Development in Practice

Publication details, including instructions for authors and
subscription information:
http://www.tandfonline.com/loi/cdip20

Can inflation be a good thing for the poor? Evidence from Ethiopia

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Available online: 29 Jun 2011

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Can inflation be a good thing for the poor? Evidence from Ethiopia

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In 2006–08, Ethiopia experienced high food and non-food inflation. This study shows that the recent inflationary spell is likely to have significantly worsened poverty in urban areas, given the reliance on the market for most consumption needs. In rural areas the distributive impact of inflation is less easy to measure. In Ethiopia's rural areas, many households are net food buyers, and non-food items weigh significantly in their budgets. Thus, it seems unlikely that high inflation was beneficial for poverty reduction, a position which seemed to underpin much of the policy response to the crisis.

L'inflation peut-elle être une bonne chose pour les pauvres ? Données d'Éthiopie
En 2006–08, l'Éthiopie a connu une inflation élevée des produits alimentaires et non alimentaires. Cette étude montre que la récente période inflationnelle a probablement aggravé la pauvreté dans les zones urbaines, étant donné la dépendance à l'égard du marché pour la plupart des besoins de consommation. Dans les zones rurales, l'impact distributif de l'inflation est moins facile à mesurer. Dans les zones rurales de l'Éthiopie, nombre de ménages sont des acheteurs nets de nourriture, et les articles non alimentaires représentent une importante partie de leur budget. Il semble donc peu probable que l'inflation élevée ait été avantageuse pour la réduction de la pauvreté, position qui semble avoir étayé une grande partie de la riposte donnée à la crise par les entités chargées des politiques générales.

A inflação pode ser algo bom para os pobres? Evidências da Etiópia
Em 2006–08, a Etiópia enfrentou alta inflação de produtos alimentares e não alimentares. Este estudo mostra que a recente escalada inflacionária é provável que tenha agravado significativamente a pobreza nas áreas urbanas, tendo em vista a dependência do mercado para a maior parte das necessidades de consumo. Em áreas rurais, o impacto distributivo da inflação é mais difícil de se medir. Nas áreas rurais da Etiópia, muitas famílias são compradoras líquidas de alimentos e itens não-alimentares pesam significativamente em seus orçamentos. Assim, parece improvável que a alta inflação tenha sido benéfica para a redução da pobreza, uma posição que pareceu sustentar grande parte da resposta das políticas à crise.

La inflación ¿puede aporta algún beneficio a los pobres? Datos de Etiopía
En 2006-2008, Etiopía sufrió altas tasas de inflación en los productos alimenticios y no alimenticios. Este ensayo muestra que, en ese periodo, la inflación pudo agudizar la pobreza en las zonas urbanas, donde forzosamente los bienes se adquieren en los mercados. En las zonas rurales es más difícil medir el efecto distributivo de la inflación. En las áreas rurales de

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Etiopía muchos hogares son compradores netos de alimentos y los productos no alimenticios constituyen una parte importante de sus gastos. Por lo tanto, es poco probable que la alta infla-ción haya contribuido a disminuir la pobreza, supuesto que fundamentó gran parte de las polí-ticas públicas que se elaboraron ante la crisis.

Introduction

The world's poor are still reeling from the effects of the global food-price shock, with international food prices high in many developing countries, after peaking in 2007–08. High fluctuations in prices are likely to be repeated, as upward pressures on food prices remain persistent.

Changes in dietary preferences and the increasing production of biodiesel and ethanol push up the international demand for cereals for feed and for biofuels, while slowing growth rates of farm productivity.[1] Water and land constraints add to the pressures by limiting the expansion of food supply. Commodity-specific factors also play a role. For example, grain prices are exposed to oil-market volatility (FAO 2009); several food items are traded globally, and their prices are influenced by global macroeconomic factors, such as global monetary policies (Frankel 2008); finally, it has been argued that commodity futures have increasingly attracted investors, as they are negatively correlated with returns to traditional financial assets while usually having higher returns than bonds (Gorton and Rouwenhorst 2004).

