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POVERTY REDUCTION AND GROWTH INTERACTIONS: WHAT CAN BE LEARNED FROM THE SYRIAN EXPERIENCE?¹

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Abstract

The aim of this paper is to realize an in-depth analysis of the growth and poverty interactions in Syria, which undertook a series of economic reforms in the past decade to reduce the intervention of the Government in the economy. One of the main tools of the pro-poor growth literature used is the index developed by Bibi (2010), which takes into account at the same time the evolution of the welfare variable and its distribution. The results show that during the 1996-2004 period growth was not equitable at both national and regional levels. When the objective of halving poverty in 2015 is used as a benchmark, growth is pro-poor neither at the national level nor in the majority of the regions. Moreover, the main other characteristic of the Syrian growth and poverty performance is the widening of the gap between urban and rural areas. This could be mainly due to a pattern of growth where oil played an increasing role and agriculture a decreasing one. Agricultural and land policy reforms could have had a negative impact on poverty in some rural regions, such as the North-Eastern rural region, despite their positive effect on agricultural productivity.

Key words : Poverty, inequality, pro-poor growth, Syria and MENA

Résumé

L'objectif de cet article réaliser une analyse approfondie des interactions entre croissance et pauvreté en Syrie, pays ayant mis en place une série de réformes économiques dans la décennie passée pour réduire l'intervention de l'État dans l'économie. Un des principaux outils d'analyse de la croissance pro-pauvres auxquels on fait appel est l'indicateur développé par Bibi (2010), qui prend en compte à la fois l'évolution de l'agrégat de bien-être et sa distribution. Nos résultats montrent que la croissance en Syrie n'a pas été équitable au cours de la période 1996-2004. Lorsque l'on utilise comme référence le taux de croissance qui permettrait de réduire de moitié la pauvreté en 2015, la croissance n'apparaît pro-pauvre ni au niveau national, ni dans la majorité des régions. Par ailleurs, l'accroissement de l'écart de croissance entre les zones urbaines et rurales est l'une des caractéristiques majeures observées entre 1996 et 2004. Cela pourrait être principalement dû à un modèle de croissance où le pétrole a joué un rôle croissant et l'agriculture un rôle déclinant. De plus, les réformes foncières et agricoles ont pu avoir un impact négatif sur la pauvreté dans certaines régions rurales, telles que celle du Nord-est, en dépit de leurs effets positifs sur la productivité agricole.

Mots clés : Pauvreté, inégalité, croissance pro-pauvres, Syrie et Moyen-Orient

JEL Classification : D63, I32, O40

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Introduction

Since the end of the nineties poverty reduction has become one of the most important performance indicators of public policy effectiveness. As it is well known by policy evaluation specialists the assessment of performance indicators can be decomposed in two steps. The first looks at by how much the indicator has varied between two time points and the second assesses if this evolution has been satisfactory according to a given standard. A third step could consist in a counterfactual analysis of the evolution of the indicator under alternative economic or social policies.

Most of the debate around the pro-poor growth concept has been around the definition of the standard of pro-poorness. As stated by Essama-Nssah and Lambert (2009) it is clearly a matter of value judgment. Klasen (2008) provides a review of the debates on this issue and concludes that the different contributions can be classified in two “camps”: the “relative” and the “absolute” camps. Growth is pro-poor in relative terms if there is a distributional change in favor of the poor, in other words if the poor benefit more than the average from economic growth. Concerning the “absolute” definition Klasen distinguishes “the strong absolute” where the poor gain more than the average in terms of absolute income, from the “the weak absolute” where it is sufficient that the income of the poor increases.

To try to go beyond the “relative” vs “absolute” debate Osmani (2005) suggested a unification of the two definitions. His ideas have been materialized through the contributions of Essama-Nssah and Lambert (2009) and Bibi (2010) who propose the decomposition of the poverty indicators in a growth and distribution effects.

The aim of this paper is to use the different tools of the pro-poor growth literature to realize in in-depth analysis of the growth and poverty interactions in Syria. The case of Syria is particularly interesting because the country undertook a series of economic reforms in the past decade to reduce the intervention of the State in the economy. It is thus legitimate to assess the impact of the first phase of liberalization of the Syrian economy on the well-being of the poor.

After analyzing the pro-poorness of growth in Syria between 1997 and 2004¹ at the national and regional levels we try to identify the reasons of the observed evolution. The evolution of inequality receives a particular attention to identify its role in the growth/poverty nexus.

The remainder of the paper is organized as follows: section two presents the results of the pro-poorness analysis, section three is devoted to the income distribution analysis, section four looks at the main potential determinants of the evolution of poverty and inequality and section five presents the conclusions

¹ Dates of the two household surveys at our disposal.

Pro-poorness of growth in Syria 1997-2004

Our poverty and pro-poorness analysis relied on the Household Income and Expenditure Surveys (HIES) conducted by the Central Bureau of Statistics (CBS) in 1996-1997 and 2003-2004 and the household poverty lines computed by El Laithy and Abu-Ismaïl (2005).

Consumption data is used as the welfare indicator to compute the different poverty measures presented below. Even though we agree with Essama-Nssaha and Lambert (2009) that consumption is never a real substitute for income we follow Ravallion and Chen (1997) who consider consumption data more reliable than income data in developing countries.

The average expenditure per capita in 1997 is 3053 Syrian Pounds (in 2004 prices) while it reaches 3508 SP in 2004. This increase in real expenditures per capita induces a decrease of the incidence of poverty from 14.3 to 11.6% as well as a reduction in the poverty gap and severity (see Table 1).

Table 1. Foster-Greer-Thorbecke poverty indices, FGT(a)

	P0	P1	P2
1997	14.3%	2.9%	0.9%
2004	11.6%	2.2%	0.6%

At the regional level poverty was reduced in all areas except for the Rural North-Eastern where poverty increased significantly.

Table 2. Poverty headcount (P0) by region²

	1997	2004
	P0	P0
South urban	11.0%	6.0%
South rural	13.5%	10.5%
North-East urban	15.5%	11.3%
North-East rural	13.8%	18.1%
Middle urban	19.5%	9.1%
Middle rural	18.6%	11.1%
Coast urban	10.7%	9.6%
Coast rural	9.8%	9.9%

This differentiated evolution of poverty induced a drastic transformation of the regional distribution of poverty. The North Eastern region concentrates 53% of total poverty in 2004 while its share was 45% in 1997. If we take into account the rural/urban divide, the difference is even more striking since the North-Eastern rural region share of the country total poverty headcount increased from 21% in 1997 to 38% in 2004.

² The complete FGT indicators are presented in Table A 1

Figure 1. Poverty distribution among regions in 1997

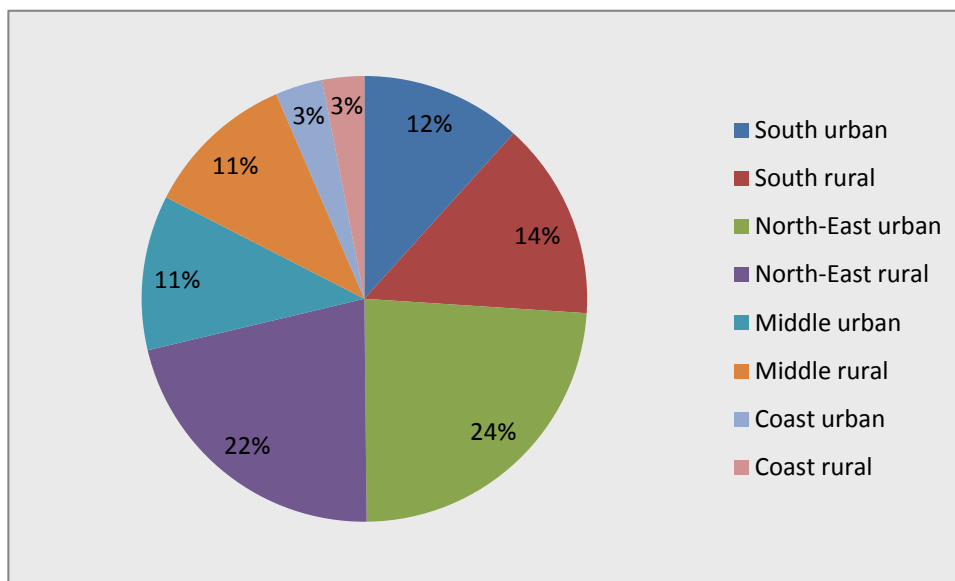
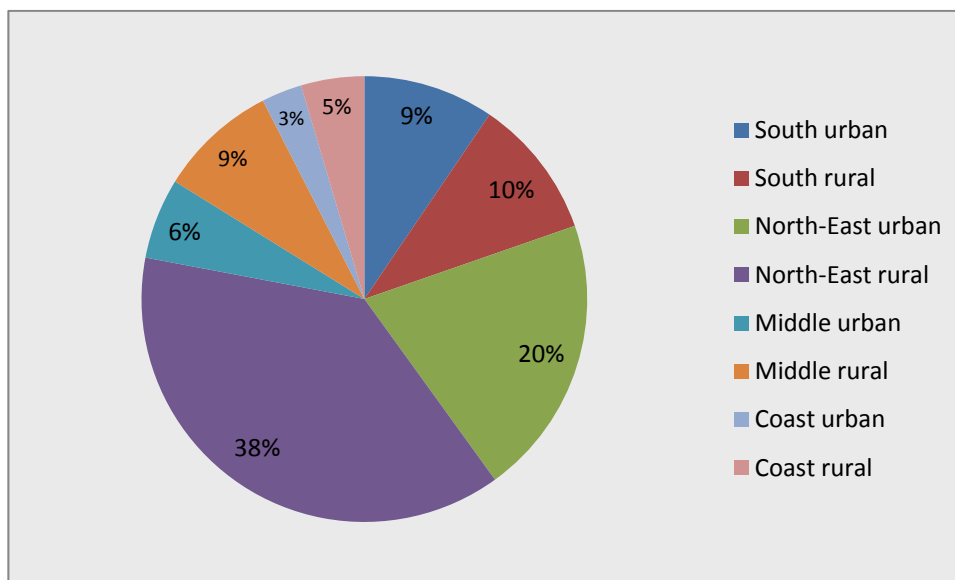


Figure 2. Poverty distribution among regions in 2004



Relative and absolute pro-poor growth

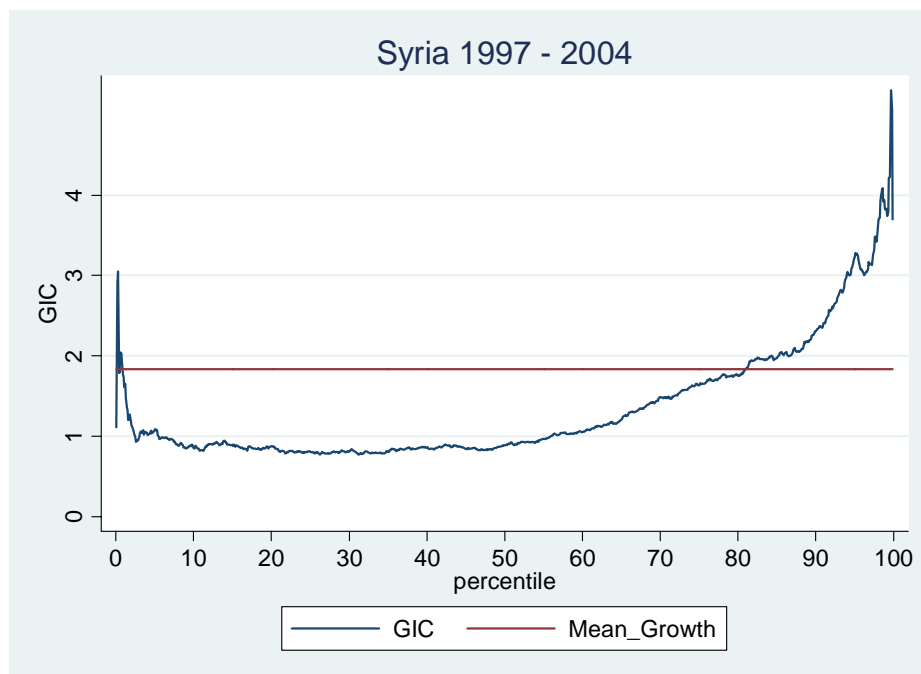
The issue in what follows it to assess to which extent the observed reduction of poverty was satisfactory according to the different standards of pro-poorness.

