

MACROECONOMIC PERFORMANCE AND INEQUALITY IN COLOMBIA: 1976-1996¹

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ABSTRACT

This paper explores the relationship between macroeconomic conditions and urban income distribution in Colombia. The results show that unemployment and inflation have significant regressive effects. Manufacturing output growth is clearly progressive, as well as improved conditions in the rural areas. Currency overvaluation is also related to income concentration. In this sense, it is no surprise that the recent combination of high unemployment, an overvalued currency, and low overall economic growth have resulted in greater inequality. The paper also finds that unemployment and inflation have an adverse effect on education of the poor. Thus, macroeconomic instability is detrimental for the accumulation of human capital, which in turn has a long-term effect on the distribution of income.

¹ Paper presented at the 10th Annual InterAmerican Seminar on Economics organized by the Centro de Estudios Públicos and the NBER, to be held in Santiago, Chile, November 20-22, 1998. Earlier versions of this paper were presented at the 1997 meetings of the Latin American and Caribbean Economic Association, and seminars at the InterAmerican Development Bank, Universidad de los Andes, DNP, and Fedesarrollo. We would like to thank Jaime Jiménez for processing the Household Surveys, and Francois Bourguignon, Juan Luis Londoño, Carlos Oliva, Francisco Rosende and seminar participants for valuable comments. We are also grateful to InterAmerican Development for financial support. The usual caveat applies.

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1. Introduction

This paper deals with the relationship between macroeconomic performance and equity. In line with a growing body of empirical literature, we analyze the impact of key macroeconomic variables on income distribution, as well as on the level and distribution of educational opportunities across the population. In particular, we explore the effects of economic growth, inflation, unemployment, and the degree of currency overvaluation, on several measures of income distribution. We perform similar exercises using enrollment rates (in primary, secondary, and tertiary education) as the dependent variables. The exercise is carried out both for the level of macroeconomic variables and their volatility.

The reasons why macroeconomic fluctuations are inefficient are well known. Economic theory has shown that it is optimal to smooth-out consumption across time when agents experience decreasing marginal utility. Also, macroeconomic instability results in greater uncertainty, which has a negative effect on investment. In fact, Fischer (1991) has pointed out that countries with greater macroeconomic stability experience, on average, higher economic growth. Thus, the allocation of resources is more efficient in less volatile economies.

Equity is also related to macroeconomic stability. It is often said that the poor are the chief sufferers of inflation, which is often characterized as the "cruelest tax" due to its regressive effects on income distribution. Also, the conventional wisdom views unemployment as having an inequality-augmenting effect. The argument here is that increases in unemployment have a larger impact on the earnings of the unskilled, who are the first ones to lose their jobs when aggregate employment falls. Although having intuitive appeal, the links between macroeconomic conditions and income distribution lack solid theoretical justification and have become the subject of a prolific empirical debate.

For example, using U.S. data, Blinder and Esaki (1978), and Blank and Blinder (1985) find that inflation *reduces* income concentration³. Nolan (1987) for the U.K. and Flückiger and Zarin-Nejadan (1994) for Switzerland also obtain the progressive impact of inflation. However, Blejer and Guerrero (1992) for the Philippines, and Björklund (1991) for Sweden, and Silber and Zilberfab (1994) for Israel have argued that the opposite is true. Moreover, the evidence presented by Cardoso, Paes de Barros and Urani (1995) for Brazil indicates that changes in inflation rates largely explain the sharp fluctuation of income distribution during the 1980s. In particular, they show that greater income concentration occurred during periods of higher inflation.

The effects of unemployment on income distribution are less controversial. Virtually every paper in this literature has pointed that higher rates of unemployment are associated with greater inequality. Indeed, building on previous work by Blinder and colleagues, Jäntti (1994) has argued that unemployment, not inflation, is the crueler tax in the U.S.. Evidence

³ Other references are Schultz (1969), Metcalf (1969), Beach (1977), Buse (1982), and Bishop, Formby and Sakano (1994).

⁴ He estimates the same equations as in Blinder and Esaki (1978) using GLS rather than OLS and finds that inflation has progressive effects and that unemployment has diminishing regressive effects.

for developing countries also finds that increases in unemployment have a high social cost (see for example work by Bonelli and Ramos (1993) and Urani (1993) for Brazil.

Along a somewhat different vein, Urrutia and Cárdenas (1993) present some evidence of a strong correlation between economic fluctuations and the social cycle (i.e., deviations around trend for an array of social indicators) in four coffee producing nations (Colombia, Costa Rica, Cote d'Ivoire and Kenya). The overall, conclusion of this body of literature is that macroeconomic instability is not only inefficient, but also generates unpleasant effects on equity. This is especially true in developing countries, where inflation does seem to have an unambiguous regressive effect⁵. However, it is important to mention that the relationship between the effects of macroeconomic instability and income distribution goes the other way. In fact, it is likely that high-income concentration can cause macroeconomic instability (see Cuckierman, Edwards and Tabellini [1991]).

This paper explores these issues using a new database on income distribution available for Colombia. In particular, based on the Household Surveys⁶ we constructed quarterly series on income distribution and educational attainment (by income quintiles) for the period 1976:1 to 1996:2. After processing and solving the top coding problems present in the data we obtained and array of income distribution indicators (e.g. Gini and Theil coefficients, top to bottom quintile ratio, etc.) for labor and non-labor income. These indicators were computed for labor earnings by individual and for the total household income in per capita terms, arguably a better measure of individual welfare.

Using cointegration analysis, this paper concludes that there is a long-run positive relation between inflation and income concentration. A similar result is obtained in the case of unemployment. In the terminology of Engle and Granger (1991) there is an attractor that holds these variables together in the long run. Trends in income inequality are related to trends in inflation and unemployment. Error correction models indicate that the same is true for the short run fluctuations in the variables.

Other macroeconomic variables are used in the paper. The results suggest that growth in the manufacturing sector is associated with a more egalitarian urban income distribution. Also, improved economic conditions in the rural sector (agriculture and mining) reduce inequality in the cities. The argument here hinges on the influence that rural sector conditions have on unskilled labor migration to the cities. Conversely, growth in nontradable sectors (e.g., construction and services) results in greater inequality. Lastly, a real depreciation of the currency is associated with improvements in income distribution.

The paper is divided in 5 sections. Section 2 describes the data and presents some stylized facts on income distribution and educational attainment in Colombia. Section 3 discusses some of the possible mechanisms that create a link between macroeconomic

⁵ Recently, however, Ferreira and Litchfield (1997) using total household income per capita (rather than labor income) have found a negative correlation between unemployment an inequality for Brazil during the 1990s.

⁶ These surveys collected data for the 4 largest metropolitan areas prior to 1982 and for 7 areas since then. The change in the sampling properties introduces some methodological problems that are dealt with later.

variables and social progress. Section 4 estimates a cointegrating vector that establishes a long-run relationship between income distribution and macroeconomic performance. Section 4 applies an identical procedure in order to capture the relationship between educational advancement and macroeconomic variables. Section 5 concludes.

2. DATA

2.1 Income Distribution

This section presents the stylized facts on income distribution in Colombia, based on a new data set obtained from the Household Surveys. These surveys suffer from several methodological problems that had to be solved in order to construct our database. The main difficulties with the raw data are related to: i. Top-coding problems in reported incomes⁷; ii. Measurement errors on the part of the surveyors.

Top coding problems are present in most of the surveys. Until September 1993 the questionnaire allowed up to six digits for monthly incomes, so that higher end incomes were increasingly underestimated. Since September 1993 seven digit incomes were allowed, but even then a fraction of the surveyed individuals reported the top coded income. This problem was finally solved in March 1996 (the surveys no longer have limits on the maximum income reported). In order to correct for truncated incomes in the survey we implemented a procedure, which is described in Appendix 19. The procedure is relatively ad hoc, but has better statistical properties than alternative methodologies. In order to compare the results of available procedures we artificially impose top-codes on the incomes of an untruncated survey. If truncation problems are solved using a lognormal distribution the Gini coefficient is overestimated by 2.44%. In contrast, the degree of overestimation is only 0.07% when our procedure is used.

Measurement errors on the part of the surveyors refer to the fact that many workers report a weekly (or by-weekly) payment of their salary, but express their salary in monthly terms. We found that the monthly incomes of some workers had been overestimated due to the fact that a monthly salary had been (wrongly) multiplied by the frequency of payment. We dealt with this problem by identifying outliers in groups with similar socioeconomic characteristics.

Throughout the paper we use three definitions of income. All our income concepts are based on primary sources. Thus, we ignore the role of transfers and subsidies to households¹⁰. First, we use pre-tax labor earnings for the individual. Second, we use pre-

⁷ Cárdenas and Gutiérrez (1996) describe in detail the top-coding problems and survey the alternative solutions that have been proposed in the literature.

⁸ At the 1993 exchange rate, the maximum allowed monthly income (Col\$999.998) was equal to US\$1,200.

⁹ The procedure is based on the estimation of the maximum level of income for the individuals whose incomes are truncate. Once that level is estimated we then fit an exponential function to distribute the incomes of the truncated population.

¹⁰ Cárdenas and Vélez (1996) show that these forms of secondary income have played a decisive role on income distribution in Colombia in recent years.

tax non-labor income (pensions, interest payments, dividends, and rents) where the receiver is also the individual. Third, we computed the gross monthly household income (from all sources). Our results are robust to the choice of income measure.

In order to describe the data we performed some static decompositions of inequality in Colombia. The goal is to separate total inequality into a component of inequality between some arbitrarily chosen groups, and the remaining within-group inequality. The individuals can be grouped according to age, gender, educational attainment, geographical location (e.g., urban vs. rural), ethnicity, etc. In the case of household income these partitions can be made according to the characteristics of the household head.

In order to perform these decompositions we use the Theil index, which is a particular case of the generalized entropy class of measures. The partition of the overall distribution by individual attribute was carried for level of education. In particular, we calculated:

$$T_{T} = \sum_{k=1}^{k} q_{k} \sum_{j=1}^{j} \frac{q_{j,k}}{q_{k}} \ln \frac{q_{j,k}/q_{k}}{p_{j,k}/p_{k}} + \sum_{k=1}^{k} q_{k} \ln \frac{q_{k}}{p_{k}}$$
 (1)

where q_k is group's k share in total income (groups were defined according to the years of schooling of the population)¹¹, $q_{j,k}$ is the share of individual j in group k, p_k is the share of group k in total population and $p_{j,k}$ is the share of individual j in group k. The first term on the right hand side is the Theil index within groups (T_w) and the second term is the Theil index between groups (T_B) . The ratio $R_B = \frac{T_B}{T_T}$ measures the share of inequality that can be explained with the attribute that defines the groups' partition 12 . In our case, the within groups entropy index measures the part of inequality that cannot be explained with educational differences.

Figure 1 shows the total and within-groups Theil indexes for labor incomes. A cursory look at the graph suggests the presence of a rapid decline in inequality between 1976 and 1982, followed by stability during the 1980s. During the 1990s inequality has increased substantially. Interestingly enough, the partition by educational attainment of the population does not seem to explain much of total inequality. In fact, R_B lies between 28 and 34% for the period 1976-1996 so the between-group component is not substantial. This is of interest because it implies that a large share of inequality can be explained with macroeconomic variables¹³.

¹¹ The k groups correspond to: i. 0 years, ii. 1 to 5 years, iii. 6 to 10 years, iv. 11 years, v. 12 to 15 years and vi. 16 years.

¹² See Cowell and Jenkins (1995) for a formal derivation of all Generalized Entropy measures.

¹³ This result is consistent with Núñez and Sánchez (1997) who find that approximately 28% of inequality can be explained by differences in educational attainment across the population.

Moreover, it is worth noticing that the reduction in inequality between 1976 and 1982 was mainly due to a reduction in inequality between groups, while the recent increase is the result of greater within-groups inequality. Thus, the role of macroeconomic factors is potentially larger in explaining changes in income distribution throughout the 1990s. This is of interest because it suggests that structural reforms cannot be held accountable for the higher skewness of the distributional curve. As we will argue, emphasis should rather be placed on greater macroeconomic instability in recent years.

To complete this description we use other measures of inequality, such as the Gini coefficient, and the share of income received by each quintile of the population. Figure 1 also shows the Gini coefficient for labor earnings by individual. According to the data, primary income is highly concentrated in Colombia. In fact, when comparing our measures with the evidence gathered in Deininger and Squire (1996) Colombia emerges as one of the countries with greater inequality in Latin America (already the region with greater inequality in the world). The trends are fairly close to those described before: The Gini coefficient experienced a drastic reduction from 0.49 in 1976 to 0.40 in 1982. Since 1991 it has increased to the levels observed in the late 1970s.

Figure 2 shows share of labor income by quintile, as well as the top-to-bottom quintile ratio¹⁴. These data confirm the mentioned trends: Until the early 1980s all the measures point towards a reduction in income concentration. This trend reversed during the late 1980s. According to the 1996 data, the top quintile received 54% of total income, while the bottom quintile received 6%. The 5:1 ratio indicates that the share of the top quintile is 9 times larger than that of the bottom quintile. In fact, the top quintile's share has increased steadily during the 1990s.

Figures 3 and 5 show the same variables calculated with non-labor income only. Clearly, in this case the concentration of income is much higher. In 1996, only 2.7% of non-labor income was received by the bottom decile, while 60% went to the top 20% of the population. Moreover, the Gini coefficient has increased from 0.56 in 1990 to 0.62 in 1996.

Lastly, Figures 4 and 5 depict income distribution variables based on the total household income in per capita terms¹⁵. Since the average size of low-income households is relatively larger, income distribution is more skewed according to these measures. The top to bottom quintile ratio was 14 in 1996 (10 in 1982), a figure that is likely one of the highest in the developing world. More worrisome is the trend observed since 1991. The top quintile's share rose from 54.7% in 1991 to 57.8% in 1996.

2.2 EDUCATION

As shown in the previous section, educational attainment is one of the attributes that can explain total inequality. But education itself is a variable attribute (such as

¹⁴ This ratio has some advantages over the Gini coefficient. See Deininger and Squire (1996).

¹⁵ The sum of total income (labor and non-labor) of the household divided by the number of individuals in the household.

income) that can respond to macroeconomic conditions. Hence, causation running from education to income distribution is misleading. It is probably more accurate to treat education and income distribution as endogenously and simultaneously determined by a common set of factors which include macroeconomic conditions.

This section describes the data on education gathered from the Household Surveys. Figure 6 shows gross enrollment rates in primary, secondary and tertiary education for the bottom and top quintiles of the population. A cursory look indicates that enrollment rates have increased significantly during the 1990s. This is true for primary and secondary education for the bottom quintile and for all levels of education for the top quintile. These trends are consistent with the rapid increase in public expenditure in education, which rose from 3.0% of GDP in 1990 to 3.7% in 1995¹⁶.

Enrollment rates in secondary education show the fastest increase (48% in 1982 to 62% in 1996). This increase is more dramatic for the bottom quintile (from 35% in 1982 to 57% in 1996). Figure 7 shows the average years of schooling for the urban population calculated from the Household surveys. According to the data, the average educational attainment of the population rose from 7.5 to 9 years between 1982 and 1996. The lower part of Figure 7 displays the ratio in terms of years of schooling of the top and bottom quintiles. The data indicates that the educational gap has narrowed since 1982¹⁷. In the next section we deal with the relationship between these trends and macroeconomic performance.

3. INCOME DISTRIBUTION AND MACROECONOMIC STABILITY

As mentioned in the introduction, the time series regressions linking macroeconomic variables and income distribution data have a long tradition in the literature ¹⁸. For example, in the case of the U.S., Schultz (1969), Metcalf (1972), Thurow (1970), Blinder and Esaki (1978) use income shares (by quintile), Gini coefficient and the Theil index as the dependent variable. Unemployment is always a significant explanatory variable, whereas the effects of inflation and the factorial distribution of income are less conclusive. Indeed, Blinder and Esaki (1978) find that increases in inflation rates are associated with a more egalitarian distribution. In contrast, Metcalf (1972) finds evidence suggesting the opposite effect. The difficulty with the time series approach is that other factors that affect income distribution are difficult to isolate.

¹⁶ According to the data in Londoño (1997).

¹⁷ According to the 1993 National Census, 14% of the population over 5 years was illiterate. Nevertheless, when computing this rate again with population over 15 years, we obtain 3.5% of illiterate population. Based on the 1985 National Census the adult illiterate rate was approximately 11% while in countries with average income this rate was 25% and in Latin American countries it corresponded to 17%. In spite of this, we are yet far from developed countries' rates (approximately 5%). For a detailed analysis on illiteracy see World Bank (1991).

¹⁸ There are other approaches, however. Budd and Whiteman (1978) and Minarik (1979) are examples of papers based on simulation exercises. In the latter case, higher inflation reduces the value of long-term assets and implies a form of redistribution from creditors to debtors.

This body of literature has identified several transmission mechanisms from macroeconomic stability to income distribution ¹⁹. Economic activity can have different effects on income distribution depending on the impact on the composition of output and on the compensation of the different factors of production. The conventional wisdom argues that labor market deterioration (maybe due to its depressing effects on wages) affects low income groups more adversely than high income groups. This could also result from greater flexibility in the unskilled labor market (due, for instance, to differences in the labor legislation). Although imprecise about the specific mechanism, the literature agrees that unemployment adversely affects the lower end of the income distribution.

Although the evidence for developed countries is mixed, inflation does seem to be a regressive distributive device in developing countries. Neri (1995) discusses several channels though which inflation can result in greater inequality: (i) economies of scale in financial transactions; (ii) limited access (by the poor) to indexed financial assets; (iii) higher degree of wage indexation for skilled workers (in other words, the degree of indexation increases with the level of skill); (iv) lower share of durable goods in the consumption basket of the poor. Of course, these channels are less relevant in the case of high-income and low inflation countries. Thus, the fact that inflation has a statistically significant progressive effect on the distribution of income in the U.S. and the U.K. may be due to the fact that in those economies (unexpected) inflation proxies for an increase in aggregate demand. At any rate, it is hard to identify a priori the effects of inflation on equity. Dealing with this issue becomes an empirical question.

Lastly, Demery and Addison (1987) have analyzed the effect of the real exchange rate on income distribution. According to their results, the effect depends on price and wage flexibility, and the relative weight of traded and nontraded production for the different groups of the population.

Following that line of research, this paper estimates the following equation:

$$S_{t} = \alpha + \beta u_{t} + \gamma \pi_{t} + \delta e_{t} + \sum_{i} \rho_{i} g_{it} + \varepsilon_{t}$$
 (2)

where S_t is a measure of income distribution (e.g., top-to-bottom quintile ratio, Gini coefficient, and the within groups Theil index), u_t is the unemployment rate, π_t is the inflation rate, e_t is the real exchange rate y g_{it} is the growth rate in sector i. Alternative versions of the model included a quadratic term on unemployment, and lags on the dependent and explanatory variables. Also, the equation can be estimated with the volatility of unemployment and inflation (measured by a rolling standard deviation) and the business cycle (measured by the deviations in output around a Hodrick-Prescott trend), instead of the macroeconomic variables in levels. The source for all the explanatory variables is DANE, except the GDP quarterly series, which come from DNP and the multilateral real exchange rate, which is obtained from the Banco de la República.

¹⁹ See Nolan (1989), Bjorklund (1991), Blejer and Guerrero (1992).

The results of estimating equation (2) are of interest. It is well known that the usual techniques of regression analysis can result in highly misleading conclusions when variables contain stochastic trends (Granger and Newbold [1974]). In particular, if the dependent variable and at least one independent variable contain stochastic trends, and if they are not cointegrated, the regression results are spurious. To identify the correct specification of the model depicted by equation (2) it is necessary to analyze the presence of stochastic trends in the variables. To this end, augmented Dickey-Fuller tests were performed on all the variables of the model (see Table A1 for the results). The statistic τ_{β} corresponds to the model with intercept and trend, the statistic τ_{μ} to the model that contains only an intercept and, finally, the statistic τ indicates the model was estimated without both intercept and trend. The values tabulated by McKinnon (1991) are used given that the estimated coefficients do not have the usual asymptotic distribution. As shown in Table A1, the null hypothesis of the existence of a unit root cannot be rejected for any of the variables 20 .

Additionally we used the Hylleberg-Engle-Granger-Yoo (HEGY) test for quarterly data in order to test for seasonal unit roots. The results are reported in Table A2 and indicate that almost all the variables show a unit root at zero frequency (π_1) , but not in the half yearly frequency (π_2) nor the annual frequency $(\pi_3 \ y \ \pi_4)$. Only primary enrollment rates show a unit root in the half yearly frequency²¹.

Given that all variables in equation (2) are I(1) we used the Johansen cointegration test²². In order to capture the long and short run relationships between the variables we also estimated the corresponding vector error correction model (VEC). These techniques diminish the risks of obtaining spurious results, which are likely to be pervasive in the previous literature.

Table A3 shows the results of the cointegration test using the income distribution variables²³. They indicate that all groups of variables are cointegrated, which implies that a long run relationship between the variables holds. Three of the systems shown have two cointegrating vectors, while the last system has three vectors at the 5% confidence. Table 1 shows the cointegrating vector (normalized for the income distribution variable) that corresponds to the theoretically expected results.

²⁰ Appendix 3 presents Perron's test for unit root in the presence of structural changes for some of the variables, nevertheless, as magnitudes of these changes are pretty small, only Dickey-Fuller and HEGY tests were used to decide about the stationarity of variables.

²¹ For this reason, these variables were de-seasonalized using the X11 procedure.

There are three main reasons for this choice: First, Gonzalo (1994) shows that the Johansen test performs better than other approaches under various specifications errors. Second, Johansen's approach is able to incorporate cointegration into the familiar VAR representation without restrictions on the exogeneity of the variables. Third, the procedure provides simultaneously test statistics to infer the number of cointegrating relationships and estimates of the cointegration vectors.

