Iranian Economic Review, Vol.8, No.9, Fall 2003

Unemployment, Inflation and Income Distribution: A Cross-country Analysis

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Abstract

This is the first study to attempt to explain income inequality using unemployment and inflation and international cross-sectional data. Using a SURE system, inflation is found to have an increasing impact on the shares of the lower 80% of the income distribution, while reducing the share of the highest 20%. Unemployment has a negative effect on the share of the first 40%, while increases the share of the highest 60%. When unemployment and inflation are controlled for, the level of inequality is significantly lower in developed countries.

Key words: Income Distribution, Unemployment, Inflation.

1- Introduction

The object of this paper is to investigate the effects of macroeconomic factors, inflation and unemployment, on the personal income distribution for both developed and developing countries using cross-sectional data.

Observed differences in personal incomes are the net result of many different factors, structural as well as macroeconomic, working in different directions. It is therefore complex to separate out the effects of macroeconomic factors, and separate the different macroeconomic influences such as inflation and unemployment from each other and from the rest.

One, however, can reasonably assume that the upper groups in the income distribution tend to receive a relatively high proportion of their income from

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I would like to thank all members of the Department of Economics & Accounting at the University of Liverpool, especially Dr. P. McCloughan and Professor Eric C. Wang whose comments have been helpful. The usual disclaimer applies.

investment income, and the lower groups a relatively high proportion from employment income. Therefore, changes in macroeconomic conditions can have an impact on the personal income/expenditure distribution through two major channels. The first is the effect of fluctuations in the level of economic activity on the share of profits/wages in total income and second is the impact of changes in activity on the level of unemployment. Concerning the factor shares, an increase in the share of lab our income in total income would increase the share of the lower groups. The macroeconomic climate may also affect the personal income distribution among the households/family through its impact on household/family structure[1]. Moreover, the newly hired, unskilled and least-skilled workers who are in the lowest income groups, losses income relatively more due to higher unemployment thus reducing the income shares of the lower quintiles and rise that of the higher quintiles.

The distributive impacts of inflation have been rather inconclusive. Concerning income distribution data, any groups whose nominal income does not keep pace with inflation will see their income shares fall. Since more than one kind of inflationary pressure has been specified in the economic literature, the impact may differ among different countries. In countries experiencing demand-pull inflation, inequality can increase because prices will rise faster than costs, thus increasing profit share, which will in turn increase the share of the higher income groups. In countries with cost-push inflation, the profit share would fall relative to wages, which would reduce inequality. Concerning the expenditure distribution data, the relative prices are important, if inflation is due to higher relative prices of basic commodities it will effect the lower income groups relatively more. Therefore, empirically inflation could be associated with both progressive and regressive impacts.

Concerning the Kuznet`s hypothesis, one expect that given unemployment and inflation, the level of inequality be lower in developed countries compared with the developing countries.

The policy of reducing inflation in the economic system has been desirable with the acknowledged cost of higher unemployment. Thus the distribution of gains and losses from such a policy as a key input in evaluating the effects on overall economic welfare has attracted many studies.

Explanation of income inequality has been carried out using either the decomposition analysis or regression techniques. Decomposition analysis has tended to explain only a fraction of observed inequality using population

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1- For example, when employment is available, young people may find it easier to leave home and set up separate units, either marrying earlier than they might otherwise have done or just leaving home earlier individually. Similarly, the impact of economic conditions on the ability of elderly to support themselves in separate units must also be taken into account.

subgroup partitions by authors including Cowell and Jenkins (1995), Jenkins (1995) and Jantti (1997). Of the impact of macro-economic conditions on economic inequality using regression techniques, time series analysis was adopted by Blinder & Esaki (1978), Nolan (1987), Blejer & Guerrero (1990), Bjorklund (1991), Silber & Zilberfarb (1994), Jantti (1994), and Mocan (1999).