National Level

The computation of Growth Incidence Curves (GIC) *à la* Ravallion et Chen (2003) can give us insights about the pro-poorness of growth in Syria according to the relative and “weak absolute” definitions proposed by Klasen (2008).

At the National level the GIC shows that the expenditure growth rate of the eight first deciles was inferior to the average expenditure growth rate, so we can assert that growth was not pro-poor in relative terms in Syria between 1997 and 2004. Still, we can say that growth was pro-poor in “weak absolute” terms since the expenditure growth rate of the poor was above zero.

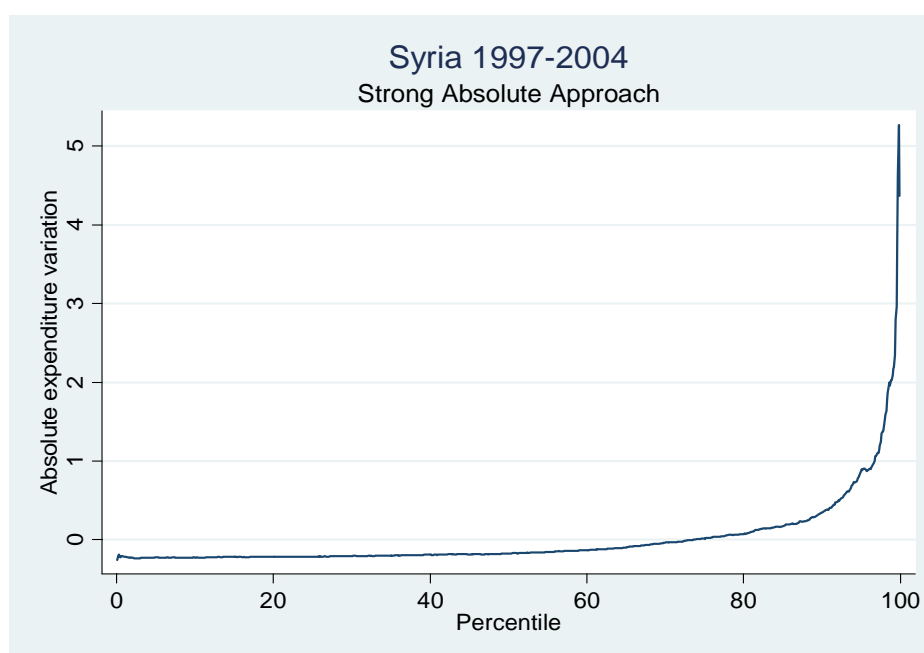
Figure 3. Growth Incidence Curve at national level



If we follow the “strong absolute” definition³, growth was not pro-poor at the National level between 1997 and 2004 (Figure 4).

³ The absolute expenditure variation is computed as the difference between the absolute variation of spending (1997-2004) and the absolute variation of the mean expenditures (1997-2004).

Figure 4. Absolute expenditure variation curve



Regional level

An analysis of pro-poorness at the regional level will allow us to check whether the results observed at the National level are representative of what is happening in the whole country or if these are simply an aggregation of heterogeneous regional outcomes.

Before analyzing the behavior of regions in terms of pro-poorness let us first compare the average expenditure growth in these regions between 1997 and 2004. Table 3 shows that expenditure growth has always been higher in urban areas. The bias against rural areas is the highest in the North-Eastern region. Finally the Middle region has been characterized by the highest growth of expenditures in both urban and rural areas.

Table 3. Average expenditure growth between 1997 and 2004 at the regional level

Region	Southern		North-Eastern		Middle		Coastal	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
Average expenditure growth	3.06	-0.12	3.18	-0.84	4.71	3.41	2.51	0.76

The analysis of Table 4⁴ shows that growth was pro-poor in “weak absolute” terms in most of the regions except for the Rural North-Eastern region due to a negative growth rate of expenditures. The observation of the regional GIC curves reveals in some cases a different outcome for the poorest 2% of the population and the rest of the poor. For example in the Southern Urban region the poorest saw their expenditures decrease in absolute terms while the average expenditure growth was more than 3%.

⁴ This table summarizes the findings of the different GIC and “strong absolute” PPG regional curves (Appendix Figure A 1 to Figure A 16).

The analysis of relative pro-poor growth reveals a very heterogeneous situation, but the main message is that in the regions where growth was significant it was not pro-poor in relative terms except in the Southern urban region, whereas in the regions where growth was negative or nil the poor have had a higher expenditure growth rate than the average.

Finally in terms of “strong absolute” pro-poor growth, we have only one positive case and which corresponds to a region where the average expenditure decreased by 0.84%. This just means that the absolute losses of the poor are lower than the average.

Table 4. Synthesis of regional outcomes with the different PPG approaches

Region	Southern		North-Eastern		Middle		Coastal	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
“Weak absolute” PPG	+	+	+	-	+	+	+	0
Relative PPG	-	+	-	+/-	-	+/-	-	-
“Strong absolute” PPG	-	0	-	+	-	-	-	0

A new approach to assess the pro-poorness of growth

We analyze in what follows the pro-poorness of growth in Syria relying on the methodology developed by Bibi (2010). The idea of the author was to develop an index which takes into account at the same time the evolution of the welfare variable (income, expenditure, etc.) and its distribution.

Following Bibi we use a censored expenditure distribution rather than the total expenditure distribution to focus on the effects of economic growth on the poor. These censored distributions are expressed in terms of normalized poverty gaps, thus allowing the use of the FGT class of poverty indices. For each index ($\alpha=0, 1, 2$) an equally distributed equivalent (EDE) income, defined by Atkinson (1970) as the “level of income per head which if equally distributed would give the same level of social welfare⁵ as the present distribution”, is computed.

As suggested by the author we then compute counterfactual growth patterns (γ_t^*) which are used as benchmarks. In the “equitable growth” scenario the counterfactual growth rate used is the average growth rate of expenditure of the entire population while in the “pro-poor growth” scenario we compute the mean expenditure growth rate of the population that permits to halve poverty between 1997⁶ and 2015.

⁵ For our analysis the level of welfare corresponds to the value of the poverty indices. For instance when $\alpha=1$, the EDE expenditure is simply the average of the expenditure of the poor.

⁶ We take 1997 as a starting year rather than 1990 as is usually the case in MDG analyses because we do not have information on poverty before 1997 in Syria (first household survey available). If we assume that the decrease of poverty is linear, halving poverty between 1997 and 2015 would mean a decrease of poverty by 21% between 1997 and 2010.

To assess the pro-poorness of growth we compare the observed growth of the EDE expenditures between 1997 and 2004 with the two counterfactuals defined above. Bibi defines Δ and Ψ as follows:

$$\Delta(x_t) = \gamma(x_t) - \gamma(x_t^*) \quad (1)$$

$$\psi(x_t) = \left(\frac{\gamma(x_t)}{\gamma(x_t^*)} \right)^\delta \quad (2)$$

where : γ is the rate of growth of the welfare indicator⁷

x_t is the actual welfare indicator

x_t^* is the counterfactual welfare indicator

and $\delta = -1$ during an economic recession and 1 otherwise.

The main finding is that growth has not been equitable between 1997 and 2004 ($\Psi < 1$ for $\alpha=0$), which means that the expenditure of the poor has grown less than the average expenditure. Moreover, we find that the poorest have benefited less than from a hypothetical equitable growth ($\Psi < 1$ for $\alpha=1, 2$) which confirms that growth was highly inequitable in Syria during that period. Furthermore, when we introduce the objective of halving poverty in 2015 as a benchmark, our results confirm that growth has been not been during the period of investigation.

Table 5. Pro-Poor Growth indicators for Syria

	Equitable growth (Individual PL)	Halve poverty (Individual PL)
μ_t^*	1.88 (0.10)	0.96 (0.05)
$\Delta(y_t(\mathbf{P}_{0,t}(z)))$	-0.98 (0.12)	-0.08 (0.12)
$\Psi(y_t(\mathbf{P}_{0,t}(z)))$	0.48 (0.06)	0.92 (0.12)
$\mu(y_{1,t}^*(z))$	0.17 (0.01)	0.10 (0.00)
$\Delta(y_{1,t}(z))$	-0.07 (0.01)	0.01 (0.01)
$\Psi(y_{1,t}(z))$	0.62 (0.07)	1.10 (0.12)
$\mu(E_{2,t}^*(z))$	0.20 (0.01)	0.10 (0.01)
$\Delta(E_{2,t}(z))$	-0.05 (0.03)	0.96 (0.05)
$\Psi(E_{2,t}(z))$	0.70 (0.10)	-0.08 (0.12)

⁷ We remind that expenditures are used as a welfare variable in this study.

At the regional level

Table 6 shows that growth has not been equitable in any of the Syrian regions. Moreover, the mean expenditure growth is always higher in the urban areas, the difference reaching 2.33% in the North-Eastern region where the average expenditure in the rural areas has decreased between 1997 and 2004.

