.

Being a 'proxy', the PMT inevitably contains an approximation of the actual means of the household, and the calculated score is likely to change more slowly than income and representing not necessarily, just the current living conditions, but what might have been achieved in the past. Nevertheless, in many cases, proxies can help in assessing the real situation of the household, especially when income is difficult to measure and verify and can be easily under-reported.

The two fundamental components in the estimation of a proxy model are the dependent variable – the welfare indicator – and the explanatory variables. The dependent variable is the measure of the household consumption aggregate adequately adjusted for price differences and by household size[24]. Furthermore, for those receiving one of the family allowances, we try to simulate consumption expenditure without such support by subtracting the income received from the family allowances[25].

The explanatory variables need to satisfy the following criteria:

- Highly correlated with the welfare indicator;
- Amenable to be collected through a simple form (variables whose definition is very complex might be difficult to collect properly and with the same standards of the data source used for the model estimation);
- As much as possible verifiable by an eventual home visit;
- Not easily modifiable by the respondent.

A large number of proxies are included in the first version of the model, but then variables are selected depending on their joint statistical association to the welfare indicator, and the weight of each variable is also determined by this statistical association. The most significant explanatory variable is selected first, and then other variables are selected based on their added contribution in predicting welfare levels. This explains why sometimes a variable that is highly correlated with welfare might not be retained when jointly assessed with other variables.

Even though in the selection of explanatory variables we are limited by the information collected in the L2CU, there is a large number of potential explanatory variables and their combinations. Moreover, the search of the model must be informed also by experience, understanding of local context and geared towards generating a model that is as much as possible intuitively understandable.

The variables included in the model at the beginning are grouped in four main areas:

- Household demographic composition: number of household members, disability, children and elderly, marital status of household members (divorced/widowed), location where the household lives (regions and urban/rural settlement);

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[24] As suggested in Deaton and Zaidi (2002) the consumption aggregate does not include health expenditure. This is also justified by the analysis conducted in the previous note on 'risk and vulnerability'.
[25] In a few cases consumption levels would become negative, but we adjust such values to maintain a certain minimum consumption.

- Economic activities, characteristics of household members and economic assets: education achieved by adult household members, occupation of household members, whether there are members working abroad, ownership of land and agricultural machinery, whether there are household members receiving certain types of incomes (foreign remittances and pensions);

- Housing characteristics: number of rooms, toilet type, water source, fuels used for cooking and heating;

- Ownership of a number of durable assets: car/truck, TV, fridge, electric oven, bicycle/motorbike, use of satellite/cable TV, computer, vacuum cleaner, electric sewing/knitting machine, air conditioner.

Other general points worth keeping in mind when estimating a PMT model are the following:

- We do not aim at measuring the causal relationships between explanatory variables and the welfare indicator, but only to predict as accurately as possible the welfare indicator;

- We aim at accurately predicting the ranking of households from the poorest to the richest, with a specific focus on the bottom part of the welfare distribution;

- We can compare different estimation methodologies, but the final decision should be made on their relative accuracy, assessing their ability to rank correctly households.

Using the explanatory variables reported above[26] we adopted different estimation methodologies and different transformations, interactions and combinations between explanatory variables. In particular, when considering estimation methodologies we used linear and log-linear models, different regional models (for the whole country, for urban and rural areas), two-steps modelling and quantile regressions. This process guided us in selecting the proposed model, which uses less than 30 variables to predict the household living standards score. The full list of proxies and their coefficients are reported in annex A.

4.4   Simulated targeting performance

Both PMT scores and the welfare indicator based on consumption expenditure can be considered ordinal numbers in which the higher the figure the better are the living conditions of the household. Moreover, both measures can be ranked in population groups of equal size, for example quintiles or deciles. Correlation between the two can then be assessed looking at the overlap between the different groups: to what extent the first (lower) PMT group contains households/people who are in the first consumption group? The same can be done for the first two groups, or three groups etc.

The objective is to assess performance not only looking at the level of overall overlap between the two distributions at different cut-off points, but also looking at the overlap for

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[26] Variables were adjusted, combined and transformed in different ways, for example we tested both a linear and squared (concave) effect of amount of land, number of children and expressed as a percentage of household members, etc. We avoided using variables of the household head, because our experience in other countries is that the household head as reported in household surveys tend to be different from the applicant of social assistance allowances. The estimation methodology that had consistently the lowest performance was the linear regression with nominal values in the consumption expenditure, whereas relatively small differences were found across the other specifications with quantile regression and log-linear producing marginally better results. Overall the preferred model used the relatively simpler log-linear specification using sampling weights and correcting for cluster effects, as this was found to be providing the most robust results. Finally, since sometime the use of regional variables can be controversial, and the sample representativeness of some of the regions can be put into question, we have also estimated a model without the regional dummies to check the impact on the model.

different population sub-groups. Indeed, it is important to make sure that the model will not be biased, performing very badly or with disproportional precision across different groups.