In this context, policy makers need to put in place solutions which might limit the vulner-ability of their poor to such fluctuations. Riots and protests related to food prices showed the political price of not doing so. In addition, a growing body of evidence (e.g. Wodon *et al.* 2008, Ivanic and Martin 2008) documents the fact that the poverty impact of food inflation is far from trivial and that it depends on a range of factors, from the distribution of net buyers and net sellers of food, to the type of the commodity affected, and the structure of the domestic food market and its degree of integration with foreign markets. An interesting finding emerging from this literature is that food-price shocks tend to hurt the poor also in rural areas, despite the fact that farmers would benefit from higher prices and may be partially insulated from adverse price fluctuations by relying on self-produced food.

This study aims to assess the distributive impact of the 2006–08 price acceleration in Ethiopia. The magnitude and duration of the acceleration in food prices, the differential impact across population groups and areas, and the potential role that food inflation had in driving overall inflation make this an interesting case to analyse. In addition, by challenging the belief commonly held in the country at the time that the increase in prices would benefit farmers, this work underscores the need to let empirical evidence inform policy responses.

Other studies provide evidence on the adverse impact of the food-price shock on poverty (Loening and Oseni 2007; Ulimwengu *et al.* 2009). The food-security assessments conducted by the World Food Program in Addis Ababa, for example, found the proportion of households consuming an adequate diet, for instance, decreased from 64 to 40 per cent between January and July 2008 (World Food Program 2008).

This article updates and broaden these earlier findings by focusing on the poverty and distri-butive impact of *overall* inflation, during a longer time period (from December 2006 to its peak in July 2008), and using price indexes as precisely disaggregated as possible (by region, by con-sumer, and producer prices) and the latest national data. Despite serious data limitations, we try to capture the income-side responses which might have mitigated the overall distributional impact (wage responses, increases in producer prices and in agricultural production).

The first section provides an overview of inflation trends and policy responses in the country and it briefly explains the methodology and the data sources. The second part investigates the poverty impact of inflation in rural and urban areas. The last section summarises the main findings of the estimates and draws some policy implications.

Inflation and poverty reduction in Ethiopia

Ethiopia, one of the poorest countries in sub-Saharan Africa, recently experienced a major rise in food prices: between 2006 and 2008, national food prices increased by 95 per cent. In contrast, over the same period world prices increased on average by 42 per cent.[2] Ethiopia's food inflation was among the highest in the African continent: between September 2007 and August 2008, retail prices of wheat, for example, grew by 165 per cent in Ethiopia, compared with a rise by 20 per cent in Burundi, by 96–97 per cent in Democratic Republic of the Congo and Mozambique, by 125 per cent in Ghana, and 178 per cent in Malawi (prices in capital cities).[3]

Ethiopia's experience was also remarkable in other ways. Interestingly, the country appeared to be experiencing both high agricultural growth and rising prices.[4] In addition, the 2008 global food-price shock hit the country as food prices were already rising, and at the end of a protracted period of pressures on foreign reserves due to the earlier oil-price increases. Annual food inflation grew from 14 per cent in August 2006 to 85 per cent in August 2008. Since the end of 2006 this has been associated with a strong acceleration of non-food prices, although regional trends across the country were very mixed. Inflation remained at high levels until the beginning of 2009. Food inflation became negative in the second half of 2009, but in June food prices were still 58 per cent higher than in December 2006.

Such a major inflationary period could have reversed the significant progress in poverty reduction in rural areas, and might have exacerbated Ethiopia's chronic food insecurity.[5] In addition, the protracted stress on household budgets that inflation brought can be expected to have increased household vulnerability or to have pushed households to adopt coping behaviours which, even if temporary, might have long-term consequences.

The policy response at the time focused mostly on developments in urban areas. Rural areas were assumed to not have suffered from these price dynamics, as the prices received by farmers[6] were growing faster than consumer food prices.[7] In addition, despite the puzzle of agricultural growth and rising prices in the face of shortages, according to official data, since the drought of 2002/03, agricultural production had been growing at 11 per cent per annum, further reinforcing the belief that higher producer prices would have translated into higher incomes in rural areas.

Faced with the price shock, the Ethiopian government adopted immediate ad hoc measures to protect urban households: in April 2007, an urban food-rationing programme was announced, and from 2008 households in possession of a ration card could have access to subsidised wheat. Preliminary evidence, however, suggests that implementation of the programme was problematic. According to data from an urban household survey conducted by the World Food Program, a large proportion of urban households did not have the ration card (World Food Program and UNICEF 2009). In rural areas, no measures were adopted until 2008, when the government introduced some adjustments in the Productive Safety Nets Programme (PSNP), a large-scale programme which started in 2005 and assists more than seven million people in food-insecure areas through direct support, or through food or cash transfers to participants in public works. These adjustments, however, were constrained by the resources available. The cash wage paid to public-works participants was raised by one third, but in May 2008 its purchasing power had already declined by 62 per cent (Gilligan *et al.* 2009). In addition, the programme provided emergency assistance to 1.5 million people outside the project, but

the population requiring assistance in October 2008 was estimated at 6.4 million in addition to PSNP beneficiaries (FEWS NET 2008).