²³ All systems used in this exercise include a dummy variable that equals 1 in the second quarter of 1982, due to the fact that the sample was changed from 4 to 7 metropolitan areas, and in each city the number of interviewed individuals increased from 10.000 to approximately 30.000.

According to the results presented in Table 1, the unemployment rate has a regressive and significant effect on income distribution. Higher rates of unemployment are associated with increases in the top-to-bottom quintile ratio (as well as in the Gini coefficient) computed either with labor income or with the total household income in per capita terms. This result implies that unemployment causes a significant social cost, probably due to the fact that unskilled workers are more likely to loose their jobs once a drop in employment starts. The error correction model results (not shown) indicate that all income distribution variables used significantly respond to past deviations from the long run equilibrium of the variables in the system. Nevertheless, these temporary deviations take a long time to be corrected. The coefficient indicates that, on average for the entire sample, only 8% of the short run disequilibrium between the income distribution variable and the other variables included in the system is corrected within one quarter.

Figures 8 and 9 show the impulse-response exercise for the systems in Table 1 using total household income per capita. These graphs are based on the error correction model where the short run dynamics between the variables of the system are influenced by the long run deviation from equilibrium. We show the response of the top to bottom quintile ratio and Gini coefficient to a one standard deviation in each of the macroeconomic variables. As can be seen, a one standard deviation shock in the unemployment rate causes an increase in income concentration, indicating that unemployment has a regressive impact on the distribution of income. Moreover, the effect tends to be of permanent nature.

On the other hand, the results in Table 1 indicate that inflation has a regressive and significant effect on the distribution of income. Higher inflation rates lead to increasing levels of inequality, as measured by the top-to-bottom quintile ratio and the Gini coefficient (computed with labor earnings and total household income per capita). The impulse-response analysis indicates that a one standard deviation shock in the inflation rate increases the top-to-bottom quintile ratio (based on total household income per capita). In the case of the Gini coefficient based on total household income the effect is positive but practically zero after two years (see Figure 9)²⁴. In sum, the evidence suggests that the inflation tax is regressive in Colombia, possibly due to the fact that the earnings of the poor are less indexed than for other income groups. Also, groups at the higher end of the income distribution scale can protect themselves against inflation acquiring real assets, a possibility that is less feasible for the poor.

From the results reported in Table 1 it can also be inferred that once we control by the unemployment rate, the growth in manufacturing has a significant progressive effect. This result can be attributed to the intensive use of unskilled labor in the manufacturing sector. In fact, according to the Annual Manufacturing Survey conducted by DANE, the share of unskilled labor in total manufacturing employment was 75% in 1976 and 65% in

²⁴ It is important to remember that an increase in the Gini coefficient is not relation exclusively to transfers from the bottom to top quintiles. In fact, this can also happen if transfers from the second to fourth quintile, or third to fourth quintile take place.

1994. Moreover, the manufacturing sector represented approximately 23 to 30% of the urban GDP between 1976 and 1996.

After analyzing the impulse-response exercise shown in Figures 8 and 9 we can see the a standard deviation shock in the growth in manufacturing causes a reduction in the measures of income concentration. The effect is progressive during the first 4 quarters after the shock but practically zero thereafter.

Additionally, the cointegration exercise allows us to infer that growth in agriculture and mining has a significantly progressive effect. Interestingly, this result suggests that favorable conditions in the rural sector reduce unskilled migration to the cities, thus reducing the possibility of significant urban income concentration. The short run analysis presented in the impulse-response exercises clearly shows that a standard deviation shock in the growth in agriculture and mining permanently reduces all measures of income concentration.

In contrast, after controlling for the effect of unemployment, growth in urban non-tradable activities raises income concentration. In fact, the estimated coefficient indicates that an increase in the growth in nontradables raises the top-to-bottom quintile ratio and the Gini coefficient. This result is difficult to interpret, but could be suggestive of a higher degree of capital and skilled labor intensity in those sectors. The impulse-response analysis shows that one standard deviation increase in the growth in nontradable sectors is associated with an increase of all income concentration measures.

Finally, the results presented in Table 1 indicate a clearly progressive effect of a real depreciation of the currency²⁵. This result can be due to the fact that a considerable proportion of Colombian exports is intensive in unskilled labor. Thus, the loss induced by the increase in the price of tradable goods is less than the gain due to the increase in real earnings. The impulse-response analysis indicates a negative (progressive) impact of a standard deviation shock in the real exchange rate. Nevertheless, this effect is small in terms of magnitudes. In fact, for the case of the top to bottom quintile ratio and Gini coefficient computed with total household income, the effect of a shock in the real exchange rates is nearly zero after a year from the initial impact.

Table 2 estimates the same cointegrating equation using the income share by each quintil as a measure of income concentration. The results are of interest because they suggest that, in relation to macroeconomic performance, the behavior of the share of the top quintile is remarkable different than for the remaining quintiles. In fact, inflation and unemployment increase the income share of the top quintile, while the opposite happens to the share of the remaining 80% of the population.

Table A3 also shows a similar cointegration exercise that includes growth separated in two components: the part of growth due to the increase in employment and the part of growth due to changes in multifactorial productivity. For that purpose we

²⁵ This result coincides with Blejer and Guerrero (1992) for the Philippine case.

calculated the quarterly Solow residual²⁶ for urban output, based on GDP data from the National Planning Department (DNP), employment data from the National Household Survey and a quarterly capital stock based on the investment information estimated by the DNP. According to the calculation, total factor productivity has increased significantly since 1992.

The results shown in Table 3 indicate that growth in urban employment reduces the degree of income concentration. However, growth in multifactorial productivity has the opposite effect on income distribution. This is an uncomfortable result, suggesting that gains in efficiency are not immediately transferred to the poor. Increases in productivity in our basic calculation can be derived from improvements in education, technology or infrastructure. Thus, the result is not surprising if the individuals at the higher end of the distribution of income are also the ones with greater access to those assets.

4. HUMAN CAPITAL AND MACROECONOMIC STABILITY

In this section, we estimate equation (2) but use measures of educational attainment rather (than income distribution) in the left-hand-side. Specifically we use enrollment rates in primary, secondary, and university education as the dependent variables. The main objective is to assess the impact of macroeconomic performance on education. We look at the effects of macroeconomic variables on the educational attainment of the different quintiles of the population. We argue that macro conditions have an effect on the distribution of human capital, which as we saw is significant determinant of income distribution. Thus, the effect of macroeconomic fluctuations on equity goes beyond their direct impact on income. Macroeconomic conditions also have an impact on the distribution of assets.

Table A4 shows the Johansen cointegration test for each of the systems that include enrollment rates and the above-mentioned macroeconomic variables. In all cases, the existence of two cointegrating vectors at 5% confidence is found, except for university coverage in the top quintile, which exhibits only one cointegrating vector. These results suggest the presence of a long run relationship between educational attainment and macroeconomic performance in Colombia. Although not reported, the same results are obtained when enrollment rates for the entire population in the Household surveys are used.

Table 4 presents the normalized cointegrating vectors. Unemployment has a negative (and in most cases significant) effect on the enrollment rates for all levels of education, except university in the top quintile. This can be linked to the fact that deteriorating conditions in the labor market motivate adult participants of the labor market to retire temporarily, finding in university an alternative activity.

²⁶ Using a Cobb-Douglas technology. The parameters of the production function were estimated econometrically. The share of employment in total product is approximately 0.6 and the share of capital is 0.4.

The results also indicate that higher inflation is related to a reduction in enrollment rates for all levels of education. This is true both for the bottom and top quintiles of the population. However, when the exercise is carried out for the entire population the effect is only significant in the case of enrollment rates in university education. Manufacturing output growth (a proxi of urban economic conditions) raises enrollment rates in primary and secondary education, but diminishes enrollment at the university level. Improved economic conditions seem to attract individuals into the labor force and out of university.

The effects of the real exchange rate on education are somewhat puzzling. A more depreciated currency seems to have a negative impact on enrollment in primary and secondary education, and a positive effect on university enrollment rates.

Finally, and as expected, the average years of schooling in the corresponding quintile are positively (and significantly) related to the enrollment rates. This result clearly confirms the existence of a virtuous cycle between education of a group and the motivation to create more education within it²⁷. The educational attainment of the household head is a good predictor of the enrollment rates in all educational categories.

Figure 10 depicts the results of the impulse-response exercise using enrollment rates for the entire population as the variable of interest²⁸. A one-standard deviation increase in the unemployment rate has a negative effect on primary and secondary education enrollment rates. The graphs also show that positive shocks to inflation are detrimental from the point of view of enrollment in primary education. It is important to mention that according to the error correction model (not shown) all enrollment rates respond significantly to past deviations from the long run equilibrium between the variables of the system. In fact, any temporary deviation takes a short time in being corrected: between 80 and 90% of the short run discrepancy is corrected within a quarter.

5. CONCLUSIONS

Colombia stands out as one of the countries with greater inequality in Latin America. Moreover, throughout the 1990s the country has experienced a significant increase in income concentration. The standard explanation links these trends to the effects of structural reform, especially trade liberalization. This paper adopts an alternative approach and explores the relationship between macroeconomic conditions and urban income distribution in Colombia. This is of interest because variables that explain differences in income between groups, such as education, cannot account for recent changes in inequality. In fact, a standard decomposition exercise indicates that increased income concentration is largely due to grater within-group inequality.

The results show that unemployment and inflation have significant regressive effects on the distribution of income. After controlling for these variables, economic

²⁷ These results coincide with the conclusions in Sánchez and Núñez (1996).

²⁸ Impulse-response functions for secondary and university enrollment rates are available upon request.

growth seems to have disparate effect on equity. Manufacturing output growth is clearly progressive, possibly due to its effect on unskilled employment. Improved conditions in the rural areas (measured by growth in agriculture and mining) deter unskilled labor migration to urban areas, reducing income concentration in the cities. A more depreciated currency also seems to have a progressive effect, due to the intensive use of unskilled labor in Colombian exports. Growth in nontraded goods production has an adverse effect from the point of view of income distribution. In this sense, it is no surprise that the recent combination of high unemployment, a strong currency, and low growth in agriculture and manufacturing have resulted in greater inequality.

The paper also finds that unemployment and inflation have an adverse effect on education of the poor. Thus, macroeconomic instability is detrimental for the accumulation of human capital, which in turn has a long-term effect on the distribution of income.

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APPENDIX 1 HOUSEHOLD SURVEYS: METHODOLOGICAL ISSUES ²⁹

Top-coding problems were registered between September 1982 and December 1995 (stages 36 through 90), when limits on the maximum reported monthly income where imposed (6 digits until June 1993 and 7 digits between September 1993 and December 1995). We corrected this problem by estimating the maximum income for the truncated surveys for each occupational category (employee, employer, and self-employed). Figure A1 shows the employers' income (in logs) for the surveys of September 1983 (top, truncated) and September 1982 (bottom, untruncated). In the top curve, the incomes' of X individuals were truncated.

In order to estimate the maximum income for this group, we calculated the average annual growth rate in the incomes of a group of high-income individuals of identical size as X, but whose incomes had not been truncated. We applied this growth rate to the maximum income reported in the untruncated survey. This gives point P in the

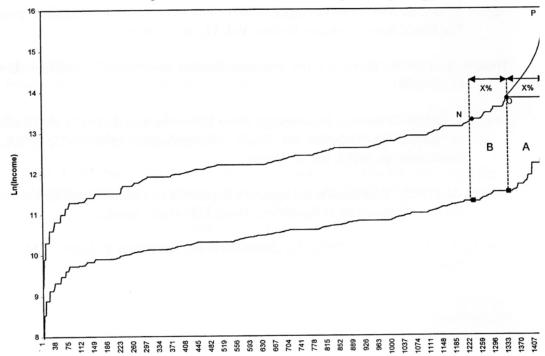


Figure.

Figure A1

Once that maximum income (P) was calculated we fitted an exponential function between points O and P. The estimated income of the X (truncated) individuals are given by:

²⁹ We would like Jaime Alberto Jiménez for his assistance in the elaboration of this Appendix.

$$Y_i = e^{\alpha n_i - \beta} + vc + \chi n_i \qquad (A1)$$

where $\beta = \alpha n - \ln(vm - vc - \chi n)$, α and χ are parameters of the exponential function, vc is the truncation value (Col\$999,998 between stages 37 and 80, and Col\$9'999,998 between stages 81 and 90), vm is the maximum (estimated) income in the truncated survey, and n is the number of individuals with truncated incomes. In order to obtain the parameters of the exponential function we estimated equation A1, with vc equal to income at point N, vm is income at point O (truncation value), and let α iterate between 0 and 4 and χ between 0 and 200,000. We chose the parameters that minimized the errors of the fit $vis \grave{a} vis$ the original data.

In Figure A1 we compare our results with those obtained with a lognormal distribution. For that purpose we artificially truncate an untruncated survey. The lognormal distribution overestimates the average income by 9.5% and the Gini coefficient by 2.44%. Our methodology overestimated income by 0.9% and the Gini coefficient by 0.07% only.

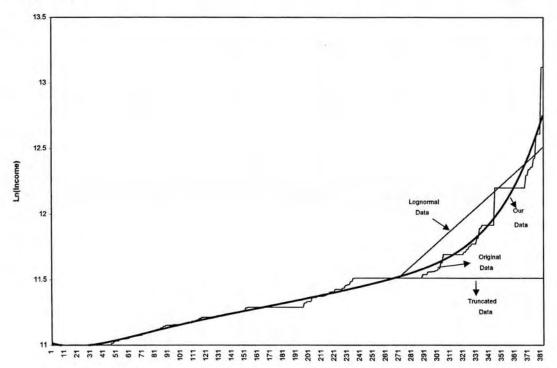


Figure A2

Table 1

| | COINTEGRATIO | | s | |
|--------------------------------|---------------------------------|---------|---------------------------------|--------------|
| | Labor income b | | Household incom | e per capita |
| Cointegration Eq. | top to bottom quintile ratio | Gini | top to bottom quintile ratio | Gini |
| Unemployment rate | 0.8845 | 1.2167 | 1.3657 | 0.8578 |
| | (2.47) | (2.39) | (4.71) | (3.07) |
| Inflation rate | 0.1804 | 0.2869 | 0.2211 | 0.2281 |
| | (2.33) | (2.26) | (2.05) | (3.03) |
| Growth in manufacturing | -0.1277 | -0.3129 | -0.2351 | -0.2227 |
| | (-1.63) | (-2.50) | (-2.65) | (-2.87) |
| Growth in agriculture and | -0.3545 | -0.4568 | -0.6658 | -0.3884 |
| mining | (-2.92) | (-3.43) | (-4.74) | (-4.35) |
| Growth in non tradable sectors | 0.9417 | 1.4999 | 1.3342 | 1.1495 |
| | (3.65) | (4.85) | (6.48) | (6.47) |
| Real exchange rate | -0.0253 | -0.0157 | -0.0237 | -0.0326 |
| | (-2.80) | (-0.76) | (-1.86) | (-2.84) |
| Constant | 0.0372 | 0.2112 | | 0.3339 |
| | | | | |

Table 2

COINTEGRATION VECTOR Income distribution measures Household income per capita Cointegration Eq. Quintile 1 Quintile 2 Quintile 3 Quintile 4 Quintil Unemployment rate -0.0787-0.0857 -0.1010 -0.13730.3 (-1.93)(-1.71)(-1.81)(-2.17)(1. Inflation rate -0.0452 -0.0640 -0.0749-0.08780.20 (-3.20)(-3.61)(-4.06)(3. (-4.06)Growth in manufacturing 0.03173 0.0274 0.0045 0.0028 -0.0 (0.17)(-0.(2.27)(1.69)(0.31)Growth in non tradable sectors -0.1111 -0.1658-0.2011-0.24320.7 (-6.10)(-5.44)(-6.89)(-7.37)(7. Real exchange rate 0.0822 0.0850 0.0979 0.0104 -0.03 (3.74)(3.42)(3.46)(3.38)(-3.0.0602 0.1062 0.4 Constant 0.1529 0.2293

Table 3

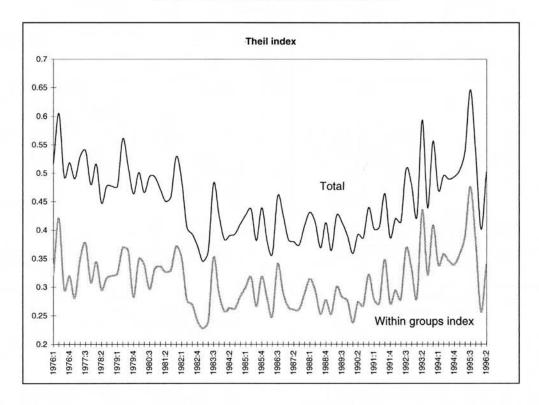
| VECTOR | |
|---------|--|
| Gini I. | Gini II. |
| -0.3096 | -0.3114 |
| (-1.66) | (-3.18) |
| 0.3087 | 0.1688 |
| (1.99) | (2.16) |
| 5.0914 | 2.2615 |
| (3.68) | (4.73) |
| -0.0930 | -0.0730 |
| (-2.69) | (-4.21) |
| 0.4558 | 0.5247 |
| | -0.3096 (-1.66) 0.3087 (1.99) 5.0914 (3.68) -0.0930 (-2.69) |

Table 4

| | COIN | TEGRATION N | ON VECTOR | 7 | | |
|---------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| | | ottom quin | | | Top quintil | |
| Cointegration Eq. | Primary | Secondar | y University | Primary | Secondary | |
| Unemployment rate | -0.367 (-7.60) | -0.922 (-4.41) | -0.147 (-1.01) | -0.117 (-0.93) | -0.237 (-2.03) | 0.0170 (0.11) |
| Inflation rate | -0.073 (-3.55) | 0.0137 (0.15) | -0.175 (-2.28) | -0.3780 (-8.08) | -0.135 (-2.32) | -0.21 (-5.91) |
| Growth in manufacturing | 0.0355 (1.42) | 0.1272 (1.10) | -0.4189 (-4.28) | -0.1088 (-1.66) | 0.1419 (2.33) | -0.142 (-2.76) |
| Real exchange rate | -0.033 (-3.78) | -0.012 (-0.32) | 0.1244 (4.02) | -0.045 (-2.27) | -0.0328 (-1.76) | -0.0493 (-3.11) |
| Quintile's schooling rate | 0.2519 (14.02) | 0.5592 (6.98) | 0.1319 (2.17) | 0.4398 (6.12) | 1.4900 (8.46) | 0.5016 (8.47) |
| Constant | 0.6421 | -0.358 | 0.1608 | 0.1737 | -2.652 | 0.6052 |
| | | Total | | | | |
| | primary | secondary | university | | | |
| Unemployment rate | -0.5230 (-2.66) | -1.9819 (-6.91) | 0.2990 (2.54) | | | |
| Inflation rate | -0.039 (-0.62) | -0.1592 (-1.24) | -0.158 (-4.37) | | | |
| Growth in manufacturing | 0.2437 (2.51) | 0.4028 (1.95) | -0.394 (-5.71) | | | |
| Real exchange rate | -0.113 (-3.49) | 0.0408 (0.75) | 0.0433 (2.27) | | | |
| Schooling rate | 0.3321 (4.42) | 0.2787 (2.58) | 0.2002 (3.88) | | | |
| Constant | 0.7766 | | 0.4115 | | | |

Figure 1

LABOR INCOME DISTRIBUTION MEASURES



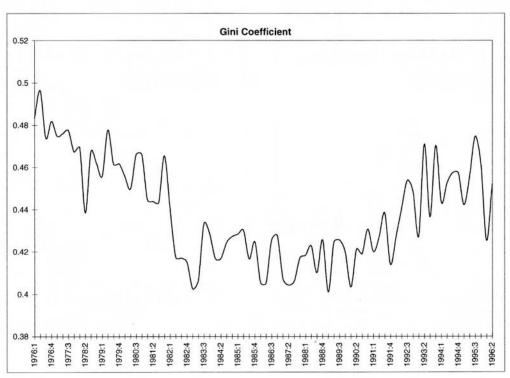
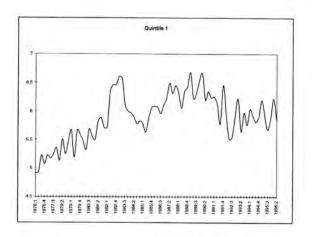
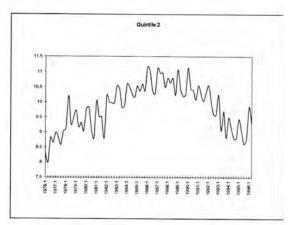
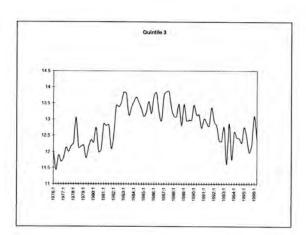


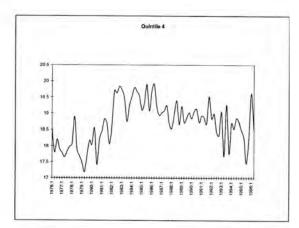
Figure 2

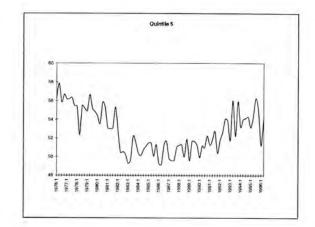
LABOR INCOME DISTRIBUTION SHARES BY QUINTILE