The results show that for the preferred model 43% of the people in the poorest consumption decile are found in the lowest 10% of the PMT distribution and that 52.5% of the poorest 20% of the population are found in the bottom 20% of the PMT distribution. These numbers in themselves are not particularly revealing, but they have been primarily used to compare results across alternative models. Annex A provides more detailed results for different population sub-groups.

Furthermore, the model should be assessed looking specifically at the households that pass the income test, and so at the combined performance of the income and PMT test, something that we call a hybrid approach.

Assuming that the household remains the unit of assessment and that we continue to impute agricultural income based on the land managed by the household, but do not assume wage labor incomes (this last part is in line with what proposed in the draft provisional regulations for Syrdarya) and all people required to register with the ESC do so, we estimate that 43% of people would pass the income test. Coverage in the poorest decile would be almost 75%, but there would be very significant leakage to high deciles with overall budget expenditure reaching more than four times the current levels of expenditure (considered to be the planned budget expenditure for 2018).

In such context if there is the intention to keep in control the budget and focus support on the poor. The PMT model could be as an objective instrument to control the total number of beneficiaries. The instrument is flexible and could be implemented in a more or less stringent way. For example, we propose that the three family allowances would cover 20% of the population - which would correspond to 62% of coverage of the people in the poorest decile – to maintain the budget under control, but also ensuring that the selection of households entitled to the allowances remains pro-poor. Table 2 provides coverage levels by deciles under the income eligibility and three scenarios where the PMT is applied to provide overall coverage of 10%, 20% and 30%.

Table 2: **Percentage of population eligible to family allowances by consumption deciles under different scenarios**

Deciles	Income eligibility	Hybrid with different coverage scenarios		
		10%	20%	30%
Poorest	74.6	43.4	61.9	69.0
2nd	63.8	20.0	39.2	54.3
3rd	55.1	15.3	30.8	45.1
4th	46.8	7.8	19.7	34.1
…				
9th	21.9	1.7	3.1	8.7
Richest	23.7	0.8	3.9	8.1
Total	43.1	10.0	20.0	30.0

Source: Analysis based on the L2CU 2018.

4.5 Testing the living standards assessment form

In order to implement the living standards' assessment, a form was developed to capture the information required to estimate the PMT household score. The form consists of three

parts, the first is an introduction to the assessment capturing the key coordinates of the location of the household and their registration number, the second collects information on household members and their attributes and the third section the dwelling characteristics and assets owned by the household (the full form is provided at the end of Annex A).

We have tested the form with eleven households in the district of Akhangaran of Tashkent region (7 households in rural areas and 4 in the city itself). Collecting the relevant information requires between 10 and 20 minutes depending on the size of the household. The test enabled us to adjust the phrasing of a few questions and ensure that the form is well structured and understood. The form is designed not only considering the proxies identified in the L2CU, but also considering information that in future could be used from the Household Budget Survey.

As part of this very small test we have also conducted a subjective assessment of the living conditions of the households we visited and compared this with the household score assigned by the PMT. In particular each enumerator who interviewed the household was asked to make a subjective assessment of the situation of the household. The results are reported in Table 3. Overall the households that were considered the poorest did fall in the bottom quintile and those considered relatively better-off were classified to be in the 8th and 9th decile. Given that at a national level Tashkent region is relatively better-off, it is understandable that some of these households are scored as being in the middle of the distribution even though subjectively interviewers have classified them as being below average.

Overall, given the small scale of the test the results are encouraging, but of course cannot be considered representative. Before adoption the model and procedures would need to be tested carefully as part of the pilot in Syrdarya region.

Table 3: Cross-tabulation of PMT and subjective assessment of the 11 interviewed households

Subjective assessment	Estimated PMT decile									
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
Very poor	2	1								
Below average	1	1			2					
Average							1	2		
Good									1	

5   Horizontal equity and allowance amount

While the means test is the same for the three types of family allowances both in the CR #44 and the provisional regulations for Syrdarya, the level of support provided is substantially different. Since October 2018, the child care allowance (when there is a child less than 2 in the family) gives an entitlement of 387,030 UZS per month; the children family allowance (targeted to poor families with children between 2-13 years old) provides an entitlement of 110,580, 184,300 and 258,020 UZS per month respectively if there is one, two or three and more children aged 2 to 13; the financial aid allowance gives an amount of 294,880 UZS per month.

