The Wrecking Force of Inflation: How the Universal Cash Transfer in Iran Has Lost its Poverty Reduction Impact

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In a nutshell

- *In December 2010, Iran replaced its energy and bread subsidies with an unconditional and universal cash transfer (UCT). In the short-run, this shift from generalized subsidies had a significant effect on poverty. Studies show that the direct effect of the reform was a reduction in the headcount ratio from 22.5 percent to 10.6 percent.*
- *However, since the introduction of the reform, inflation has severely eroded the real value of the transfer because adjustments to its nominal value have been minimal in comparison. We estimate that after five years, during which time there was a cumulative 136.5 percent increase in prices (since 2011/2012 or 1390 in the Iranian calendar), the real value of the transfer was cut nearly in half.*
- *As a result of this cut, the poverty-reducing effect of the transfer declined by about 40 percent, which translates into an increase of roughly five percentage points in the headcount ratio. We find that this deleterious consequence of inflation is much higher in rural areas where the contribution of the transfer to the reduction in the incidence of poverty declines from 21.9 to 11.0 percentage points over the course of these five years.*
- *The only way for the UCT to recover the poverty-reducing results observed at the beginning, without increasing the budget, is by making it a more targeted program focused on the poorest 40 percent of the population.*

Unconditional Cash Transfer in Iran and Inflation

In December 2010, Iran replaced its energy and bread subsidies with an unconditional and universal cash transfer (UCT) (Guillaume et. al. 2011). The transfer was set at 455,000 Iranian rials or about 40 USD (90 USD in 2011 Purchasing Power Parity) per person per month for all Iranians. Our estimates (based on the Iranian Household Expenditure and Income Survey) show that the majority of Iranian households (about 95 percent) signed up to receive the UCT (Enami et al. 2016).

The 2011/2012 round of the Iranian Household Survey, which took place on the first full year of the implementation of this subsidy reform, found that the UCT reached the majority of both rural and urban households (Enami et al. 2016). Given the prevalence of poverty in rural areas and the relatively large size of the UCT, a number of studies reported that the UCT had a significant effect on reducing poverty during the initial year of its implementation (Salehi-Isfahani et al., 2015; Enami et al. 2016; Gahvari and Karimi 2016). For example, Enami et al. (2016) find that poverty, measured by the headcount ratio and with respect to the 2005 four USD Purchasing Power Parity poverty line, declined from 22.5 percent to 10.6 percent credited to the UCT.

The real value of the UCT, however, did not keep up with inflation. Removing the energy subsidies had an instantaneous effect on the prices. The distribution of cash transfers was expected to mitigate the effect of this increase in prices on people's living standards. It was expected that the fiscal pressure of cash transfers would be lower than that of subsidies, which rose proportionately any time the price of oil increased in international markets. However, during this period, it may have been the other way around; the UCT's impact on inflation may have been worse than the impact the previous subsidies would have had because the UCT's fiscal burden ended up being higher given the reduction in global oil prices. Finally, the reform coincided with a new wave of international sanctions against Iran which resulted in a significant increase in prices.

Over the course of five years following the reform, the Consumer Price Index (CPI) increases from 121 to 285 units while the nominal value of the UCT remains mainly unchanged. Given this enormous increase in prices, one would expect the poverty alleviation effect of the UCT to decrease substantially. The goal of this report is to estimate the abovementioned impact and to provide a policy recommendation with regards to restoring the power of the UCT in reducing poverty. Our analysis does not rely on the assumption that the inflation is created exogenously

with respect to the reform, even though using the first year following the reform as the baseline allows us to absorb the reform-related inflation to a great deal. Moreover, our policy recommendation keeps the fiscal burden of the UCT constant which means it would not have any impact on the inflation and allows us to view inflation as if it was completely exogenous.