The general methodology applied has been to regress the Gini coefficient/income shares on aggregate macroeconomic indicators typically inflation, unemployment, productivity and government expenditure. The main result concerning unemployment has been that unemployment as expected will increase inequality. On the other hand, contrary to the popular belief that the poor suffer most from inflation, the empirical evidence on the impact of inflation has not been conclusive. The progressive impact of inflation was reported by Blinder & Esaki (1978), Jantti (1994), Bishop, Formby and Sakano (1994), who used data from the United States, and Fluckiger & Zarin-Nejadan (1994) using data from Switzerland. Blejer & Guerrero (1990) and Silber & Zilberfab (1994) reported a regressive impact in the Philippines and Israel, respectively, whereas Buse (1982) found no relationship between inflation and income inequality in Canada.

Mocan (1999) argues that previous time-series studies failed to take into account the stochastic trend behavior of the variables involved. Using US time-series data, he provided evidence against the unit root for unemployment, but indicated that the hypothesis of unit root cannot be rejected for inflation and income shares. He continues that the presence of a unit root implies that the variance of the series is a function of time, and the variance would increase infinitely over time. This, in particular, creates a conceptual difficulty for income shares, since they are bounded. Then, he decomposed unemployment into its structural and cyclical components and inflation into its anticipated and unanticipated components for investigating their impact on inequality. He concluded that increases in structural (long-run) unemployment have a substantial aggravating impact on income inequality and inflation has a progressive effect, which has been due to the unexpected component.

Parker (2000) argues that time series regression analysis is of only very limited use for understanding the determinants of income inequality. His argument is based on a combination of results from the time series econometrics literature as well as several characteristics of inequality itself, principally nonstationarity of the data in most inequality regression models, and calls for an alternative analysis such as cross-section regression analyses.

Concerning the extensive time series analysis of Mocan (1999) and the recent theoretical argument of Parker (2000), a cross-sectional analysis would be appropriate. Thus, the object here is to analyse the unemployment and inflation

effects on income (or expenditure) distribution using cross-sectional data recently made available by the World Bank (1999). The data covers per capita income or expenditure distribution data of 96 developed and developing countries (one observation for each country) within a period of (1982-97). The model is presented in section 2. Section 3 is devoted to the sources of data. The estimated cross-sectional results are summarised in section 4, and compared with the previous main time-series results. Finally, the paper is concluded in section5.

2- The Model

Using time-series data, Blinder and Esaki (1978), Nolan (1987) and Bjorklund (1991) applied the model

$$S_{it} = \alpha_i + \beta_i U_t + \lambda_i I_t + \delta_i T + \varepsilon_{it}, \qquad (1)$$

Where S_{it} was considered to be the share of the *ith* quintile in the income distribution in year *t*, U_t the unemployment rate, I_t the rate of inflation and T a linear time trend. The following restrictions were imposed.

$$\sum \alpha_i = 1 \text{ and } \sum \beta_i = \sum \lambda_i = \sum \delta_i = \sum \varepsilon_{it} = 0 \qquad (2)$$

If the argument made by Mocan (1999) and Parker (2000) holds for any time series concerning a particular country, then the above model would be inappropriate. When income shares and the rate of inflation contain stochastic trends the proper specification of equation (1) should either take account of the recent developments in time-series econometrics or instead uses cross-sectional (or panel) data. Mocan (1999) using time-series data, for example, regressed the first difference of income shares on the level of unemployment and the first difference of inflation, without including a time trend as regressor. Using cross-sectional data, in order to estimate the effects of changes in unemployment and inflation on the income distribution, in this paper the following model is used;

$$\begin{aligned} S_{ij} = {} & \alpha_i + \beta_i U_j + \lambda_i I_j + \delta_i ID_j + \varphi_i GIDU_j + \phi_i GIDI_j + \gamma_i DD_j + \\ & \eta_i GDDU_j + \theta_i GDDI_j + \varepsilon_{ij} \end{aligned} \qquad (3)$$

where S_{ij} is the share of the i th quintile (i=1,2,...,5) in total income (expenditure) within country U is the unemployment rate; and I is the rate of inflation (as measured by the GDP deflator). ID is dummy variable for

income/expenditure (ID=1 for income data and $ID = 0$ for expenditure data) and $GIDU = ID \times U$ and $GIDI = ID \times I$. DD is dummy variable for developed/ developing countries[1] (DD=1 for developed and $DD = 0$ for developing countries) and $GDDU = DD \times U$ and $GDDI = DD \times I$.