Methods and data

A standard methodology to measure the impact of an increase in the price of one good on house-holds focuses on consumption patterns before the price increase. Assuming that those do not change due to the price increase (for example, households do not stop buying one item as it becomes more expensive), households will be affected by the price shock in proportion to how much they consume of it. With this approach, households who both produce and consume a good (as can be the case for farmers in rural areas) are affected in accordance with their net market position,[8] with net sellers benefiting from the price increase and net buyers suffering from it. This approach can be generalised to the case of overall inflation by summing up the effects of the increases in prices of the various goods (or groups of goods).

Note that in a low-income and largely agricultural context such as Ethiopia, most rural house-holds rely on their own production for a significant share of their food consumption. In rural areas, food self-consumption represents about 30 per cent of total expenditure and more than half of food expenditure.[9] Consistent with the overall methodological approach based on ana-lysing consumption patterns before the price increase, we assume that, following the price shock, households relied just as much as before on food that they had produced themselves. Our analysis therefore excludes foods consumed from own production, as those can be con-sidered as 'insulated' from fluctuations in market prices.

The estimated effect is of course an approximation, not least as it does not include the fact that rising inflation might lead to second-round effects, i.e. other changes, such as changes in consumption patterns, or rises in wages, or production increases. In what follows we try to obviate some of those limitations by incorporating some of those second-round effects to the extent possible, given available data.

Our analysis relies on price data (national and regional) collected by the Ethiopian Central Statistical Agency (CSA).[10] Our main data source is the 2004/2005 WMS-HICES, a household survey conducted by the CSA which is representative at the national, regional, rural, and urban levels and provides detailed information on household expenditures. This survey did not collect income information, so that incorporating income-side developments, which would attenuate the impact of inflation on household welfare (i.e. changes in the production ratio, changes in wages), requires relying on other sources. In our simulations we rely on the availability of both expenditure and income variables for the WMS-HICES survey of 1999/2000.

In the next sections, we first analyse the effective consumer-price inflation experienced by distinct groups of population across location and economic status and then we estimate the direct poverty impact of the rise in consumer prices in rural and urban areas. We then look in greater detail at the impact in urban and rural areas separately, after having incorporated some second-round effects, namely an increase in wages in urban areas, and a rise in wages and in income from sales of agricultural products and in cereal production in rural areas.

The distributive impact of the rise in consumer prices

At the aggregate level, the distributional impact of inflation depends on the consumption and production patterns of different income groups, the pace at which the prices of different goods increase, and the extent to which inflation is translated into second-round effects. In this section we look at the distributive impact of the rise in consumer prices alone, focusing only on the expenditure side.

Data show that rural areas overall experienced lower inflation than urban ones, and in both areas households in the top expenditure quintile experienced lower inflation rates than the rest. Over the December 2006–July 2008 period, for instance, individuals in the lowest two expenditure quintiles faced an effective total inflation rate[11] of 64 per cent in rural areas and 76 per cent in urban ones. Households in the top quintile faced, respectively, an inflation rate of 54 and 56 per cent in rural and urban areas.

These differences are driven by the incidence of food expenditure in the budgets of different households. Food shares are lower for the highest two quintiles, regardless of the area of residence and of whether we include food self-consumption. The overall food shares (including self-consumption) decline from 58 per cent for the bottom quintile to 45 per cent for those in top quintiles in rural areas and from 59 to 36 per cent in urban areas. If food shares are restricted to marketed consumption, the pattern is similar, but the estimates of effective inflation are lower in rural areas than in urban ones.

In addition, regional location also contributed to variations in the effective inflation rates households experienced (Figure 1). Regional differences were even higher than differences by quintile. In all the regions the minimum inflation was experienced by the richest quintiles, while in seven out of 10 cases the maximum rates were experienced by either of the two bottom quintiles (in five of those cases, the bottom one). In light of these regional differences, our analysis relies as much as possible on regional price indices. This choice is also in line with earlier research (Ulimwengu *et al.* 2009) which found great deal of heterogeneity across regions in terms of consumption and calorie-intake loss due to food-price increases.