Table 6. Equitable Growth Indicators for Syria (regional level)

	Equitable growth (Individual Poverty Lines)							
	Southern		North-Eastern		Middle		Coastal	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
μ_t^*	3.06 (0.25)	-0.12 (0.21)	3.18 (0.23)	-0.84 (0.20)	4.71 (0.41)	3.41 (0.32)	2.51 (0.49)	0.76 (0.44)
$\Delta(y_t(\mathbf{P}_{0,t}(z)))$	-0.60 (0.43)	1.18 (0.34)	-1.92 (0.24)	-0.36 (0.21)	-1.43 (0.48)	-1.17 (0.45)	-2.02 (0.64)	-0.79 (0.57)
$\Psi(y_t(\mathbf{P}_{0,t}(z)))$	0.81 (0.14)	3.02 (7.43)	0.40 (0.06)	0.71 (0.17)	0.70 (0.09)	0.66 (0.12)	0.19 (0.24)	-0.38 (2.41)
$\mu(y_{1,t}^*(z))$	0.19 (0.02)	-0.02 (0.03)	0.27 (0.02)	-0.11 (0.03)	0.46 (0.05)	0.35 (0.04)	0.15 (0.03)	0.05 (0.03)
$\Delta(y_{1,t}(z))$	-0.05 (0.02)	0.10 (0.04)	-0.08 (0.02)	0.01 (0.04)	-0.09 (0.04)	-0.02 (0.04)	-0.15 (0.05)	-0.07 (0.05)
$\Psi(y_{1,t}(z))$	0.73 (0.12)	5.02 (34.59)	0.68 (0.09)	1.35 (0.93)	0.80 (0.09)	0.94 (0.13)	-0.04 (0.43)	-1.13 (3.57)
$\mu(E_{2,t}^*(z))$	0.33 (0.03)	-0.02 (0.03)	0.32 (0.03)	-0.09 (0.02)	0.53 (0.05)	0.34 (0.04)	0.27 (0.06)	0.08 (0.05)
$\Delta(E_{2,t}(z))$	-0.25 (0.06)	0.04 (0.06)	-0.01 (0.06)	0.16 (0.06)	-0.18 (0.09)	0.07 (0.10)	-0.31 (0.09)	-0.14 (0.09)
$\Psi(E_{2,t}(z))$	0.42 (0.16)	4.75 (36.97)	0.85 (0.14)	2.03 (18.94)	0.72 (0.12)	1.07 (0.21)	-0.12 (0.38)	-1.53 (4.32)

If we take the objective of halving poverty in 2015 as a benchmark, growth has been pro-poor in terms of poverty incidence in the Southern urban, North-Eastern urban, Middle urban and rural regions. We obtain the same results in terms poverty depth and in terms of poverty severity except for the South urban.

Table 7. Pro-Poor Growth Indicators for Syria (regional level)

	Halve poverty (Individual Poverty Lines)							
	Southern		North-Eastern		Middle		Coastal	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
μ_t^*	0.96 (0.11)	1.00 (0.11)	0.98 (0.08)	0.97 (0.14)	1.04 (0.14)	1.15 (0.23)	0.88 (0.19)	0.73 (0.22)
$\Delta(y_{it}(\mathbf{P}_{0,t}(z)))$	1.40 (0.33)	-0.09 (0.20)	0.25 (0.16)	-2.23 (0.27)	1.98 (0.43)	0.96 (0.33)	-0.41 (0.46)	-0.82 (0.57)
$\Psi(y_{it}(\mathbf{P}_{0,t}(z)))$	2.46 (0.34)	0.91 (0.21)	1.25 (0.17)	-1.31 (0.24)	2.94 (0.51)	1.88 (0.41)	0.47 (0.61)	-0.15 (0.78)
$\mu(y_{1,t}^*(z))$	0.07 (0.01)	0.09 (0.01)	0.11 (0.01)	0.09 (0.01)	0.14 (0.02)	0.15 (0.03)	0.07 (0.02)	0.05 (0.01)
$\Delta(y_{1,t}(z))$	0.05 (0.02)	-0.02 (0.02)	0.08 (0.03)	-0.20 (0.04)	0.20 (0.04)	0.17 (0.04)	-0.07 (0.06)	-0.07 (0.04)
$\Psi(y_{1,t}(z))$	1.66 (0.20)	0.76 (0.26)	1.71 (0.25)	-1.19 (0.51)	2.38 (0.25)	2.24 (0.40)	-0.30 (1.21)	-0.70 (1.25)
$\mu(E_{2,t}^*(z))$	1.55 (0.25)	2.09 (0.36)	3.04 (0.43)	2.69 (0.51)	5.57 (1.97)	6.77 (2.42)	1.34 (0.43)	0.97 (0.37)
$\Delta(E_{2,t}(z))$	-0.16 (0.49)	-0.97 (0.73)	3.05 (0.97)	-3.42 (1.27)	5.00 (1.46)	6.51 (2.05)	-2.01 (1.27)	-1.71 (1.10)
$\Psi(E_{2,t}(z))$	0.91 (0.28)	0.52 (0.38)	1.98 (0.25)	-0.38 (0.63)	1.94 (0.21)	2.02 (0.32)	-0.84 (1.54)	-1.12 (1.70)

What about inequality?

Given that growth was not pro-poor in relative terms (Figure 3) and not equitable (Table 5) it is legitimate to observe the evolution of inequality in Syria between 1997 and 2004 as one of the main potential explanations of the weak pro-pooriness of growth.

Table 8. Difference between GINI indices in 1997 and in 2004

	Index Estimate	Std, Err,	T	P>t	[95% Conf, Interval]	
GINI 1997	32.5%	0.3%	100,831	0,000	31.8%	33.1%
GINI 2004	33.6%	0.2%	157,128	0,000	33.2%	34.0%
Difference	1.1%	0.4%	2,867	0,004	0.4%	1.9%

An analysis based on the comparison of the Gini coefficients at the National level in 1997 and 2004 shows a statistically significant increase by 1.1%. At the regional level the main increases are observed in the North-Eastern and the Middle regions (Table A2) and if we take into account the rural/urban divide, the bulk of the increase is observed in the rural areas (Table A4).

To check the robustness of our analysis of inequality evolution in Syria we extend it to the comparison of the difference between quantiles ratios. Indeed as Kakwani and Pernia (2000) remind us the “Gini index is not always the best measure for inequality because it gives maximum weight to those individuals who are near the mode of income distribution”.

Table 9. Difference between the quantile ratio index of inequality (P1=10% P2=90%)

	Index Estimate	Std. Err.	T	P>t	[95% Conf.	Interval]
Ratio 1997	24.8%	0.003	90.212	0.000	0.243	0.254
Ratio 2004	23.4%	0.002	111.563	0.000	0.230	0.238
Difference	-1.5%	0.003	-4.202	0.000	-0.021	-0.008

Table 10. Difference between the quantile ratio index of inequality (P1=20% P2=80%)

	Index Estimate	Std. Err.	T	P>t	[95% Conf.	Interval]
Ratio 1997	40.4%	0.003	125.599	0.000	0.398	0.410
Ratio 2004	39.2%	0.003	152.272	0.000	0.387	0.397
Difference	-1.3%	0.004	-3.036	0.002	-0.021	-0.004

When we compute the 10/90⁸ (Table 9) or the 20/80 (Table 10) quantile ratio indices of inequality we notice a statistically significant increase of inequality which confirms the results obtained with the Gini coefficient.

The analysis of the evolution of inequality at the regional level (Table A 2) coupled with the analysis of the regional average growth rates permits to understand the differentiation of performances in terms of poverty reduction at the regional levels. In the Middle Urban region high growth led to significant poverty reduction despite an increase in inequality. In the North-Eastern region the combination of an increase in inequality and the weak growth performances of its rural areas induced a high increase in poverty.

How to explain the observed evolution?

The challenge in what follows is to try to find the determinants of the observed evolution of poverty at the regional level, especially for the North-Eastern Rural region where most of the poor lived in 2004. Why did the urban areas generally perform better in terms of growth and poverty reduction? And why did the average expenditure (and income) decrease in the North-Eastern Rural region between 1996 and 2004?

The main macro-economic determinants of growth, inequality and poverty

Between 1996 and 2004 GDP growth per capita was relatively weak and volatile: 0.5% on average (Table 11), ranging between -6% (in 1999, year of a severe drought) and 4%. The sustained level of the population growth rate (2.6% on average) puts a heavy burden on the GDP per capita growth.

⁸ Ratio of the expenditure of the first decile and the last decile of the distribution.

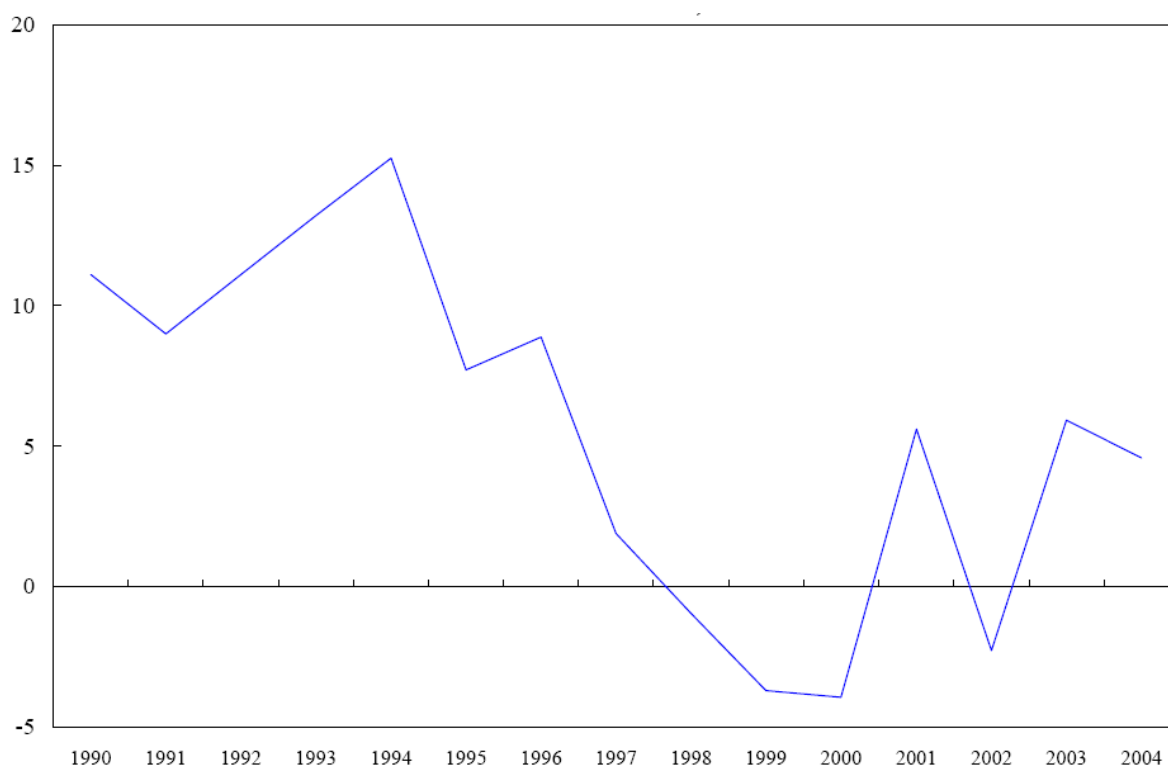
The evolution of per capita growth between 1996/1997 (2% / -1%) and 2003/2004 (-1% / 3%) shows an improvement due to the high level of GDP growth in 2004 (5.8%). This explains at least partly the aggregate expenditure increase observed (Table 5), given the low inflation rate in the studied period (Figure 5), one of the lowest in the MENA region according to Abu-Ismaïl (2005).