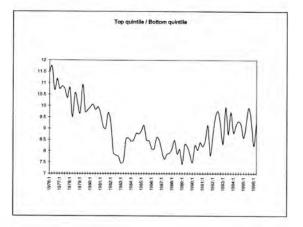
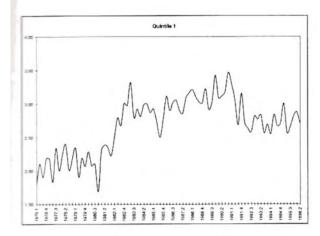
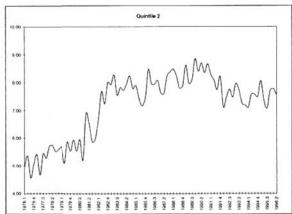
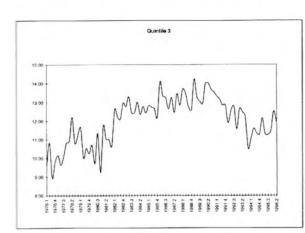


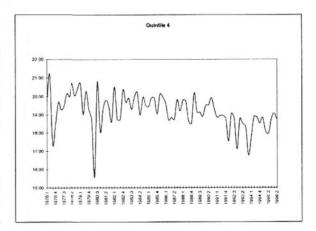
Figure 3

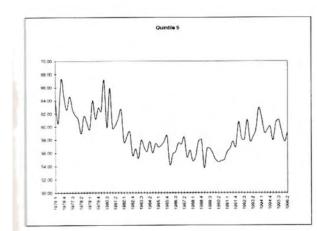
NON-LABOR INCOME DISTRIBUTION SHARES BY QUINTILE











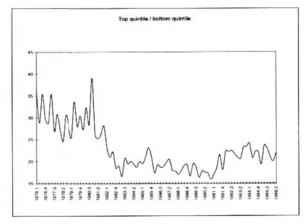
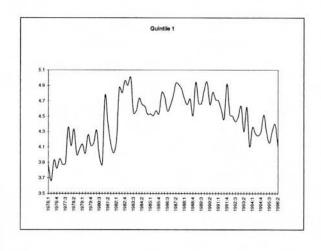
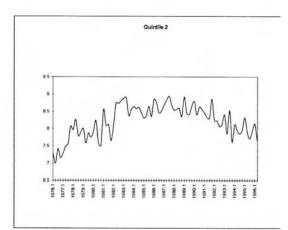
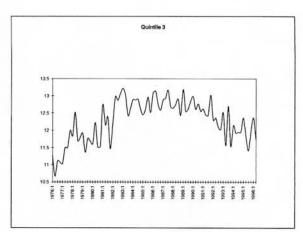


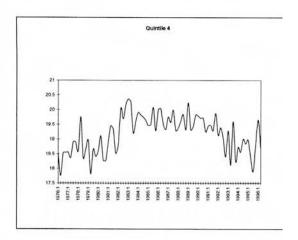
Figure 4

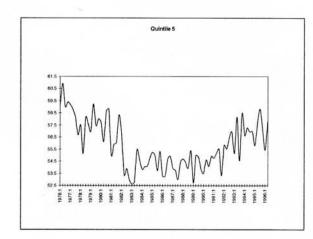
TOTAL HOUSEHOLD INCOME PER CAPITA











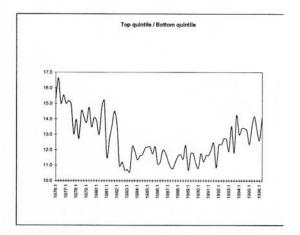
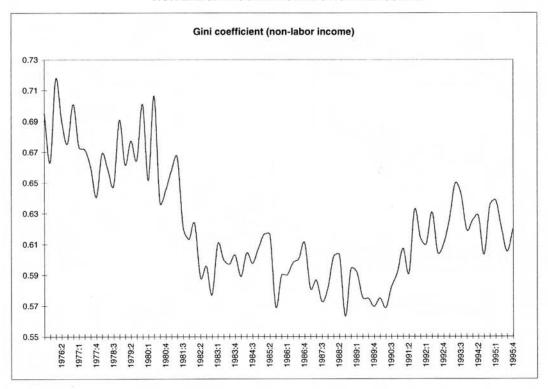


Figure 5

NON-LABOR INCOME DISTRIBUTION MEASURES



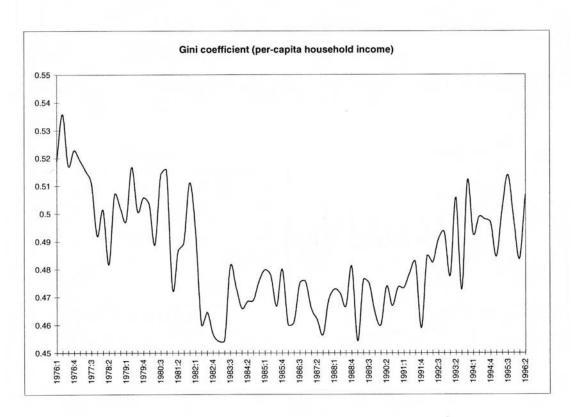
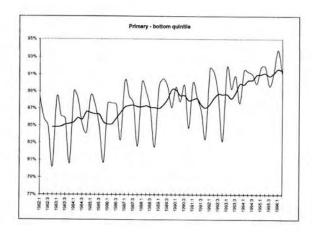
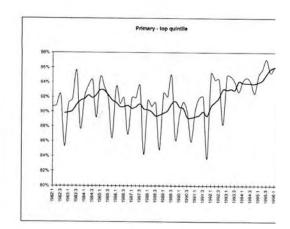
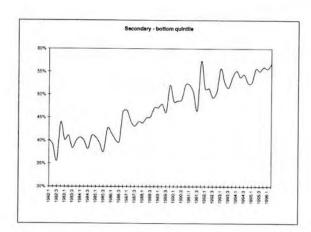


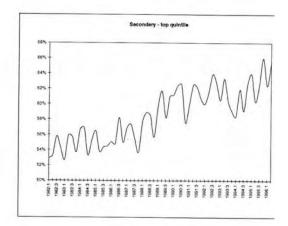
Figure 6

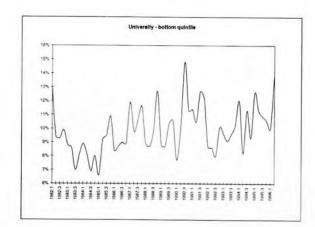
ENROLLMENT RATES BY INCOME QUINTILE











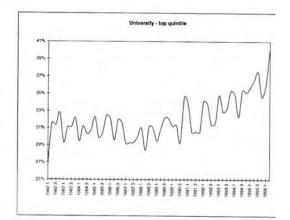
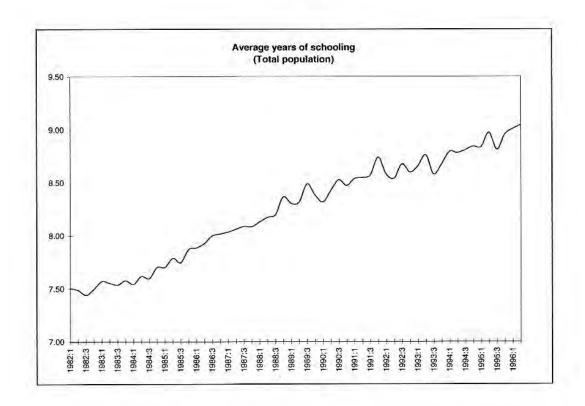


Figure 7



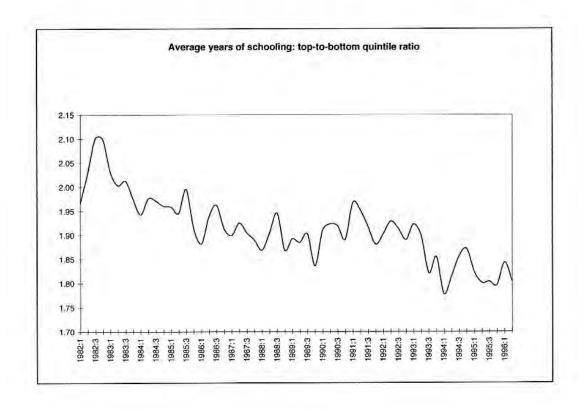
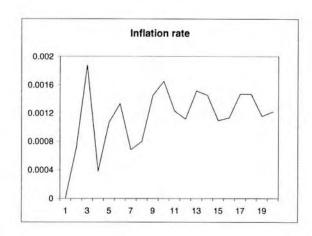
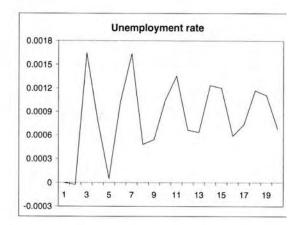


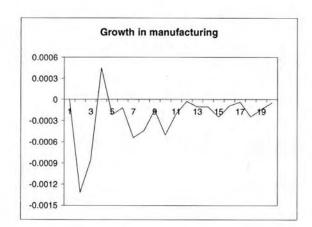
Figure 8

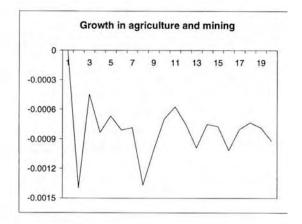
TOP-TO-BOTTOM QUINTILE RATIO FOR TOTAL HOUSEHOLD INCOME PER CAPITA IMPULSE-RESPONSE TO MACROECONOMIC SHOCKS

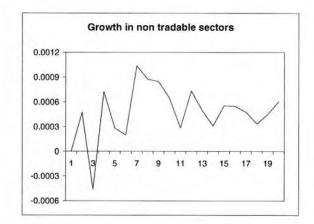
One standard deviation increase in:











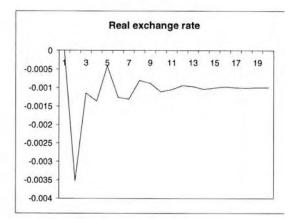
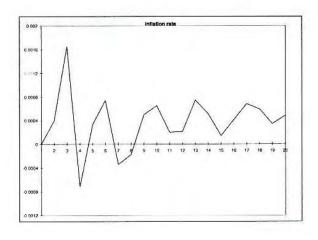
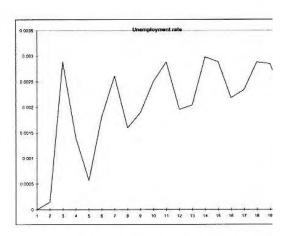
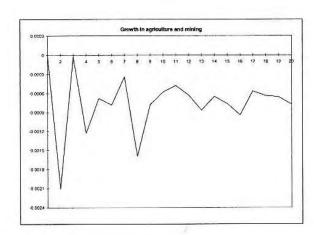


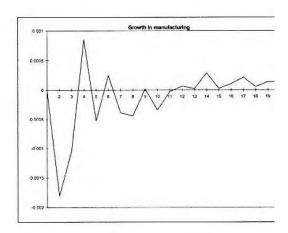
Figure 9

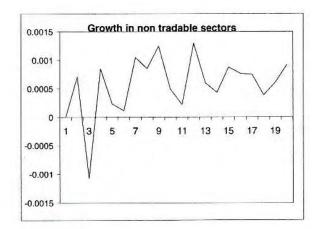
GINI COEFFICIENT FOR TOTAL HOUSEHOLD INCOME PER CAPITA IMPULSE-RESPONSE TO MACROECONOMIC SHOCKS One standard deviation increase in:











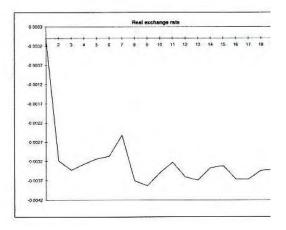
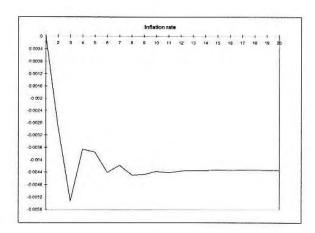
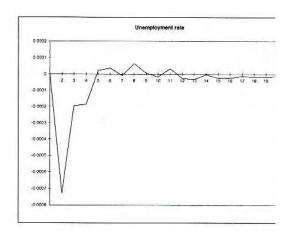
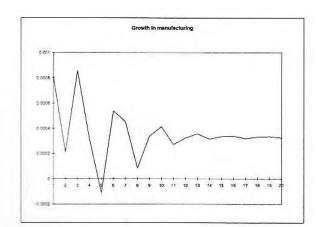


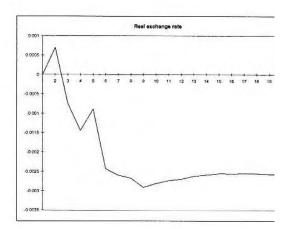
Figure 10

ENROLLMENT IN PRIMARY EDUCATION: IMPULSE-RESPONSE TO MACROECONOMIC SHOCKS One standard deviation increase in:









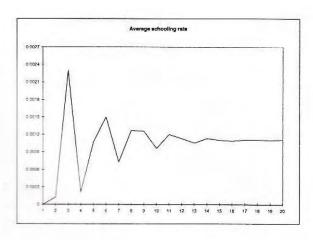


Table A1

| | | UNIT ROOT TE Quarterly Dat | | | a saide |
|--|------|-------------------------------|------------------------------|-------------------|--------------------|
| VARIABLE | LAGS | | ESTATISTIC | CRITICAL VALUE | DECISION |
| Inflation | 8 | 73 | $\tau = -0.3686$ | -1.9448 | Does not reject Ho |
| Growth in manufacturing | 5 | 68 | $\tau_{\mu}~=\text{-}2.8425$ | -2.9042 | Does not reject Ho |
| Growth in agriculture and mining | 4 | 71 | $\tau_{\mu} = -2.7973$ | -2.9023 | Does not reject Ho |
| Growth in non tradable sectors | 4 | 69 | $\tau_{\mu}~=-1.7639$ | -2.9035 | Does not reject Ho |
| Unemployment rate | 5 | 76 | $\tau_{\mu} = -2.4235$ | -2.8996 | Does not reject Ho |
| Annual growth in urban employment | 4 | 73 | $\tau_{\mu} = -3.3682$ | -3.4713 | Does not reject Ho |
| Annual growth in productivity | 4 | 69 | $\tau_{\mu} = -2.5787$ | -2.9035 | Does not reject Ho |
| Real exchange rate | 5 | 76 | $\tau_{\mu} = -1.1566$ | -2.8996 | Does not reject Ho |
| Top to bottom quintile ratio (labor inc | 2 | 79 | $\tau_{\mu} = -2.3859$ | -2.8981 | Does not reject Ho |
| Gini coefficient | 3 | 78 | $\tau_{\mu} = -2.0773$ | -2.8986 | Does not reject Ho |
| Theil index | 3 | 78 | $\tau_{\mu} = -2.5054$ | -2.8986 | Does not reject Ho |
| Top to bottom quintile ratio (total inc. | 2 | 79 | $\tau_{\mu} = -2.5458$ | -2.8981 | Does not reject Ho |
| Gini coefficient | 2 | 79 | $\tau_{\mu} = -2.4724$ | -28981 | Does not reject Ho |
| Primary coverage bottom quintile | 4 | 53 | $\tau_{\beta} = -3.0063$ | -3.4952 | Does not reject Ho |
| Primary coverage top quintile | 3 | 54 | $\tau_{\mu} = -0.0466$ | -2.9157 | Does not reject Ho |
| Secondary coverage bottom quintile | 3 | 54 | $\tau_{\beta} = -2.7381$ | -3.4935 | Does not reject Ho |
| Secondary coverage top quintile | 2 | 55 | $\tau_{\beta} = -2.6558$ | -3.4919 | Does not reject Ho |
| University coverage bottom quintile | 5 | 52 | $\tau_{\mu} = -2.0870$ | -2.9871 | Does not reject Ho |
| University coverage top quintile | 4 | 53 | $\tau_{\beta} = -0.4269$ | -3.4952 | Does not reject Ho |
| Bottom quintile's schooling rate | 2 | 58 | $\tau_{\beta} = -3.4610$ | -3.4875 | Does not reject Ho |
| Top quintile's schooling rate | 1 | 58 | $\tau_{\beta} = -3.1165$ | -3.4875 | Does not reject Ho |
| Primary coverage | 4 | 53 | $\tau_{\mu} = -1.2536$ | -2.9167 | Does not reject Ho |
| Secondary coverage | 3 | 54 | $\tau_{\beta} = -2.2595$ | -3.4935 | Does not reject Ho |
| University coverage | 3 | 54 | $\tau_{\beta} = -1.9541$ | -3.4935 | Does not reject Ho |
| Schooling rate | 2 | 55 | $\tau_{\beta} = -1.7137$ | -3.4919 | Does not reject Ho |

Ho: Existence of unit root Critical values at 5% significance

Table A2

| | | | STATIONA | Querter | | neur | | | | |
|--|------|------|------------------|------------------|------------------|-------------------------|--|-----------|-------|----------------------------------|
| VARIABLE | LAGS | OBS. | | t'S | TAT | | 'F' | INTERCEPT | TREND | STATIONAL |
| | _ | | Ho: $\pi_1 = 0$ | Ho: $\pi_2 = 0$ | Ho: $\pi_3=0$ | Ho: π ₄ =0 F | lo: π ₃ y π ₄ =0 | .1, | .1. | DUMMIES |
| Inflation | 4 | 74 | -2.54 (-2.96) | -4.70 (-1.95) | -5.81 (-1.90) | -3.82 (-1.72) | 31.24 (3.04) | 2.47 | | |
| Growth in urban GDP | 1 | 69 | -2.42 (-2.88) | -6.49 (-1.95) | -8.42 (-1.90) | -2.75 (-1.72) | 40.3 (3.08) | 2.02 | | |
| Unemployment rate | 2 | 76 | -2.42 (-2.88) | -3.37 (-1.95) | -2.42 (-1.90) | -1.05 (-1.72) | 3.59 (3.08) | 2.44 | | |
| Real exchange rate | 2 | 76 | -1.15 (-2.88) | -1.50 (-1.95) | -2.85 (-1.90) | -2.28 (-1.72) | 7.32 (3.08) | 1.28 | | |
| Top to bottom quintile ratio (labor income) | 0 | 78 | -2.47 (-2.88) | -4.10 (-1.95) | -5.24 (-1.90) | -0.97 (-1.72) | 14.79 (3.08) | 2.36 | | |
| Gini coefficient | 1 | 77 | -2.01 (-2.95) | -4.16 (-2.94) | -6.09 (-3.44) | -2.05 (-1.96) | 20.40 (6.57) | 2.11 | | <u>-3.1</u> , -0.63, 0.1 |
| Theil index | 1 | 77 | -1.63 | -4.85 | -5.24 | -1.77 | 15.48 | 1.65 | | |
| Fop to bottom quintile ratio | 0 | 78 | (-2.88) -1.90 | (-1.95) -4.67 | (-1.90) | -0.21 | (3.08) | 1.96 | | <u>-2.2</u> , 0.45, -0.0 |
| other income) Gini coefficient | 0 | 78 | (-2.95) -2.09 | (-2.94) -4.65 | (-3.44) | (-1.96) -0.64 | (6.57) 27.76 | | | |
| | | | (-2.95) | (-2.94) | (-3.44) | (-1.96) | (6.57) | 2.20 | | <u>-2.8</u> , -0.78, -0.2 |
| Theil index | 0 | 78 | -0.64 (-1.95) | -6.37 (-1.95) | -5.59 (-1.93) | -3.56 (-1.76) | (3.26) | | | |
| Fop to bottom quintile ratio per-capita household income) | 1 | 77 | -2.31 (-2.95) | -4.52 (-2.94) | -6.14 (-3.44) | -2.14 (-1.96) | 21.10 (6.57) | 2.35 | | <u>-2.06,</u> -0.2, 0.2 |
| Gini coefficient | 0 | 78 | -2.23 (-2.95) | -4.18 (-2.94) | -6.05 (-3.44) | -0.74 (-1.96) | 19.25 (6.57) | 2.29 | | <u>-2.06,</u> -0.8, -0.3 |
| Primary coverage bottom quintile | 0 | 54 | -3.12 (-3.53) | -2.44 (-2.94) | -3.38 (-3.48) | -1.83 (-1.94) | 9.02 (6.60) | 3.06 | 2.92 | 3.92, <u>1.66</u> , 0.7 |
| Primary coverage top quintile | 0 | 54 | -0.61 (-2.95) | -2.68 (-2.94) | -3.68 (-3.44) | -0.55 (-1.96) | 6.98 (6.57) | 0.37 | | 3.27, 3.03, <u>2.8</u> |
| Secondary coverage bottom quinti | 1 | 53 | -2.20 (-3.53) | -3.94 (-2.94) | -4.75 (-3.48) | -1.47 (-1.94) | 12.62 (6.60) | 2.51 | 2.29 | -1.8, <u>-2.28</u> , <u>-3.6</u> |
| Secondary coverage top quintile | 0 | 54 | -2.34 (-3.53) | -4.41 (-2.94) | -4.87 (-3.48) | -0.93 (-1.94) | 12.68 (6.60) | 2.29 | 2.36 | 0.62, 1.86, 1.2 |
| University coverage bottom quintile | 0 | 54 | -3.04 (-3.47) | -2.86 (-1.94) | -3.93 (-1.89) | -0.90 (-1.65) | 8.44 (2.98) | 2.83 | 2.53 | |
| University coverage top quintile | 1 | 53 | -0.42 (-3.47) | -3.82 (-1.94) | -2.97 (-1.89) | -0.12 (-1.65) | 4.44 (2.98) | 0.33 | 1.76 | |
| Primary coverage | 0 | 54 | -1.57 (-2.95) | -2.23 (-2.94) | -3.40 (-3.44) | -1.46 (-1.96) | 7.83 (6.57) | 1.41 | | 3.86, 2.64, 1.5 |
| Secondary coverage | 0 | 54 | -2.57 (-3.53) | -4.13 (-2.94) | -4.99 (-3.48) | -0.45 (-1.94) | 12.78 (6.60) | 2.72 | 2.64 | <u>-1.92,</u> -1.08, <u>-4</u> |
| University coverage | 0 | 54 | -1.95 (-3.47) | -2.92 (-1.94) | -2.42 (-1.89) | -0.82 | 3.42 | 1.87 | 2.7 | |
| Bottom quintile's schooling rate | 0 | 54 | -1.91 | -2.83 | -3.49 | (-1.65) -0.26 | 7.15 | 2.00 | 1.90 | |
| Top quintile's schooling rate | 0 | 56 | (-3.47) -2.58 | -5.11 | (-1.89) -6.09 | -0.75 | (2.98) | 2.61 | 2.52 | |
| Schooling rate | 0 | 54 | -1.62 | (-1.94) -4.52 | (-1.89) -5.39 | -0.93 | (2.98) | 1.69 | 1.56 | |

Critical values in Hyllberg, Engle, Granger y Yoo (1990).