Using this information on effective inflation rates, we simulate how the expenditure distribution is affected by the loss of purchasing power due to the increase in overall consumer prices. Results reported in Table 1 show that, due to the impact on expenditures alone, in both areas, a large proportion of individuals would have been pushed below the poverty line.[12] The estimated increase in the incidence of poverty (the share of population below the poverty line) is of 23 percentage points, with a slightly larger increase in rural than in urban areas.[13] In urban areas consumer-price inflation leads to a greater increase in both the depth of poverty (the average difference between the income of the poor and the poverty line) and the severity of poverty (i.e. the extent to which some of the poor are very far from the poverty line) than in rural areas.[14]

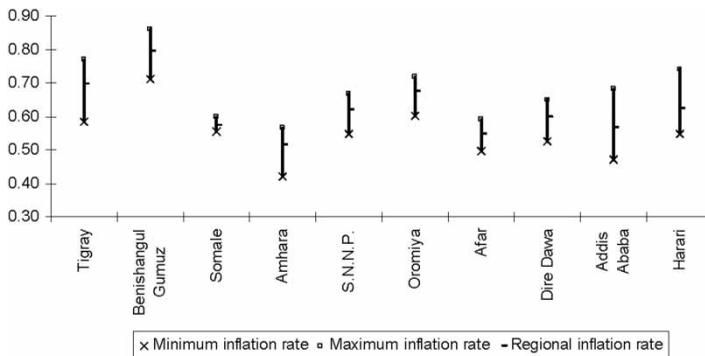**Figure 1:** Effective inflation rates, December 2006–July 2008, by region, average and min and max by quintile, based on HICES 2004/05
Note: Effective inflation assuming constant spending and self-consumption patterns since 2004/05. For each region, the Figure shows average inflation and the inflation rates experienced by the two quintiles that faced the smallest and greatest effective price rise.

Table 1:   Simulated changes in poverty indices due to rise in consumer prices, December 2006–July 2008, percentage points, based on HICES 2004/05

	Estimated poverty rates in 2006						Poverty impact due to overall inflation						Poverty impact due to food inflation alone		
	National	Rural	Urban	Addis	Small urban centres	Major urban	National	Rural	Urban	Addis	Small urban centres	Major urban centres	National	Rural	Urban
Head count ratio (incidence of poverty)	39.7	40.6	34 2	32.6	35 9	31.9	23 0	23.6	19.7	12.2	22.3	16.1	12.6	12.6	12.6
Poverty gap (depth of poverty)	9.7	10.0	7.6	6.4	8.3	6.6	10.6	10.1	13.7	11.4	14.6	12.3	6.1	5.5	9.6
Squared poverty gap (severity of poverty)	3.3	3.4	2.5	2.0	2.8	2.1	5.5	5.1	7.9	6.5	8.5	7.0	3.1	2.7	5.3

Across urban areas, the poverty impact of higher consumer prices is stronger in smaller cities, with Addis Ababa and larger urban centres (in this order) affected much less. Regional differences across urban areas are also noticeable, with the smallest simulated poverty impact in urban Addis and urban Harari (headcount increase of 12.2 and 13.1 percentage points, respectively), and the largest in Somale and Oromiya (headcount increase of 29.0 and 29.1 respectively).

The increase in food price accounts for more than half of the overall impact of inflation. In our estimates the increase in food prices represents a higher share of the poverty impact in urban than in rural areas, as the urban bottom quintile spends 57 per cent of its expenditure on food, against 38 per cent of the rural one. As discussed above, this reflects our assumptions that self-consumption is insulated from the price dynamics. It is remarkable, however, that even using a definition of food consumption which insulates rural households more than urban ones from the impact of very high food prices, the overall impact on poverty incidence is higher in rural areas. This underscores the importance of non-food inflation in rural areas.

Figure 2 elaborates this point by showing the different sources of purchasing power loss for different income groups in urban and rural areas. Overall, urban households face a higher relative loss of purchasing power than rural dwellers, with the lowest quintiles the worst hit. This vulnerability of the poorest urban groups reflects their high food share, and their high dependency on marketed food. The vulnerability to non-food price shocks, instead, does not show a marked variation across areas of residence.