Table 11. Annual growth of some macroeconomic indicators, 1996-2004

	1996	1997	1998	1999	2000	2001	2002	2003	2004	Mean
GDP per capita growth	2	-1	4	-6	0	2	1	-1	3	0.5
GDP growth	4.4	1.8	6.3	-3.6	2.7	5.2	4.0	1.6	5.8	3.1
Population growth	2.5	2.4	2.4	2.4	2.6	2.7	2.8	2.9	3.1	2.6
Inflation rate	8.9	1.9	-1.0	-3.7	-3.9	3.4	-0.5	5.8	4.4	1.7

Source: WDI 2009

Figure 5. Consumer Price Inflation, 1990-2004



Source: IMF, Article IV (2005)

The objective of this paper is not to analyze the determinants of growth performance in Syria in the considered period⁹, but to understand the interactions between growth and poverty evolution at the regional and national levels. The analysis of the nature of growth could be helpful in this regard.

The analysis of the evolution of the sectoral composition of GDP reveals an increase of the share of oil production between 1996 (13%, Table 12) and 2004 (21%, Table 12) due to the increase of international oil prices since 2001, despite the decrease of the Syrian oil reserves. This increase has certainly had a traditional Dutch Disease impact on the Syrian economy (Abu-Ismaïl, 2005) but more importantly for our purpose it could explain the bias observed in favor of urban areas. This hypothesis is confirmed by the comparison of the shares of oil and agricultural products in GDP. Oil's contribution was less than half of agricultural contribution in 1996 while their contribution is almost similar in 2004.

Table 12. Oil and agriculture share in the GDP

	1996	1997	1998	1999	2000	2001	2002	2003	2004
Oil	13.0%	16.7%	13.5%	19.9%	28.2%	19.8%	22.7%	21.2%	21.3%
Agriculture	27.7%	25.8%	29.4%	24.3%	24.2%	26.3%	24.8%	24.8%	22.4%

Source: IMF (2005, 2009)

Given that oil, a capital intensive sector was the main engine of growth between 1996 and 2004, this could explain to a great extent the increase of inequality observed at the aggregate level and in the urban areas. Moreover, the increase of oil receipts from 1996 to 2004 (from 73 to 141 billion Syrian Pounds, according to IMF, 2005) allowed the Government to pursue its labor market policy consisting in hiring excess labor in the public sector to reduce unemployment (Brück, Binzel, and Handrich, 2007). According to Huitfeldt and Kabbani (2006) the public sector represented 28% of total employment and 75% of post secondary workers in 2003. This type of labor market policy (and social policy) contributes also to understand the bias in favor of urban areas in Syria since most of the public jobs are in urban areas.

Why such a weak performance in rural areas?

As Table 5 shows average expenditure growth in the rural regions varied between -0.84% in the North-Eastern Rural region to 3.4 in the Middle Rural region while average expenditure growth in the urban regions varied from 2.5 in the Coastal Urban region to 4.7% in the Middle Urban region. Given that agriculture is the main source of income of 56% of the total rural poor (El-Ghonemy, 2005) we focus our analysis on this sector in order to try to capture the main reasons behind the weak economic performance of the rural areas in terms of average expenditure growth.

⁹ Many papers already dealt with this issue including Abu-Ismaïl (2005).

Table 13. Total Value of Agricultural Production

	1996	1997	1998	1999	2000	2001	2002	2003	2004
Constant prices of 2000, mill. SP	203090	197218	241172	204771	228802	248531	260359	247098	247216
Current prices, mill. SP	191487	192162	232283	199415	228802	265623	276904	277284	278992

Source: Syria Statistical Yearbooks, Central Bureau of Statistics (2001, 2006)

The total value of agricultural production increased by 46% in nominal terms and 22% in real terms between 1996 and 2004 (Table 13). As the table shows the increase has not been regular due to the irregularity of rainfall with some particularly severe droughts such as in 1999. However, the performance of agricultural production does not explain the decrease of the average rural income in absolute terms observed in some regions.

According to El-Ghonemy (2005) three elements in the reform of agricultural policies may contribute to explain the observed evolution in the rural areas. First the sale of some large public farms to private landowners who switched to more capital-intensive production techniques; second the freezing of the land reform which was the main characteristic of the Syrian agricultural policies in the previous decades and third the reduction of the State intervention in inputs distribution and products marketing (except for strategic crops).

Ababsa (2005) provides a more detailed analysis of the State land privatization initiated in 2000. The main objective was to increase agricultural production and fight corruption in State farms. The State farms were distributed in plots of 3 ha (irrigated) and 8 ha (non irrigated). The movement of parceling that resulted from this land distribution did not last since a movement of resale allowed some big owners to constitute large domains. According to Aita (2009) this movement of “selling and grouping” was extended much beyond the State farms. The main consequence of this transformation of land structures is according to Aita (2009) the reduction of the labor force by 460,000 persons in the rural areas between 2003 and 2004, mainly in the North-Eastern region. The job losses in the agricultural sector led to a “massive rural-urban migration” and a reduction of average income in the rural areas, mainly in the North-Eastern rural region. An increase of agricultural productivity also resulted from this switch to a more-capital intensive production system (60% between 2001-2003 and 2005-2007 according to the author).

Conclusion

Syria has been characterized by a decrease of its poverty headcount in 2003/2004 by about one fifth of its level in 1996/97. The poverty gap and severity were also reduced by about one fourth and one third, respectively, of their levels in 1996/97. This has been achieved despite modest per capita growth rates thanks to the low poverty gap in Syria. However poverty reduction has been very uneven at the regional level. It was much more significant in the urban areas and in some regions such as the Middle region while it increased significantly in the North-East rural region.

Moreover, the article concludes that growth was pro-poor in “weak absolute” terms but that it was neither pro-poor in relative terms nor in “strong absolute” terms. The use of Bibi’s index of pro-poorness assessment shows that growth was not equitable at both national and regional levels. When the objective of halving poverty in 2015 is used as a benchmark, growth is pro-poor neither at the national nor for the majority of the regions.

The increase of inequality at the national level mainly in rural areas provides one of the explanations for the lack of pro-poorness of growth in Syria during the 1996-2004 period. The analysis of the evolution of inequality at the regional level coupled with the analysis of the regional average growth rates permits to understand the differentiation of performances in terms of poverty reduction at the regional levels.

The main other characteristic of the Syrian growth and poverty performance is the widening of the gap between urban and rural areas. This could be mainly due to a pattern of growth where oil played an increasing role and agriculture a decreasing one. Agricultural and land policy reforms could have had a negative impact on poverty in some rural regions, such as the North-Eastern rural region, despite their positive effect on agricultural productivity.

The availability of data constitutes a limit for some possible improvements of this paper. The first constraint is that we had to limit our analysis up to 2004 which impeded us from taking into account more recent developments in Syria’s economic policies. The second constraint was the absence of detailed data on education and health to conduct a multidimensional analysis on pro-poor growth such as those realized by Gunther, Marouani and Raffinot (2007) or Klasen (2008). The third constraint was the difficulty to find information on regional policies which could help us understand better the differentiated evolution of growth and poverty at the regional levels. Finally a deeper analysis of the efficiency/equity trade-off that seems to have been taking place in rural areas cannot be realized without the availability of detailed agricultural surveys.

On the technical side a possible improvement of this research could consist in elaborating a general equilibrium model of the Syrian economy including a microsimulation module based on household surveys. This model could be used for retrospective simulations to better disentangle the effects of the main Government economic and social policies and changes in the international economic environment (eg. oil prices). It could also be useful for prospective simulations to assess the impact of the current policies as well as counterfactual ones on growth, inequality and poverty in Syria.

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Appendix

Table A 1. Foster-Greer-Thorbecke poverty indices, FGT by region

	1997			2004		
	P0	P1	P2	P0	P1	P2
South urban	11.04%	2.15%	0.65%	6.00%	1.24%	0.45%
South rural	13.48%	2.55%	0.74%	10.53%	2.02%	0.64%
North-East urban	15.47%	3.07%	0.97%	11.28%	1.82%	0.45%
North-East rural	13.81%	2.89%	0.98%	18.07%	3.54%	1.02%
Middle urban	19.52%	4.11%	1.28%	9.09%	1.67%	0.48%
Middle rural	18.60%	4.12%	1.42%	11.12%	1.82%	0.50%
Coast urban	10.71%	2.07%	0.60%	9.61%	2.04%	0.63%
Coast rural	9.82%	1.79%	0.51%	9.90%	1.95%	0.59%