Table A3

| JOHANSEN C | COINTEGRA | TION | TESTS |
|------------|-----------|------|-------|
|------------|-----------|------|-------|

| Income distr | | The contract of the contract o | 5 | | |
|--|------|--|--------|----------|-----------|
| SYSTEM | LAGS | OBSERV | | TEST | 01/40/ |
| TARGE WESTER BY MENURIAL | | | LR | CV 5% | CV 1% |
| LABOR INCOME BY INDIVIDUAL | | | | | |
| A. Top to bottom quintile ratio, unemployment, | 3 | 64 | 252.94 | 165 58 | 177.20 ** |
| inflation, growth in manufacturing, growth in | 3 | 04 | 172.19 | 0.500.73 | 143.09 ** |
| agriculture and mining, growth in non tradable | | | 100.03 | | 111.01 |
| | | | 69.82 | 76.07 | 84.45 |
| sectors, real exchange rate, dummy 82 | | | 45.07 | 53.12 | 60.16 |
| | | | 27.03 | 34.91 | 41.07 |
| | | | 12.54 | 19.96 | 24.60 |
| | | | 4.25 | 9.24 | 12.97 |
| | | 7.75 | | | - 1417 |
| B. Gini, unemployment, growth in manufacturing, | 3 | 64 | 247.16 | 165.58 | 177.20 ** |
| growth in agriculture and mining, growth in non | | | 167.86 | 131.70 | 143.09 ** |
| tradable sectors, real exchange rate, dummy 82 | | | 100.85 | 102.14 | 111.01 |
| The second secon | | | 69.76 | 76.07 | 84.45 |
| | | | 45.51 | 53.12 | 60.16 |
| | | | 25.34 | 34.91 | 41.07 |
| | | | 11.67 | 19.96 | 24.60 |
| | | | 4.71 | 9.24 | 12,97 |
| and the second second second | | | | | |
| C. Gini, growth in urban employment, inflation, | 3 | 64 | 252.94 | | 177.20 ** |
| growth in multifactorial productivity, real | | | 172.19 | 131.70 | 143.09 ** |
| exchange rate, dummy 82 | | | 100.03 | | 111.01 |
| | | | 69.82 | 76.07 | 84.45 |
| | | | 45.07 | 53.12 | 60.16 |
| | | | 27.03 | 34.91 | 41.07 |
| | | | 12.54 | 19.96 | 24.60 |
| | | | 4.25 | 9.24 | 12.97 |
| II. TOTAL HOUSEHOLD INCOME PER CAPIT | A | | | | |
| A. Top to bottom quintile ratio, unemployment, | 3 | 64 | 237.87 | 141.20 | 152.32 ** |
| inflation, growth in manufacturing, growth in | | 04 | 156.25 | 109.99 | 119.8 ** |
| agriculture and mining, growth in non tradable | | | 82.01 | 82.49 | 90.45 |
| sectors, real exchange rate, dummy 82 | | | 51.09 | 59.46 | 66.52 |
| sectors, real exchange rate, durning oz | | | 25.70 | 39.86 | 45.58 |
| | | | 12.32 | 24.31 | 29.75 |
| | | | 5.06 | 12.53 | 16.31 |
| | | | 0.28 | 3.84 | 6.51 |
| | | | 0.20 | 0.04 | 0.01 |
| B. Gini, unemployment, growth in manufacturing, | 3 | 64 | 269.71 | 165.58 | 177.20 ** |
| growth in agriculture and mining, growth in non | | | 183.71 | 131.70 | 143.09 ** |
| tradable sectors, real exchange rate, dummy 82 | | | 110.21 | 102.14 | 111.01 * |
| and the second s | | | 76.01 | 76.07 | 84.45 |
| | | | 48.96 | 53.12 | 60.16 |
| 8 | | | 25.24 | 34.91 | 41.07 |
| | | | 11.81 | 19.96 | 24.60 |
| | | | 5.10 | 9.24 | 12.97 |
| Service of the pro- make while the | | 25. | | 442.50 | ACC-0511 |
| | 3 | 64 | 247.16 | 165.58 | 177.20 |
| growth in multifactorial productivity, real | | | 167.86 | 131.70 | 143.09 ** |
| exchange rate, dummy 82 | | | 100.85 | 102.14 | 111.01 |
| | | | 69.76 | | 84.45 |
| | | | 45.51 | 53.12 | 60.16 |
| | | | 25.34 | 34.91 | 41.07 |
| | | | 11.67 | 19.96 | 24.60 |
| | | | 4.71 | 9.24 | 12.97 |

Table A4

JOHANSEN COINTEGRATION TESTS

| Enrollment Ra | | | | | |
|---|------|--------|--------|--------|-----------|
| SYSTEM | LAGS | OBSERV | I D | TEST | |
| | _ | | LR | CV 5% | CV 1% |
| Enrollment in primary education (bottom quintile), | 2 | 55 | 134.79 | 94.15 | 103.18 ** |
| inflation, unemployment, growth in manufacturing, | | | 76.31 | 68.52 | 76.07 ** |
| real exchange rate, average years of schooling in | | | 47.02 | 47.21 | 54.46 |
| bottom quintile | | | 24.22 | 29.68 | 35.65 |
| | | | 9.36 | 15.41 | 20.04 |
| | - | | 0.07 | 3.76 | 6.65 |
| Enrollment in secondary education (bottom quintile) | 1 | 56 | 100.51 | 94.15 | 103.18 * |
| inflation, unemployment, growth in manufacturing, | | | 69.33 | 68.52 | 76.07 * |
| real exchange rate, average years of schooling in | | | 43.72 | 47.21 | 54.46 |
| bottom quintile | | | 22.48 | 29.68 | 35.65 |
| | | | 7.89 | 15.41 | 20.04 |
| | | | 0.17 | 3.76 | 6.65 |
| Enrollment in university education (bottom quintile), | 1 | 56 | 111.45 | 102.14 | 110.01 ** |
| inflation, unemployment, growth in manufacturing, | | | 76.69 | 76.07 | 84.45 * |
| real exchange rate, average years of schooling in | | | 50.89 | 53.12 | 60.16 |
| bottom quintile | | | 32.00 | 34.91 | 41.07 |
| | | | 15.67 | 19.96 | 24.60 |
| | | | 5.97 | 9.24 | 12.97 |
| Enrollment in primary education (top quintile), | 1 | 56 | 101.71 | 94.15 | 103.18 * |
| inflation, unemployment, growth in manufacturing, | | | 69.32 | 68.52 | 76.07 * |
| real exchange rate, average years of schooling in | | | 46.40 | 47.21 | 54.46 |
| top quintile | | | 24.81 | 29.68 | 35.65 |
| 1. 1 | | | 9.26 | 15.41 | 20.04 |
| | | | 1.76 | 3.76 | 6.65 |
| Enrollment in secondary education (top quintile), | 1 | 56 | 141.35 | 114.90 | 124.75 ** |
| inflation, unemployment, growth in manufacturing, | | | 88.53 | 87.31 | 96.58 * |
| real exchange rate, average years of schooling in | | | 62.15 | 62.99 | 70.05 |
| top quintile | | | 41.34 | 42.44 | 48.45 |
| 20 F. (10 20 20 20 20 20 20 20 20 20 20 20 20 20 | | | 21.31 | 25.32 | 30.45 |
| | | | 6.21 | 12.25 | 16.26 |
| Enrollment in university education (top quintile), | 1 | 56 | 107.90 | 94.15 | 103.18 ** |
| inflation, unemployment, growth in manufacturing, | | - | 65.67 | 68.52 | 76.07 |
| real exchange rate, average years of schooling in | | | 43.09 | 47.21 | 54.46 |
| top quintile | | | 22.91 | 29.68 | 35.65 |
| - T-1 | | | 7.94 | 15.41 | 20.04 |
| | | | 0.64 | 3.76 | 6.65 |