As shown earlier, the way income is assumed under CR #44 distorts the actual needs of the household among those with children less than two, who appear to be poorer than what shown by data on actual reported incomes or consumption expenditure levels. On the contrary, when households are eligible, there is no significant difference in their per capita consumption expenditure across the current categories. Therefore, we would recommend considering to establish the amount of the allowance in a more equitable way.

In addition to this, we also want to highlight that currently the assessment of the household eligibility to financial aid (the third type of family allowances) is made primarily by the *mahallas* when there are members with disabilities, a single elderly member or when there are widowed or divorced parents with children[27]. However, there are no set rules that identify households eligible to financial aid, and the provisional regulations for Syrdarya do not provide any further guidelines on this. When staff from the District Pension Fund will need to assess the living condition and select beneficiaries of the financial aid allowance, it is unlikely that they will be able to take an informed decision.

We have therefore attempted to identify alternative approaches to define the amount of benefit for each household. More specifically, we have considered all households that qualify based on the income test (without assuming incomes equal to 2.5 of the MW for work-able members as in the provisional regulation), the demographic test (family must have either a child less than 14, a disabled or a single elderly) and satisfy the proxy means test at a threshold that ensures eligibility to 20% of the population. This corresponds to 1,1 million households. We then have computed the required budget by assigning to every household the level of benefit provided at the time of the survey. The financial aid amount has been assigned to all eligible households with just one elderly member or a disabled, the amount of childcare allowance if there is at least a child less than 2, and the other amounts depending on how many children aged 2-13 are present in the household. The total expected budget is of 3.3 billion UZS.

Using the same eligible households (1.1 million) and annual budget (3.3 billion UZS), we have compared the performance of alternative ways to compute the benefit amount for the 3 family allowances. Specifically, we compare the following alternative benefit structures/formulas:

1. **Based on the number of entitled members:** The benefit amount is based on the number of entitled members: children under 14, disabled members, single elderly and whether in the household there is a widow or divorced parent. However, the maximum number of entitled members is capped to four. Each entitled household member is assigned a monthly benefit of 89,907 UZS per month.

2. **Based on the number of equivalized entitled members:** Rather than counting the entitled members in the same way another scenario considers a sort of

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[27] 95% of current beneficiaries of financial aid fall within one of these categories.

equivalence scale adjustment: the first entitled member counts as 1, the second 0.5, the third 0.3 and the fourth and all others 0.2. Effectively, the household can be entitled to 1 benefit unit, 1.5, 1.8 or 2 units. An equivalized member/unit being equal to 147,506 UZS per month.

3. **Based on household size:** A third option considers giving the same amount to each eligible household member, so that the transfer depends on the household size of the eligible household: each household member receiving 42,422 UZS per month.

4. **Flat benefit for each eligible household:** the last scenario considers giving the same amount for every qualifying household, i.e. 246,990 UZS per month.

The distribution of amounts under the first two scenarios is reported in Table 4 (the flat and household size scenarios are not reported) compared to the current status. The flat scenario would have the same amount for all households. The family distribution based on the "household size"scenario would correspond to the distribution of the household size). The average amount is always the same, because we are distributing the same budget to the same households. Moreover, the distribution of households under the second and third scenario is also the same because in both cases we compare households with one, two, three, four and more entitled household members.

Table 4:   Distribution of families based on different benefit amount structure

Current structure		Entitled members (up to 4)		Entitled members with equivalence adjustment	
Amount	%	Amount	%	Amount	%
86120	11.0	89906	11.0	147506	11.0
137792	16.0	179812	30.9	221259	30.9
206688	13.2	269718	30.4	265511	30.4
258360	20.8	359624	27.7	295012	27.7
344480	39.1				
246990	100.0	246990	100.0	246990	100.0

Source: Analysis of the L2CU 2018. "Amount" refers to the monthly benefit amount per household, whereas '%' shows the percentage of households receiving different amounts.