The dummy variables are included in the estimating model in order to separate effects on the distribution through the gradients of unemployment and inflation influences. Constant α_i represents the relative share of quintile *i=1, 2,..., 5*. Coefficient β_i represents marginal unemployment gain (loss) in quintile *i*. Obviously the gain (loss) to one quintile is offset by loss (gain) to others. This is true for all factors in the model. Thus, the following restrictions hold for the model.

$$\sum \alpha_i = 1,$$
$$\sum \beta_i = \sum \lambda_i = \sum \delta_i = \sum \varphi_i = \sum \phi_i = \sum \gamma_i = \sum \eta_i = \sum \theta_i = \cdot \qquad (4)$$

and $\varepsilon_j \sim$ iid $(0, \delta^2)$ for *all j*.

The set of five equations for the quintile shares are in fact a set of Seemingly Unrelated Regressions Equations (SURE) introduced by Zellner (1962). The SURE estimation method suggested by Zellner reduces to OLS when the right-hand side variables are the same in each equation, as is the case in this application. Estimation of the system taking place by the (Iterative) Ordinary Least Squares (OLS), which automatically imposes the cross-equation constraints:

3- The Source of Data

The cross-sectional income or expenditure data has become available in the World Development Indicators (1999) from the World Bank for 96 countries. The GDP deflator and the unemployment data have been obtained from the IMF CD-ROM (1999) and ILO (1995, 1998) for the corresponding years, respectively.

The sample covers 65 developing and developed countries for which all necessary data are available. This data in Table 1A in Appendix refer to different years between 1982 and 1997, which includes the Gini coefficients as well as the income shares as quintiles. Footnotes to the survey year indicate whether the rankings are based on per capita income or consumption. Each

1 - Developed countries here are taken as synonymous to the high income group countries used in the World Bank (1999).

distribution (including for high-income economies) is based on percentiles of population-rather than of households-with households ranked by income or expenditure per person. The distribution indicators have been adjusted by the World Bank (1999), for household size, providing a more consistent measure of per capita income or consumption. No adjustment has been made for spatial differences in cost of living within countries.

Because the underlying household surveys differ in method and in the type of data collected, the distribution indicators are not strictly comparable across countries. The following sources of non-comparability should be noted. First, the surveys can differ in many respects, including whether they use income or consumption expenditure as the living standard indicator. The distribution of income is typically more unequal than the distribution of consumption, since the proportion of saving is higher among higher income groups. In addition, the definitions of income used in surveys are usually very different. Consumption is usually a much better welfare indicator, less fluctuating and more reliable, particularly in developing countries. Second, household units differ in size and in some extent of income sharing among members. Moreover individuals differ in age and consumption needs. Differences between countries in these respects may bias comparisons of distribution, but not significantly the results of this study, since the object is not the comparison, and also dummy variables will be used to separate the effects of the differences in the definition where possible. Nonetheless, this is the most recent and comparable income or expenditure distribution data available from official sources.

4- Empirical Results

Using the observations on Table 1A, the SURE system is estimated by TSP7, which automatically imposes the restrictions given in (4). The results indicated that the factors GIDU, GIDI, GDDU and GDDI are not statistically significant, that is, there is not significantly difference between unemployment effects on inequality, measured in terms of income or expenditure in developed or developing countries. The same results hold for inflation. Therefore, these factors are removed from the model and the final estimated results are summarised in Table 1.

Table 1: Estimated results: Unemployment/inflation and income or expenditure distribution, across developed and developing countries (n=65).

