

Methodology: Addis Ababa Grain Wholesale Price Index

Data Coverage

The data source for this index is obtained from the Ethiopian Grain trade Enterprise (EGTE). The data is collected from Ehile berenda on a weekly, basis three to four times a week. The Ehile Berenda grain market is the major wholesale marketing area in the capital. The AA - WPI comprises 18 commodities comprises of three major groups including cereals, pulses and oilseeds. The Cereals group consists ten items, Pulses and Oilseeds groups consists of four items each.

Method of Index Computation

i. WPI Aggregation Techniques

The average price data for each grain is calculated by using geometric mean, commonly called Jevons elementary index aggregation techniques. The price relatives are then obtained by dividing current month geometric average price with the reference geometric average price.

The higher aggregate (group level WPI) is obtained by multiplying the price relatives of each grain with their respective weights. This is called traditional Laspeyres price index aggregation technique. The Traditional Laspeyres Index formula is given by:

$$I_t = \frac{\sum \frac{P_{i1}}{P_{i0}} * W_{i0}}{\sum W_{i0}} * 100$$

Where

P_{i1} = current geometric average prices of grain i

P_{i0} = reference period geometric average price of grain i

$W_{i0} = \frac{P_{i0} Q_{i0}}{\sum P_{i0} Q_{i0}}$ = reference period weight of grain i

ii. Weights

The weights are computed based on 2006 yearly grain inflows for each grain supplied to the Ehile Berenda market on daily basis and the data is collected by EGTE. The reference period is selected based on data availability and by considering comparability of the index with other national price indices.

The yearly grain inflow was summed up from the monthly grain inflows to the Ehile Berenda market. Furthermore, the total grain inflow was not so detailed to consider certain varieties and only aggregated quantity is available. For example, the total quantity sold within the month is collected for teff but not for varieties like teff white, teff red and teff mixed included in the index. Hence, in order to take into account these problems the consumption pattern of households from the 2004/05 household income, consumption and expenditure survey (HICES) results has been used to re-distribute the total sales quantity into these different varieties like teff white, teff red and teff mixed. Finally, the yearly sales value for 2006 to each grain is calculated by multiplying the quantity with the price average of each month and the weight was determined for each grain in the index. The relative contribution of cereals was found to be 78.6%, Pulses 13.3% and Oilseeds 8.1%. The detail contribution for each groups and items are shown in table 1.

Table 1:- Weight distributions of grains in the AA - WPI

<i>Grain Type</i>	<i>Weights</i>		<i>Grain Type</i>	<i>Weights</i>
Total AA - WPI	100			
<i>Cereals</i>	78.6		Pulses	13.3
Teff White	17.9		Chick Pea	0.6
Teff Mixed	18.9		Horse Beans	2.7
Teff Red	8.3		Lentils	4.6
Wheat White	10.5		Field Peas Mixed	5.5
Barley White	6.7		Oil seeds	8.1
Barley Mixed	0.5		Niger Seed	0.8
Sorghum White	2.1		Lin Seed	0.7
Sorghum Yellow	1.9		Rape Seed	0.1
Sorghum Red	1.1		Sesame	6.5
Maize White	10.4			