These alternative ways to determine benefit amounts should be compared in terms of their impact on poverty reduction, i.e. simulating the effect on poverty measures after providing eligible households with the entitlements. Firstly, the observed consumption expenditure is adjusted by detracting the amount of family allowances received and the simulated poverty levels computed[28]. Secondly, the consumption aggregate is increased with the new transfer for eligible households, and we compute new simulated poverty levels under different intervention scenarios.

Table 5 reports the results of poverty measures (head-count, poverty gap and severity of poverty, also known as the FGT 0, 1 and 2)[29] in all four different scenarios considered. The table confirms that the combined effect of the family allowances reduces all the poverty measures, by one third the percentage of poor, but even more the poverty gap (which is halved) and the severity of poverty (reduced by 60%). However, results show that under these different benefit amounts scenarios there are relatively small differences on the

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[28] the poverty line used in this analysis is that computed for the L2CU survey, i.e. 1.59 million UZS per capita on an annual basis or about 133 thousand UZS per month per capita
[29] It is important to note that for this calculation the consumption aggregate excludes health.

poverty impact, and the best outcome is achieved under the current approach (though the differences with some of the proposed new approaches are very small).

Table 5:   Poverty measures under different benefit amount structures

	Head-count (FGT0)	Poverty gap (FGT1)	Severity of poverty (FGT2)
Without family allowances	15.18	4.09	1.77
Different benefit structure			
Current benefit structure	10.18	2.13	0.72
No. of entitled members	10.31	2.17	0.75
No. of equivalised entitled members	10.44	2.15	0.73
Household size	10.40	2.18	0.76
Household	10.53	2.18	0.74

Source: Analysis of the L2CU 2018.

More simulations could be attempted to identify an entitlement scheme with optimal poverty reducing effects.

6   Recommendations for the future pilot

This paper simulated the eligibility assessment for the family allowances in the CR #44 and the draft provisional regulations for Syrdarya region. A set of recommendations are presented and summarized in this section.

The possible effect of changing the unit of assessment from households to families is very significant: the number of eligible people would increase to 53%. Naturally, it would increase coverage in the lowest deciles, though it also comes with significant inclusion errors and would require increasing the family allowances budget by more than 5 times. If budget allocation matches this requirement, and proper implementation is achieved, coverage of the poor would definitely increase. However, if budget falls short and the administration introduces direct or indirect barriers to limit coverage, then the effect on actual coverage of the poor would be unclear.

Based on the preliminary findings presented in this study, we would recommend to maintain the household as unit of assessment and to introduce the change only after a careful assessment based on the analysis of additional data, possibly collected during the pilot.

Dropping the assumption of incomes equal to 2.5 the minimum wage for work able members who do not declare formal labor income as described in the draft resolution may have positive effects. However, it is recommended to keep and improve the quality of the imputation of agricultural income based on land managed by the household. While the current imputation is simplistic, we think that with adequate data the imputation could be strengthened and improved to consider not only the land managed by the household, but possibly also the quality of land, the livestock owned by the household and the number of family members engaged in the family farm. This would also have the positive side effect of recognizing the employment of household members engaged in agriculture, thus exempting them from the mandatory registration with the ESC.

Given the current institutional context and the quality of administrative data (including the lack of inter-operability of administrative data systems), it is recommended to keep the implementation of home visits as a critical process in the program delivery chain, especially in the context of the planned single registry pilot in Syrdarya. The recommendation is to keep household visits for eligibility verification and to conduct an assessment of their living conditions for all applications during the Syrdarya pilot. Results of the paper proposed approach and the approach under the provisional regulation should be carefully evaluated before scaling up nationwide the procedures.

The paper proposes to pilot in Syrdarya a standardized tool for home visits which would aid as an objective instrument to cut the higher part of the distribution of those who pass the MT and avoid the potential use of non-transparent ways "to control the total coverage" to stay within budget. The PMT is not recommended for targeting/identifying the poorest. Rather, a PMT might be introduced as an objective method to rank eligible families and correct possible inclusion errors that may arise under the proposed regulations to be piloted in Syrdarya.

Leveraging the single registry pilot in Syrdarya, it is recommended to pilot the indirect living standards assessment tool (the PMT) to test the following objectives: a) to control the overall number of beneficiaries by ranking eligible applicants who pass the MT and assign the benefits to the poorest to match the allocated budget; b) to use the information collected through the PMT questionnaire as a basis to develop a risk-profiling tool to manage cases of fraud and errors; the pilot data collected through the tool would aid to identify the profiles of households who are more likely to under-report or mis-report their income/assets and to develop an algorithm for the identification of high risk cases that

should be subject to home visit inspections (hence best targeting administrative expenses on such higher risk cases). c) to analyze to what extent the lack of mandatory registration with the ESC excludes poor or relatively better-off households and how such requirement should be enforced and managed and d) to assess the living conditions of first-time applicants but not for subsequent re-applications. The usefulness of such PMT instrument should be carefully assessed before national scale up, weighting costs and benefits.