Figure A 1. Growth Incidence Curve for the South urban region

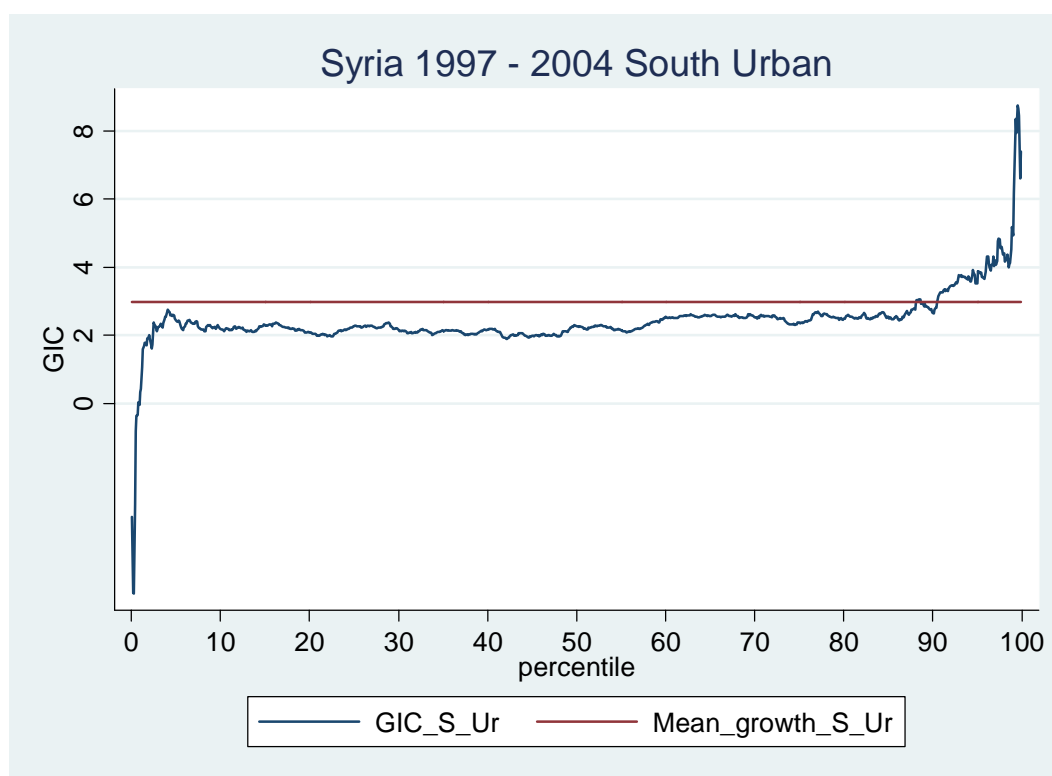


Figure A 2. Absolute expenditure variation curve for the South urban region

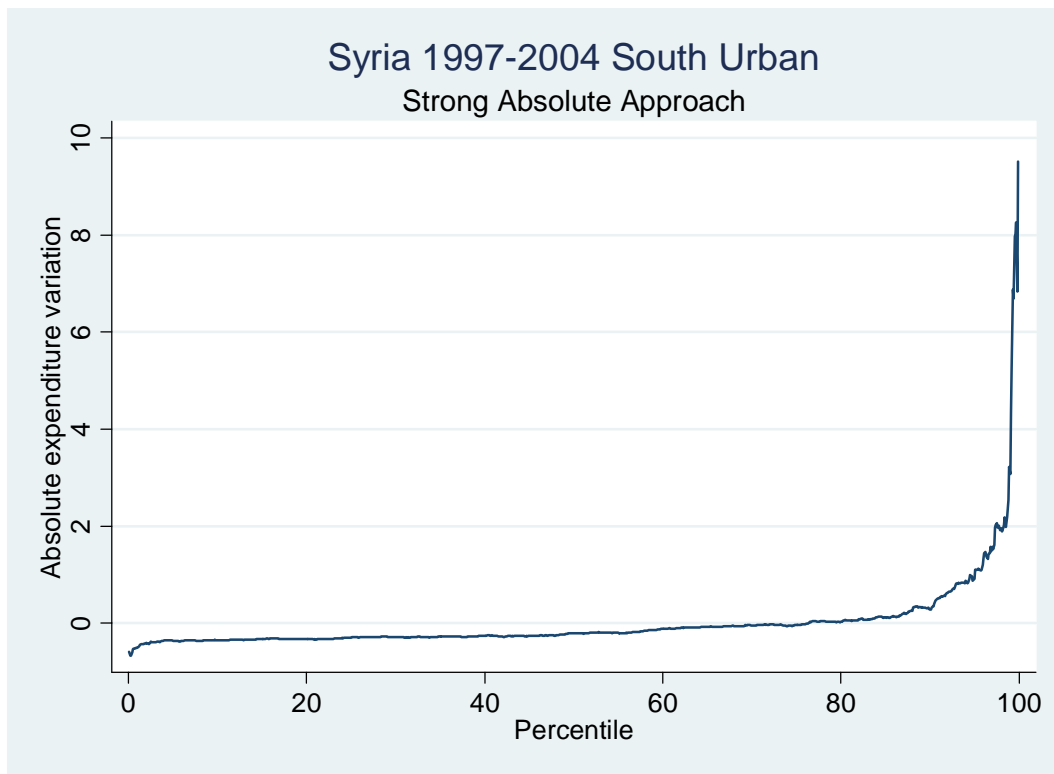


Figure A 3. Growth Incidence Curve for the South rural region

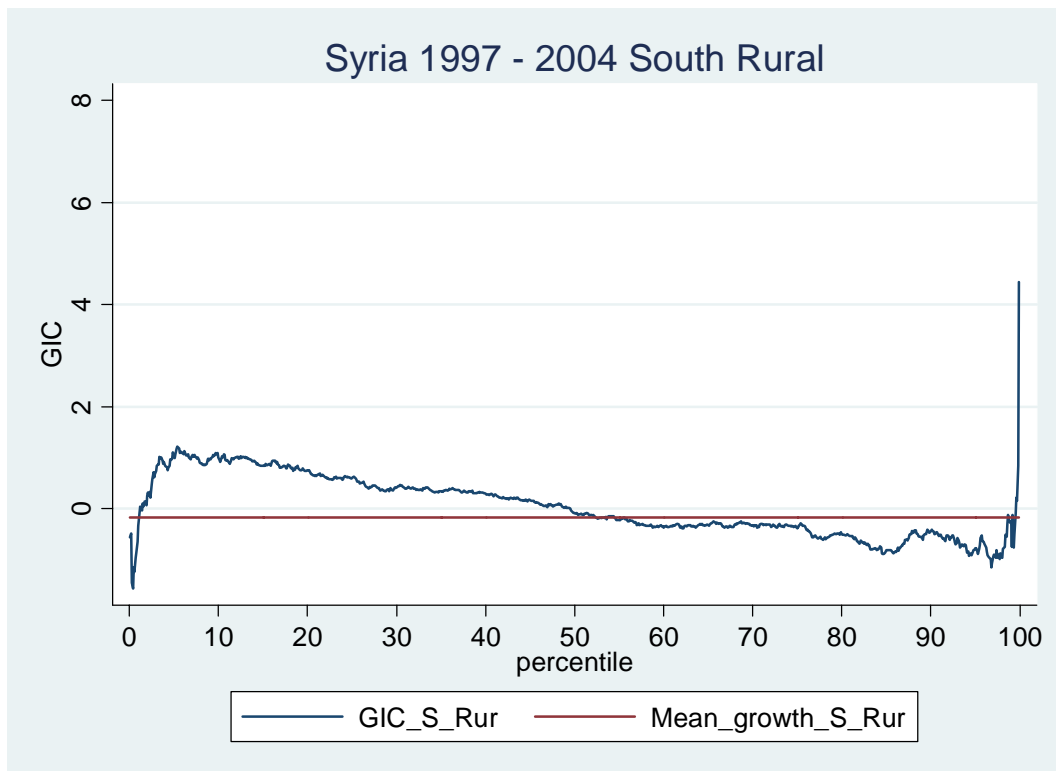


Figure A 4. Absolute expenditure variation curve for the South rural region

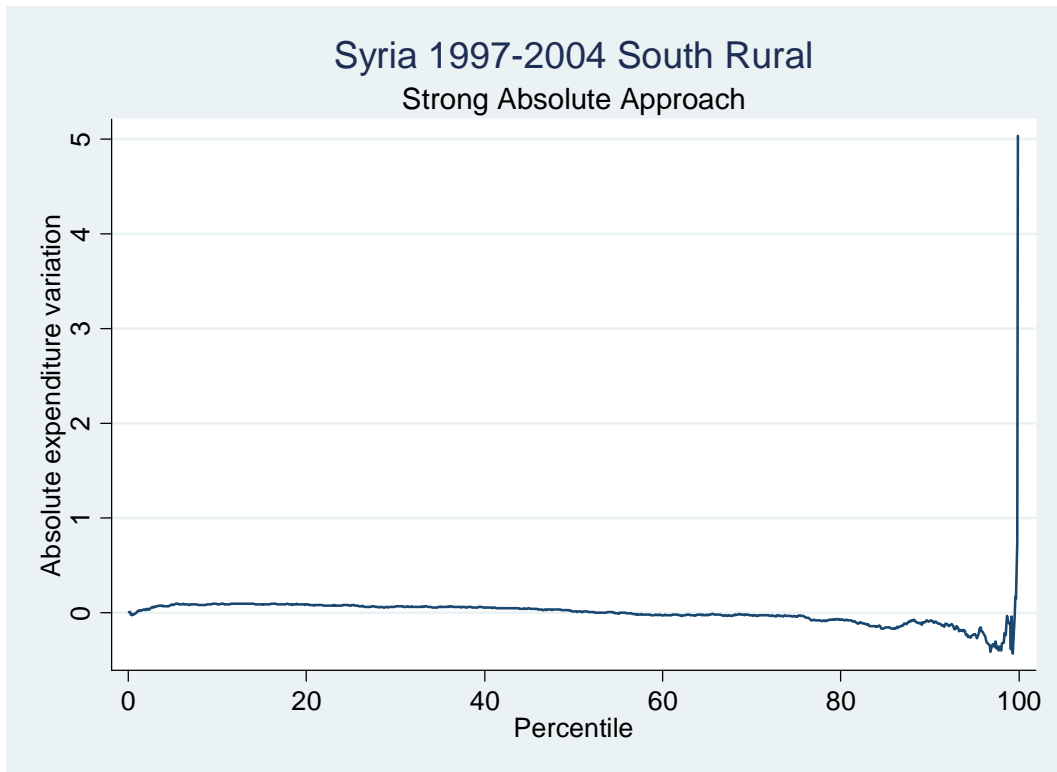


Figure A 5. Growth Incidence Curve for the North-Eastern urban region

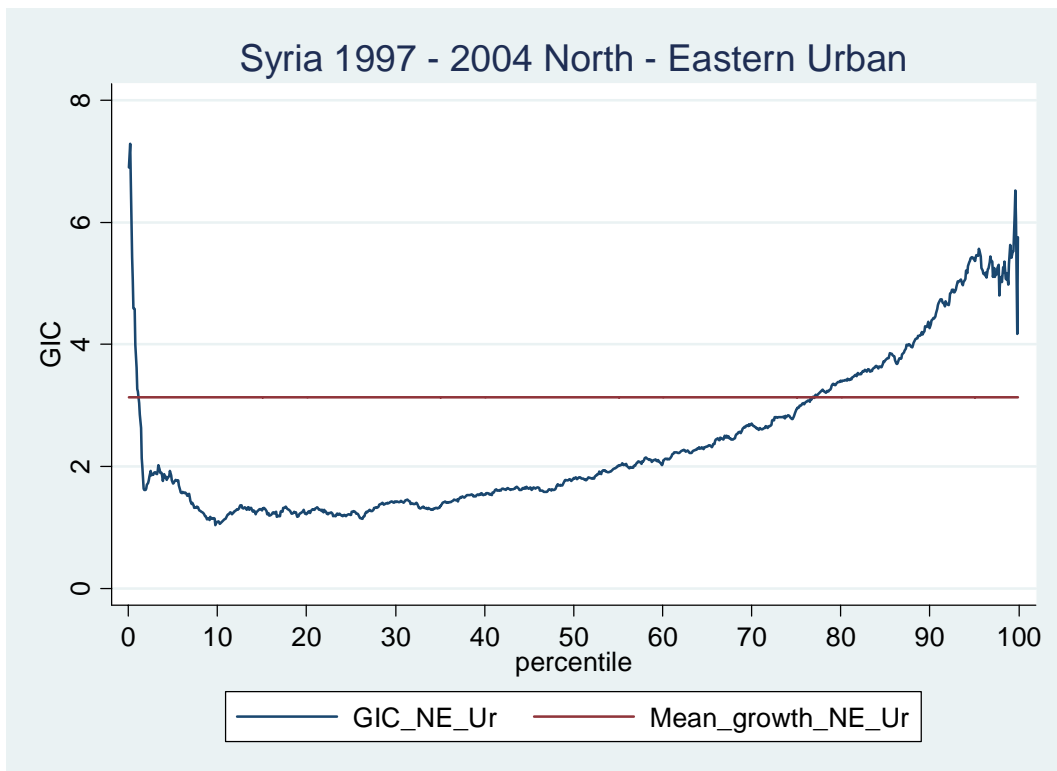


Figure A 6. Absolute expenditure variation curve for the North-Eastern urban region