Analysis

In order to relate this work to our previous paper on this topic, we continue to use the Commitment to Equity framework used in Enami et al. (2016). According to this framework, in order to analyze the impact of the UCT on poverty, we need to compare two fiscal systems: one with the UCT and one without it. The difference between these two systems (with respect to the poverty indicator of choice) is the contribution of the UCT to the reduction of poverty. Following this methodology, we measure the contribution of the UCT to the reduction of poverty by focusing on disposable income (i.e. market income plus direct transfers minus direct taxes). The construction of this income concept is discussed in detail in Enami et al. (2016). In order to keep all other elements constant and only evaluate the effect of inflation on the UCT, we use data from the 2012/2013 through 2015/2016 rounds of the Household Survey as well as the Consumer Price Index (published by the World Bank) for these years to scale the values of the UCT during the year 2011/2012. Since all other elements, i.e. income sources, taxes, and transfers, are identical and unaffected by the inflation, our analysis clearly identifies the effect of inflation on the power of the UCTs to reduce poverty.

Table 1 presents the poverty headcount ratio for disposable income, using the 2005 four USD Purchasing Power Parity poverty line. The poverty rates are presented for the country as a whole, as well as the urban and rural areas separately. As previously mentioned, the poverty rates for the year 2011/2012 are calculated using the survey data from the same year. For years 2012/2013 through 2015/2016, we

use the 2011/2012 data, but adjust the value of each UCT using the ex-post information about the inflation-adjusted value of the cash transfers made to the families in the future years. This technique allows us to focus only on the effect of inflation on the UCT, while keeping every other component of Iran's fiscal system identical.

According to Table 1, the poverty headcount ratio of disposable incomes remains relatively the same for 2011/2012 and 2012/2013, but increases by about five percentage points by the year 2015/2016 (becoming about 14.3 percent). The increase in poverty is much more severe in rural areas compared to urban areas. From 2011/2012 to 2015/2016, the poverty headcount ratio in rural areas increases from 20.6 percent to 31.1 percent. For the same period of time, the poverty headcount ratio in urban areas only increases from 4.8 percent to 7.5 percent. While the increase in poverty in urban areas is greater in percentage terms over the course of these five years (about 56.3 percent in urban areas comparing to 50.0 percent in rural areas), , it only affects around one in 12 households in urban areas, as opposed to one in three households in rural areas that live in poverty in the year 2015/2016.

Table 1. Poverty Headcount ratio for Disposable Income from 2011/2012 to 2015/2016. Poverty Line is 2005 US$4 Purchasing Power Parity

	Year				
	2011/2012	2012/2013	013/2014	2014/2015	2015/2016
Urban	4.8%	4.3%	5.7%	6.8%	7.5%
Rural	20.6%	18.8%	24.4%	29.2%	31.1%
Total	9.4%	8.5%	11.1%	13.3%	14.3%

Source: Own calculations using the 2011/2012 through 2015/2016 rounds of Iranian household survey (2011/2012 is equivalent to 1390 in Iranian calendar).
Note: Year 2011/2012 values are from the household survey for that year while values for years 2012/2013 through 2015/2016 are simulated using 2011/2012 data and the relevant adjustment to the value of Unconditional Cash Transfer using ex-post information about the inflation-adjusted size of this program in those years. In calculating Purchasing Power Parity values, we use the

2005 round of ICP (International Comparison Program) as reported in the World Development Indicators published by the World Bank. To change monetary values from the year of survey to 2005, we use the Consumer Price Index from the World Development Indicators.

By fixing all the elements of the fiscal system other than the UCT, the aforementioned increase in poverty is attributed solely to the impact of inflation on the UCT. To have a better understanding of the loss of the UCT's power in reducing poverty, Table 2 presents this program's contribution to the reduction of poverty in different years. The contribution values show how much higher the poverty headcount ratio would have been had the UCT not existed. In other words, by combining corresponding values from Tables 1 and 2, we have the poverty headcount ratio of a system without the UCT. For example, Table 1 reveals that the poverty headcount ratio in 2011/2012 is 9.4 percent; while the corresponding value of the UCT's contribution to the reduction of poverty in the same year is presented in Table 2 and is equal to 11.3 percentage points. Combining these two values, if the UCT did not exist in year 2011/2012, the poverty headcount ratio would have been about 20.7 percent (as opposed to 9.4 percent). This shows that the UCT has a major impact on poverty and reduces it by about 50 percent in 2011/2012.