A closer look at the impact of inflation on poverty in urban areas

As discussed above, to estimate in full the distributional impact of inflation we ought to incorporate the offsetting effects of higher wages, to the extent that those rose over the period. Since there is no comprehensive source of wage-trends data, to have an idea of the possible extent to which the impact of inflation might have been offset by increases in urban wages, we assumed a 30 per cent increase in wages over the period for all wage workers. This increase is roughly equivalent to the observed increase in the 'going rate' for unskilled construction workers from 15 to 20 birr a day. We have applied such an increase to the estimated household wage income for 2005.[15]

Figure 3 shows our simulated distributions for urban areas and finds that wage increases of this magnitude would attenuate the negative impact of inflation only to a limited extent, even if we are increasing the incomes of 47 per cent of urban households.[16] More precisely, an increase
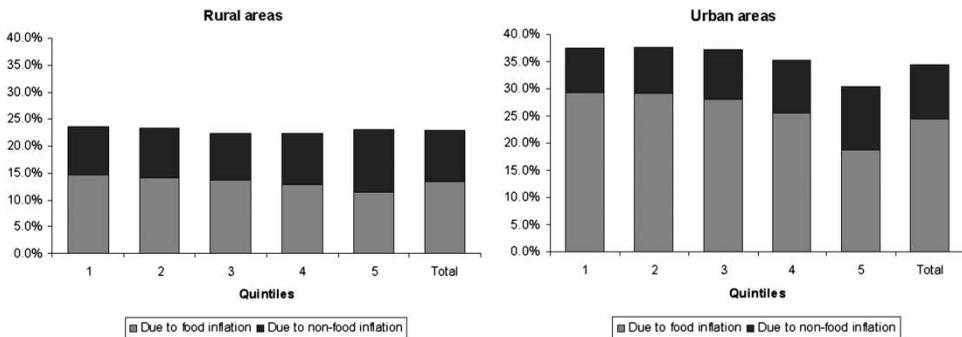

Figure 2: Loss of purchasing power due to food and non-food consumer price increase. December 2006–July 2008, rural and urban areas (share of total expenditure in December 2006)
Note: Individual quintiles in terms of per adult total expenditure in 2005.
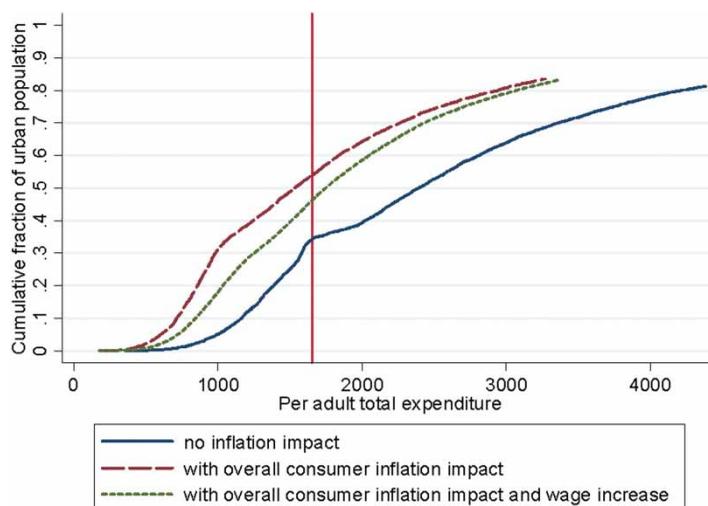
Figure 3: Simulated shift in the distribution of per adult equivalent expenditure due to rise in consumer prices (December 2006–August 2008), based on WMS-HICES 2004/05, urban areas

Note: All in constant 2006 Addis prices, the vertical line is the poverty line (1653 birr). Each point on the curve gives the proportion of the population consuming less than the amount given on the horizontal axis. The value of the function at the intersection with the red line represents the poverty incidence. The top twentieth percentile of expenditure distribution is cut.

in wages by 30 per cent would result in a reduction of the poverty impact (i.e. of the increase in poverty) of 3 percentage points in the headcount, with more muted effects for the other poverty indices (1.8 and 1.2 percentage points in poverty gap and squared poverty gap, respectively).