While the mandatory registration with ESCs for work able family members with no-declared incomes is to be encouraged, ESC should be equipped with the capacity to deal with a surge of registrations as well as with dealing with a group of people who might have different skills and motivations, and that rules on registration need to be carefully monitored.

In relation to the above, existing beneficiaries should be directly and carefully informed about the new requirement of registering with the ESC in the transition from the current to the new approach. Along with the already expected means of communication, it is also recommended to use mobile teams that should inform the population about the new procedures to apply for family allowances, contact and explain the new requirements whenever applications are made. Such information should be also available through the *mahallas.*

Finally, even if benefit amounts for the three allowances maintain the current division of child care allowance (child aged less than 2), allowance for family with children (2-13) and financial aid, it is important to establish clear rules for the selection of beneficiaries of the financial aid allowances. This was an area where *mahallas* have significant discretionary power, but if applications in Syrdarya will follow a more standardized approach it is necessary to identify clear protocols to identify the third type of beneficiaries.

Benefit amount entitlement should also follow a more intuitive approach and be based on the number of qualifying members/categories within the household.

Annex A Assessment of material conditions

Regression model used to identify proxies and coefficients for the assessment of household living conditions

Variable name	Explanation	Coefficient	Std. err.
region2	Buxoro	0.240***	(0.0560)
region3	Farg`ona v.	0.294***	(0.0418)
region4	Jizzax	0.526***	(0.0538)
region5	Namangan	0.288***	(0.0513)
region6	Navoiy	0.334***	(0.0555)
region8	Qashqadaryo	0.559***	(0.0531)
region9	Samarqand	0.178***	(0.0606)
region10	Sirdaryo	0.248***	(0.0391)
region11	Surxondaryo	0.225***	(0.0557)
region12	Toshkent v. (region)	0.346***	(0.0624)
region13	Toshkent sh (city)	0.292***	(0.0591)
region14	Xorazm	0.216***	(0.0487)
hhs3	Household has 3 members	-0.187***	(0.0518)
hhs4	Household has 4 members	-0.305***	(0.0452)
hhs5	Household has 5 members	-0.354***	(0.0469)
hhs6	Household has 6 members	-0.453***	(0.0524)
hhs7	Household has 7 members	-0.484***	(0.0497)
hhs8	Household has 8 or more members	-0.586***	(0.0530)
perc_child2	(Number of children<=2)/Hhsize	-1.292***	(0.136)
perc_child3_5	(Number of children >=3 & <=5)/Hhsize	-0.531***	(0.103)
perc_child6_14	(Number of children >=6 & <=14)/Hhsize	-0.413***	(0.0550)
hh_divorced	At least one household member divorced or separated	-0.128***	(0.0374)
hh_disabled	At least one household member is disabled	-0.0802***	(0.0272)
perc_primary	(Members 15+ with highest edu=1-9 years of general education)/Members 15+	-0.134**	(0.0627)
perc_tertiary	(Members 15+ with highest edu=Bachelor, higher, master or postdegree)/Members 15+	0.249***	(0.0448)

(continue on next page)