| 1 quintile 2 quintile 3 quintile 4 quintile 5 gini quintile 1 quintile 2 quintile 3 quintile 3 quintile 4 quintile 5 gini quintile 1 quintile 2 quintile 3 quintile 4 quintile 3 quintile 3 quintile 3 quintile 4 quintile 5 300 quintile 3 quintile 3 quintile 3 quintile 3 quintile 3 quintile 4 quintil | | TOTAL HOUSEHOLD INCOME PER CAPITA DISTRIBUTION | OLD INCOME | PER CAPITA | DISTRIBUTION | NC | | | LABOR IN | COME DISTR | LABOR INCOME DISTRIBUTION BY INDIVIDUAL | NDIVIDUAL | | |
|---|------------|--|------------|------------|--------------|-------|------------|------------|------------|------------|---|-----------|-------------|---------------------------|
| 3.861 7.294 11.248 18.495 59.102 0.519 4.910 8.290 12.011 3.863 6.986 1.726 4.934 1.896 1.617 1.617 1.628 1.627 <th< th=""><th>quintile 1</th><th>quintile 2</th><th>quintile 3</th><th>quintile 4</th><th>quintile 5</th><th>gini</th><th>quintile 1</th><th>quintile 2</th><th>quintile 3</th><th>quintile 4</th><th>quintile 5</th><th>gini</th><th>theil index</th><th>theil index within groups</th></th<> | quintile 1 | quintile 2 | quintile 3 | quintile 4 | quintile 5 | gini | quintile 1 | quintile 2 | quintile 3 | quintile 4 | quintile 5 | gini | theil index | theil index within groups |
| 3.663 6.906 10.666 17.756 6.036 6.336 4.834 7.992 3.930 7.411 11.110 18.522 5.9016 0.553 5.069 8.645 3.946 7.481 11.077 18.547 5.9400 0.553 5.069 8.645 3.946 7.483 11.504 18.370 58.136 0.511 5.243 8.983 3.847 7.544 11.504 18.900 5.6682 0.482 5.543 8.983 4.357 8.056 11.504 18.900 5.6682 0.482 5.509 10.208 4.377 8.056 11.832 18.565 5.129 0.482 5.509 10.208 4.076 7.897 11.697 18.663 5.749 0.482 5.509 10.208 4.077 7.897 11.697 18.663 5.129 0.492 5.139 9.119 4.078 8.066 11.994 18.900 5.619 0.501 5.749 0.669 </th <th>3.861</th> <th>7.294</th> <th>11.248</th> <th>18.495</th> <th>59.102</th> <th>0.519</th> <th>4.910</th> <th>8.290</th> <th>12.011</th> <th>18.508</th> <th>56.282</th> <th>0.484</th> <th>0.5181</th> <th>0.3224</th> | 3.861 | 7.294 | 11.248 | 18.495 | 59.102 | 0.519 | 4.910 | 8.290 | 12.011 | 18.508 | 56.282 | 0.484 | 0.5181 | 0.3224 |
| 3930 7.411 11.107 18.532 59.016 0.5523 5.224 8.807 3.942 7.154 11.077 18.547 59.181 0.519 5.224 8.898 3.946 7.264 11.004 18.509 58.186 0.511 5.224 8.988 3.847 7.483 11.504 18.906 56.82 0.492 5.243 8.788 4.357 8.066 11.594 18.906 56.82 0.511 5.243 8.788 4.374 8.076 11.594 18.906 56.82 0.492 5.509 10.208 4.074 7.794 11.697 18.365 55.129 0.492 5.509 10.19 4.076 7.794 11.697 18.961 5.243 9.713 9.15 4.077 7.754 11.697 18.861 5.249 0.507 5.249 9.256 4.076 7.784 18.663 5.756 0.507 5.713 9.113 4.077 | 3.663 | 6.996 | 10.666 | 17.756 | 60.916 | 0.536 | 4.934 | 7.982 | 11.437 | 17.798 | 57.850 | 0.496 | 0.6046 | 0.4205 |
| 3.872. 7.154 11.077 18.547 59.400 0.553 5.069 8.645 3.842. 7.284 11.504 18.370 88.771 0.515 5.224 8.898 3.872. 7.483 11.504 18.908 58.136 0.511 5.243 8.578 4.357 7.666 11.504 18.908 58.136 0.511 5.243 8.578 4.354 7.966 11.832 18.595 57.494 0.501 5.243 8.778 4.334 8.270 12.520 19.747 55.129 0.482 5.509 10.208 4.070 7.897 11.803 18.663 57.566 0.502 5.460 9.109 4.074 7.897 11.803 18.663 57.443 0.501 5.509 10.208 4.076 7.897 11.903 18.663 57.443 0.501 5.667 9.317 4.076 7.897 11.903 18.663 57.443 0.501 5.670 | 3.930 | 7.411 | 11.110 | 18.532 | 59.016 | 0.517 | 5.223 | 8.807 | 11.897 | 18.204 | 55.870 | 0.474 | 0.4941 | 0.2966 |
| 3.946 7.294 11028 18.559 59.181 0.519 5.224 8.893 3.882 7.284 11.501 18.908 58.136 0.511 5.243 8.78 3.883 7.564 11.501 18.908 58.136 0.511 5.243 8.78 4.357 8.066 11.994 18.900 56.682 0.482 5.569 0.109 4.344 8.270 11.801 18.966 56.822 0.482 5.569 10.208 4.070 7.397 11.910 18.961 56.922 0.489 5.509 10.208 4.074 7.397 11.910 18.961 56.922 0.489 5.670 9.471 4.176 8.001 11.362 18.410 58.026 0.569 5.699 0.498 4.176 7.287 11.564 18.604 50.21 0.517 5.189 9.165 4.176 7.287 11.562 18.410 50.20 0.489 5.509 0.489 <td>3.822</td> <td>7.154</td> <td>11.077</td> <td>18.547</td> <td>59.400</td> <td>0.523</td> <td>5.069</td> <td>8.645</td> <td>11.701</td> <td>17.903</td> <td>56.682</td> <td>0.482</td> <td>0.5183</td> <td>0.3191</td> | 3.822 | 7.154 | 11.077 | 18.547 | 59.400 | 0.523 | 5.069 | 8.645 | 11.701 | 17.903 | 56.682 | 0.482 | 0.5183 | 0.3191 |
| 3.87.2 7.443 11.504 18.370 58.771 0.515 5.171 8.888 4.387 7.564 11.504 18.900 56.682 0.492 5.381 9.019 4.387 8.666 11.594 18.900 56.682 0.492 5.381 9.019 4.387 8.666 11.894 18.900 56.682 0.492 5.381 9.019 4.004 7.794 11.697 18.365 57.494 0.507 5.249 9.225 4.004 7.794 11.697 18.365 57.56 0.507 5.249 9.225 4.015 7.897 11.803 18.663 57.56 0.507 5.249 9.225 4.016 7.897 11.764 18.663 57.443 0.501 5.667 9.317 4.15 7.897 11.764 18.663 57.443 0.501 5.831 9.706 4.15 7.897 11.604 18.604 57.718 0.503 5.713 9.416 <td>3.946</td> <td>7.284</td> <td>11.028</td> <td>18.559</td> <td>59.181</td> <td>0.519</td> <td>5.224</td> <td>8.983</td> <td>11.811</td> <td>17.795</td> <td>56.187</td> <td>0.475</td> <td>0.4905</td> <td>0.2815</td> | 3.946 | 7.284 | 11.028 | 18.559 | 59.181 | 0.519 | 5.224 | 8.983 | 11.811 | 17.795 | 56.187 | 0.475 | 0.4905 | 0.2815 |
| 3.889 7.564 11.501 18.906 58.136 0.511 5.243 8.578 4.357 8.066 11.994 18.900 56.882 0.492 5.361 9.019 4.357 8.066 11.994 18.900 56.882 0.492 5.361 9.019 4.344 8.270 11.807 18.865 57.29 0.498 5.509 10.208 4.004 7.794 11.697 18.961 56.992 0.498 5.509 10.208 4.015 7.581 11.310 18.961 56.992 0.498 5.670 9.713 4.015 7.581 11.324 18.804 57.718 0.507 5.88 9.65 4.177 7.754 11.692 18.410 58.026 0.508 5.543 9.029 4.177 7.754 11.692 18.410 58.026 0.506 5.588 9.029 4.177 7.754 11.692 18.410 56.047 0.501 5.411 9.776< | 3.872 | 7.483 | 11.504 | 18.370 | 58.771 | 0.515 | 5.171 | 8.838 | 12.141 | 17.654 | 56.179 | 0.476 | 0.5294 | 0.3487 |
| 4.357 8.066 11.994 18.900 56.682 0.492 5.361 9.019 4.114 7.965 11.832 18.595 57.494 0.501 5.136 9.019 4.004 7.794 11.897 18.365 58.140 0.507 5.249 9.255 4.004 7.794 11.807 18.863 57.566 0.507 5.249 9.255 4.015 7.581 11.382 18.683 57.566 0.507 5.249 9.255 4.015 7.581 11.382 18.683 57.443 0.501 5.460 9.413 4.015 7.581 11.784 18.683 57.443 0.501 5.667 9.131 4.17 7.754 11.692 18.410 58.026 0.506 5.324 9.830 4.17 7.754 11.692 18.440 56.016 0.498 5.324 9.830 4.17 7.754 11.802 19.104 56.119 0.498 5.324 9.830 <td>3.889</td> <td>7.564</td> <td>11.501</td> <td>18.908</td> <td>58.136</td> <td>0.511</td> <td>5.243</td> <td>8.578</td> <td>12.005</td> <td>17.824</td> <td>56.335</td> <td>0.477</td> <td>0.5396</td> <td>0.3767</td> | 3.889 | 7.564 | 11.501 | 18.908 | 58.136 | 0.511 | 5.243 | 8.578 | 12.005 | 17.824 | 56.335 | 0.477 | 0.5396 | 0.3767 |
| 4.114 7.965 11.832 18.565 57.494 0.501 5.136 9.119 4.334 7.965 11.837 18.565 55.129 0.482 5.518 9.119 4.004 7.394 11.803 18.663 57.566 0.502 5.460 9.484 4.007 7.897 11.803 18.663 57.566 0.502 5.460 9.484 4.015 7.861 11.302 18.663 57.443 0.501 5.667 9.173 4.015 7.867 11.764 18.663 57.443 0.501 5.677 9.176 4.17 7.754 11.692 18.410 58.026 0.506 5.588 9.029 4.17 7.754 11.604 18.049 55.171 0.480 5.667 9.174 4.164 7.267 11.515 18.286 58.653 0.514 5.667 9.029 4.174 7.262 12.749 56.144 5.671 0.487 5.684 9.029 <td>4.357</td> <td>8.066</td> <td>11.994</td> <td>18.900</td> <td>56.682</td> <td>0.492</td> <td>5.361</td> <td>9.019</td> <td>12.176</td> <td>17.979</td> <td>55.465</td> <td>0.467</td> <td>0.4796</td> <td>0.3083</td> | 4.357 | 8.066 | 11.994 | 18.900 | 56.682 | 0.492 | 5.361 | 9.019 | 12.176 | 17.979 | 55.465 | 0.467 | 0.4796 | 0.3083 |
| 4.334 8.270 12.520 19,747 55,129 0.482 5,509 10,208 4.004 7.794 11.697 18.365 58.140 0.507 5,509 10,208 4.007 7.894 11.697 18.365 57.566 0.507 5,649 9,285 4.015 7.861 11.362 18.463 57.566 0.507 5,649 9,679 4.15 7.581 11.362 18.410 88.626 0.507 5,687 9,114 4.15 7.582 11.604 18.664 55.01 0.503 5,771 9,117 9,114 9,6119 0.489 5,670 9,117 9,117 7,748 18.804 5,501 0.516 5,560 8,016 0.516 5,560 8,017 0.489 5,501 10,049 8,016 6,616 9,484 9,524 0,488 9,524 0,489 5,501 0,489 5,501 0,489 5,501 0,489 5,501 0,489 5,501 0,489 <td< td=""><td>4.114</td><td>7.965</td><td>11.832</td><td>18.595</td><td>57.494</td><td>0.501</td><td>5.136</td><td>9.119</td><td>12.284</td><td>18.063</td><td>55.393</td><td>0.469</td><td>0.5155</td><td>0.3441</td></td<> | 4.114 | 7.965 | 11.832 | 18.595 | 57.494 | 0.501 | 5.136 | 9.119 | 12.284 | 18.063 | 55.393 | 0.469 | 0.5155 | 0.3441 |
| 4,004 7,794 11,697 18,365 58,140 0,507 5,249 9,255 4,070 7,897 11,803 18,663 57,566 0,502 5,249 9,255 4,076 7,897 11,803 18,663 57,566 0,507 5,687 9,113 4,156 7,581 11,362 17,819 59,221 0,501 5,687 9,113 4,157 7,754 11,692 18,400 57,718 0,503 5,588 9,029 4,154 7,920 11,604 18,604 57,413 0,503 5,547 9,317 4,131 8,226 11,604 18,604 57,718 0,503 5,274 9,307 3,876 7,567 11,515 18,286 5,611 0,418 5,501 0,489 5,501 0,489 5,501 0,489 5,501 0,489 4,671 1,049 1,049 5,501 0,489 5,501 0,489 1,049 1,049 1,049 1,049 1,04 | 4.334 | 8.270 | 12.520 | 19.747 | 55.129 | 0.482 | 5.509 | 10.208 | 13.049 | 18.897 | 52.333 | 0.439 | 0.4477 | 0.2959 |
| 4,070 7,897 11,803 18,653 57,566 0,502 5,460 9,484 4,015 7,561 11,910 18,651 56,929 0,498 56,70 9,713 4,015 7,581 11,362 18,410 58,026 0,506 5,687 9,173 4,117 7,754 11,692 18,410 58,026 0,506 5,687 9,317 4,117 7,754 11,692 18,410 58,026 0,506 5,687 9,317 4,117 7,754 11,692 18,410 58,036 0,506 5,687 9,317 4,117 7,754 11,692 18,410 58,036 0,514 9,029 3,977 7,567 11,515 18,296 55,011 0,473 5,881 4,407 8,088 12,149 18,449 55,011 0,473 5,891 9,056 4,407 8,088 11,448 18,519 58,047 0,490 5,891 10,049 4,707 <td>4.004</td> <td>7.794</td> <td>11.697</td> <td>18.365</td> <td>58.140</td> <td>0.507</td> <td>5.249</td> <td>9.255</td> <td>12.139</td> <td>17.900</td> <td>55.456</td> <td>0.467</td> <td>0.4772</td> <td>0.3155</td> | 4.004 | 7.794 | 11.697 | 18.365 | 58.140 | 0.507 | 5.249 | 9.255 | 12.139 | 17.900 | 55.456 | 0.467 | 0.4772 | 0.3155 |
| 4.136 8.001 11.910 18.961 56.992 0.498 5670 9.713 4.015 7.581 11.362 17.819 59.221 0.517 5.183 9.165 4.254 11.362 17.819 59.221 0.517 5.667 9.317 4.154 7.287 11.564 18.604 57.718 0.503 5.471 9.776 4.154 7.320 11.504 18.604 57.718 0.503 5.471 9.776 4.154 7.527 11.515 18.275 58.619 0.568 9.689 9.029 3.977 7.567 11.515 18.279 58.816 0.516 5.684 9.029 4.768 8.564 12.748 18.909 55.011 0.497 5.694 9.068 4.768 8.564 12.748 18.309 55.011 0.497 5.601 9.317 4.768 8.118 12.249 19.449 55.007 0.490 5.831 9.504 | 4.070 | 7.897 | 11.803 | 18.663 | 57.566 | 0.502 | 5.460 | 9.484 | 12.171 | 17.696 | 55.187 | 0.462 | 0.4770 | 0.3200 |
| 4.015 7.581 11.382 17.819 59.221 0.517 5.183 9.165 4.177 7.754 11.664 18.663 57.443 0.501 5.667 9.317 4.117 7.754 11.602 18.410 56.119 0.506 5.586 9.029 4.154 7.920 11.604 18.604 57.718 0.506 5.587 9.377 3.377 7.567 11.515 18.286 58.653 0.514 5.564 9.029 4.768 8.564 12.748 18.909 55.011 0.473 5.561 10.049 4.768 8.564 12.748 18.909 55.011 0.473 5.501 10.049 4.407 8.088 12.149 19.449 55.907 0.490 5.831 9.510 4.407 8.088 12.149 19.449 55.907 0.490 5.831 9.508 4.754 8.118 12.226 18.796 56.696 0.490 5.831 9.5 | 4.136 | 8.001 | 11.910 | 18.961 | 56.992 | 0.498 | 5.670 | 9.713 | 12.204 | 17.491 | 54.918 | 0.456 | 0.4767 | 0.3245 |
| 4.259 7.867 11.764 18.663 57.443 0.501 5.667 9.317 4.117 7.754 11.692 18.410 58.026 0.506 5.588 9.029 4.117 7.754 11.694 18.6419 0.503 5.471 9.776 4.319 8.236 12.222 19.104 56.119 0.489 5.324 9.830 4.768 8.564 11.515 18.275 58.816 0.516 5.560 8.807 4.708 8.088 12.149 18.490 55.071 0.443 5.561 10.049 4.708 8.188 12.748 18.909 55.077 0.487 5.891 9.508 4.024 7.649 11.488 18.519 56.047 0.497 5.891 9.508 4.165 8.118 12.226 18.796 56.696 0.495 5.720 10.029 4.165 8.118 12.226 18.795 56.696 0.495 5.720 10.229 | 4.015 | 7.581 | 11.362 | 17.819 | 59.221 | 0.517 | 5.183 | 9.165 | 11.802 | 17.191 | 56.651 | 0.478 | 0.5608 | 0.3690 |
| 4.117 7.754 11.692 18.410 58.026 0.506 5.588 9.029 4.154 7.320 11.604 18.604 57.718 0.503 5.471 9.029 4.319 8.236 11.604 18.604 57.718 0.503 5.471 9.776 4.319 8.236 11.222 19.104 56.119 0.489 5.324 9.830 3.876 7.502 11.531 18.275 58.619 0.516 5.694 9.058 4.768 8.564 12.749 19.449 55.907 0.487 5.501 10.049 4.148 8.118 12.379 19.307 56.047 0.490 5.891 9.508 4.166 8.118 12.277 20.048 53.354 0.460 6.364 10.011 4.166 8.118 12.226 18.796 56.696 0.495 5.720 10.229 4.167 8.118 12.226 18.796 56.696 0.495 5.720 10 | 4.259 | 7.867 | 11.764 | 18.663 | 57.443 | 0.501 | 2.667 | 9.317 | 12.154 | 17.693 | 55.169 | 0.462 | 0.5117 | 0.3641 |
| 4.154 7.920 11.604 18.604 57.718 0.503 5.471 9.776 4.319 8.236 12.222 19.104 56.119 0.489 5.324 9.058 3.977 7.567 11.531 18.275 56.119 0.489 5.324 9.058 3.876 7.567 11.531 18.275 56.119 0.489 5.501 10.049 4.768 8.564 12.748 18.909 55.017 0.473 5.501 10.049 4.024 7.649 11.468 18.519 55.017 0.487 5.891 9.508 4.168 8.118 12.226 18.307 50.047 0.490 5.891 9.508 4.165 8.118 12.227 20.048 55.894 0.460 6.364 10.011 4.165 8.118 12.226 19.687 53.955 0.465 6.467 9.966 4.873 8.736 12.869 19.687 53.955 0.455 6.463 9. | 4.117 | 7.754 | 11.692 | 18.410 | 58.026 | 905.0 | 5.588 | 9.029 | 12.377 | 18.163 | 54.840 | 0.462 | 0.4633 | 0.2826 |
| 4,319 8,236 12,222 19,104 56,119 0,489 5,324 9,830 3,977 7,567 11,515 18,286 58,653 0,514 5,684 9,058 3,876 7,502 11,531 18,275 58,816 0,516 5,560 8,097 4,407 8,088 12,149 19,449 55,907 0,487 5,501 10,049 4,148 8,118 12,379 19,307 56,047 0,490 5,831 9,510 4,146 8,118 12,226 18,796 56,696 0,495 5,720 10,229 4,165 8,118 12,226 18,796 56,696 0,495 5,720 10,229 4,873 8,178 12,297 20,048 52,354 0,460 6,646 0,495 4,962 8,819 13,073 20,149 52,395 0,446 6,617 10,011 4,962 8,887 13,073 20,149 52,395 0,457 6,617 1 | 4.154 | 7.920 | 11.604 | 18.604 | 57.718 | 0.503 | 5.471 | 9.776 | 12.296 | 18.038 | 54.420 | 0.456 | 0.5012 | 0.3484 |
| 3.977 7.567 11.515 18.286 58.653 0.514 5.684 9.058 3.876 7.502 11.531 18.275 58.816 0.516 5.560 8.807 4.768 8.564 12.748 18.909 55.011 0.473 5.560 8.807 4.768 8.564 12.748 19.449 55.907 0.487 5.831 9.510 4.148 8.118 12.226 18.796 56.696 0.495 5.720 10.0229 4.165 8.118 12.226 18.796 56.696 0.495 5.720 10.229 4.873 8.736 12.977 20.048 53.354 0.460 6.364 10.011 4.873 8.736 12.869 19.685 52.624 0.455 6.467 9.966 4.962 8.887 13.043 20.255 52.794 0.465 6.612 10.011 4.962 8.887 13.043 20.255 52.794 0.454 6.612 | 4.319 | 8.236 | 12.222 | 19.104 | 56.119 | 0.489 | 5.324 | 9.830 | 12.741 | 18.548 | 53.558 | 0.450 | 0.4657 | 0.3388 |