The limited benefits of such a non-trivial simulated increase in wages can be ascribed to the much larger increase in prices (an 80 per cent increase in the consumer price index faced by urban households, vs. a simulated 30 per cent increase in wages over the period), and to the higher prevalence of wage employment for higher income groups in urban areas. The share of urban households with at least one worker earning a wage or salary decreases from 54 per cent in the top expenditure quintile to 43 per cent in the bottom quintile.

A closer look at the impact of inflation on poverty in rural areas

The impact of inflation on poverty in rural areas is likely to have been softened or even reversed by the increase in producer prices and by increases in agricultural production. To evaluate to what extent this was the case, we carried out a number of simulations on the 2004/2005 WMS-HICES, deriving benchmarks from the 1999/00 WMS-HICES.

Incorporating the impact of higher producer prices

As discussed above, the policy response to rampant food inflation was informed by a belief that the steep rise in producer prices between 2006 and 2008 might have mitigated the impact of food inflation in rural areas. But was the increase in producer prices sufficient to offset the impacts of *overall* inflation?

As the WMS-HICES 2004/05 data do not include income information, we simulated the orders of magnitude of these effects in an earlier survey and replicated their poverty impacts

in the latest data. We used the 1999/00 WMS survey, which is the latest nationally representative source of information on both expenditure and income available, for the initial simulations. The offsetting effects due to supply-side developments were then replicated in the 2004/05 WMS-HICES data. We calculated the extent to which the increase in poverty due to rising consumer prices is alleviated by the rise in food producer prices in two ways (Table 2). In the first method we held constant the ratio of the two simulated headcounts (i.e. the one accounting for the effect of both producer and consumer prices, and the one based on the effects of consumer prices only, hereafter referred to as Method 1). In the second method we held constant the percentage of the simulated headcount when using consumer prices only, which is offset in the simulation which includes also an increase in producer prices (hereafter Method 2).

Table 2 presents the simulated impact of inflation on rural poverty indices when factoring in the effects of the increase in both producer and consumer prices (for fixed quantities). The two methods lead to different estimated impacts, ranging from a significant increase in poverty to a mild decrease. The simulations, therefore, suggest that the rise in food producer prices alone (i.e. with fixed quantities) would have mitigated the overall increase in rural poverty only to a limited extent (although the combination of producer and consumer price dynamics would have led to a 2 percentage point reduction in the headcount poverty ratio in one scenario). In addition, note that due to lack of data neither simulation takes into account the effect of the rise in farm-input prices which might have further contributed to the rise in poverty.

The reason for the only mild offsetting effect of increased prices on rural poverty is that, while there is a high share of net food buyers across all income groups (almost 60 per cent), the share of net food sellers is increasing in income from 35.7 per cent in the lowest quintile to 50.9 in the highest quintile.[17]

Further support to the argument that the benefits of higher producer prices are not very progressive comes from separate evidence that most of the farmers sell their product around harvest time, with very limited changes in storing behaviour over the last few years (Rashid *et al.* 2008). This suggests that at times of rising prices, even if producer prices increase in close step with consumer prices, farmers are selling their output at lower price levels than they will face when purchasing agricultural produce later in the year. In conclusion, our results, in conjunction with other findings, do not seem to support the view that food inflation would be beneficial to poverty reduction in rural areas.

Incorporating the impact of the rise in production

Official data have estimated agricultural growth in Ethiopia at an average of 11 per cent per annum since the 2003 drought. This expansion in production – supported by good weather,

Table 2: Simulated changes in poverty indices (percentage points) when imputing the effect of higher food producer prices, rural areas

	Overall inflation only	**Overall inflation and higher food producer prices – method 1**	**Overall inflation and higher food producer prices – method 2**
Headcount ratio (incidence of poverty)	23.6	9.2	−1.8
Poverty gap (depth of poverty)	10.1	4.1	0.3
Squared poverty gap (severity of poverty)	5.1	1.9	0.4

significant investment in agriculture-related sectors, and various policy developments – could have altered production and marketing behaviours of the households, thereby offsetting some of the negative distributional impacts of inflation discussed above (or possibly amplifying the farmers' ability to benefit from the positive effects of higher producer prices).

Only an analysis of very recent nationally representative data including production and/or agricultural income information could ascertain the extent to which this has really been the case. Drawing on the data available, however, we can provide some order of magnitude to start answering this question.

