AN ASSESSMENT OF THE MACROECONOMIC DETERMINANTS OF INEQUALITY

by

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Abstract

This paper provides an assessment of the determinants of income inequality in a broader macroeconomic context. In particular the hypothesis that income inequality is related to fundamentals affecting economic growth is examined.

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I. INTRODUCTION

Why do different countries have such different levels of, and trend rates in inequality? In his classic 1955 paper Kuznets advanced the theoretical conjecture that a nation's income distribution becomes less, rather than more, egalitarian as its level of development increases. Only after a nation has passed some threshold level, growth brings about more equality. In other words Kuznets' hypothesis states that the evolution of income distribution follows an inverted U-shaped curve: economic expansion results in relatively more inequality in the initial stages of a nation's development, and relatively more equality at advanced stages.

Kuznets' hypothesis was based on the theories of economic growth prevalent in the fifties together with empirical observation. Those theories explained growth as a process of shifts of the working force from the traditional rural to a more productive industrial sector. The empirical observation was that the relative difference in per capita income between the rural and urban populations did not necessary drift downward in the process of economic growth. Under these assumptions, Kuznets conjectured, the development of a typical country was likely to be coupled with both higher per capita incomes and greater income inequality, as it meant that over time an increasingly higher fraction of the population would be located in the more productive industrial sector.

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In recent years, however, the classic Kuznets hypothesis has come under attack. In particular, Adelman and Robinson [1989] or Anand and Kanbur [1993] among others, have documented evidence suggesting that there is little—or at least very inconclusive—empirical support for Kuznets' claim, although many economists take it to be a stylized fact.

This paper takes Simon Kuznets nonetheless seriously, albeit much weaker interpreted. We advance the hypothesis that per capita GDP may not be a sufficient metric for the level of "development" because the underlying economic growth fundamentals differ significantly across countries. It has indeed been established in both the theoretical and empirical literature that growth fundamentals, such as the investment share in human, physical, and knowledge capital for instance, have different impacts on economies' long-run performance (e.g. Romer [1990], Rebello [1991], Mankiw, Romer and Weil [1992], Levine and Renelt [1992], Nonneman and Vanhoudt [1996] among many others). It therefore might well be the case that two countries are observed which reached a similar level of per capita income, but by focusing on different fundamentals. If those economic fundamentals have different consequences for the distribution of the additional income generated by the growth process, the inconclusive results of regressions of measures of inequality on per capita income is not surprisingly, for important control variables have been omitted.

In this paper we will therefore evaluate Kuznets' hypothesis empirically within the context of a formal model in which both per capita income and inequality are endogenously determined. We believe that our approach represents the first attempt in this respect, and that a rescued, though weaker, version of the Kuznets curve may be a valuable contribution to policy debates on the issue of inequality.

II. A SIMPLE MODEL

In this section we present a simple model which will generate inequality and income. Following Kuznets [1955] there are two types of labor in the economy. In the present version, however, there will not be such things as rural and urban labor. We will rather focus on unskilled labor (L_u), human (H) and physical (K) capital as factors of production. We assume that there exist capital market imperfections as suggested in Aghion and Bolton [1996], which form the basis of credit (borrowing) constraints for a fraction (1-a) of the workforce (L). These people cannot invest in formal training and the remaining fraction (a) henceforth possesses the full stock of human capital. The weights (a) and (1-a)—non-zero and strictly smaller than 1—are kept exogenous[1].

We assume that production in the goods producing sector takes place according to a Mankiw, Romer, Weil [1992] type of Cobb-Douglas production function:

$$Y_t = A_t \cdot K_t^{\alpha} \cdot H_t^{\beta} \cdot L_{u_t}^{1-\alpha-\beta} \quad (1)$$

with $\alpha+\beta<1$, $L_u=(1-a)\ L$, and A a factor which grows exogenously at rate x and influences the productivity of the workers, for instance because of technological change. It will be convenient for further use to express equation (1) relative to the working force. If we define y as Y/L, k as K/L and h as H/L, then the average labor productivity at any time equals:

$$y_t = A_t \cdot k_t^{\alpha} \cdot h_t^{\beta} \cdot (1-a)^{1-\alpha-\beta} \quad (2).$$

The law of motion for the per capita stock of physical capital is standard[2]:

$$\dot{k}_t = s_k \cdot y_t - (n + x + \delta) \cdot k_t \quad (3).$$

As in Mankiw, Romer and Weil [1992], we allow the average stock of human capital (h) to evolve over time in a similar way:

[1] The interested reader can find an excellent exposition on microeconomic underpinned theory in this respect in Aghion and Howitt, Ch. 9 [1998]. Because the fractions (a) and (1-a) will be constants in the steady state if endogenized, the assumed exogeneity will not influence the cross-country steady state regressions later on.

$$\dot{h}_t = s_h \cdot y_t - (n + x + \delta) \cdot h_t \qquad (4)$$

which basically reflects that the skilled workers need to forgo a fraction s_h of average output per person (directly or indirectly through taxes) in order to improve their level of human capital, and thus the economy-wide average level of human capital.