| 3.876 7.502 11.531 18.275 58.816 0.516 5.560 8.807 4.768 8.564 12.748 18.909 55.011 0.473 5.561 10.049 4.768 8.564 12.748 18.909 55.011 0.487 5.501 10.049 4.148 8.118 12.239 19.307 56.047 0.490 5.891 9.510 4.024 7.649 11.468 18.519 55.047 0.490 5.891 9.508 4.165 8.118 12.226 18.799 56.996 0.495 5.720 10.229 4.873 8.736 12.869 19.687 53.905 0.465 6.463 9.976 4.803 8.736 12.869 19.687 52.995 0.454 6.017 9.966 4.902 8.887 12.229 20.149 52.995 0.454 6.617 10.249 4.902 8.887 13.221 20.149 52.995 0.454 6.617 1 | 3.977 | 7.567 | 11.515 | 18.286 | 58.653 | 0.514 | 5.684 | 9.058 | 12.003 | 17.414 | 55.841 | 0.466 | 0.4940 | 0.2962 |
| 4.768 8.564 12.748 18.909 55.011 0.473 5.501 10.049 4.407 8.088 12.149 19.449 55.907 0.487 5.831 9.510 4.148 8.118 12.379 19.307 56.047 0.490 5.891 9.510 4.148 8.118 12.379 19.307 56.047 0.490 5.891 9.510 4.024 7.649 11.468 18.519 58.341 0.511 5.709 8.792 4.165 8.118 12.226 18.796 56.696 0.495 5.720 10.229 4.873 8.736 12.867 53.965 0.465 6.463 9.976 4.962 8.819 13.073 20.149 52.995 0.457 6.467 9.966 4.962 8.819 13.073 20.149 52.995 0.457 6.467 9.966 4.962 8.819 13.073 20.149 52.995 0.457 6.467 9.968 <t< td=""><td>3.876</td><td>7.502</td><td>11.531</td><td>18.275</td><td>58.816</td><td>0.516</td><td>5.560</td><td>8.807</td><td>12.077</td><td>18.228</td><td>55.324</td><td>0.466</td><td>0.4933</td><td>0.3324</td></t<> | 3.876 | 7.502 | 11.531 | 18.275 | 58.816 | 0.516 | 5.560 | 8.807 | 12.077 | 18.228 | 55.324 | 0.466 | 0.4933 | 0.3324 |
| 4.407 8.088 12.149 19.449 55.907 0.487 5.831 9.510 4.148 8.118 12.379 19.307 56.047 0.490 5.891 9.508 4.024 7.649 11.468 18.519 56.047 0.495 5.709 8.792 4.024 7.649 11.468 18.796 56.696 0.495 5.709 8.792 4.873 8.749 12.226 19.687 53.905 0.465 6.364 10.011 4.802 8.819 12.2869 19.687 53.905 0.465 6.467 9.976 4.903 8.887 13.271 20.365 52.624 0.454 6.612 10.011 4.903 8.887 13.243 20.255 52.794 0.455 6.578 10.431 4.501 8.908 13.043 20.255 52.794 0.456 6.578 10.431 4.541 8.376 12.429 19.206 55.449 0.456 6.578 | 4.768 | 8.564 | 12.748 | 18.909 | 55.011 | 0.473 | 5.501 | 10.049 | 12.853 | 18.460 | 53.135 | 0.445 | 0.4719 | 0.3363 |
| 4.148 8.118 12.379 19.307 56.047 0.490 5.891 9.508 4.024 7.649 11.468 18.519 58.341 0.511 57.09 8.792 4.165 8.118 12.226 18.796 56.696 0.495 5.720 10.229 4.873 8.749 12.277 20.048 53.354 0.465 6.364 10.011 4.802 8.819 12.2869 19.687 53.905 0.465 6.364 10.011 4.802 8.819 13.073 20.149 52.262 0.465 6.463 9.976 4.903 8.887 13.221 20.365 52.624 0.454 6.612 10.011 4.903 8.887 13.221 20.365 52.624 0.454 6.612 10.431 4.501 8.908 13.043 20.255 52.794 0.455 6.578 10.431 4.511 8.528 12.625 19.206 55.449 0.481 6.111 <t< td=""><td>4.407</td><td>8.088</td><td>12.149</td><td>19.449</td><td>55.907</td><td>0.487</td><td>5.831</td><td>9.510</td><td>12.800</td><td>18.826</td><td>53.025</td><td>0.444</td><td>0.4503</td><td>0.3269</td></t<> | 4.407 | 8.088 | 12.149 | 19.449 | 55.907 | 0.487 | 5.831 | 9.510 | 12.800 | 18.826 | 53.025 | 0.444 | 0.4503 | 0.3269 |
| 4.024 7.649 11.468 18.519 58.341 0.511 5.709 8.792 4.165 8.118 12.226 18.796 56.696 0.495 5.720 10.229 4.873 8.749 12.226 18.796 56.696 0.495 5.720 10.229 4.803 8.736 12.869 19.687 53.905 0.465 6.463 9.976 4.803 8.817 13.221 20.149 52.995 0.457 6.463 9.976 4.902 8.819 13.073 20.149 52.995 0.457 6.467 9.966 4.903 8.887 13.221 20.255 52.794 0.456 6.578 10.011 4.541 8.376 12.429 19.206 55.449 0.481 6.111 9.813 4.555 8.568 12.890 19.619 54.612 0.474 6.007 9.896 4.555 8.586 12.890 19.821 54.057 0.489 5.811 10 | 4.148 | 8.118 | 12.379 | 19.307 | 56.047 | 0.490 | 5.891 | 9.508 | 12.825 | 18.695 | 53.081 | 0.443 | 0.4583 | 0.3303 |
| 4.165 8.118 12.226 18.796 56.696 0.495 5.720 10.229 4.873 8.749 12.977 20.048 53.354 0.465 6.364 10.011 4.803 8.736 12.877 20.048 53.354 0.465 6.463 9.976 4.803 8.736 12.877 20.149 52.995 0.455 6.467 9.966 4.962 8.819 13.221 20.365 52.995 0.457 6.467 9.966 4.902 8.887 13.221 20.365 52.995 0.457 6.467 9.966 4.901 8.908 13.043 20.255 52.794 0.455 6.578 10.541 4.575 8.568 12.635 19.019 54.612 0.474 6.007 9.896 4.575 8.586 12.882 19.496 55.242 0.468 5.899 10.485 4.655 8.586 12.890 19.745 54.105 0.469 5.781 1 | 4.024 | 7.649 | 11.468 | 18.519 | 58.341 | 0.511 | 5.709 | 8.792 | 12.099 | 18.065 | 55.327 | 0.465 | 0.5292 | 0.3714 |
| 4.873 8.749 12.977 20.048 53.354 0.460 6.364 10.011 4.803 8.736 12.869 19.687 53.905 0.465 6.463 9.976 4.902 8.819 13.073 20.149 52.995 0.457 6.467 9.966 4.903 8.887 13.221 20.255 52.994 0.455 6.467 9.966 4.903 8.887 13.221 20.255 52.794 0.455 6.578 10.541 4.501 8.908 12.429 19.206 55.449 0.455 6.578 10.431 4.575 8.648 12.635 19.619 54.612 0.474 6.007 9.896 4.555 8.586 12.882 19.819 54.612 0.446 5.899 10.485 4.655 8.586 12.892 19.815 54.105 0.466 5.911 10.596 4.657 8.468 12.605 19.633 54.765 0.446 5.781 | 4.165 | 8.118 | 12.226 | 18.796 | 969.99 | 0.495 | 5.720 | 10.229 | 12.544 | 18.628 | 52.879 | 0.441 | 0.4869 | 0.3511 |
| 4.803 8.736 12.869 19.687 53.905 0.465 6.463 9.976 4.902 8.819 13.073 20.149 52.995 0.457 6.467 9.966 4.903 8.887 13.221 20.365 52.624 0.454 6.612 10.541 5.001 8.908 13.043 20.255 52.794 0.455 6.578 10.431 4.541 8.376 12.429 19.206 55.449 0.481 6.111 9.813 4.575 8.586 12.890 19.906 53.827 0.466 5.971 10.596 4.631 8.616 12.890 19.906 53.827 0.468 5.899 10.485 4.631 8.616 12.903 19.745 54.105 0.469 5.781 10.596 4.534 8.310 12.454 19.459 55.242 0.480 5.832 10.163 4.534 8.31 12.611 19.459 55.242 0.480 5.834 | 4.873 | 8.749 | 12.977 | 20.048 | 53.354 | 0.460 | 6.364 | 10.011 | 13.436 | 19.709 | 50.481 | 0.417 | 0.4048 | 0.2781 |
| 4.962 8.819 13.073 20.149 52.995 0.457 6.467 9.966 4.903 8.887 13.221 20.365 52.624 0.454 6.612 10.541 5.001 8.908 13.043 20.255 52.794 0.455 6.578 10.431 4.541 8.376 12.429 19.206 55.449 0.481 6.111 9.813 4.575 8.586 12.890 19.006 53.827 0.466 5.971 10.596 4.631 8.616 12.892 19.821 54.057 0.468 5.899 10.485 4.631 8.616 12.903 19.745 54.105 0.469 5.781 10.596 4.527 8.468 12.605 19.633 54.765 0.478 5.832 10.163 4.534 8.310 12.454 19.459 55.242 0.480 5.783 10.534 4.509 8.381 12.611 19.496 55.022 0.478 5.637 <t< td=""><td>4.803</td><td>8.736</td><td>12.869</td><td>19.687</td><td>53.905</td><td>0.465</td><td>6.463</td><td>9.976</td><td>13.389</td><td>19.628</td><td>50.544</td><td>0.417</td><td>0.3930</td><td>0.2695</td></t<> | 4.803 | 8.736 | 12.869 | 19.687 | 53.905 | 0.465 | 6.463 | 9.976 | 13.389 | 19.628 | 50.544 | 0.417 | 0.3930 | 0.2695 |
| 4.903 8.887 13.221 20.365 52.624 0.454 6.612 10.541 5.001 8.908 13.043 20.255 52.794 0.455 6.578 10.431 4.541 8.376 12.429 19.206 55.449 0.485 6.578 10.431 4.575 8.586 12.890 19.006 53.827 0.466 5.971 10.596 4.631 8.616 12.892 19.821 54.05 0.468 5.899 10.485 4.631 8.616 12.802 19.821 54.105 0.469 5.781 10.596 4.527 8.468 12.605 19.633 54.765 0.469 5.781 10.634 4.534 8.310 12.454 19.459 55.242 0.480 5.783 10.634 4.509 8.381 12.611 19.496 55.002 0.478 5.637 10.362 4.531 8.552 12.544 19.279 55.326 0.480 6.075 < | 4.962 | 8.819 | 13.073 | 20.149 | 52.995 | 0.457 | 6.467 | 996.6 | 13.508 | 19.829 | 50.225 | 0.415 | 0.3719 | 0.2404 |
| 5,001 8,908 13,043 20,255 52,794 0,455 6,578 10,431 4,541 8,376 12,429 19,206 55,449 0,481 6,111 9,813 4,575 8,558 12,836 19,619 54,612 0,474 6,007 9,896 4,575 8,586 12,890 19,906 53,827 0,466 5,971 10,596 4,631 8,616 12,892 19,821 54,057 0,468 5,899 10,485 4,631 8,616 12,503 19,745 54,105 0,469 5,781 10,596 4,527 8,468 12,605 19,633 54,765 0,469 5,781 10,636 4,534 8,310 12,459 55,242 0,480 5,783 10,633 4,509 8,381 12,611 19,496 55,002 0,478 5,637 10,362 4,531 8,552 12,544 19,279 55,326 0,460 6,075 10,376 | 4.903 | 8.887 | 13.221 | 20.365 | 52.624 | 0.454 | 6.612 | 10.541 | 13.842 | 19.722 | 49.280 | 0.402 | 0.3448 | 0.2278 |
| 4.541 8.376 12.429 19.206 55.449 0.481 6.111 9.813 4.575 8.558 12.635 19.619 54.612 0.474 6.007 9.896 4.736 8.642 12.890 19.906 53.827 0.466 5.971 10.596 4.655 8.586 12.892 19.821 54.057 0.468 5.899 10.485 4.657 8.468 12.503 19.745 54.765 0.476 5.832 10.661 4.527 8.468 12.605 19.659 55.242 0.469 5.783 10.261 4.534 8.310 12.454 19.459 55.242 0.480 5.783 10.362 4.509 8.381 12.611 19.496 55.002 0.478 5.637 10.362 4.531 8.552 12.514 19.279 55.326 0.480 6.075 10.376 4.808 8.851 13.073 19.392 53.276 0.460 6.084 <t< td=""><td>5.001</td><td>8.908</td><td>13.043</td><td>20.255</td><td>52.794</td><td>0.455</td><td>6.578</td><td>10.431</td><td>13.796</td><td>19.496</td><td>49.700</td><td>0.406</td><td>0.3628</td><td>0.2396</td></t<> | 5.001 | 8.908 | 13.043 | 20.255 | 52.794 | 0.455 | 6.578 | 10.431 | 13.796 | 19.496 | 49.700 | 0.406 | 0.3628 | 0.2396 |
| 4.575 8.558 12.635 19.619 54.612 0.474 6.007 9.896 4.736 8.642 12.890 19.006 53.827 0.466 5.971 10.596 4.655 8.586 12.882 19.821 54.657 0.468 5.899 10.485 4.657 8.616 12.892 19.745 54.765 0.469 5.899 10.485 4.537 8.468 12.605 19.633 54.765 0.476 5.832 10.161 4.534 8.310 12.454 19.459 55.242 0.480 5.783 10.163 4.509 8.381 12.611 19.496 55.002 0.478 5.637 10.362 4.575 8.652 12.964 20.076 53.730 0.467 5.894 10.593 4.575 8.652 12.949 55.326 0.480 6.075 10.376 4.808 8.851 13.073 19.392 53.276 0.460 6.084 11.63 | 4.541 | 8.376 | 12.429 | 19.206 | 55.449 | 0.481 | 6.111 | 9.813 | 13.131 | 18.745 | 52.195 | 0.433 | 0.4820 | 0.3519 |
| 4,736 8,642 12,890 19,906 53,827 0,466 5,971 10,596 4,655 8,586 12,882 19,821 54,057 0,468 5,899 10,485 4,631 8,616 12,903 19,745 54,105 0,469 5,899 10,485 4,534 8,310 12,454 19,459 55,242 0,480 5,783 10,163 4,509 8,381 12,611 19,496 55,002 0,478 5,637 10,364 4,575 8,652 12,964 20,076 53,730 0,467 5,894 10,593 4,575 8,652 12,964 20,076 53,730 0,467 5,894 10,593 4,575 8,851 13,073 19,392 55,326 0,480 6,075 10,376 4,808 8,851 13,073 19,392 53,276 0,460 6,075 11,022 4,754 8,460 12,756 19,495 54,777 0,475 6,133 | 4.575 | 8.558 | 12.635 | 19.619 | 54.612 | 0.474 | 6.007 | 9.896 | 13.363 | 19.236 | 51.494 | 0.429 | 0.4268 | 0.2895 |
| 4,655 8,586 12,882 19,821 54,057 0,498 5,899 10,485 4,631 8,616 12,903 19,745 54,105 0,469 5,781 10,261 4,534 8,486 12,454 19,459 55,222 0,480 5,783 10,163 4,534 8,310 12,454 19,496 55,002 0,476 5,783 10,534 4,509 8,381 12,611 19,496 55,002 0,467 5,894 10,593 4,575 8,652 12,964 20,076 53,730 0,467 5,894 10,593 4,531 8,351 12,514 19,279 55,326 0,480 6,075 10,376 4,808 8,851 13,073 19,392 53,276 0,460 6,084 11,163 4,754 8,773 12,756 19,495 54,717 0,475 5,963 10,374 4,571 8,460 12,758 19,495 54,717 0,475 6,113 | 4.736 | 8.642 | 12.890 | 19.906 | 53.827 | 0.466 | 5.971 | 10.596 | 13.547 | 19.514 | 50.369 | 0.417 | 0.3839 | 0.2581 |
| 4.631 8.616 12.903 19.745 54.105 0.469 5.781 10.261 4.527 8.468 12.605 19.633 54.765 0.476 5.832 10.163 4.534 8.310 12.454 19.459 55.242 0.480 5.783 10.534 4.509 8.381 12.611 19.496 55.002 0.478 5.637 10.362 4.575 8.652 12.964 20.076 53.730 0.467 5.894 10.593 4.531 8.351 12.514 19.279 55.326 0.480 6.075 10.376 4.808 8.851 13.073 19.992 53.276 0.460 6.084 11.163 4.754 8.773 13.146 20.030 53.297 0.461 6.072 11.022 4.571 8.460 12.756 19.495 54.717 0.475 5.963 10.374 4.571 8.456 12.587 19.345 54.717 0.475 6.113 | 4.655 | 8.586 | 12.882 | 19.821 | 54.057 | 0.468 | 5.899 | 10.485 | 13.689 | 19.796 | 50.132 | 0.417 | 0.3900 | 0.2631 |
| 4.527 8.468 12.605 19.633 54.765 0.476 5.832 10.163 4.534 8.310 12.454 19.459 55.242 0.480 5.783 10.534 4.509 8.381 12.611 19.496 55.022 0.478 5.637 10.362 4.575 8.652 12.964 20.076 53.730 0.467 5.894 10.593 4.531 8.351 12.514 19.279 55.326 0.480 6.075 10.376 4.89 8.851 13.073 19.992 53.276 0.460 6.084 11.163 4.754 8.773 13.146 20.030 53.297 0.461 6.072 11.022 4.571 8.460 12.756 19.495 54.717 0.475 5.963 10.374 4.641 8.515 12.587 19.335 54.277 0.475 6.113 10.377 | 4.631 | 8.616 | 12.903 | 19.745 | 54.105 | 0.469 | 5.781 | 10.261 | 13.519 | 19.677 | 50.760 | 0.424 | 0.3931 | 0.2623 |
| 4.534 8.310 12.454 19.459 55.242 0.480 5.783 10.534 4.509 8.381 12.611 19.496 55.002 0.478 5.637 10.362 4.575 8.652 12.964 20.076 53.730 0.467 5.894 10.593 4.531 8.351 12.514 19.279 55.326 0.480 6.075 10.376 4.808 8.851 13.073 19.992 53.276 0.460 6.084 11.163 4.754 8.773 13.146 20.030 53.297 0.461 6.072 11.022 4.571 8.460 12.756 19.495 54.717 0.475 5.963 10.374 4.641 8.515 12.587 19.345 54.277 0.475 6.113 10.377 | 4.527 | 8.468 | 12.605 | 19.633 | 54.765 | 0.476 | 5.832 | 10.163 | 13.319 | 19.555 | 51.130 | 0.427 | 0.4107 | 0.2836 |
| 4.509 8.381 12.611 19.496 55.002 0.478 5.637 10.362 4.575 8.652 12.964 20.076 53.730 0.467 5.894 10.593 4.531 8.351 12.514 19.279 55.326 0.480 6.075 10.376 4.808 8.851 13.073 19.992 53.276 0.460 6.084 11.163 4.754 8.773 13.146 20.030 53.297 0.461 6.072 11.022 4.571 8.460 12.756 19.495 54.717 0.475 5.963 10.374 4.641 8.515 12.587 19.345 54.717 0.475 6.113 10.377 | 4.534 | 8.310 | 12.454 | 19.459 | 55.242 | 0.480 | 5.783 | 10.534 | 13.090 | 19.099 | 51.494 | 0.428 | 0.4266 | 0.2994 |
| 4.575 8.652 12.964 20.076 53.730 0.467 5.894 10.593 4.531 8.351 12.514 19.279 55.326 0.480 6.075 10.376 4.808 8.851 13.073 19.992 53.276 0.460 6.084 11.163 4.754 8.773 13.146 20.030 53.297 0.461 6.072 11.022 4.571 8.460 12.756 19.495 54.717 0.475 5.963 10.374 4.641 8.515 12.587 19.333 54.276 6.113 10.377 | 4.509 | 8.381 | 12.611 | 19.496 | 55.002 | 0.478 | 5.637 | 10.362 | 13.229 | 19.308 | 51.464 | 0.430 | 0.4366 | 0.3172 |
| 4.531 8.351 12.514 19.279 55.326 0.480 6.075 10.376 4.808 8.851 13.073 19.992 53.276 0.460 6.084 11.163 4.754 8.773 13.146 20.030 53.297 0.461 6.072 11.022 4.571 8.460 12.756 19.495 54.717 0.475 5.963 10.374 4.641 8.415 12.757 19.395 6.471 6.113 10.374 | 4.575 | 8.652 | 12.964 | 20.076 | 53.730 | 0.467 | 5.894 | 10.593 | 13.555 | 19.892 | 20.067 | 0.417 | 0.3814 | 0.2664 |
| 4.808 8.851 13.073 19.992 53.276 0.460 6.084 11.163 4.754 8.773 13.146 20.030 53.297 0.461 6.072 11.022 4.571 8.460 12.756 19.495 54.717 0.475 5.963 10.374 4.641 8.515 12.587 19.333 54.026 0.476 6.113 10.377 | 4.531 | 8.351 | 12.514 | 19.279 | 55.326 | 0.480 | 6.075 | 10.376 | 13.179 | 19.071 | 51.300 | 0.425 | 0.4389 | 0.3180 |
| 4.754 8.773 13.146 20.030 53.297 0.461 6.072 11.022 4.571 8.460 12.756 19.495 54.717 0.475 5.963 10.374 4.641 8.515 12.587 19.333 54.926 0.476 6.113 10.277 | 4.808 | 8.851 | 13.073 | 19.992 | 53.276 | 0.460 | 6.084 | 11.163 | 13.722 | 19.712 | 49.320 | 0.405 | 0.3799 | 0.2792 |
| 4.571 8.460 12.756 19.495 54.717 0.475 5.963 10.374 4.641 8.515 12.587 19.333 54.926 0.476 6.113 10.277 | 4.754 | 8.773 | 13.146 | 20.030 | 53.297 | 0.461 | 6.072 | 11.022 | 13.816 | 19.905 | 49.183 | 0.405 | 0.3584 | 0.2493 |
| 4 641 R 515 19 587 19 333 54 996 0 476 6 113 10 977 | 4.571 | 8.460 | 12.756 | 19.495 | 54.717 | 0.475 | 5.963 | 10.374 | 13.208 | 19.198 | 51.257 | 0.426 | 0.4594 | 0.3400 |
| 13.01 011.0 036.40 036.41 100.31 010.0 | 4.641 | 8.515 | 12.587 | 19.333 | 54.926 | 0.476 | 6.113 | 10.277 | 12.960 | 18.940 | 51.711 | 0.428 | 0.4264 | 0.2902 |