We elaborate initial estimates of the effects of a uniform increase in production (sale) of cereals and how they affect the poverty impact of inflation as previously simulated. In the light of recent concerns that official data might overestimate agricultural production performance (Rashid and Dorosh 2009; Dercon and Hill 2009), the analysis in this study simulates sustained but lower growth rates than official ones. We simulated again the distributional impact of inflation in rural areas, adding a 6 per cent uniform increase in cereal production across all rural areas to the simulations on the impacts of higher producer prices. The increase in quantities was computed for all households that sell cereals, regardless of their net position in the cereal market and across plots of all sizes and all types of input intensity.[18] This scenario (Table 3) results in a reduction in rural and national poverty, at least according to one of the methods adopted (the result is quite the opposite with the other method). It is interesting that, even with such a method, we would still register an increase in the severity of poverty. This suggests that there is a group of very poor households who would not share in the benefits of increased sales, and would therefore be more distant from the poverty line due to the effects of inflation, irrespective of favourable supply developments in rural areas.

Finally, drawing on some evidence provided by IFPRI (Rashid *et al.* 2008) that rural wages might have increased as a response to higher producer prices, we added those effects to the simulations, considering increases of both 30 and 60 per cent over the period. As in the previous simulations we still obtain a wide variation in estimates, depending on the method with which we try to mimic the magnitude of the offsetting effects in the 2004/05 data (Table 3).

Table 3: Poverty impact of inflation if cereal production would have grown by 6 per cent per annum over the 2006–08 period and rural wages would have increased by 30% or 60%, rural areas

	Overall inflation and higher producer prices + 6% increase in cereal production		Overall inflation and higher producer prices + 6% increase in cereal production + 30% increase in rural wages		Overall inflation and higher producer prices + 6% increase in cereal production + 60% increase in rural wages	
	Method 1	Method 2	Method 1	Method 2	Method 1	Method 2
Headcount ratio (incidence of poverty)	6.53	−7.54	6.41	−7.66	6.20	−7.87
Poverty gap (depth of poverty)	3.34	−0.93	3.25	−1.01	3.17	−1.09
Squared poverty gap (severity of poverty)	2.60	1.63	2.56	1.59	2.52	1.55

Note: Estimated household wage income for 2005 was obtained estimating in the 1999/00 data the average share of wage income over total expenditure in rural areas (17 per cent) and imputing such wage income to each household with at least one wage/salaried worker in 2005.

Overall our simulations are inconclusive on the overall direction of the rural poverty impacts due to the recent price dynamics – a significant finding in itself, as it points to the importance of the plurality of effects at play. Despite the wide variations in our estimates, it is worth underscoring that some of the findings are consistent across simulations. Firstly, the benefits of higher prices do not necessarily lead to a major reduction in poverty, even when considering that households might have increased their sales of cereals. Moreover, even in the simulations where the headcount declines, there is an increase in the severity of poverty, suggesting that a group of poor households falls deeper into poverty due to higher prices, and that even under the most optimistic assumptions (such as a uniform increase in sales) some rural groups are bound to suffer from higher producer prices. Finally, significant increases in rural wages do not seem to affect those findings significantly, as both labour income and the incidence of wage labour appear relatively limited in rural areas.

Conclusions

This study analysed the distributional impact of inflation in Ethiopia at the time of the global food-price shock.

Our findings suggest that the effect of overall inflation on poverty was differentiated both across rural and urban areas and across regions, but, overall, urban poverty and its severity increased. In rural areas, the picture is less conclusive. The greater reliance on self-consumption, the increases in food-producer prices and the considerable agricultural production growth revealed by official data might have helped in contrasting the impact of inflation. The growth in agricultural production drives the findings of our simulations, while producer-price dynamics has a much more limited role. However, while the incidence of poverty might have actually decreased in rural areas, driven by all those developments in Ethiopia, the severity of poverty increased even under the most optimistic hypotheses. This suggests that the main risk in rural areas is a further impoverishment of the poorest.

The policy implications of these findings for Ethiopia are clear. In urban areas, the 2006–08 inflationary spell is likely to have significantly worsened poverty, in a context already characterised by stagnant poverty reduction. Considering a system of more structured and permanent measures to cushion the urban poor from this type of shocks might be required, rather than relying on ad hoc measures to improve food availability, as happened during the latest food crisis. The poor results of the urban food-rationing programme show how ad hoc responses which cannot rely on pre-existing administrative systems and institutional capacity risk not being effective.