We will further assume there exists a balanced growth path on which all the lower case variables grow at a zero rate. The loci for which h and k are constant then are:

$$\begin{aligned} k_* &= A^{\frac{1}{1-\alpha}} \cdot s_k^{\frac{1}{1-\alpha}} \cdot h_*^{\frac{\beta}{1-\alpha}} \cdot (n + x + \delta)^{-\frac{1}{1-\alpha}} \cdot (1-a)^{\frac{1-\alpha-\beta}{1-\alpha}} \\ h_* &= A^{\frac{1}{1-\beta}} \cdot s_h^{\frac{1}{1-\beta}} \cdot k_*^{\frac{\alpha}{1-\beta}} \cdot (n + x + \delta)^{-\frac{1}{1-\beta}} \cdot (1-a)^{\frac{1-\alpha-\beta}{1-\beta}} \end{aligned} \qquad (5)$$

which jointly determine a unique and stable steady state. Solving the above system (5) yields reduced form expressions for k_*, and h_* which are solely functions of the underlying exogenous economic fundamentals:

$$\begin{aligned} \ln(k_*) &= \frac{1}{1-\alpha-\beta} \cdot \ln(A) + \frac{1-\beta}{1-\alpha-\beta} \cdot \ln(s_k) + \frac{\beta}{1-\alpha-\beta} \cdot \ln(s_h) \\ &\quad - \frac{1}{1-\alpha-\beta} \cdot \ln(n + x + \delta) + \ln(1-a) \\ \ln(h_*) &= \frac{1}{1-\alpha-\beta} \cdot \ln(A) + \frac{\alpha}{1-\alpha-\beta} \cdot \ln(s_k) + \frac{1-\alpha}{1-\alpha-\beta} \cdot \ln(s_h) \\ &\quad - \frac{1}{1-\alpha-\beta} \cdot \ln(n + x + \delta) + \ln(1-a) \end{aligned} \qquad (6).$$

The implied steady state expression for the average labor productivity consequently is:

$$\begin{aligned} \ln(y_*) &= \frac{1}{1-\alpha-\beta} \cdot \ln(A) + \frac{\alpha}{1-\alpha-\beta} \ln(s_k) + \frac{\beta}{1-\alpha-\beta} \ln(s_h) \\ &\quad - \frac{\alpha+\beta}{1-\alpha-\beta} \ln(n + x + \delta) + \ln(1-a) \end{aligned} \qquad (7).$$

[2] A dot above a variable denotes a time derivative

Now let us take a look at inequality in this simple economy. It turns out that we need to define inequality (Δ) as a Cobb-Douglas type of function of the wages of skilled and unskilled labor weighed with their respective shares in total population in order to obtain a particular kind of Kuznets-relation:

$$
\begin{aligned}
\Delta &= \left(a \cdot w_s\right)^{\lambda_1} \cdot \left((1-a) \cdot w_u\right)^{-\lambda_2} = \left[a \cdot \frac{dY}{dH} \cdot \frac{H}{aL}\right]^{\lambda_1} \cdot \left[(1-a) \cdot \frac{dY}{dL_u}\right]^{-\lambda_2} \\
&= \left[\beta \cdot \frac{Y}{L}\right]^{\lambda_1} \cdot \left[\left((1-\alpha-\beta) \cdot \frac{Y}{L}\right)\right]^{-\lambda_2} = \frac{\left(\beta \cdot y\right)^{\lambda_1}}{\left((1-\alpha-\beta).y\right)^{\lambda_2}} \\
&= \beta^{\lambda_1} \cdot \left(1-\alpha-\beta\right)^{-\lambda_2} \cdot y^{\lambda_1-\lambda_2}
\end{aligned} \qquad (8).
$$

In fact, the economic interpretation of Δ is straightforward: it puts the total amount of wages received by one skilled person [βy] relative to the wage income for one unskilled worker [(1-α-β)y], each term powered with an elasticity (λ_1 and λ_2). The relation between the level of per capita income and (earnings) inequality is—as in Kuznets theory—clearly present. Obviously $\lambda_1<\lambda_2$ results in decreasing inequality as y increases. The elasticity λ_1 may be smaller than λ_2 e.g. because a relatively large fraction of the population belongs to the skilled class. Increasing the total share of wages going to the unskilled at the expense of the skilled would then indeed harm the first class on average (i.e. in terms of earnings per capita) far less than it would benefit the latter so that the net effect on Δ is negative. The reverse intuition holds if only a very small percentage of the population would be skilled. $\lambda_1<\lambda_2$ is presumably the case in highly developed countries (OECD), whereas $\lambda_1>\lambda_2$ can be presumed in less developed countries (LDCs hereafter). We will test these hypotheses in the empirical work[3].