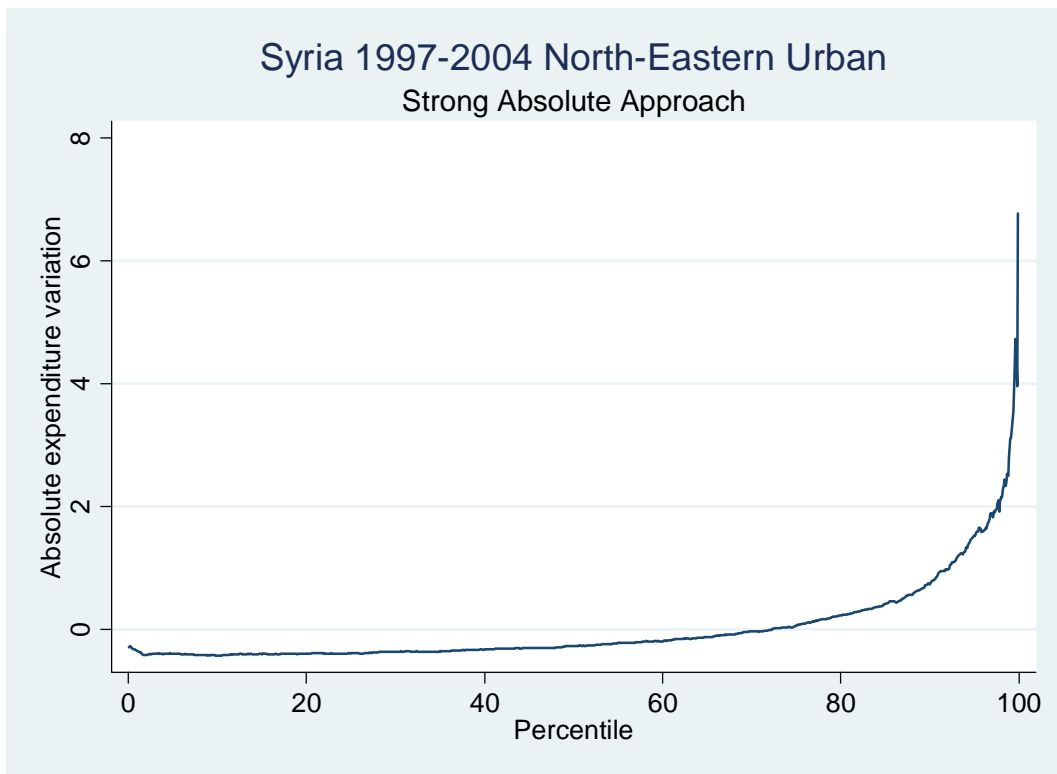


Figure A 7. Growth Incidence Curve for the North-Eastern rural region

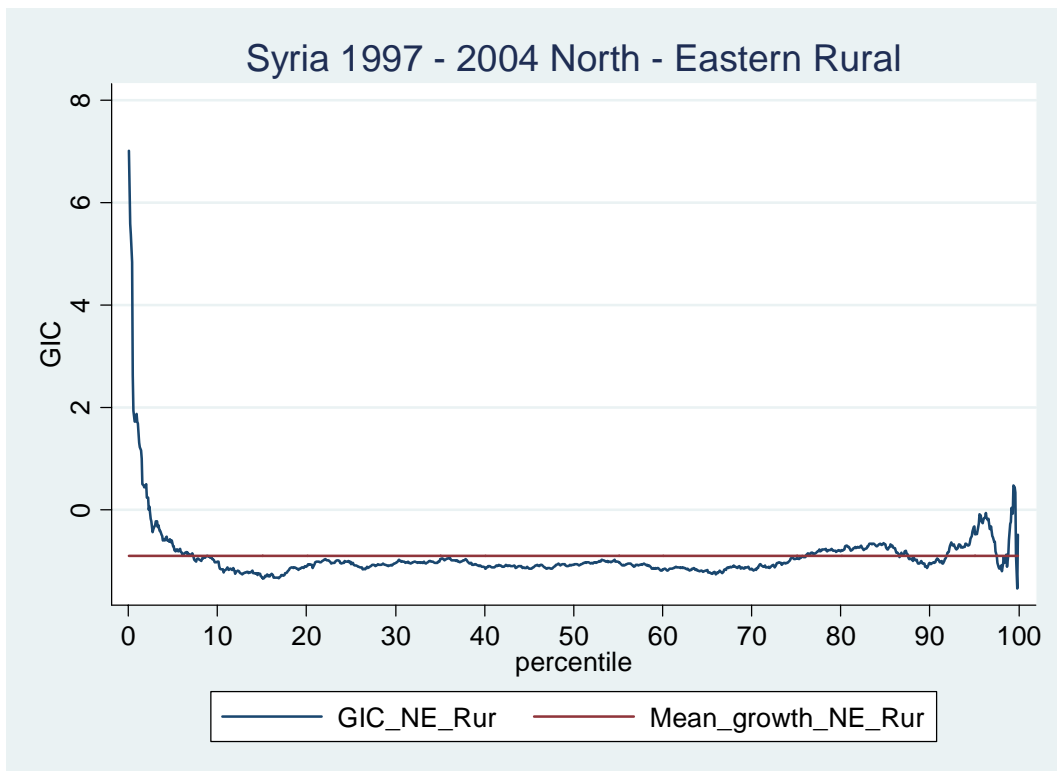


Figure A 8. Absolute expenditure variation curve for the North-Eastern rural region