Table 2. The Contribution of UCT to the Reduction of Poverty Headcount Ratio of Disposable Income from 2011/2012 to 2015/2016. Poverty Line is 2005 US$4 Purchasing Power Parity

	Year				
	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016
Urban	7.2pp	7.7pp	6.4pp	5.2pp	4.6pp
Rural	21.3pp	23.1pp	17.5pp	12.7pp	10.8pp
Total	11.3pp	12.2pp	9.6pp	7.4pp	6.4pp

Source: Own calculations using the 2011/2012 through 2015/2016 rounds of Iranian household survey (2011/2012 is equivalent to 1390 in Iranian calendar).
Note: pp stands for percentage points. Year 2011/2012 values are from the household survey for that year while values for years 2012/2013 through 2015/2016 are simulated using 2011/2012 data

and the relevant adjustment to the value of Unconditional Cash Transfer using ex-post information about the inflation-adjusted size of this program in those years. In calculating Purchasing Power Parity values, we use the 2005 round of ICP (International Comparison Program) as reported in the World Development Indicators published by the World Bank. To change monetary values from the year of survey to 2005, we use the Consumer Price Index from the World Development Indicators.

The UCT's power to reduce poverty decreases as it loses its real value due to inflation. Table 2 shows that between 2011/2012 and 2015/2016, the contribution of the UCT to the reduction of poverty diminishes by about 40 percent, from 11.3 to 6.4 percentage points.

The role of the UCT in reducing poverty is much more significant in the rural areas of Iran in 2011/2012. As a result, the increase in poverty due to inflation is much greater in these areas. Specifically, in 2011/2012 the contribution of the UCT to the reduction of poverty is about 21.3 percentage points in the rural areas, as opposed to only 7.2 in the urban areas. In 2015/2016, this contribution is reduced to about 10.8 percentage points in rural areas compared to 4.6 percentage points in urban areas.

Policy Recommendation

The UCT component of the energy subsidy reform in Iran received a lot of credit for its role in creating a peaceful environment for eliminating energy subsidies as well as its initial impact on reducing poverty. Our analysis shows that inflation over the course of the five years following this reform reduced the effect of the UCT significantly, by about 40 percent nationwide. Moreover, this loss in the contribution of the UCT to the reduction of poverty is felt more in the rural areas of Iran where the UCT lost almost 50 percent of its 2011/2012 power by 2015/2016.

While UCTs still play an important role in fighting poverty in Iran, our findings highlight the detrimental impact of inflation and the need for policy reform in order to keep the UCT a relevant poverty-reduction factor. Over the past few years, Iran's government focused on eliminating UCTs for the top 20 percent of income distribution (i.e. making the cash transfer "conditional") to reduce the fiscal burden of the program. Our recommendation is to extend the elimination of the UCT to include the top 40 percent, and to reallocate the resulting freed-up resources from the additional two deciles to the bottom deciles of income distribution as a way of compensating for the effect of inflation over the past five years. Our analysis shows that the value of the UCT in 2015/2016 is almost half of its original value in 2011/2012. That means if the UCT of deciles seven and eight is divided between deciles one through four evenly, these bottom four deciles will be as well-off as they were in 2011/2012 (ignoring the impact of inflation on other components of the fiscal system in Iran). A better approach, although costlier from an administrative perspective, is to make the UCT more targeted towards the poor population, especially those in rural areas. Our analysis in Enami et al. (2016) shows that targeting resources will significantly increase the effectiveness of the UCT in reducing poverty and ensure that financial resources are properly spent on fighting poverty and reducing inequality.

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