The Consumer Price Index for All Urban Consumers (Inflation Rate)

Introduction:

The Consumer Price Index (CPI) is the measure of the average price change of goods and services consumed by Iranian households. This measure, as a tool for measuring general price level of goods and services consumed by households, is one of the best criteria for measuring changes in purchasing power of money inside the country. This index is used to adjust the wage and salary in bilateral contracts (escalating contracts) and legal claims and it is also the most important measure of the inflation rate in Iran.

To get more familiar with the Consumer Price Index (CPI), the geographical and population coverage of it, and the contents of the CPI basket, the methods of collecting information and the approach of calculating the index will be discussed briefly. In order to investigate the variation of this index during these years, the CPI indices for the years 1315 to 1396 are tabulated at the last page.

1. Geographical Coverage

Wider geographical coverage of the index considerably increases the degree of its accuracy and validity. It's obvious that consumption culture and attitudes can partly be the result of climatic and geographical characteristics of each region. To attain an appropriate geographical coverage, we have scientifically selected 79 sample cities in different provinces of the country. These samples can reflect price changes for all urban areas and for each province as well. To calculate the total index for urban areas in Iran, we apply a statistical method to combine the 31 independently produced indices each province.

2. Population Coverage of CPI

In 1395 (Base Year 1395=100), after selecting sample cities, we have scientifically selected almost 17600 households from resident households in 79

cities. The average expenditure of these households is the representative of the average expenditure for the whole country. These samples have been selected from every type of households with different incomes and different consumption patterns. Data collectors visit the selected households to obtain the detailed information on the purchased items and their costs. The results are generalized to the total resident households in each province and then to the total urban areas in the country.

3. Goods and Services of CPI Basket

According to the results of the Household Budget Survey, goods and services are selected for the CPI basket due to their relative importance (weight) in the household total expenditure.

These weights are updated periodically, since the consumer purchasing patterns change during the years. In 1395, the contents of the CPI basket were updated (revised) using the outcomes of the HBS of the current year, and 386 items of goods and services (including 294 items of goods and 92 items of services) were selected scientifically due to their proportion of the total expenditure of the household.

Classification of goods and services

Based on COICOP[1] classification, 386 items of goods and services are divided into 12 main groups, which their weighting coefficients are as followed:

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[1] Classification of individual consumption by purpose

Description	Base year weight
1-Food and Beverages	25.51
2-Tobacco	0.37
3-Clothing and Footwear	4.62
4-Housing, Water, Electricity, Gas and other Fuels	37.05
5-Furnishings, Household Equipment and Routine-Household Maintenance	4.33
6-Health	7.83
7-Transport	8.90
8-Communication	2.30
9-Recreation and Culture	2.07
10-Education	2.03
11-Restaurants and Hotels	1.82
12-Miscellaneous Goods and Services	3.17

Each of the main groups has been divided to some subgroups and each subgroup includes several items of goods and services with similar characteristics according to COICOP classification. The CPI basket comprises of 104 items of food and beverages group and 282 items of non-food goods and services.

4. Methods of collecting data

Data collectors of General Directorate of Economic Statistics of the central bank (who are professional trained fixed questioners) visit thousands of

retail stores, service establishments, rental units and doctor's offices all over the country to obtain information on the prices of the thousands of items used to track and measure price changes in the CPI. In order to achieve real prices, data collectors visit 40000 outlets every month and ask current prices of more than 121000 quotations of goods and services, and investigate and register the causes of price fluctuation in comparison with the previous month price. It is always tried to gather and report the purchasing price of each item.

5. Method of calculating the index

After collecting prices, the consumer price index is calculated using Laspeyres formula. First, the index for each province and then for the whole country (overall CPI) is calculated. The formula is as below:

$$I_{t,0} = \frac{\sum_{i=1}^{n} P_t^i Q_0^i}{\sum_{i=1}^{n} P_0^i Q_0^i} \times 100 = \frac{\sum_{i=1}^{n} P_{t-1}^i Q_0^i \times \left(\frac{P_t^i}{P_{t-1}^i} \right)}{\sum_{i=1}^{n} P_0^i Q_0^i} \times 100$$

Where:

$I_{t,0}$: The index in period "t" relative to the base period.

n : The total number of goods and services comprising the CPI basket

P_t^i : The price for item "i" at the period "t" (observation period)

P_0^i : The price for item "i" at the base period

Q_0^i : The quantity for item "i" at the base period

In this method, one year is usually selected as the base year. On the basis of the results of the household budget survey for the base year, the weight for any item (which is the item proportion of the total expenditure) is calculated. So the weight of item determines the contribution of item in calculating the CPI. In

order to compute the index, price changes of goods and services across the two periods 0 and t are measured as follows:

The quantities of the base period and the prices of period "t" are multiplied to get sum of expenditures of total items for period "t". The total expenditure for the base period is calculated in the same way. We get the overall index by dividing these two total expenditures and then multiplying the result by 100.

6. Variation of the CPI during Different Years

The changes of the CPI indices from 1315 to 1396 are tabulated below:

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Index Numbers and Their Percent Changes

(1395=100)

Year	Index number	Inflation Rate (percent)	Year	Index number	Inflation Rate (percent)	Year	Index number	Inflation Rate (percent)
1315	0.004	---	1343	0.052	4.5	1371	1.480	24.4
1316	0.004	21.2	1344	0.052	0.3	1372	1.814	22.9
1317	0.004	8.8	1345	0.052	0.8	1373	2.456	35.2
1318	0.004	8.0	1346	0.052	0.8	1374	3.665	49.4
1319	0.004	13.8	1347	0.052	1.5	1375	4.520	23.2
1320	0.008	49.5	1348	0.052	3.6	1376	5.298	17.3
1321	0.012	96.2	1349	0.056	1.5	1377	6.258	18.1
1322	0.028	110.5	1350	0.056	5.5	1378	7.516	20.1
1323	0.028	2.7	1351	0.060	6.3	1379	8.463	12.6
1324	0.024	-14.4	1352	0.069	11.2	1380	9.427	11.4
1325	0.020	-11.5	1353	0.077	15.5	1381	10.915	15.8
1326	0.024	6.6	1354	0.085	9.9	1382	12.624	15.6
1327	0.024	11.1	1355	0.101	16.6	1383	14.544	15.2
1328	0.028	2.3	1356	0.125	25.1	1384	16.048	10.4
1329	0.020	-17.2	1357	0.137	10.0	1385	17.955	11.9
1330	0.024	8.3	1358	0.153	11.4	1386	21.265	18.4
1331	0.024	7.2	1359	0.190	23.5	1387	26.660	25.4
1332	0.028	9.2	1360	0.234	22.8	1388	29.527	10.8
1333	0.032	15.9	1361	0.278	19.2	1389	33.188	12.4
1334	0.032	1.7	1362	0.319	14.8	1390	40.321	21.5
1335	0.036	8.8	1363	0.355	10.4	1391	52.635	30.5
1336	0.036	4.4	1364	0.379	6.9	1392	70.916	34.7
1337	0.036	1.0	1365	0.468	23.7	1393	81.948	15.6
1338	0.044	13.0	1366	0.597	27.7	1394	91.714	11.9
1339	0.048	7.9	1367	0.770	28.9	1395	100.000	9.0
1340	0.048	1.6	1368	0.903	17.4	1396	109.650	9.6
1341	0.048	0.9	1369	0.984	9.0			
1342	0.048	1.0	1370	1.189	20.7			