Our analysis also highlights that the initial limited concerns on poverty impact of inflation in rural areas were not well-founded. The poorest in rural areas are found to be the most vulnerable. Strengthening and developing food-security early-warning systems could be considered in order to avoid poor or late responses. Policy responses need also to reflect the changing nature of the rural economy. In the past, high producer prices have attenuated the impact of overall inflation, but this may be changing. In recent months, food-price inflation has declined sharply (from 92 per cent in July 2008 to 12 per cent in May 2009), while non-food inflation has remained stuck at around 19–20 per cent. If the current trend persists, the term-of-trade, which so far has been extremely favourable to agriculture, may begin to reverse, raising further concerns for what might happen over the next year or so in rural areas.

Acknowledgements

Notes

1. On long-run trends of cereal and rice yield growth rates at global level, see FAO (2009).
2. Authors' elaboration based on food-price indexes provided by Central Statistical Agency of Ethiopia and on commodity food-price indexes in World Economic Outlook, October 2009.
3. Authors' calculation based on FAO–GIEWS data.
4. According to data estimated by Central Statistical Agency of Ethiopia, agricultural production rose by 20 per cent between 2005/06 and 2007/08.
5. Rural areas, where about 80 per cent of the population lives, between 1995/96 and 2004/2005 experienced robust poverty reduction from 47.5 to 39.3 per cent, while a strong rise in inequality (Gini coefficient grew from 34 to 44 per cent) led to stagnation in urban poverty reduction (the headcount increased from 33.2 to 35.1 per cent although the increase was not statistically significant).
6. This refers to the producer-price index collected by the CSA as the price of the first commercial transaction at the farm gate or at the nearest rural market.
7. Note however that only net food sellers would have been able to benefit from these higher prices. Both the 2005 Poverty Assessment (World Bank 2005) and Loening and Oseni (2007) have drawn attention to the low share of net food sellers even in rural areas.
8. The household net market position of a good is referred to as the difference between the value of the commodities produced by household and the value of commodities consumed by the household.
9. In this article, self-food consumption is defined as in-kind food expenditure from household agricultural enterprises. In 2005, on average, self-food expenditure of rural households represented 55 per cent of total household food expenditure, compared with an in-kind food share of 4 per cent among urban households.
10. More precisely, the updating of consumption data between 2005 and 2006 and between 1999 and 2009 was based on national price indices, because regional data were not available. We used regional monthly consumer prices disaggregated by item group to deflate consumption expenditure from December 2006 to July 2008. The effect of producer-price inflation on income was calculated using monthly national food producer-price index, while cereal production increase was estimated using monthly average regional prices by type of cereal (teff, wheat, barley, sorghum, and maize). Poverty lines are expressed in Addis Ababa prices. Household expenditure and income are reported to Addis Ababa prices in order to make them comparable with the poverty line.
11. Effective inflation rates are based on the consumption bundles that households were consuming in 2004/05 net of self-consumed items, and they assume constant spending patterns and constant self-consumption since 2004/05. Quintiles are calculated in terms of quintiles of the adult equivalent expenditure.
12. We updated PASDEP 2005 Addis Ababa poverty line per equivalent adult to December 2006 (1653 birr) and we converted and deflated all expenditures per adult in 2006 Addis prices.
13. Note that this result is actually biased towards finding a greater impact in urban areas since we exclude food self-consumption. Despite this, the poverty impact is still higher in rural areas.
14. Squared poverty-gap index takes into account not only the distance separating the poor from the poverty line, but also the inequality among the poor, since it gives a higher weight to the poorest households.
15. This was obtained by estimating in the 1999/00 data the average share of wage income over total expenditure (53 per cent) and imputing such wage income to each household with at least one wage/salaried worker in 2005. This process was due to another data limitation: the 2004/2005 survey does not identify household income, but it provides information on the occupations of household members.
16. As a comparison, note that in the Labour Force Survey (LFS) 2005 an estimated 44 per cent of urban workers aged 15 and over are in paid employment.

17. Net sellers are here defined on the basis of the difference between the share of food income in total income minus the share of food expenditure in total expenditure, restricting both definitions to items which are common for both definitions. This should reduce measurement error with the respect to a definition in which both the production share and the consumption share are calculated out of expenditure.

18. Due to the lack of data on physical quantities produced, the household production of cereals is estimated from 1999–2000 WMS dividing income from sales of each cereal products by its regional price (at July 2000).

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