Explanatory Variable	Dependent Variables of the Model							
	Gini	L. 20%	S. 20%	T. 20%	F. 20%	H. 20%	L. 10%	H. 10%
Constant	37.78 (11.63)	7.2957 (9.97)	11.01 (13.88)	15.00 (21.16)	21.07 (46.69)	45.65 (17.86)	3.14 (8.78)	30.52 (12.52)
Unemployment	+0.20 (0.83)	-0.0710 (1.32)	-0.0436 (0.75)	-0.0203 (0.39)	+0.0045 (0.14)	+0.1295 (0.69)	-0.0401 (1. 53)	+0.1105 (0.62)
Developed/Developing Dummy	-11.96 (4.23)	+2.4446 (3.84)	+3.0736 (4.45)	+2.7154 (4.40)	+1.6488 (4.20)	-9.9330 (4.4655)	+0.9131 (2. 94)	-9.41 (4.44)
Income/Expenditure Dummy	+2.56 (0.87)	-0.8894 (1.35)	-0.5352 (0.75)	-0.2618 (0.41)	+0.0280 (0.07)	+1.6455 (0.71)	-0.5239 (1.63)	+.5113 (0.69)
R^2	0.24	0.19	0.24	0.25	0.25	0.25	0.14	0.26
Constant	39.91 (17.97)	6.5 700 (12.85)	10.5374 (19.41)	14.7518 (30.89)	21.0709 (70.64)	47.0933 (27.12)	2.7316 (10.84)	31.7729 (19.29)
Inflation	-0.0114 (1.95)	+0.0020 (1.46)	+0.0028 (1.95)	+0.0030 (2.35)	+0.0022 (2.85)	-0.0100 (2.17)	+0.0008 (1.28)	-0.0098 (2.26)
Developed/Developing Dummy	-13..24 (4. 64)	+2.6008 (3.96)	+3.3944 (4.87)	+3.1018 (5.06)	+1.9751 (5.1571)	-11.1240 (4.99)	+0.9638 (2.98)	-10.6169 (5.02)
Income/Expenditure Dummy	+.44 (1.20)	-0.9342 (1.41)	-0.7652 (1.09)	-0.5821 (0.94)	-0.2716 (0.70)	+2.5428 (1.13)	-0.5155 (1.58)	+.4444 (1.15)
R^2	0.27	0.20	0.28	0.30	0.33	0.29	0.13	0.31
Constant	38.95 (11.96)	7.1182 (9.64)	10.7215 (13.57)	14.6778 (21.10)	20.8086 (48.15)	46.7068 (18.47)	3.0667 (8.40)	31.5687 (13.05)
Unemployment	+0.0977 (0.41)	-0.0558 (1.02)	-0.0187 (0.32)	+0.0075 (0.15)	+0.0267 (0.83)	+0.0393 (0.21)	-0.0341 (1.26)	+0.0208 (0.12)
Inflation	-0.0109 (1.79)	+0.0016 (1.19)	+0.0027 (1.82)	+0.0030 (2.32)	+0.0024 (2.98)	-0.0098 (2.07)	+0.0006 (0.95)	-0.0097 (2.15)
Developed/Developing Dummy	-13.32 (4.63)	+2.6513 (4.06)	+3.4114 (4.88)	+3.0950 (5.03)	+1.9509 (5.11)	-11.1597 (4.99)	+0.9947 (3.08)	-10.6358 (4.97)
Income/Expenditure Dummy	+3.6562 (1.24)	-1.0549 (1.58)	-0.8057 (1.13)	-0.5658 (0.90)	-0.2139 (0.55)	+2.6279 (1.15)	-0.5893 (1.79)	+2.4894 (1.14)
R^2	0.27	0.21	0.28	0.31	0.34	0.29	0.15	0.31

(t-statistics in the parentheses)

Sources: The SURE system was estimated using Iterative OLS in TSP7, which converged after two iterations.

5- Conclusions

Increases in unemployment may increase inequality while inflation has a reducing impact on the level of inequality measured by the Gini coefficient. Analyses of the results imply that unemployment reduces the share of the lowest 40% but increases the share of top 60% of the population. On the other hand, contrary to the general belief, inflation increases the share of the lowest 80% while reducing that of the top 20%. The results indicate that other things given, developed countries experienced significantly lower inequality. Although the

time-series results have came under criticism by Mocan (1999) and Parker (2000) mainly due to nonstationarity of the variables involved, the cross-sectional results can well be supported. This indicates that in any policy implication in favour of the lower income groups (reduction in inequality), unemployment should be taken into account more seriously than inflation.