Variable name	Explanation	Coefficient	Std. err.
firewood_cook	Use firewood for cooking	0.124***	(0.0474)
liquidgas_cook	Use liquid gas for cooking	0.0894**	(0.0375)
centralgas_heat	Use central gas for heating	0.136***	(0.0383)
centralheating_heat	Use central heating	0.223***	(0.0741)
blackcoal_heat	Use black coal for heating	0.157***	(0.0404)
dwelling_room3	Dwelling has 3 rooms	0.102***	(0.0380)
nrooms4_6	Dwelling has 4 to 6 rooms	0.205***	(0.0373)
nrooms7m	Dwelling has 7 or more rooms	0.277***	(0.0506)
agland_priv	Sotka of land used for farming	0.00974***	(0.00251)
agland_priv2	Squared sotka of land used for farming	-5.45e-05***	(1.22e-05)
toilet_improvedlatrine	Latrine is ventilated/improved	0.146***	(0.0446)
use_satellite	Use satellite or cable TV	0.188***	(0.0421)
durable_oven	Owns electric oven	0.133***	(0.0226)
durable_fridge	Owns fridge	0.166***	(0.0237)
durable_vacuum	Owns vacuum cleaner	0.110***	(0.0288)
durable_ac	Owns air conditioner	0.0818***	(0.0274)
durable_sewing	Owns electrical sewing/knitting maching	0.0692**	(0.0283)
durable_tv	Owns a TV	0.201***	(0.0729)
durable_computer	Owns a computer	0.139***	(0.0363)
durable_bike_mbike	Owns a bike or motorbike	0.0875***	(0.0231)
durable_car	Owns a car/track	0.182***	(0.0274)
padults_mobile	(N of members 15+ with mobile phone)/Members 15+	0.259***	(0.0424)
pmemb_work	(N of members 15+ working)/Members 15+	0.169***	(0.0402)
hh_oldpens	At least one member receives old age pension	0.0566**	(0.0222)
d_foreign_remittances	HH received foreign remittances last month	0.111**	(0.0503)
Constant		11.65***	(0.0905)
Observations		4013	
R-squared		0.396	

Note: Robust standard errors in parentheses, *** p<0.01, ** p<0.05

Source: Analysis of the L2CU 2018.

In Table 6 we report detailed results of the overlap between the poorest 20% based on the consumption expenditure and the lowest 20% of the PMT looking at different population sub-groups. For each group the main column reports the percentage of that sub-population that is in the poorest quintile, whereas the last columns reports respectively the distribution of the poorest quintile and the overall population across groups. This is important to understand the relevance of the subgroup.

For example, in Andjian we find that 77% of the people in the bottom quintile are identified by the bottom 20% of the PMT distribution, and we know that in Andijan we find 13% of the overall poorest 20% of people. On the other hand, while the performance of the model in identifying households with 2 or less members in the poorest quintile is very low (only 33.5%), it should be recognised that this type of households represents less than 1% of people in the poorest quintile.

Table 6: Percentage of population below 20% PMT eligibility threshold in the poorest quintile, by household characteristics, 2018

Characteristic	Overlap	Population structure 1st quintile	All
Total	52.5	100.0	100.0
Area			
Rural and peri-urban	52.4	82.8	77.4
Urban	53.3	17.2	22.7
Region			
Andijon	77.2	13.0	9.2
Buxoro	49.1	4.8	5.8
Fargona	34.3	8.5	11.1
Jizzax	55.9	2.4	4.1
Namangan	51.1	9.4	8.1
Navoiy	44.4	2.1	3.0
Qaraqalpaqstan	70.6	8.6	5.7
Qashqadaryo	25.9	8.1	9.7
Samarqand	52.7	16.3	11.2
Sirdaryo	80.1	3.6	2.5
Surxondaryo	58.1	9.2	7.6
Toshkent	30.8	7.1	9.0
Toshkent_city	0.0	0.8	7.6
Xorazm	48.9	6.1	5.5
Households size			
Less than two	33.5	0.9	3.1
Three	46.6	3.9	7.1
Four	55.0	14.9	16.8
Five	55.4	20.0	23.8
Six	48.9	19.3	19.1
Seven	51.4	11.1	10.7
Eight or more	53.5	29.9	19.4
Household type			
Upto_2members	33.5	0.9	3.1
Alladults_couple/single+sons/daughters	33.7	2.8	7.2
Alladults_others	12.1	2.6	4.0
Couple+1child	44.9	0.9	2.1
Couple+2children	56.0	10.6	10.0
Couple+3children	56.1	12.8	13.1
Couple+4+children	62.2	9.2	6.0
Single+children	72.6	2.6	2.2
Couple+children+2parents	35.7	10.0	12.1
Couple+children+1parents	59.2	5.8	7.6
Single+children+1/2parents	44.0	2.0	1.9
2nuclei_headfamily1+child/brotherfamily	55.2	12.2	12.0
3nuclei_headfamily_childfamily1+childfa	51.4	18.9	11.0
4nuclei_headfamily_childfamily1+childfa	58.3	4.0	2.5
other_hhsize<=7	48.1	1.6	2.1
other_hhsize>=8	76.4	3.2	3.1

Source: Analysis of the L2CU 2018.