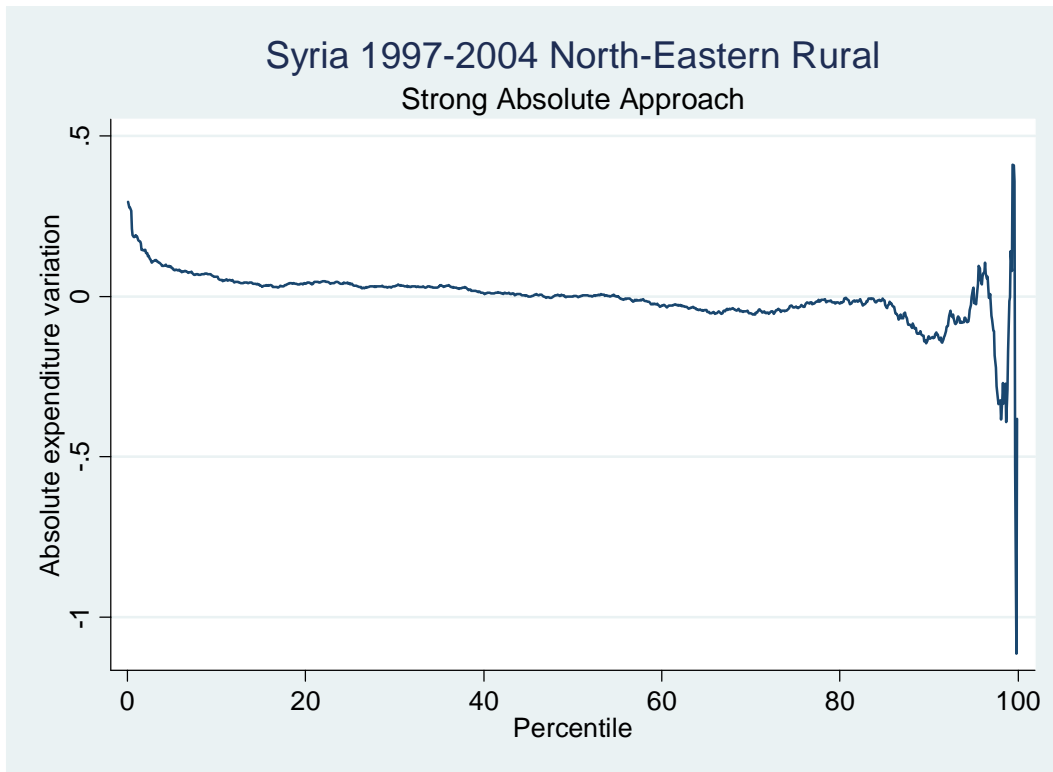


Figure A 9. Growth Incidence Curve for the Middle urban region

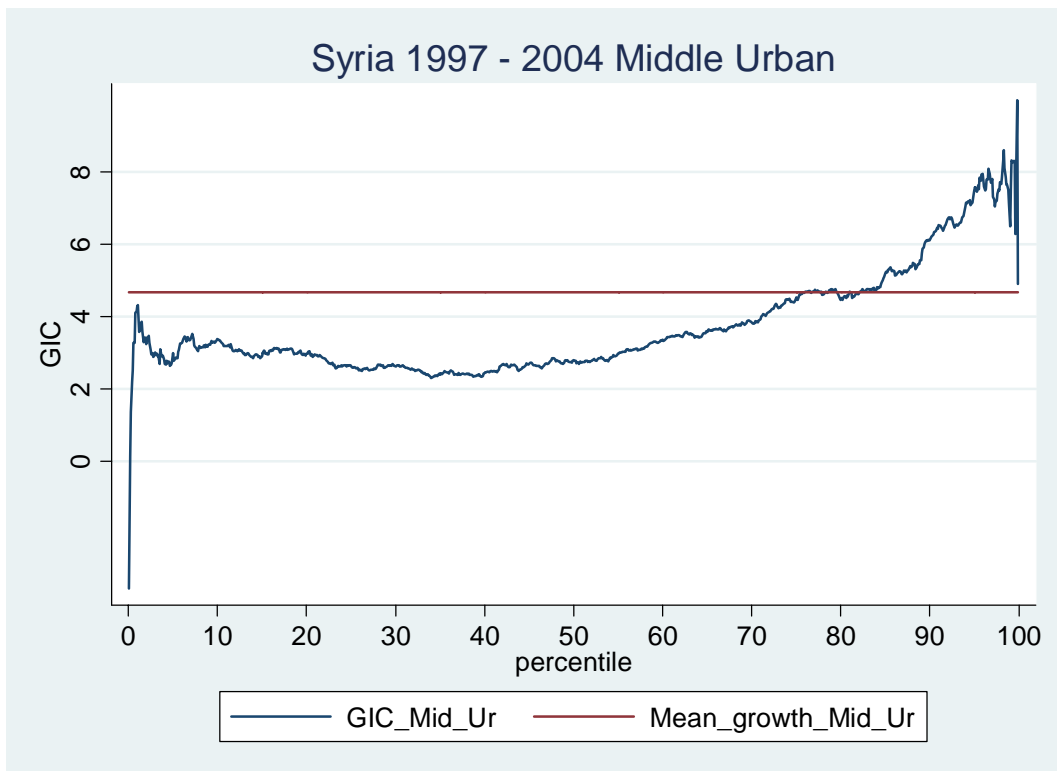


Figure A 10. Absolute expenditure variation curve for the Middle urban region

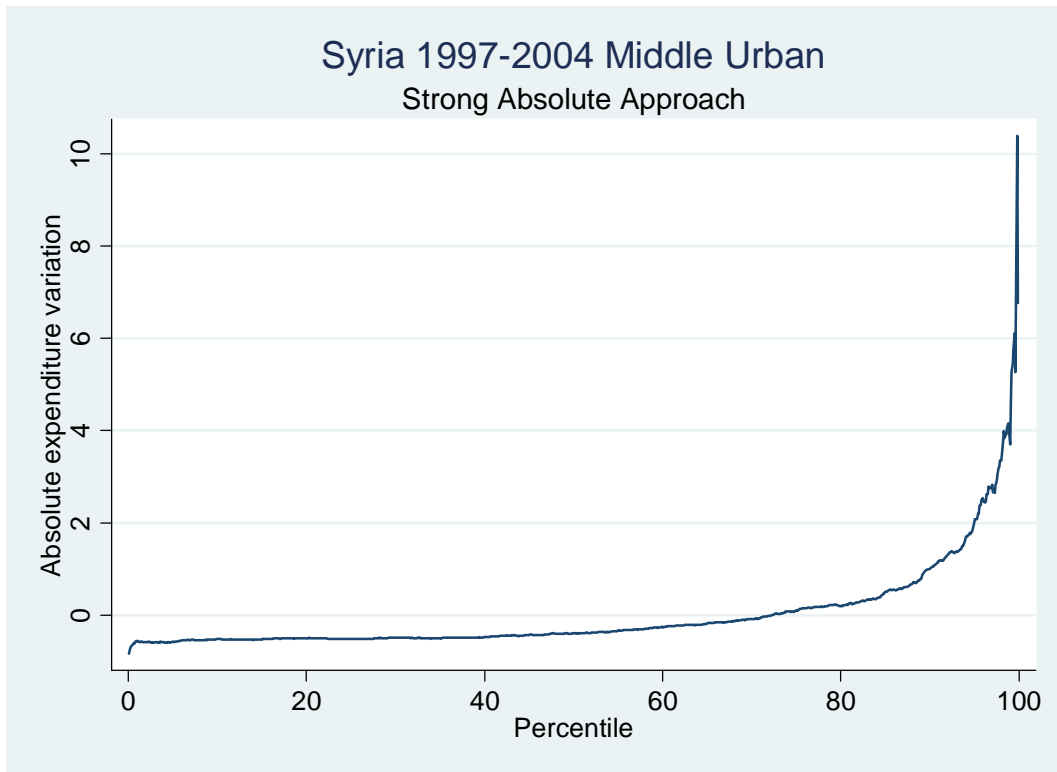


Figure A 11. Growth Incidence Curve for the Middle rural region

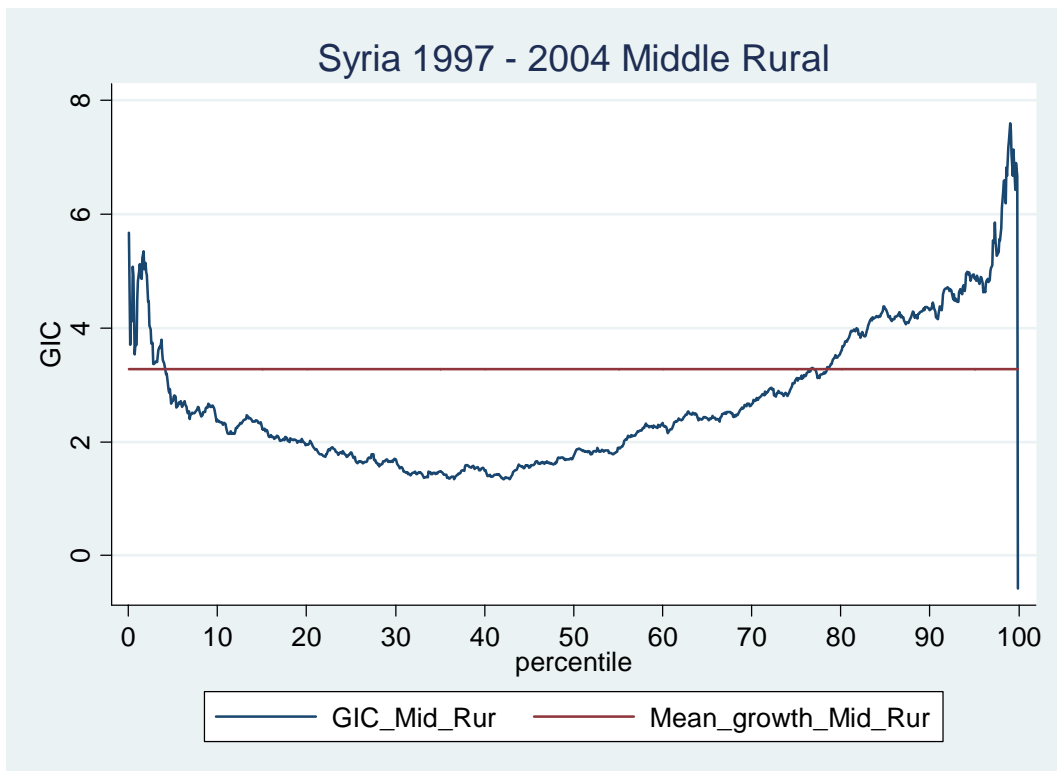


Figure A 12. Absolute expenditure variation curve for the Middle rural region

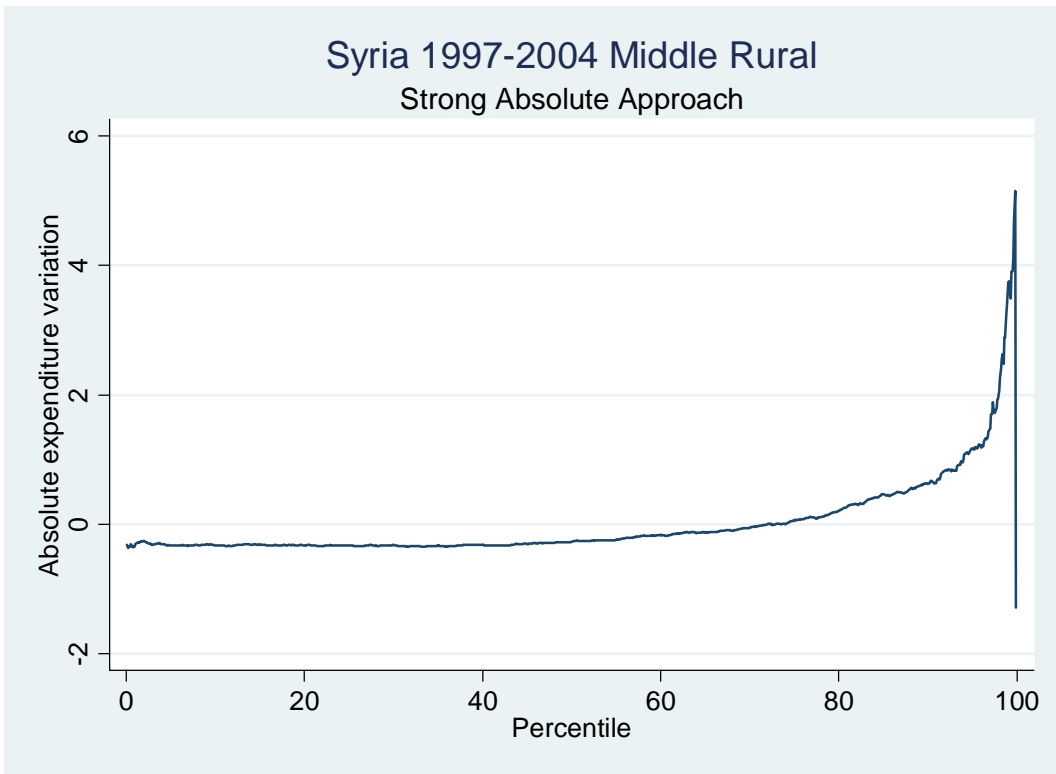


Figure A 13. Growth Incidence Curve for the Coast urban region

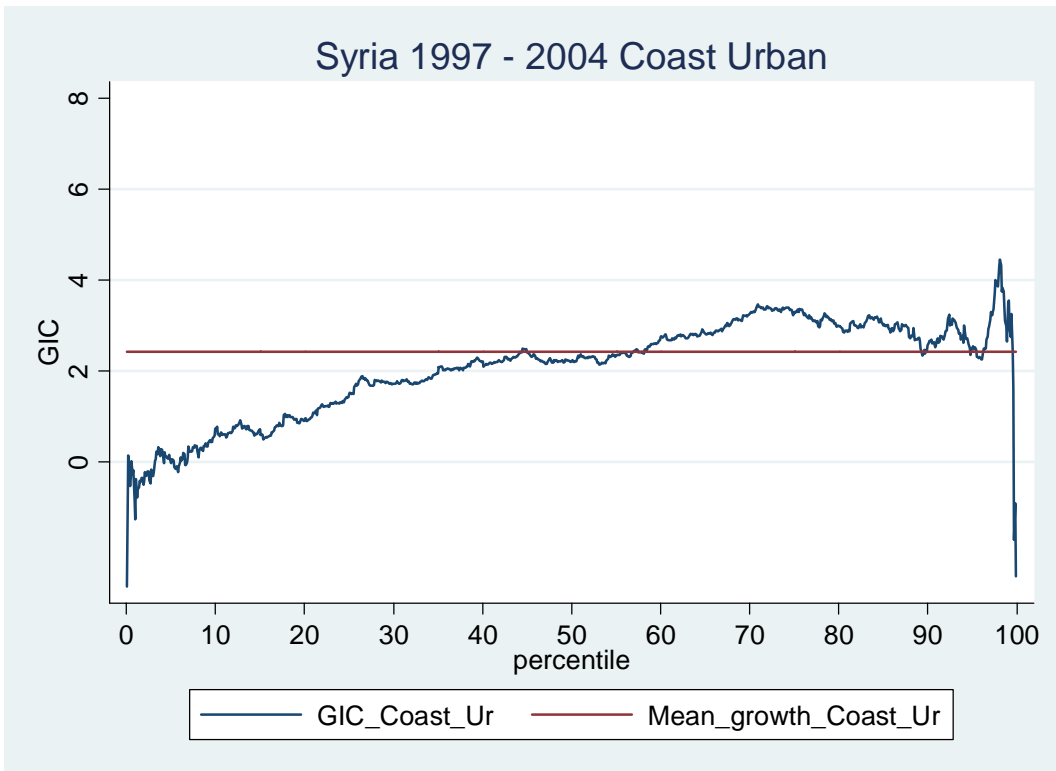


Figure A 14. Absolute expenditure variation curve for the Coast urban region

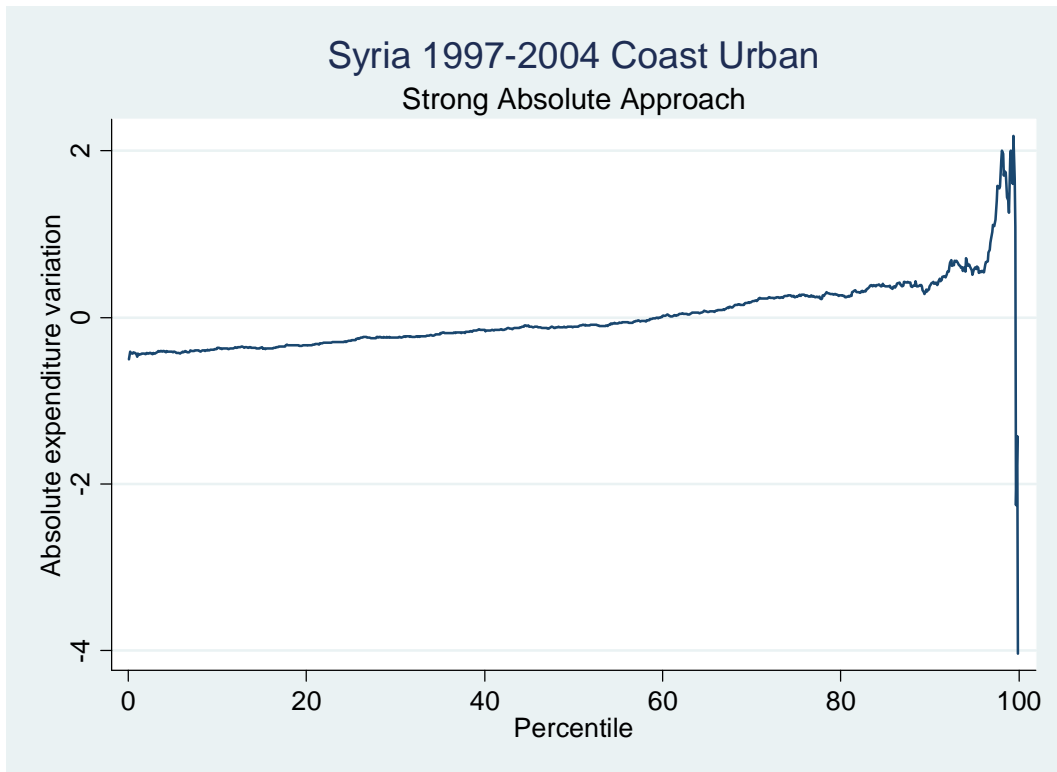


Figure A 15. Growth Incidence Curve for the Coast rural region

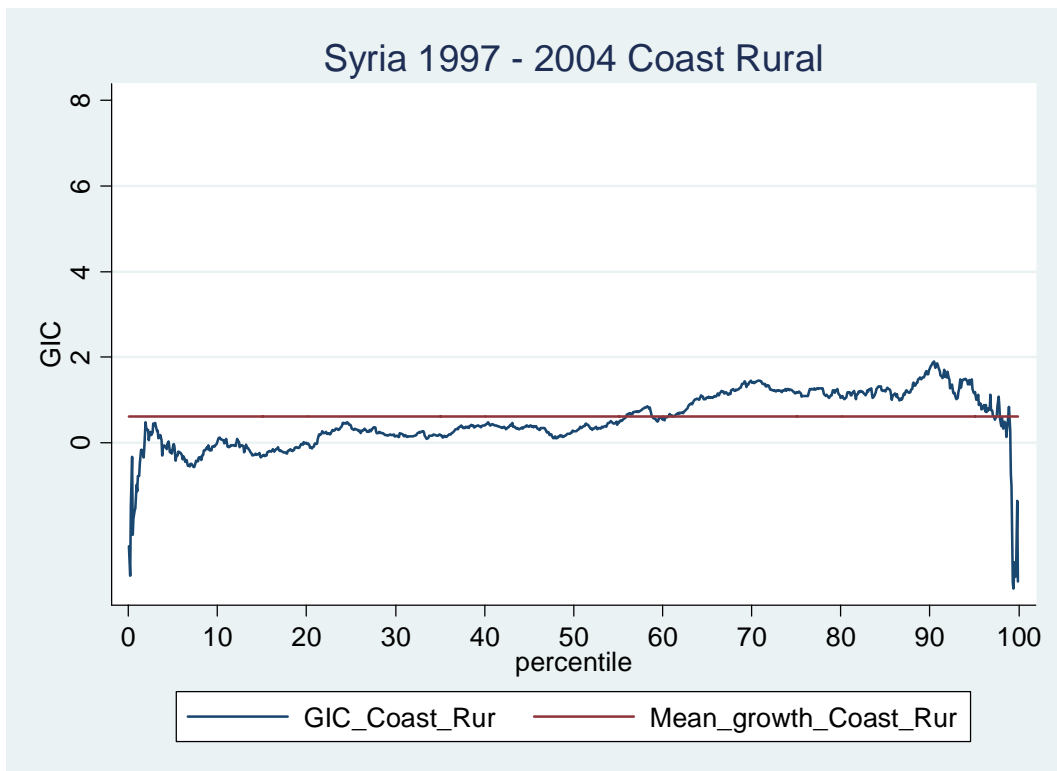


Figure A 16. Absolute expenditure variation curve for the Coast rural region

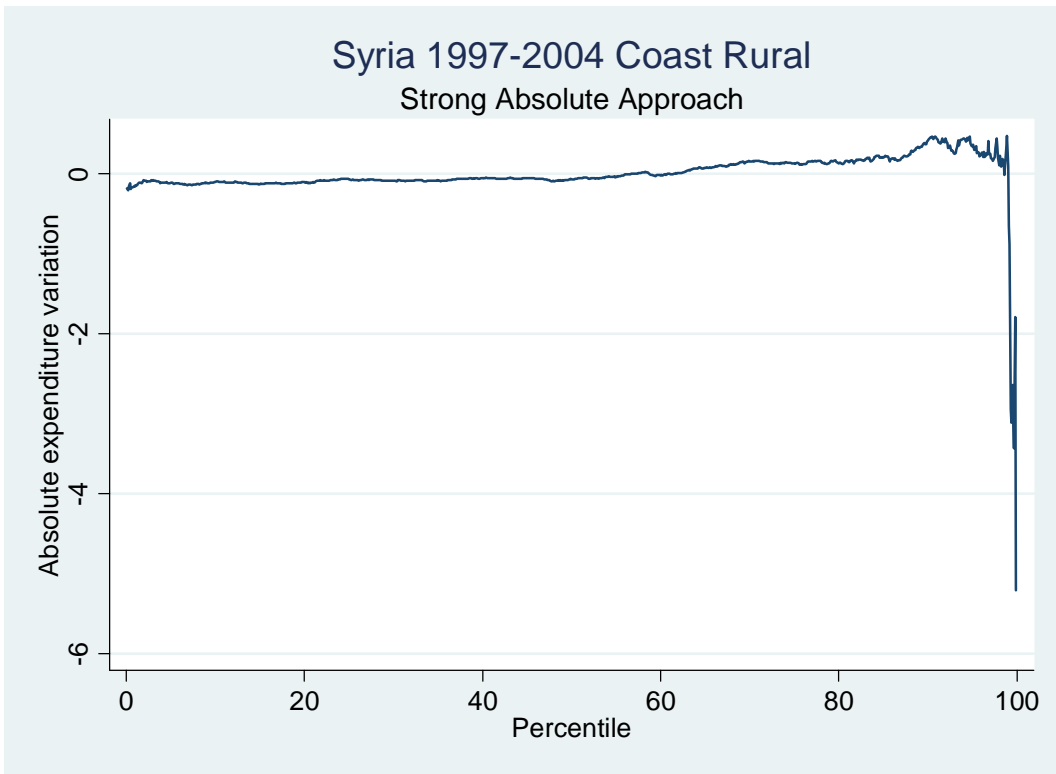


Figure A 17. Difference between the Lorenz curves in 1997 and 2004

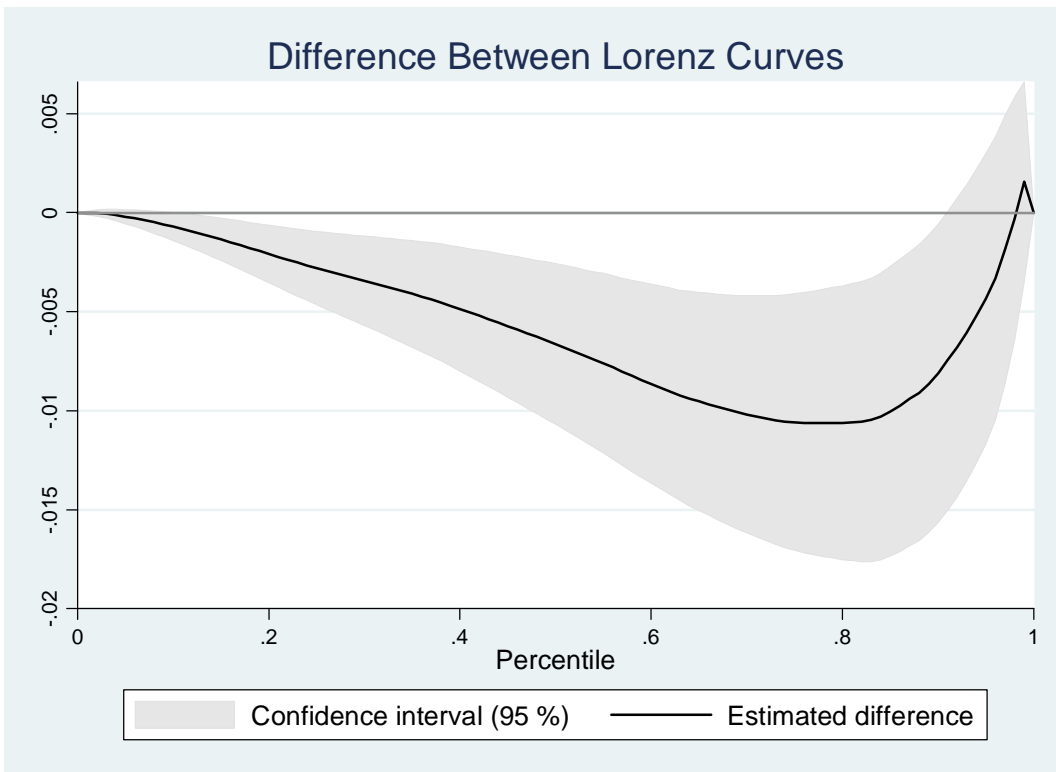


Table A2. Difference between the GINI indices for the four regions