The estimated coefficients have the consistent expected signs, even though not all are statistically significant. The constants are highly significant, indicating that the average share of each quintile among countries of the international community, regardless of unemployment and inflation are in general about 7, 11, 15 21 and 47 percent, and that of income shares are about 6, 10, 14, 21 and 44 percent, respectively. DD with negative signs and statistically significant estimates indicate that, other things given, developed countries experienced lower inequality. Plus signs of ID imply that inequality is higher when measured in terms of income rather than expenditure, as it is expected. Inflation has an increasing and statistically significant impact on the shares of the lower 80% while reducing from the top 20%. On the other hand, unemployment has decreasing, although not statistically significant impacts on the share of the bottom 40% while increasing the shares of higher 60%. It should be appreciated that the data concerning unemployment is not as accurate and reliable as the rest, especially when most developing and Eastern block countries are concerned. The results from the cross-sectional analysis, obtained here, are compared with those obtained from the time-series analyses in Table 2. The results are more consistent with the Blinder and Esaki (1978) although this represents that higher inflation is in favour of the lower 40% of the U.S. families against the rest, and unemployment will harm the lower 60% in favour of the rest.

Table 2: Estimated results: Unemployment (Un.) and inflation effects (Inf.) on income distribution

Dependent Variable	Based on time-series data, concerning individual country								Based on cross-sectional data	
	U.S.		Canada		U.K.		Sweden			
	Un.	Inf.	Un.	Inf.	Un.	Inf.	Un.	Inf.	Un.	Inf.
Lowest 20%	-0.129 (4.78)	+0.031 (2.82)	-0.016 (0.49)	-0.011 (0.78)	-0.21 (2.03)	+0.02 (1.80)	+0.0004 (0.20)	+0.0003 (0.50)	-0.0558 (1.02)	+0.0016 (1.19)
Second 20%	-0.135 (4.50)	+0.010 (0.77)	-0.005 (0.08)	+0.002 (0.08)	+0.04 (0.28)	-0.03 (1.80)	+0.0001 (0.17)	+0.0001 (0.50)	-0.0187 (0.32)	+0.0027 (1.82)
Third 20%	-0.031 (0.91)	-0.007 (0.50)	-0.015 (0.50)	-0.018 (1.33)	-0.02 (0.12)	+0.01 (0.64)	-0.0002 (0.25)	-0.0002 (1.00)	+0.0075 (0.15)	+0.0030 (2.32)
Fourth 20%	+0.042 (1.24)	-0.023 (1.64)	-0.010 (0.41)	+0.011 (0.94)	+0.32 (4.58)	-0.01 (1.46)	+0.0004 (0.67)	-0.0001 (0.50)	+0.0267 (0.83)	+0.0024 (2.98)
Highest 20%	+0.272 (3.68)	-0.005 (0.16)	+0.046 (0.44)	+0.016 (0.37)	-0.13 (0.38)	-0.01 (0.34)	-0.0007 (0.39)	+0.0000 (0.20)	+0.0393 (0.21)	-0.0098 (2.07)

(*t*-statistics in the parentheses)

Sources: U.S. from Blinder and Esaki (1978, p. 605), Canada from Buse (1982, p. 199), U.K. from Nolan (1987, p. 20), Sweeden from Bjorklund (1991, p. 462).

Table 1A. Personal income or expenditure distribution, unemployment and inflation data across developed and developing countries (n=65)