LIVING CONDITIONS ASSESSMENT SURVEY

PART 1 - GENERAL INFORMATION

Code

1.01. Republic of Karakalpakstan, region, Tashkent city	
1.02. DISTRICT	
1.03. CITY/URBAN SETTLEMENT	
1.04. RURAL SETTLEMENT	
1.05. VILLAGE/MAHALLA …………………………………………	
1.06. ENUMERATOR	
1.07. SUPERVISOR	
1.08. DATA ENTRY OPERATOR	
1.09 HOUSEHOLD HEAD SURNAME AND NAME	
1.10 ADDRESS	

1.11 **Household application number**

1.12

VISITS	DATE			RESULT *
	YEAR	MONTH	DAY	
1				
2				
3				

* Use oned of the following codes:

Complete	1	Refused	4
No respondent	2	Not found	5
Postponed	3		

1.13 How many families are there in this household? *(couples or single parent with unmarried children)*   **If 1 go the next section**

1.14 Do you share the same kazan?   1…...Yes
2 …...No

If there is more than one family and they do not share the same kazan, identify family that applied for family allowances or select the family with the youngest children

Declaration: I hereby declare that the information given on this form is correct and complete

Name and signature:
.... / …………………………………………

1.15   ID code of respondent

25

PART 2: Household members

	2.01	2.02	2.03			2.04	2.05	2.06	2.07	2.08	2.09	2.10	2.11
ID CODE	How many people live in this household, including you? NAMES OF HOUSEHOLD MEMBERS: MAKE A COMPLETE LIST OF EVERYONE WHO NORMALLY LIVES IN THE HOUSEHOLD AND TAKE THEIR MEALS TOGETHER. INCLUDE MIGRANTS, AND OTHER MEMBERS WHO ARE TEMPORARILY ABSENT. **FILL IN QUESTIONS 1-4 FOR ALL HOUSEHOLD MEMBERS BEFORE GOING ON.**	SEX:	In what year, and month, and on what day was [NAME] born?			If unknown, what is [NAME]'s age?	Relationship to head HEAD 1 SPOUSE/PARTNER 2 SON/DAUGHTER 3 SON/DAUGHTER-IN-LAW 4 FATHER/MOTHER 5 FATHER/MOTHER-IN-LAW 6 SISTER/BROTHER 7 GRANDCHILD 8 GRANDPARENT 9 NIECE/NEPHEW 10 FOSTER CHILD 11 OTHER RELATIVE 12 NOT RELATED 13	What is the present marital status of [NAME]? UNMARRIED/SINGLE 1 => **Q2.08** MARRIED OFFICIAL 2 MARRIED TRADITIONAL (NIKAH) 4 LIVING TOGETHER 5 SEPARATED 6 => **Q2.08** DIVORCED 7 => **Q2.08** WIDOW/ER 8 => **Q2.08**	Select the ID number of the spouse of [NAME]. If not living in this household, then use one of codes below NOT LIVING HERE 98 DON'T KNOW 99	Select the ID number of the father of [NAME]. If not living in this household, then use one of codes below	Select the ID number of the mother of [NAME]. DIED 97 NOT LIVING HERE 98 DON'T KNOW 99	Does [NAME] have any recognised or not recognised disability?	Does [Name] require another family member providing costant care?
	FIRST NAME	MALE 1 FEMALE 2	YEAR	MONTH	DAY	INTEGER			ID CODE	ID CODE	ID CODE	YES......1 NO......2 => **NP**	YES......1 NO......2
01													
02													
03													
04													
05													
06													
07													
08													
09													
10													
11													
12													
13													
14													
15													

ID CODE	2.12	2.13	2.14	2.15	2.16	2.17	2.18	2.19
	Is [NAME] 15 years old or above?	What is the highest diploma [NAME] has obtained? (do not include incomplete degrees)	In the last 7 days, did [Name] do any work for pay or for profit?	During the last 7 days, did [Name] run or do any kind of business, farming or other activity to generate income, even if only for one hour? (e.g. growing produce for sale, making things for sale, buying and reselling things, providing services for pay)	During the last 7 days, did [Name] help unpaid in a business owned by a household member, even if only for one hour?	During the last 7 days, did [Name] have a paid job or a business from which [Name] was temporary absent and to which [Name] expects to return? *This also includes all seasonal work*	In this job is [Name]?	Does [NAME] own a personal mobile phone?
		None .... 1 Preschool .... 2 General Education: Grades 1-9 ...... 3 Upper Secondary – 10-11 ...... 4 Academic Lyceum ...... 5 Vocational Education / College ...... 6 Bachelor's Studies – Years 1-4 ...... 7 Higher Education - Years 1-5 ...... 8 Master's Degree – Years 1-2 9					Employee ...... 1 Paid apprentice / intern ...... 2 Working as an Employer (with regular employees) ...... 3 Own-account worker (without regular employees) ...... 4 Contributing family worker (helping without pay in a household/family business) 5	
	YES......1 NO......2 => **NP**	Postgraduate studies 10	YES......1 => **Q2.18** NO 2	YES......1 => **Q2.18** NO 2	YES......1 => **Q2.18** NO 2	YES......1 NO......2 => **Q2.19**	Daily worker ...... 6 Other (..........................) 7	YES......1 NO 2
01								
02								
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
14								
15								