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| quintile 1 quintile 2 quintile 3 quintile 3 quintile 4 quintile 3 quintile 4 quintile 5 quintile 5 quintile 5 quintile 6 quintil | 1 | - | O DE LIGORE | IOCD INCOM | E LEU CALII | N DOGINI CON | | | | 1000 | COME DIST | | | | |
| 4910 89413 1813 12.24 8813 12.24 18.97 18.97 18.97 18.97 0.44 0.47 0.46 0.47 10.48 13.26 19.07 0.46 0.47 10.48 13.36 19.23 4.97 0.47 0.47 0.47 10.48 13.36 19.23 4.97 0.47 0.47 0.47 0.47 10.48 13.36 19.23 4.98 0.40 0.41 0.40 0.43 1.47 0.44 1.07 1.13.46 18.36 1.12.49 0.41 0.40 0.43 1.07 4.42 1.08 13.34 1.86 1.03 0.41 0.40 0.43 0.44 1.08 1.34 1.08 1.03 0.41 0.41 0.41 0.43 0.44 | | quintile 1 | quintile 2 | quintile 3 | quintile 4 | quintile 5 | gini | quintile 1 | quintile 2 | quintile 3 | quintile 4 | quintile 5 | gini | theil index | within groups |
| 4910 8940 13.164 19.968 5.301 0.647 0.636 13.861 19.862 0.447 0.469 6.317 10.659 13.368 13.244 9.654 0.4406 0.477 0.477 10.659 13.368 15.244 0.447 0.477 0.477 10.688 13.348 13.248 0.447 0.478 11.782 11.248 15.1246 0.441 0.4068 4.723 8.586 12.266 12.348 13.348 13.447 13.488 13.248 49.894 0.441 0.432 4.529 8.386 12.346 6.247 0.477 0.247 10.248 13.488 0.441 0.447 0.444 0.447 0.444 0.444 0.444 0.444 0.444 0.444 0.444 0.444 0.4 | 1987:2 | 4.932 | 8.813 | 12.931 | 19.572 | 53.752 | 0.462 | 6.497 | 10.950 | 13.859 | 19.075 | 49.620 | 0.404 | 0.3796 | 0.2605 |
| 4.85 8.79 12.89 19.291 4.477 0.473 6.627 10.488 18.334 18.697 10.488 10.489 0.417 0.408 4.722 8.539 12.666 19.384 5.477 0.473 6.627 10.624 13.348 18.893 51.242 0.442 0.411 | 1987:3 | 4.910 | 8.940 | 13.164 | 19.985 | 53.001 | 0.457 | 6.313 | 10.959 | 13.861 | 19.234 | 49.634 | 0.406 | 0.3739 | 0.2609 |
| 4.722 8.538 1.249 18.770 0.477 6.236 10.794 15.098 18.533 51.246 0.418 0.431 4.723 8.536 1.2762 18.645 10.784 10.783 13.894 0.417 0.623 10.645 18.666 51.246 0.4132 4.503 8.356 1.2468 19.834 5.843 0.447 6.354 10.723 13.665 19.899 0.440 0.432 4.513 8.456 1.256 19.807 5.681 10.441 1.866 19.899 0.441 0.471 0.471 10.484 1.866 19.890 0.441 0.471 0.471 10.484 1.866 0.482 0.441 0.471 0.471 0.471 0.471 0.471 0.471 0.471 0.471 0.471 0.471 0.471 0.471 0.471 0.471 0.471 0.471 0.471 0.472 0.472 0.472 0.472 0.472 0.472 0.472 0.472 0.472 0.472 <td>1987:4</td> <td>4.853</td> <td>8.700</td> <td>12.680</td> <td>19.291</td> <td>54.477</td> <td>0.469</td> <td>6.447</td> <td>10.488</td> <td>13.346</td> <td>18.687</td> <td>51.029</td> <td>0.417</td> <td>0.4068</td> <td>0.2877</td> | 1987:4 | 4.853 | 8.700 | 12.680 | 19.291 | 54.477 | 0.469 | 6.447 | 10.488 | 13.346 | 18.687 | 51.029 | 0.417 | 0.4068 | 0.2877 |
| 4 662 6 5571 1 2755 1 8862 5 4 4 00 0 471 6 657 1 10.64 1 8.895 5 12.72 0 4 22 0 4 10 4 508 8 356 1 2 908 1 9 34 6 4 20 0 4 7 6 4 25 1 10.24 1 10.24 1 3 89 1 3 20 0 4 10 3 0 4 10 4 1 2 3 2 4 5 2 4 4 5 2 2 1 2 4 8 4 4 9 3 7 0 4 10 3 0 4 10 4 1 2 3 2 4 1 2 3 2 4 2 2 4 4 1 2 3 2 1 2 4 8 2 4 1 2 3 2 4 2 2 2 <td>1988:1</td> <td>4.722</td> <td>8.538</td> <td>12.649</td> <td>19.384</td> <td>54.707</td> <td>0.473</td> <td>6.326</td> <td>10.794</td> <td>13.099</td> <td>18.533</td> <td>51.246</td> <td>0.418</td> <td>0.4311</td> <td>0.3137</td> | 1988:1 | 4.722 | 8.538 | 12.649 | 19.384 | 54.707 | 0.473 | 6.326 | 10.794 | 13.099 | 18.533 | 51.246 | 0.418 | 0.4311 | 0.3137 |
| 4.72 8.656 12.900 19.836 5.6340 0.467 6.254 10.704 113.465 19.393 4.994 0.401 0.3894 4.97 8.556 112.436 19.314 20.236 52.720 0.441 6.228 11.074 11.345 19.393 4.994 0.410 0.3894 4.671 8.488 12.625 19.411 5.2720 0.445 6.628 11.044 12.975 19.027 5.189 0.440 0.3894 4.641 8.762 1.646 6.628 11.044 12.975 19.027 5.124 0.430 0.3896 4.849 8.651 1.2648 6.647 11.132 11.848 6.667 0.443 1.689 0.449 0.448 8.640 0.428 0.449 0.448 8.640 0.444 1.686 6.647 1.1172 1.848 6.640 0.444 1.2879 1.898 6.469 0.444 1.2879 1.898 6.469 0.444 0.286 0.444 0.628< | 1988:2 | 4.652 | 8.571 | 12.755 | 19.612 | 54.409 | 0.471 | 6.057 | 10.624 | 13.088 | 18.959 | 51.272 | 0.423 | 0.4132 | 0.2944 |
| 4500 83.56 12.436 19.314 45.384 0.4481 64.25 10.223 12.805 18.666 51.889 0.4287 0.4454 6.81 11.074 13.68 51.899 0.4287 0.4454 6.81 11.074 13.68 51.889 0.4287 0.4454 6.81 11.074 13.68 51.899 0.4287 0.4844 6.81 11.074 13.88 6.81 0.4287 0.4864 6.81 11.074 13.89 18.88 0.4287 0.4287 0.4864 8.8284 0.4287 0.4864 8.8283 0.490 0.475 0.4287 12.899 0.4287 0.4287 0.4868 0.4287< | 1988:3 | 4.723 | 8.595 | 12.908 | 19.835 | 53.939 | 0.467 | 6.354 | 10.793 | 13.466 | 19.393 | 49.994 | 0.410 | 0.3689 | 0.2531 |
| 4.943 8.917 13.181 20.255 9.2473 0.4544 8.917 13.181 20.255 9.2473 0.4574 1.074 13.455 19.170 0.4257 0.4267 | 1988:4 | 4.509 | 8.356 | 12.436 | 19.314 | 55.384 | 0.481 | 6.425 | 10.223 | 12.805 | 18.656 | 51.889 | 0.426 | 0.4127 | 0.2771 |
| 4671 8.488 12,555 19.319 54,897 0,476 6,228 10,445 12,975 18,656 0,425 0,425 4,664 8.612 12,686 19,265 19,319 54,887 0,475 6,313 10,194 12,373 19,677 51,689 0,425 0,425 4,941 8.787 12,885 19,826 5,485 0,467 6,113 13,439 18,885 49,825 0,420 0,3897 4,814 8.776 19,445 54,082 0,467 6,647 11,132 13,439 18,885 49,825 0,421 0,421 4,816 8.666 12,644 19,707 54,082 0,467 6,246 10,277 12,779 18,875 51,214 0,420 0,439 4,704 8,488 19,266 19,445 54,716 0,477 12,779 18,875 51,244 0,420 0,439 4,704 8,686 13,271 0,479 6,246 10,277 12,779 18,87 | 1989:1 | 4.943 | 8.917 | 13.181 | 20.235 | 52.723 | 0.454 | 6.681 | 11.074 | 13.456 | 19.214 | 49.575 | 0.401 | 0.3640 | 0.2527 |
| 4 664 8 4412 1 2 652 1 9 441 6 533 1 0 194 1 2 979 1 8 8 4 5 1 2 12 4 0 428 0 4133 4 944 8.751 1 2 855 0 464 6 533 1 0 194 1 2 973 1 5 214 0 403 0 3895 4 541 8.751 1 2 865 1 2 564 1 9 705 5 4631 0 404 1 6 50 1 1 2 49 1 6 50 0 403 0 5 3895 4 550 8 400 1 2 644 1 9 705 5 4631 0 474 6 50 1 6 70 5 6 99 0 401 0 3895 4 774 8 565 1 2 5 4 1 9 445 6 2 6 1 0 0 7 1 2 7 8 0 4 9 <td< td=""><td>1989:2</td><td>4.671</td><td>8.458</td><td>12.555</td><td>19.319</td><td>54.997</td><td>0.476</td><td>6.228</td><td>10.445</td><td>12.956</td><td>18.719</td><td>51.650</td><td>0.425</td><td>0.4257</td><td>0.2997</td></td<> | 1989:2 | 4.671 | 8.458 | 12.555 | 19.319 | 54.997 | 0.476 | 6.228 | 10.445 | 12.956 | 18.719 | 51.650 | 0.425 | 0.4257 | 0.2997 |
| 4,848 8,651 12,855 19,820 53,885 0,464 6,653 10,247 12,973 19,027 51,159 0,420 0,3897 4,941 8,787 12,614 19,705 54,631 0,474 6,67 11,132 13,137 19,067 51,159 0,421 0,3825 4,650 8,600 12,614 19,705 54,631 0,474 6,246 10,377 12,128 6,049 0,411 0,439 4,704 8,656 12,654 19,445 54,761 0,474 6,246 10,377 12,128 6,049 0,411 0,479 6,246 10,377 12,289 18,046 56,04 0,478 6,049 10,474 6,246 10,077 12,289 18,049 0,419 0,478 6,049 10,474 6,246 10,077 12,289 18,049 0,419 0,478 6,246 10,077 12,289 18,049 0,419 0,478 6,246 10,077 12,289 14,043 0,448 0,448 | 1989:3 | 4.664 | 8.412 | 12.623 | 19.441 | 54.859 | 0.475 | 6.313 | 10.194 | 12.979 | 18.854 | 51.658 | 0.426 | 0.4133 | 0.2822 |
| 4941 8787 12.891 19.788 53.563 0.460 6.667 11.132 13.439 18.836 49.925 0.403 0.3590 4.650 8.400 12.614 19.706 54.681 0.474 6.204 10.433 13.137 19.067 51.189 0.491 0.3865 4.718 8.656 12.564 19.247 54.916 0.474 6.236 10.077 12.728 18.719 52.240 0.431 0.4365 4.704 8.465 12.564 19.445 55.167 0.473 6.236 10.077 12.728 18.719 52.240 0.431 0.436 4.556 1.268 19.445 55.167 0.473 6.244 10.262 12.887 18.874 6.477 0.4204 4.556 1.268 19.247 54.916 0.473 6.254 10.024 12.790 18.874 6.477 0.439 4.556 1.268 1.279 10.248 12.790 18.874 6.473 0.4 | 1989:4 | 4.848 | 8.651 | 12.855 | 19.820 | 53.825 | 0.464 | 6.533 | 10.247 | 12.979 | 19.027 | 51.214 | 0.420 | 0.3897 | 0.2762 |
| 4,650 8,400 12,614 19,705 54,631 0,447 6,204 10,433 13,137 19,067 51,159 0,421 0,3855 4,712 8,630 12,768 19,707 54,082 0,467 6,236 10,389 13,129 19,159 6,239 0,449 4,714 8,645 12,564 19,247 52,406 0,473 6,236 10,282 12,249 0,431 0,439 4,704 8,645 12,648 55,167 0,479 6,254 10,249 18,279 5,2240 0,431 0,438 4,704 8,645 12,249 19,246 55,167 0,479 6,254 10,249 13,281 0,471 0,438 0,471 0,489 0,471 0,489 0,471 0,489 0,471 0,489 0,471 0,489 0,471 0,489 0,471 0,489 0,471 0,489 0,471 0,489 0,471 0,489 0,471 0,489 0,471 0,489 0,471 0,489 <td>1990:1</td> <td>4.941</td> <td>8.787</td> <td>12.981</td> <td>19.788</td> <td>53.503</td> <td>0.460</td> <td>6.667</td> <td>11.132</td> <td>13.439</td> <td>18.836</td> <td>49.925</td> <td>0.403</td> <td>0.3590</td> <td>0.2377</td> | 1990:1 | 4.941 | 8.787 | 12.981 | 19.788 | 53.503 | 0.460 | 6.667 | 11.132 | 13.439 | 18.836 | 49.925 | 0.403 | 0.3590 | 0.2377 |
| 4812 8630 12.768 19.707 54.082 0.467 6.345 10.398 13.129 19.128 6.099 0.419 0.3865 4.718 8.565 12.564 19.707 54.082 0.474 6.236 10.077 12.723 18.179 56.099 0.491 0.4018 4.718 8.565 12.445 54.761 0.473 6.121 10.282 12.887 18.719 52.240 0.4018 4.585 8.333 12.449 19.465 55.167 0.479 6.121 10.282 12.887 51.874 0.401 0.401 0.401 0.401 0.401 0.402 0.421 10.282 12.887 0.489 0.401< | 1990:2 | 4.650 | 8.400 | 12.614 | 19.705 | 54.631 | 0.474 | 6.204 | 10.433 | 13.137 | 19.067 | 51.159 | 0.421 | 0.3925 | 0.2729 |
| 4.718 8.565 12.554 19.247 54.916 0.473 6.236 10.077 12.723 18.719 52.240 0.431 0.4395 4.704 8.463 12.666 19.445 54.767 0.473 6.254 10.054 18.976 51.261 0.4034 4.704 8.302 12.469 19.465 55.167 0.473 6.254 10.054 51.267 0.4054 4.470 8.302 12.434 19.289 55.506 0.485 5.779 10.034 12.790 18.860 52.716 0.437 0.4054 4.522 8.880 19.389 55.522 0.485 5.47 10.054 12.790 18.860 0.471 0.438 4.522 8.288 12.239 19.025 56.386 0.481 5.541 10.046 12.790 18.494 51.704 0.483 5.779 10.034 12.790 18.494 51.741 0.483 5.741 0.054 12.790 18.890 5.714 0.0483 | 1990:3 | 4.812 | 8.630 | 12.768 | 19.707 | 54.082 | 0.467 | 6.345 | 10.398 | 13.129 | 19.128 | 50.999 | 0.419 | 0.3865 | 0,2673 |
| 4.704 8.463 12.626 19.445 54.761 0.473 6.254 10.543 13.016 18.926 51.281 0.4018 4.585 8.333 12.449 19.445 54.761 0.473 6.124 10.024 12.887 18.874 50.403 0.4018 4.586 8.333 12.449 19.2485 55.566 0.483 5.779 10.034 12.790 18.884 0.427 0.402 4.524 8.262 12.290 19.375 55.822 0.485 5.947 10.554 12.289 19.418 0.402 0.418 0.279 0.418 0.402 0.418 0.402 0.418 0.429 0.418 0.418 0.418 0.418 0.418 0.418 0.418 0.418 0.418 0.418 0.418 0.418 0.418 0.418 0.418 0.418 0.428 0.418 0.274 0.429 0.418 0.418 0.418 0.418 0.418 0.418 0.418 0.418 0.418 0.418 | 1990:4 | 4.718 | 8.565 | 12.554 | 19.247 | 54.916 | 0.474 | 6.236 | 10.077 | 12.728 | 18.719 | 52.240 | 0.431 | 0.4395 | 0.3214 |
| 4.585 8.333 12,449 19,465 55,167 0.479 6.121 10,292 12,887 18,874 51,824 0.437 0.4054 4,470 8,302 12,444 19,289 55,506 0,483 0.779 10,034 12,790 18,890 52,146 0,483 0.444 0.3664 4,524 8,830 12,290 19,130 55,566 0,483 10,274 13,356 19,515 50,393 0,447 0.3666 4,524 8,228 12,290 19,130 55,522 0,482 5,749 10,554 12,790 18,879 52,717 0,427 0,4204 4,502 8,228 12,299 19,229 55,522 0,482 5,541 9,596 12,739 18,429 54,075 0,473 | 1991:1 | 4.704 | 8.463 | 12.626 | 19,445 | 54.761 | 0.473 | 6.254 | 10.543 | 13.016 | 18.926 | 51.261 | 0.420 | 0.4018 | 0.2782 |
| 4.470 8.302 12.434 19.289 55.506 0.483 5.779 10.034 12.790 18.680 52.716 0.438 0.4634 4.922 8.860 13.027 19.385 5.347 10.034 12.790 18.680 52.716 0.441 0.3866 4.502 8.228 12.329 19.339 55.522 0.482 5.514 10.054 12.932 18.444 5.582 0.481 5.541 10.049 18.379 50.393 0.414 0.3866 4.431 8.066 12.091 19.025 5.638 0.491 5.541 10.054 12.335 18.429 5.677 0.441 0.4504 4.432 8.123 12.021 18.444 5.638 0.491 5.541 9.595 12.335 18.429 5.047 0.4504 4.432 8.123 1.648 5.541 0.493 5.541 9.056 12.335 18.429 5.047 0.4504 4.432 8.128 1.2.32 1.2.32 | 1991:2 | 4.585 | 8.333 | 12.449 | 19.465 | 55.167 | 0.479 | 6.121 | 10.292 | 12.887 | 18.874 | 51.824 | 0.427 | 0.4054 | 0.2714 |
| 4.922 8.860 13.021 19.875 53.322 0.459 6.459 10.277 13.356 19.515 50.393 0.414 0.3866 4.524 8.233 12.290 19.130 55.823 0.485 5.947 10.554 12.923 18.844 51.732 0.4204 0.5074 4.502 8.228 12.290 19.130 55.826 0.491 5.541 10.046 12.790 18.8429 52.671 0.449 0.5074 4.492 8.028 12.296 9.573 12.397 18.8429 52.671 0.449 0.5074 4.492 8.028 12.296 9.573 12.397 18.229 5.847 0.5074 4.492 8.123 12.027 18.404 56.954 0.493 5.946 10.243 12.397 18.429 52.871 0.449 0.5074 4.492 8.123 12.246 10.243 12.345 18.429 52.861 0.493 6.449 0.5049 0.5074 0.5084 | 1991:3 | 4.470 | 8.302 | 12.434 | 19.289 | 55.506 | 0.483 | 5.779 | 10.034 | 12.790 | 18.680 | 52.716 | 0.438 | 0.4634 | 0.3476 |
| 4.524 8.233 12.290 19.130 55.822 0.486 5.947 10.554 12.923 18.844 51.732 0.427 0.4204 4.502 8.228 12.039 19.389 55.52 0.482 5.541 10.046 12.790 18.979 52.677 0.454 0.5074 4.431 8.028 12.039 55.622 0.482 5.541 9.066 12.730 18.334 53.851 0.459 0.5074 4.492 8.126 12.037 18.044 56.974 0.478 6.224 10.243 12.745 19.036 51.752 0.459 0.477 0.4534 4.492 8.126 18.13 58.170 0.478 6.224 10.243 12.745 19.036 51.752 0.477 0.427 0.437 4.618 8.402 11.546 18.113 58.170 0.478 6.224 10.243 12.745 19.036 51.752 0.477 0.437 4.618 8.117 11.545 18.2 | 1991:4 | 4.922 | 8.860 | 13.021 | 19.875 | 53.322 | 0.459 | 6.459 | 10.277 | 13,355 | 19.515 | 50.393 | 0.414 | 0.3866 | 0.2719 |
| 4.502 8.228 12.359 19.389 55.522 0.482 5.514 10.046 12.790 18.979 52.671 0.441 0.4139 4.431 8.066 12.091 19.389 55.522 0.483 5.541 9.565 12.397 18.429 54.075 0.454 0.5074 4.432 8.123 12.027 18.404 56.954 0.493 5.906 9.573 12.337 18.334 53.861 0.449 0.676 4.492 8.123 12.027 18.404 56.954 0.478 0.224 10.243 12.347 18.349 0.479 0.479 0.479 4.402 8.123 11.566 18.113 58.170 0.478 0.244 9.084 12.086 19.261 52.209 0.427 0.439 4.618 8.526 12.704 19.591 54.562 0.473 5.980 9.684 12.885 19.261 50.497 0.438 4.107 7.615 11.349 18.236 18.48 | 1992:1 | 4.524 | 8.233 | 12.290 | 19.130 | 55.823 | 0.485 | 5.947 | 10.554 | 12.923 | 18.844 | 51.732 | 0.427 | 0.4204 | 0.2938 |
| 4.431 8.066 12.091 19.025 56.386 0.491 5.541 9.595 12.359 18.429 54.075 0.454 0.5074 4.492 8.123 12.027 18.404 56.584 0.493 5.906 9.573 12.337 18.334 53.851 0.449 0.4794 4.492 8.123 12.027 18.404 56.584 0.478 6.224 10.243 12.745 19.036 51.752 0.471 0.4237 4.300 7.861 11.566 18.113 58.170 0.506 9.684 12.745 19.036 51.772 0.471 0.5931 4.300 7.815 11.546 19.056 5.644 9.056 11.614 17.664 56.019 0.471 0.5931 4.107 7.615 11.540 19.560 0.493 5.948 12.866 19.36 14.71 18.564 9.471 18.564 9.480 12.441 18.520 0.471 0.4893 4.278 7.947 11. | 1992:2 | 4.502 | 8.228 | 12,359 | 19.389 | 55.522 | 0.482 | 5.514 | 10.046 | 12.790 | 18.979 | 52.671 | 0.441 | 0.4139 | 0.2791 |
| 4.492 8.123 12.027 18.404 56.954 0.493 5.906 9.573 12.337 18.334 53.851 0.449 0.4794 4.632 8.402 12.518 19.279 55.170 0.478 6.224 10.243 12.745 19.036 51.752 0.427 0.4237 4.632 8.402 11.564 19.591 55.170 0.473 5.980 9.684 17.664 56.019 0.471 0.5931 4.618 8.526 11.545 18.236 58.497 0.473 5.980 9.684 17.762 57.209 0.473 0.4388 4.618 8.526 11.545 18.236 58.497 0.459 5.948 0.488 53.207 0.443 0.458 4.516 8.177 12.134 18.733 56.660 0.499 5.917 9.141 12.441 18.520 53.980 0.457 0.4891 4.278 7.949 11.994 19.006 56.946 0.499 5.914 12.41 | 1992:3 | 4.431 | 8,066 | 12.091 | 19.025 | 56.386 | 0.491 | 5.541 | 9.595 | 12.359 | 18.429 | 54.075 | 0,454 | 0.5074 | 0.3675 |
| 4.632 8.402 12.518 19.279 55.170 0.478 6.224 10.243 12.745 19.036 51.752 0.427 0.4237 4.300 7.851 11.566 18.113 58.170 0.506 5.644 9.056 11.614 17.664 56.019 0.471 0.5931 4.018 8.526 12.704 19.591 54.562 0.473 5.980 9.684 12.865 19.261 52.209 0.470 0.558 4.017 7.615 11.545 18.236 58.497 0.512 5.756 8.811 11.752 17.750 55.930 0.470 0.5568 4.027 1.248 18.236 56.860 0.493 5.940 12.41 11.752 17.750 55.930 0.470 0.5568 4.278 7.947 11.949 19.066 56.946 0.499 5.941 12.41 18.56 0.457 0.499 4.28 7.949 11.949 19.066 56.946 0.498 5.948 </td <td>1992:4</td> <td>4.492</td> <td>8.123</td> <td>12.027</td> <td>18.404</td> <td>56.954</td> <td>0.493</td> <td>5.906</td> <td>9.573</td> <td>12.337</td> <td>18.334</td> <td>53.851</td> <td>0.449</td> <td>0.4794</td> <td>0.3332</td> | 1992:4 | 4.492 | 8.123 | 12.027 | 18.404 | 56.954 | 0.493 | 5.906 | 9.573 | 12.337 | 18.334 | 53.851 | 0.449 | 0.4794 | 0.3332 |
| 4.300 7.851 11.566 18.113 58.170 0.506 5.644 9.056 11.614 17.664 56.019 0.471 0.5931 4.618 8.526 12.704 19.591 54.562 0.473 5.980 9.684 12.865 19.261 52.209 0.436 0.4388 4.618 8.526 12.704 19.591 54.562 0.473 5.980 9.684 12.865 19.261 52.209 0.436 0.4388 4.107 7.615 11.545 18.236 58.497 0.512 5.756 8.811 11.752 17.750 55.390 0.447 0.4593 4.278 7.947 11.927 18.686 0.499 5.914 12.415 18.589 53.207 0.443 0.4654 4.28 7.949 11.949 19.066 56.946 0.498 5.914 12.241 18.520 54.124 0.445 0.4936 4.28 7.949 11.949 19.066 56.946 0.498 5.94 | 1993:1 | 4.632 | 8.402 | 12.518 | 19.279 | 55.170 | 0.478 | 6.224 | 10.243 | 12.745 | 19.036 | 51.752 | 0.427 | 0.4237 | 0.2815 |
| 4.618 8.526 12.704 19.591 54.562 0.473 5.980 9.684 12.865 19.261 52.209 0.436 0.4388 4.107 7.615 11.545 18.236 58.497 0.512 5.756 8.811 11.752 17.750 55.930 0.470 0.5558 4.107 7.615 11.545 18.236 58.497 0.512 5.756 8.811 11.752 17.750 55.930 0.470 0.5558 4.356 8.117 12.134 18.733 56.660 0.493 5.914 12.41 18.590 53.207 0.443 0.4554 4.278 7.940 11.937 18.666 0.493 5.914 12.41 18.50 53.90 0.457 0.4934 4.28 7.940 11.949 19.066 56.946 0.493 5.914 12.249 18.744 0.457 0.4936 4.518 8.322 12.391 18.374 57.609 0.502 5.918 9.061 12.435 </td <td>1993:2</td> <td>4.300</td> <td>7.851</td> <td>11.566</td> <td>18.113</td> <td>58.170</td> <td>0.506</td> <td>5.644</td> <td>9.056</td> <td>11.614</td> <td>17.664</td> <td>56.019</td> <td>0.471</td> <td>0.5931</td> <td>0.4349</td> | 1993:2 | 4.300 | 7.851 | 11.566 | 18.113 | 58.170 | 0.506 | 5.644 | 9.056 | 11.614 | 17.664 | 56.019 | 0.471 | 0.5931 | 0.4349 |
| 4.107 7.615 11.545 18.236 58.497 0.512 5.756 8.811 11.752 17.750 55.930 0.470 0.5558 4.356 8.117 12.134 18.733 56.660 0.493 5.917 9.141 12.588 18.688 53.207 0.443 0.4693 4.278 7.947 11.927 18.565 57.283 0.499 5.917 9.141 12.411 18.580 0.452 0.4994 4.248 7.940 11.937 19.006 56.946 0.499 5.811 8.796 12.290 18.734 0.457 0.4994 4.248 7.940 11.939 18.745 55.820 0.496 5.817 9.461 12.290 18.734 0.457 0.4936 4.518 8.324 0.484 56.860 0.493 5.918 9.061 12.435 18.742 0.457 0.4936 4.518 7.911 11.419 17.894 58.826 0.514 5.676 8.604 11.845< | 1993:3 | 4.618 | 8.526 | 12.704 | 19.591 | 54.562 | 0.473 | 5.980 | 9.684 | 12.865 | 19.261 | 52.209 | 0.436 | 0.4388 | 0.3217 |
| 4.356 8.117 12.134 18.733 56.660 0.493 6.037 9.480 12.588 18.688 53.207 0.443 0.4693 4.278 7.947 11.927 18.565 57.283 0.499 5.917 9.141 12.441 18.520 53.980 0.452 0.4954 4.248 7.849 11.949 19.006 56.946 0.499 5.811 8.796 12.290 18.734 54.72 0.457 0.4891 4.288 7.940 11.953 18.846 56.963 0.497 9.436 12.290 18.734 54.27 0.457 0.4891 4.518 7.941 11.949 17.894 56.963 0.495 6.197 9.461 12.435 18.74 6.457 0.4892 4.518 7.911 11.419 17.894 58.826 0.514 5.76 9.041 1.2445 18.245 54.341 0.455 0.455 0.551 4.152 7.706 11.419 17.894 58.826 </td <td>1993:4</td> <td>4.107</td> <td>7.615</td> <td>11.545</td> <td>18.236</td> <td>58,497</td> <td>0.512</td> <td>5.756</td> <td>8.811</td> <td>11.752</td> <td>17.750</td> <td>55.930</td> <td>0.470</td> <td>0.5558</td> <td>0.4075</td> | 1993:4 | 4.107 | 7.615 | 11.545 | 18.236 | 58,497 | 0.512 | 5.756 | 8.811 | 11.752 | 17.750 | 55.930 | 0.470 | 0.5558 | 0.4075 |
| 4.278 7.947 11.927 18.565 57.283 0.499 5.917 9.141 12.441 18.520 53.380 0.452 0.4954 4.248 7.849 11.949 19.006 56.946 0.498 5.811 8.796 12.415 18.653 54.124 0.457 0.4891 4.298 7.940 11.953 18.846 56.963 0.497 5.908 8.796 12.290 18.734 54.27 0.4891 4.298 7.940 11.939 18.374 57.609 0.502 5.918 9.061 12.435 18.245 54.341 0.455 0.5381 4.286 7.911 11.819 18.374 57.609 0.502 5.918 9.061 12.435 18.245 54.341 0.455 0.5381 4.152 7.706 11.499 17.894 58.826 0.514 5.769 8.604 11.984 17.455 56.282 0.475 0.6457 4.305 7.919 11.939 18.776 57. | 1994:1 | 4.356 | 8.117 | 12.134 | 18.733 | 56.660 | 0.493 | 6.037 | 9.480 | 12.588 | 18,688 | 53.207 | 0.443 | 0.4693 | 0.3394 |
| 4.248 7.849 11.949 19.006 56.946 0.498 5.811 8.796 12.415 18.853 54.124 0.457 0.4891 4.298 7.940 11.953 18.846 56.963 0.497 5.908 8.796 12.290 18.734 54.273 0.457 0.4936 4.518 8.322 12.361 18.978 55.820 0.495 6.949 12.749 18.774 53.148 0.442 0.5051 4.518 7.311 11.819 18.374 57.609 0.502 5.918 9.061 12.435 18.245 54.341 0.456 0.5531 4.152 7.706 11.439 17.894 58.826 0.514 5.676 8.604 11.384 17.455 56.282 0.475 0.6457 4.305 7.919 11.339 18.776 57.061 0.488 5.878 8.774 12.217 18.238 54.893 0.462 0.531 4.392 8.138 12.365 15.249 13. | 1994:2 | 4.278 | 7.947 | 11.927 | 18.565 | 57.283 | 0.499 | 5.917 | 9.141 | 12.441 | 18.520 | 53,980 | 0.452 | 0.4954 | 0.3572 |
| 4.298 7.940 11.953 18.846 56.963 0.497 5.908 8.796 12.290 18.734 54.273 0.457 0.4936 4.518 8.322 12.361 18.978 55.820 0.485 6.197 9.436 12.749 18.471 53.148 0.442 0.5051 4.286 7.911 11.819 18.374 57.609 0.502 5.918 9.061 12.435 18.245 54.341 0.456 0.5381 4.152 7.706 11.419 17.894 58.826 0.514 5.676 8.604 11.984 17.455 56.282 0.475 0.6457 4.305 7.919 11.939 18.776 57.061 0.498 5.878 8.774 12.217 18.238 54.893 0.462 0.5351 4.392 8.138 12.365 55.451 0.484 6.224 9.895 13.098 19.618 51.214 0.452 0.5013 4.109 7.643 11.742 18.705 57. | 1994:3 | 4.248 | 7.849 | 11.949 | 19.006 | 56.946 | 0.498 | 5.811 | 8.796 | 12.415 | 18.853 | 54.124 | 0.457 | 0.4891 | 0.3456 |
| 4.518 8.322 12.361 18.978 55.820 0.485 6.197 9.436 12.749 18.471 53.148 0.442 0.5051 4.286 7.911 11.819 18.374 57.609 0.502 5.918 9.061 12.435 18.245 54.341 0.456 0.5381 4.152 7.706 11.419 17.894 58.826 0.514 5.676 8.604 11.984 17.455 56.282 0.475 0.6457 4.305 7.919 11.939 18.776 57.061 0.498 5.878 8.774 12.217 18.238 54.893 0.462 0.5351 4.392 8.138 12.363 19.655 55.451 0.484 6.224 9.845 13.098 19.618 51.214 0.425 0.4010 4.109 7.643 17.742 18.705 57.801 0.507 5.852 9.299 12.395 18.510 53.945 0.452 0.5013 | 1994:4 | 4.298 | 7.940 | 11.953 | 18.846 | 56.963 | 0.497 | 5.908 | 8.796 | 12.290 | 18.734 | 54.273 | 0.457 | 0.4936 | 0.3394 |
| 4.286 7.911 11.819 18.374 57.609 0.502 5.918 9.061 12.435 18.245 54.341 0.456 0.5381 4.152 7.706 11.419 17.894 58.826 0.514 5.676 8.604 11.984 17.455 56.282 0.475 0.6457 4.305 7.919 11.939 18.776 57.061 0.498 5.878 8.774 12.217 18.238 54.893 0.462 0.5351 4.392 8.138 12.363 19.655 55.451 0.484 6.224 9.845 13.098 19.618 51.214 0.425 0.4010 4.109 7.643 17.742 18.705 57.801 0.507 5.852 9.299 12.395 18.510 53.945 0.452 0.5013 | 1995:1 | 4.518 | 8.322 | 12,361 | 18.978 | 55.820 | 0.485 | 6.197 | 9.436 | 12.749 | 18.471 | 53.148 | 0.442 | 0.5051 | 0.3574 |
| 4.152 7.706 11.419 17.894 58.826 0.514 5.676 8.604 11.984 17.455 56.282 0.475 0.6457 4.305 7.919 11.939 18.776 57.061 0.498 5.878 8.774 12.217 18.238 54.893 0.462 0.5351 4.392 8.138 12.363 19.655 55.451 0.484 6.224 9.845 13.098 19.618 51.214 0.425 0.4010 4.109 7.643 11.742 18.705 57.801 0.507 5.852 9.299 12.395 18.510 53.945 0.452 0.5013 | 1995:2 | 4.286 | 7.911 | 11.819 | 18.374 | 57.609 | 0.502 | 5.918 | 9.061 | 12.435 | 18.245 | 54.341 | 0.456 | 0.5381 | 0.3890 |
| 4.305 7.919 11.939 18.776 57.061 0.498 5.878 8.774 12.217 18.238 54.893 0.462 0.5351 4.392 8.138 12.363 19.655 55.451 0.484 6.224 9.845 13.098 19.618 51.214 0.425 0.4010 4.109 7.643 11.742 18.705 57.801 0.507 5.852 9.299 12.395 18.510 53.945 0.452 0.5013 | 1995:3 | 4.152 | 7.706 | 11.419 | 17.894 | 58.826 | 0.514 | 5.676 | 8.604 | 11.984 | 17.455 | 56.282 | 0.475 | 0.6457 | 0.4745 |
| 4.392 8.138 12.363 19.655 55.451 0.484 6.224 9.845 13.098 19.618 51.214 0.425 0.4010 4.109 7.643 11.742 18.705 57.801 0.507 5.852 9.299 12.395 18.510 53.945 0.452 0.5013 | 1995:4 | 4.305 | 7.919 | 11.939 | 18.776 | 57.061 | 0.498 | 5.878 | 8.774 | 12.217 | 18.238 | 54.893 | 0.462 | 0.5351 | 0.3796 |
| 4.109 7.643 11.742 18.705 57.801 0.507 5.852 9.299 12.395 18.510 53.945 0.452 0.5013 | 1996:1 | 4.392 | 8.138 | 12,363 | 19.655 | 55,451 | 0.484 | 6.224 | 9.845 | 13.098 | 19.618 | 51.214 | 0.425 | 0.4010 | 0.2569 |
| | 1996:2 | 4.109 | 7.643 | 11.742 | 18.705 | 57.801 | 0.507 | 5.852 | 9.299 | 12.395 | 18.510 | 53.945 | 0.452 | 0.5013 | 0.3388 |