Country	Survey Year	Personal Income or Expenditure Distribution								Unemployment	Inflation
		Gini	L.10%	L.20%	S.20%	T.20%	F.20%	H.20%	H.10%		
Algeria	1995a	35.3	2.8	7.0	11.6	16.1	22.7	42.6	26.8	28.10	28.3
Australia	1989a	33.7	2.5	7.0	12.2	16.6	23.3	40.9	24.8	6.20	5.92
Austria	1987a	23.1	4.4	10.4	14.8	18.5	22.9	33.3	19.3	5.60	2.07
Bangladesh	1992a	28.3	4.1	9.4	13.5	17.2	22.0	37.9	23.7	2.08	4.29
Belarus	1995a	28.8	3.4	8.5	13.5	17.7	23.1	37.2	22.6	2.70	648
Belgium	1992a	25.0	3.7	9.5	14.6	18.4	23.0	34.5	20.2	11.20	3.60
Bolivia	1990a	42.0	2.3	5.6	9.7	14.5	22.0	48.2	31.7	7.30	12.20
Brazil	1995a	60.1	0.8	2.5	5.7	9.9	17.7	64.2	47.9	6.10	72.50
Bulgaria	1992a	30.8	3.3	8.3	13.0	17.0	22.3	39.3	24.7	11.38	59.50
Canada	1994a	31.5	2.8	7.5	12.9	17.2	23.0	39.3	23.8	10.30	0.737
Chile	1994a	56.5	1.4	3.5	6.6	10.9	18.1	61.0	46.1	7.90	14.00
China	1995a	41.5	2.2	5.5	9.8	14.9	22.3	47.5	30.9	2.85	12.80
Colombia	1995a	57.2	1.0	3.1	6.8	10.9	17.6	61.5	46.9	8.80	20.50
Costa Rica	1996a	47.0	1.3	4.0	8.8	13.7	21.7	51.8	34.7	5.53	16.10
Côte d` Ivoire	1988a	36.9	2.8	6.8	11.2	15.8	22.2	44.1	28.5	2.76	0.39
Czech Republic	1993a	26.6	4.6	10.5	13.9	16.9	21.3	37.4	23.5	3.00	16.20
Denmark	1992a	24.7	3.6	9.6	14.9	18.3	22.7	34.5	20.5	11.30	3.17
Dominican Republic	1989a	50.5	1.6	4.2	7.9	12.5	19.7	55.7	39.6	19.11	23.30
Ecuador	1994b	46.6	2.3	5.4	8.9	13.2	19.9	52.6	37.6	7.71	27.30
Egypt, Arab Rep.	1991b	32.0	3.9	8.7	12.5	16.3	21.4	41.1	26.7	9.60	14.50
El Salvador	1995a	49.9	1.2	3.7	8.3	13.1	20.5	54.4	38.3	7.70	10.80
Estonia	1995a	35.4	2.2	6.2	12.0	17.0	23.1	41.8	26.2	9.70	31.7
Finland	1991a	25.6	4.2	10.0	14.2	17.6	22.3	35.8	21.6	7.50	2.48
France	1989a	32.7	2.5	7.2	12.7	17.1	22.8	40.1	24.9	9.40	3.02
Germany	1989a	28.1	3.7	9.0	13.5	17.5	22.9	37.1	22.6	7.90	4.20
Guyana	1993b	40.2	2.4	6.3	10.7	15.0	21.2	46.9	32.0	9.70	16.8
Honduras	1996a	53.7	1.2	3.4	7.1	11.7	19.7	58.0	42.1	4.30	21.2
Hungary	1993a	27.9	4.1	9.7	13.9	16.9	21.4	38.1	24.0	12.10	21.3
Indonesia	1996a	36.5	3.6	8.0	11.3	15.1	20.8	44.9	30.3	4.00	8.69
Ireland	1987a	35.9	2.5	6.7	11.6	16.4	22.4	42.9	27.4	18.80	2.20
Israel	1992a	35.5	2.8	6.9	11.4	16.3	22.9	42.5	26.9	11.20	13.5
Italy	1991a	31.2	2.9	7.6	12.9	17.3	23.2	38.9	23.7	10.90	7.69
Jamaica	1991b	41.1	2.4	5.8	10.2	14.9	21.6	47.5	31.9	15.70	46.10
Kazakhstan	1993a	32.7	3.1	7.5	12.3	16.9	22.9	40.4	24.9	0.60	1270
Kyrgyz Republic	1993a	35.3	2.7	6.7	11.5	16.4	23.1	42.3	26.2	4.00	763
Latvia	1995a	28.5	3.3	8.3	13.8	18.0	22.9	37.0	22.4	6.30	15.3
Lithuania	1993a	33.6	3.4	8.1	12.3	16.2	21.3	42.1	28.0	3.60	371
Luxembourg	1991a	26.9	4.2	9.5	13.6	17.7	22.4	36.7	22.3	2.30	1.48
Malaysia	1989a	48.4	1.9	4.6	8.3	13.0	20.4	53.7	37.9	6.30	3.47
Mexico	1995a	53.7	1.4	3.6	7.2	11.8	19.2	58.2	42.8	4.70	38.0
Moldova	1992a	34.4	2.7	6.9	11.9	16.7	23.1	41.5	25.8	0.70	1393
Morocco	1990-91b	39.2	2.8	6.6	10.5	15.0	21.7	46.3	30.5	15.40	5.38
Netherlands	1991a	31.5	2.9	8.0	13.0	16.7	22.5	39.9	24.7	7.00	2.69
Nicaragua	1993b	50.3	1.6	4.2	8.0	12.6	20.0	55.2	39.8	11.99	20.2