PART 3: Dwelling characteristcs and assets

3.01 How many rooms are there in the dwelling? ☐
(excluding the kitchen, balconies, corridors)

3.02 What is the main source of drinking water for your dwelling? ☐

PIPED INTO DWELLING	11
PIPED INTO COMPOUND, YARD OR PLOT	12
PIPED TO NEIGHBOR (when HH drinks neighbor's piped water)	13
PUBLIC TAP / STANDPIPE	14
TUBE WELL, BOREHOLE	21
PROTECTED WELL	31
UNPROTECTED WELL	32
PROTECTED SPRING	41
UNPROTECTED SPRING	42
TANKER-TRUCK	61
CART WITH SMALL TANK / DRUM	71
SURFACE WATER: river, stream, dam, lake, pond, canal, irrigation channel	81
OTHER, specify (…………………………………)	96

3.03 What type of toilet does the household have? ☐

FLUSH TO PIPED SEWER SYSTEM	11
FLUSH TO SEPTIC TANK	12
FLUSH TO SOMEWHERE ELSE	13
VENTILATED IMPROVED LATRINE	21
PIT LATRINE WITH SLAB	22
PIT LATRINE WITHOUT SLAB / OPEN PIT	23
COMPOSTING TOILET	31
OTHER, specify (…………………………………….)	96

3.04 Does the household farm any agricultural land? ☐

YES	1
NO	2 → 3.06

3.05 What is the size of land farmed by each type?

	Irrigated	Non-irrigated
a) Own land (in case of private garden, tomorqa) - **sotka**	☐	☐
b) Deckhan farm - **Hectares**	☐	☐
c) Sharecropper - **Hectares**	☐	☐
d) Informal lessee - **Hectares**	☐	☐

3.06 Do you or any members of your household keep pets, livestock poultry, or bees, whether they are your own or for feeding?

YES	1
NO	2 → 3.08 ☐

3.07 How many ..[ANIMAL].. does the household have now?
Write 0 if none and skip to the next animal

	Type	Number
a	Cattle (excluding cows)	
b	Cows	
c	Pigs	
d	Sheep and/or goats	
e	Poultry	
f	Horses, camels or donkeys	
g	Rabbits	
h	Beehives	
i	other (.....................................)	
j	other (.....................................)	
k	other (.....................................)	

3.08 Which kind of fuel did your household use over the past 30 day for cooking?

	Type	Yes……1 No ……2
a	Electricity	
b	Central gas	
c	Firewood	
d	Liquid gas in vessels	
e	Other (...)	

3.09 Which kind of fuel did your household use for heat during the last heating season?

	Type	Yes……1 No ……2
a	Electricity	
b	Central gas	
c	Central heating	
d	Firewood	
e	Black coal	
f	Dung	
g	Other (...)	

3.10 Does your household own any of the following durable goods? And how many are in working conditions?

	Durable good	Own: Yes……1 No ……2	Number (in working conditions)
a	Electric oven		
b	Gas oven		
c	Vacuum cleaner		
d	Washing machine		
e	Refrigerator		
f	Electrical Sewing/knitting machine		
g	Air Conditioner		
h	Television		
i	Computer		
j	Car/Truck		
k	Bicycle		
l	Tractor		

3.11 Does your household use the following types of service?

	Type	Yes……1 No ……2
a	Internet at home	
b	Satellite antenna or cable television	

3.12 Did anyone in your household receive remittances from outside Uzbekistan during the last 30 days?

YES	1 ☐
NO	2

3.13 Does any member of your household receive the following pensions?

	Type	Yes……1 No ……2
a	Old age pension	
b	Survivor pension	
c	Disability pension	

3.14 Observation of Enumerator on situation of this household ☐

1 = Very poor; 2 = Below average; 3 = Average; 4 = Good; 5 = Very good

3.15 Additional notes/observations

28