STATISTICAL APPENDIX

| DATE. | ACIA | C SMCONI GOOD I NON | OIG BROOK | MOITHGIGT | INITIALIZATION OF INITIALIZATION | | | NOTE THE PROPERTY OF THE PROPE | CND | THENT | ENBOLL MENT BATES BY INCOME OF INITIAL | THE CHAIN | u | | |
|--------|------------|-----------------------|-----------|--------------|----------------------------------|-------|---------|--|----------------------|---------|--|--------------------------------|---------|------------------------|------------|
| DAIE | 2 | N-LABOR II | ACOME DIS | NOTION | DI INDIVID | UAL | | Ouintile 1 | EINE | OLLIMEN | Orintile 5 | COME GOIN | 1 | Dispose | |
| | quintile 1 | quintile 1 quintile 2 | quintile | 3 quintile 4 | 0 | gini | primary | - | universitary primary | primary | secondary | secondary universitary primary | primary | secondary universitary | iversitary |
| 1976:1 | 1.787 | 4.982 | 9.595 | 19.708 | 63.959 | 0.695 | | | | | | | | | |
| 1976:2 | 2.107 | 5.361 | 10.828 | 21.159 | 60.527 | 0.663 | | | | | | | | | |
| 1976:3 | 1.901 | 4.556 | 8.927 | 17.376 | 67.199 | 0.717 | | | | | | | | | |
| 1976:4 | 2.184 | 5.059 | 9.803 | 18.397 | 64.557 | 0.690 | | | | | | | | | |
| 1977:1 | 2.177 | 5.409 | 10.146 | 19.686 | 62.582 | 0.675 | | | | | | | | | |
| 1977:2 | 1.827 | 4.660 | 9.629 | 19.273 | 64.612 | 0.701 | | | | | | | | | |
| 1977:3 | 2.338 | 5.439 | 10.100 | 19.470 | 62.654 | 0.673 | | | | | | | | | |
| 1977:4 | 2.004 | 5.274 | 10.821 | 20.166 | 61.737 | 0.672 | | | | | | | | | |
| 1978:1 | 2.244 | 5.699 | 10.914 | 20.000 | 61.118 | 0.660 | | | | | | | | | |
| 1978:2 | 2.394 | 5.731 | 12.208 | 20.718 | 58.936 | 0.640 | | | | | | | | | |
| 1978:3 | 2.014 | 5.513 | 10.800 | 20.033 | 61,619 | 0.669 | - 2 | | | | | | | | |
| 1978:4 | 2.178 | 5.591 | 11.220 | 20.368 | 60.633 | 0.659 | | | | | | | | | |
| 1979:1 | 2.342 | 5.668 | 11.641 | 20.702 | 59.647 | 0.648 | | | | | | | | | |
| 1979:2 | 1.902 | 5.086 | 10.006 | 18,997 | 63,989 | 0.691 | | | | | | | | | |
| 1979:3 | 2.190 | 5.849 | 10.539 | 20.272 | 61.152 | 0.662 | | | | | | | | | |
| 1979:4 | 2.069 | 5.521 | 10.233 | 19.266 | 62.902 | 0.677 | | | | | | | | | |
| 1980:1 | 2 289 | 5 931 | 10 706 | 18.704 | 62.376 | 0.665 | | | | | | | | * | |
| 1980-2 | 2 075 | 5.514 | 9 704 | 15.574 | 67 133 | 0 701 | | | | | | | | | |
| 1980:3 | 2,107 | 5 945 | 11.335 | 20.757 | 59 857 | 0.652 | | | | | | | | | |
| 1980.4 | 1,685 | 5 192 | 9 221 | 18017 | 65 886 | 0 706 | | | | | | | | | |
| 1981:1 | 2.304 | 6.878 | 11.738 | 19.297 | 59.783 | 0.637 | | | | | | | | | |
| 1981:2 | 2,389 | 6.525 | 11.015 | 19.788 | 60.223 | 0.645 | | | | | | | | | |
| 1981:3 | 2.350 | 5.858 | 11.004 | 19.451 | 61.328 | 0.658 | | | | | | | | | |
| 1981:4 | 2.225 | 5.978 | 10.626 | 18.588 | 62.583 | 0.667 | | | | | | | | | |
| 1982:1 | 2.493 | 6.705 | 12.627 | 20.505 | 57.671 | 0.621 | 0.883 | 0.402 | 0.130 | 0.907 | 0.529 | 0.269 | 0.915 | 0.482 | 0.175 |
| 1982:2 | 2.794 | 7.669 | 12.220 | 18.738 | 58.545 | 0.613 | 0.858 | 0.391 | 0.094 | 0.909 | 0.533 | 0.316 | 0.899 | 0.478 | 0.175 |
| 1982:3 | 2.675 | 7.239 | 12.091 | 18.733 | 59.247 | 0.623 | 0.849 | 0.356 | 0.093 | 0.923 | 0.558 | 0.313 | 0.900 | 0.474 | 0.173 |
| 1982:4 | 3.009 | 8.005 | 12.967 | 20.357 | 55.654 | 0.588 | 0.802 | 0.439 | 0.099 | 0.853 | 0.543 | 0.328 | 0.845 | 0.504 | 0.185 |
| 1983:1 | 2.980 | 7.910 | 12.778 | 19.650 | 56.668 | 0.596 | 0.883 | 0.402 | 0.088 | 0.911 | 0.527 | 0.293 | 0.920 | 0.490 | 0.166 |
| 1983:2 | 3.320 | 8.265 | 13.303 | 19.904 | 55.208 | 0.577 | 0.861 | 0.411 | 0.086 | 0.917 | 0.559 | 0.311 | 0.908 | 0.486 | 0.165 |
| 1983:3 | 2.797 | 7.544 | 12.437 | 19.272 | 57.950 | 0.610 | 0.858 | 0.384 | 0.070 | 0.956 | 0.557 | 0.311 | 0.921 | 0.475 | 0.169 |
| 1983:4 | 2.925 | 7.818 | 12.452 | 19.949 | 56.835 | 0.600 | 908.0 | 0.400 | 0.081 | 0.877 | 0.537 | 0.322 | 0.865 | 0.497 | 0.186 |
| 1984:1 | 2.809 | 7.706 | 13.013 | 20.215 | 56.248 | 0.597 | 0.890 | 0.407 | 0.089 | 0.920 | 0.567 | 0.295 | 0.919 | 0.495 | 0.166 |
| 1984:2 | 2.986 | 7.939 | 12.353 | 18.961 | 57.761 | 0.603 | 0.881 | 0.400 | 0.081 | 0.936 | 0.569 | 0.312 | 0.925 | 0.493 | 0.168 |
| 1984:3 | 3.002 | 8.228 | 12.780 | 19.952 | 56.039 | 0.589 | 0.851 | 0.382 | 0.069 | 0.943 | 0.533 | 0.303 | 0.914 | 0.478 | 0.167 |
| 1984:4 | 2.872 | 7.769 | 12.440 | 19.476 | 57.444 | 0.604 | 0.842 | 0.411 | 0.080 | 0.892 | 0.553 | 0.307 | 0.878 | 0.493 | 0.174 |
| 1985:1 | 2.927 | 7.891 | 12.826 | 19.439 | 56.911 | 0.598 | 0.885 | 0.407 | 0.066 | 0.947 | 0.565 | 0.323 | 0.928 | 0.503 | 0.167 |
| 1985:2 | 2.732 | 7.410 | 12.759 | 19.917 | 57.177 | 0.607 | 0.875 | 0.394 | 0.092 | 0.934 | 0.538 | 0.299 | 0.916 | 0.495 | 0.170 |
| 1985:3 | 2.499 | 7.163 | 12.673 | 19.894 | 57.771 | 0.616 | 0.848 | 0.376 | 0.095 | 0.918 | 0.544 | 0.304 | 0.908 | 0.480 | 0.170 |
| 1985:4 | 2.774 | 7.425 | 12.177 | 19.021 | 58.585 | 0.616 | 0.807 | 0.426 | 0.109 | 0.864 | 0.545 | 0.325 | 0.839 | 0.504 | 0.187 |
| 1986:1 | 3.114 | 8.466 | 14.084 | 20.110 | 54.226 | 0.569 | 0.876 | 0.417 | 0.084 | 0.934 | 0.551 | 0.321 | 0.921 | 0.504 | 0.177 |
| 1986:2 | 2.901 | 7.955 | 13.350 | 19.930 | 55.857 | 0.590 | 0.876 | 0.402 | 0.087 | 0.911 | 0.548 | 0.296 | 0.913 | 0.496 | 0.170 |
| 1986:3 | 3.017 | 7.935 | 13.269 | 19.577 | 56.203 | 0.590 | 0.874 | 0.397 | 0.090 | 0.919 | 0.582 | 0.320 | 0.915 | 0.501 | 0.186 |
| 1986:4 | 3.056 | 8.058 | 12.654 | 18.696 | 57.536 | 0.598 | 0.833 | 0.463 | 0.089 | 0.869 | 0.550 | 0.316 | 0.874 | 0.530 | 0.191 |
| 1987:1 | 2.905 | 7.621 | 13.264 | 18.841 | 57.363 | 0.601 | 0.902 | 0.465 | 0.119 | 0.919 | 0.569 | 0.292 | 0.929 | 0.521 | 0.173 |
| 1987:2 | 2.858 | 7.588 | 12.456 | 18.715 | 58.383 | 0.611 | 0.884 | 0.441 | 0.098 | 0.919 | 0.574 | 0.293 | 0.919 | 0.518 | 0.166 |
| 1987-3 | 3 088 | R 228 | 13 473 | 19 RDR | 55 40R | 0 581 | 0.876 | 0.431 | O 108 | 0 935 | ח ההה | D 293 | 9660 | 0 503 | O 174 |

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|--------|------------|-----------------|------------|------------|-------------------------------|-------|---------|------------|--------------|----------|-------------------------------------|--------------|---------|-----------|--------------|
| | | | | | | | | Quintile 1 | | | Quintile 5 | 2 | | Overall | |
| | quintile 1 | quintile 2 | quintile 3 | quintile 4 | quintile 5 | gini | primary | secondary | universitary | primary | secondary | universitary | primary | secondary | universitary |
| 1987:4 | 3.167 | 8.373 | 12.852 | 19.178 | 56.430 | 0.587 | 0.826 | 0.441 | 0.116 | 0.842 | 0.537 | 0.300 | 0.857 | 0.508 | 0.181 |
| 1988:1 | 3.213 | 8.468 | 13.720 | 19.795 | 54.795 | 0.573 | 0.901 | 0.438 | 0.089 | 0.915 | 0.577 | 0.310 | 0.929 | 0.517 | 0.182 |
| 1988:2 | 3.106 | 8.229 | 13.485 | 19.724 | 55.457 | 0.581 | 0.889 | 0.449 | 0.087 | 0.907 | 0.589 | 0.284 | 0.917 | 0.524 | 0.170 |
| 1988:3 | 3.031 | 7.782 | 12.768 | 18.624 | 57.796 | 0.602 | 0.869 | 0.451 | 0.098 | 0.912 | 0.585 | 0.312 | 0.916 | 0.521 | 0.184 |
| 1988:4 | 3.013 | 7.874 | 12.594 | 18.510 | 58.006 | 0.603 | 0.825 | 0.471 | 0.127 | 0.848 | 0.557 | 0.310 | 0.859 | 0.538 | 0.188 |
| 1989:1 | 3.225 | 8.611 | 14.226 | 20.180 | 53.748 | 0.563 | 0.896 | 0.471 | 0.088 | 0.925 | 0.597 | 0.295 | 0.928 | 0.547 | 0.171 |
| 1989:2 | 2.914 | 7.954 | 13.284 | 19.114 | 56.732 | 0.594 | 0.905 | 0.479 | 0.087 | 0.920 | 0.617 | 0.309 | 0.924 | 0.547 | 0.172 |
| 1989:3 | 3.022 | 8.094 | 13.057 | 19.131 | 56.697 | 0.592 | 0.896 | 0.462 | 0.104 | 0.949 | 0.582 | 0.322 | 0.927 | 0.550 | 0.192 |
| 1989:4 | 3.422 | 8.842 | 12.927 | 18.891 | 55.909 | 0.575 | 0.871 | 0.520 | 0.106 | 0.862 | 0.610 | 0.321 | 0.875 | 0.561 | 0.189 |
| 1990:1 | 3.089 | 8.389 | 14.012 | 19.511 | 54.996 | 0.575 | 0.895 | 0.485 | 0.077 | 0.894 | 0.612 | 0.312 | 0.911 | 0.548 | 0.170 |
| 1990:2 | 3.117 | 8.696 | 14.021 | 19.497 | 54.669 | 0.570 | 0.878 | 0.486 | 0.101 | 0.913 | 0.624 | 0.313 | 0.911 | 0.566 | 0.172 |
| 1990:3 | 3.179 | 8.343 | 13.693 | 19.910 | 54.870 | 0.575 | 0.897 | 0.489 | 0.148 | 0.900 | 0.626 | 0.293 | 0.908 | 0.574 | 0.193 |
| 1990:4 | 3.466 | 8.658 | 13.552 | 19.317 | 55.007 | 0.569 | 0.847 | 0.522 | 0.113 | 0.859 | 0.576 | 0.346 | 0.868 | 0.569 | 0.195 |
| 1991:1 | 3.298 | 8.277 | 13.338 | 18.843 | 56.238 | 0.582 | 0.900 | 0.521 | 0.114 | 0.901 | 0.598 | 0.338 | 0.908 | 0.563 | 0.195 |
| 1991:2 | 3.059 | 8.078 | 13.172 | 18.935 | 56.755 | 0.591 | 0.882 | 0.504 | 0.105 | 0.919 | 0.625 | 0.305 | 0.905 | 0.577 | 0.178 |
| 1991:3 | 2.684 | 7.729 | 12.857 | 18.950 | 57.780 | 0.607 | 0.866 | 0.466 | 0.127 | 0.920 | 0.622 | 0.306 | 0.902 | 0.552 | 0.198 |
| 1991:4 | 3.159 | 8.207 | 12.871 | 18.793 | 56.971 | 0.591 | 0.835 | 0.573 | 0.122 | 0.836 | 0.607 | 0.305 | 0.844 | 0.594 | 0.210 |
| 1992:1 | 2.714 | 7.115 | 11.900 | 17.516 | 60.745 | 0.632 | 0.917 | 0.513 | 0.087 | 0.952 | 0.600 | 0.341 | 0.937 | 0.572 | 0.191 |
| 1992:2 | 2.630 | 7.462 | 12.613 | 19.045 | 58.250 | 0.614 | 0.912 | 0.513 | 980.0 | 0.943 | 0.615 | 0.338 | 0.929 | 0.565 | 0.183 |
| 1992:3 | 2.581 | 7.744 | 12.801 | 18.798 | 58.057 | 0.610 | 0.884 | 0.493 | 0.080 | 0.944 | 0.639 | 0.314 | 0.915 | 0.566 | 0.187 |
| 1992:4 | 2.817 | 7.459 | 11.560 | 17.089 | 61.065 | 0.631 | 0.832 | 0.507 | 0.101 | 0.882 | 0.627 | 0.316 | 0.864 | 0.575 | 0.180 |
| 1993:1 | 2.767 | 7.954 | 12.685 | 18.763 | 57.831 | 0.605 | 0.918 | 0.557 | 960.0 | 0.949 | 0.605 | 0.348 | 0.927 | 0.581 | 0.197 |
| 1993:2 | 2.836 | 7.719 | 12.500 | 18.484 | 58.451 | 0.610 | 0.893 | 0.527 | 0.091 | 0.948 | 0.633 | 0.329 | 0.917 | 0.591 | 0.189 |
| 1993:3 | 2.562 | 7.240 | 12.263 | 18.333 | 59.603 | 0.626 | 0.908 | 0.515 | 960.0 | 0.940 | 0.604 | 0.333 | 0.928 | 0.569 | 0.204 |
| 1993:4 | 2.695 | 7.183 | 10.509 | 16.743 | 62.869 | 0.650 | 0.876 | 0.538 | 0.102 | 0.927 | 0.590 | 0.353 | 0.898 | 0.582 | 0.201 |
| 1994:1 | 2.546 | 7.102 | 11.079 | 17.761 | 61.500 | 0.643 | 0.915 | 0.552 | 0.120 | 0.941 | 0.584 | 0.349 | 0.929 | 0.591 | 0.207 |
| 1994:2 | 2.841 | 7.566 | 11.609 | 18.885 | 59.100 | 0.619 | 0.913 | 0.538 | 0.082 | 0.946 | 0.619 | 0.323 | 0.930 | 0.586 | 0.193 |
| 1994:3 | 2.666 | 7.566 | 11.350 | 18.858 | 59.559 | 0.625 | 0.910 | 0.544 | 0.113 | 0.940 | 0.591 | 0.354 | 0.932 | 0.584 | 0.209 |
| 1994:4 | 2.707 | 7.480 | 11.270 | 18.519 | 60.012 | 0.628 | 0.899 | 0.525 | 0.093 | 0.925 | 0.626 | 0.351 | 0.907 | 0.595 | 0.210 |
| 1995:1 | 3.006 | 8.053 | 12.163 | 18.843 | 57.929 | 0.603 | 0.918 | 0.527 | 0.126 | 0.949 | 0.639 | 0.357 | 0.935 | 0.595 | 0.212 |
| 1995:2 | 2.567 | 7.334 | 11.303 | 18.105 | 60.682 | 0.635 | 0.919 | 0.556 | 0.113 | 0.958 | 0.603 | 0.365 | 0.941 | 0.602 | 0.216 |
| 1995:3 | 2.659 | 7.062 | 11.270 | 17.938 | 61.067 | 0.639 | 0.896 | 0.551 | 0.109 | 0.971 | 0.625 | 0.375 | 0.931 | 0.590 | 0.222 |
| 1995:4 | 2.815 | 7.693 | 11.477 | 18.728 | 59.282 | 0.620 | 0.912 | 0.560 | 0.106 | 0.953 | 0.660 | 0.346 | 0.927 | 0.612 | 0.207 |
| 1996:1 | 2.881 | 7.765 | 12.536 | 19.068 | 57.737 | 0.605 | 0.938 | 0.556 | 0.100 | 0.960 | 0.624 | 0.360 | 0.944 | 0.592 | 0.213 |
| 1996:2 | 2.707 | 7.550 | 11.909 | 18.723 | 59.108 | 0.620 | 0.911 | 0.567 | 0.138 | 0.958 | 0.652 | 0.401 | 0.931 | 0.614 | 0.231 |