Norway	**1991a**	25.2	4.1	10.0	14.3	17.9	22.4	35.3	21.2	5.50	2.42
Pakistan	**1996b**	31.2	4.1	9.4	13.0	16.0	20.3	41.2	27.7	4.99	11.3
Panama	**1995a**	57.1	0.7	2.3	6.2	11.3	19.8	60.4	43.8	14.00	0.473
Paraguay	**1995a**	59.1	0.7	2.3	5.9	10.7	18.7	62.4	46.6	7.71	12.9
Peru	**1996a**	46.2	1.6	4.4	9.1	14.1	21.3	51.2	35.4	7.00	9.42
Philippines	**1994b**	42.9	2.4	5.9	9.6	13.9	21.1	49.6	33.5	7.98	10.0
Poland	**1992b**	27.2	4.0	9.3	13.8	17.7	22.6	36.6	22.1	14.00	39.3
Romania	**1994a**	28.2	3.7	8.9	13.6	17.6	22.6	37.3	22.7	8.20	139
Russian Federation	**1996b**	48.0	1.4	4.2	8.8	13.6	20.7	52.8	37.4	9.30	45.5
Slovak Republic	**1992a**	19.5	5.1	11.9	15.8	18.8	22.2	31.4	18.2	1.43	12.6
South Africa	**1993-94b**	59.3	1.1	2.9	5.5	9.2	17.7	64.8	45.9	4.40	10.8
Spain	**1990a**	32.5	2.8	7.5	12.6	17.0	22.6	40.3	25.2	16.30	7.31
Sri Lanka	**1990b**	30.1	3.8	8.9	13.1	16.9	21.7	39.3	25.2	14.40	20.20
Sweden	**1992a**	25.0	3.7	9.6	14.5	18.1	23.2	34.5	20.1	5.30	10.5
Switzerland	**1982a**	36.1	2.9	7.4	11.6	15.6	21.9	43.5	28.6	0.40	7.07
Thailand	**1992b**	46.2	2.5	5.6	8.7	13.0	20.0	52.7	37.1	1.40	4.31
Tunisia	**1990b**	40.2	2.3	5.9	10.4	15.3	22.1	46.3	30.7	5.71	4.50
Ukraine	**1995a**	47.3	1.4	4.3	9.0	13.8	20.8	52.2	36.8	5.60	416
United Kingdom	**1986a**	32.6	2.4	7.1	12.8	17.2	23.1	39.8	24.7	11.80	3.17
United States	**1994a**	40.1	1.5	4.8	10.5	16.0	23.5	45.2	28.5	6.10	2.16
Venezuela	**1995a**	46.8	1.5	4.3	8.8	13.8	21.3	51.8	35.6	10.33	51.3

L.10%, L.20%, S.20%, T.20%, F.20%, H.20% and H.10% indicate the Lowest 10%, Lowest 20%, Second 20%, Third 20%,
Fourth 20%, Highest 20% and Highest 10%, respectively.
Sources: Data on distribution of income or consumption is obtained from The World Bank (1999), and data for the unemployment
Is from the ILO (1998) and inflation is from IMF CD-ROM (1999).
Refers to expenditure shares by percentiles of population, ranked by per capita expenditure.
Refers to income shares by percentiles of population, ranked by per capita income.

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