	GINI	Index Estimate	Std, Err,	T	P>t	[95% Conf, Interval]	
South	1997	31.6%	0.005	65.040	0.000	0.307	0.326
	2004	32.0%	0.004	80.465	0.000	0.313	0.328
	Difference	0.4%	0.006	0.669	0.504	-0.008	0.017
North-Eastern	1997	33.1%	0.005	63.484	0.000	0.321	0.342
	2004	34.4%	0.003	107.423	0.000	0.337	0.350
	Difference	1.2%	0.006	2.006	0.045	0.000	0.024
Middle	1997	31.6%	0.009	33.842	0.000	0.297	0.334
	2004	34.3%	0.006	59.724	0.000	0.332	0.354
	Difference	2.8%	0.011	2.516	0.012	0.006	0.049
Coast	1997	32.4%	0.009	35.457	0.000	0.306	0.342
	2004	31.7%	0.005	62.606	0.000	0.307	0.327
	Difference	-0.7%	0.010	-0.664	0.507	-0.027	0.014

Table A3. Difference between the GINI indices for the urban region

	Index Estimate	Std. Err.	t	P>t	[95% Conf. Interval]	
GINI 1997	33.0%	0.005	68.050	0.000	0.321	0.340
GINI 2004	33.5%	0.003	127.277	0.000	0.330	0.340
Difference	0.5%	0.006	0.916	0.360	-0.006	0.016

Table A4. Difference between the GINI indices for the rural region

	Index Estimate	Std. Err.	T	P>t	[95% Conf. Interval]	
GINI 1997	31.9%	0.004	75.827	0.000	0.311	0.327
GINI 2004	33.0%	0.004	94.102	0.000	0.324	0.337
Difference	1.1%	0.005	2.069	0.039	0.001	0.022