Yet y evolves over time—and thus so will inequality—due to changes in k and h until the economy reaches its steady state. Consequently, the central predictions of this model are concerned with the impact of the economic fundamentals on inequality. Substituting (7) in (8) after having taken logs, we find that the steady state level of inequality is:

[3] Obviously $\lambda_1$and λ_2 should be endogenized. In our view they are possibly determined by such things as the extent of passive and active labor market policies, tax schemes, and potential spill-overs on the (human) capital side. We leave this issue, however, for later research since the focus of the paper is to reveal empirically a relation between economic fundamentals and inequality.

$$\ln(\Delta_*) = \xi + \frac{\omega}{1-\alpha-\beta}\ln(A) + \frac{\alpha\omega}{1-\alpha-\beta}\left[\ln(s_k) - \ln(n+x+\delta)\right] + \frac{\beta\omega}{1-\alpha-\beta}\left[\ln(s_h) - \ln(n+x+\delta)\right] + \omega\ln(1-a) \qquad (9)$$

with $\begin{aligned}\xi &= \lambda_1\ln(\beta) - \lambda_2\ln(1-\alpha-\beta) \\ \omega &= \lambda_1 - \lambda_2\end{aligned}$.

In addition this model makes the prediction that countries will converge to *their* steady-state level of inequality at a certain speed, because of the conditional convergence property which is typical for neoclassical growth models. Approximating the growth rate of Δ_t by a log-linearization around the steady state, the model implies the following equation to study the rate of convergence μ ($\mu \geq 0$):

$$\ln\left(\frac{\Delta_t}{\Delta_0}\right) = (1 - e^{-\mu \cdot t}) \cdot [\ln(\Delta_*) - \ln(\Delta_0)] \qquad (10)$$

in which $\ln(\Delta_*)$ can be replaced by equation (9). Thus, in this modified Kuznets story changes in inequality are explained as a function of the determinants of the ultimate steady state and the initial level of inequality, no longer solely as a shift in the working force.

Equation (10) has the advantage of explicitly taking into account out-of-steady-state dynamics. Another advantage of equation (10) is that the dependent variable consists of trend rates in inequality. Comparing absolute levels of inequality indicators across countries is often criticized because of possible measurement errors. Indeed, differences in e.g. the questionnaires used to obtain information on households' earnings and incomes certainly exist between countries. However, estimations for, and comparisons of trend rates will be unbiased as long as the measurement error for each country remains consistent over time.

II. EMPIRICAL TESTING

A. SPECIFICATION

The natural question to consider is whether the data support this modified Kuznets model's prediction concerning the determinants of inequality in a broader macroeconomic context. For developed countries ω is presumably negative, and thus we want to investigate whether inequality is lower in countries with higher investment shares in both physical and human capital, and higher population growth. The opposite results should show up for developing countries with ω presumably positive.

As in Mankiw, Romer and Weil [1992] we assume that x is constant across countries in the sample. This variable primarily reflects the advancement in technology which is available as a public good. The rate of technological progress will henceforth be approximately the same, or at least there is no indication to assume differently. However, resource endowments, institutions, people's temper and speed of learning, their willingness to work and so forth, which is captured in the initial condition of the technology variable A, may substantially influence inequality. $Ln(A)=ln(A_0)+xt$ thus may be country specific. It is therefore assumed that $ln(A)=a+u$ in which a is a constant and u is a country specific shock. In addition we assume that capital market imperfections are on average pretty much of equal importance in comparable countries and that deviations from the average capital market imperfection are random. Ln(1-a) my thus also be country specific and be represented as b+e in which b is constant and e is a country specific shock. Thus, the log of inequality at a given time for a group of similar countries is:

$$\ln(\Delta_{*_i}) = c_0 + c_1\left[\ln(s_{k_i}) - \ln(n_i + x_i + \delta_i)\right] + c_2\left[\ln(s_{h_i}) - \ln(n_i + x_i + \delta_i)\right] + \sigma_i \qquad (11)$$

with

$$c_0 = \xi + \frac{\omega}{1-\alpha-\beta}\cdot a + \omega \cdot b \qquad c_1 = \frac{\alpha\omega}{1-\alpha-\beta}$$

$$c_2 = \frac{\beta\omega}{1-\alpha-\beta} \qquad \sigma_i = \frac{\omega}{1-\alpha-\beta}\cdot u_i + \omega \cdot e_i$$

while the dynamic version (cf. equation (10)) becomes:

$$\ln(\frac{\Delta_{t_i}}{\Delta_{0_i}}) = \tilde{c}_0 + \tilde{c}_1\left[\ln(s_{k_i}) - \ln(n_i + x_i + \delta_i)\right] + \tilde{c}_2\left[\ln(s_{h_i}) - \ln(n_i + x_i + \delta_i)\right] + \tilde{c}_4 \ln(\Delta_{0_i}) + \tilde{\sigma}_i \quad (12)$$

with $\tilde{c}_0 = c_4 \cdot c_0 \quad \tilde{c}_1 = c_4 \cdot c_1 \quad \tilde{c}_2 = c_4 \cdot c_1 \quad \tilde{c}_4 = -(1 - e^{-\mu \cdot t})$.

We further assume that the right-hand side variables are independent of the error term. We expect c_1 and c_2 to be negative in a sample of highly industrialized countries (OECD) whereas the opposite signs are expected in a sample of LDCs.

B. Data

Data are gathered from various sources. In order to be consistent with the theoretical framework we need a measure of personal wage inequality as a close proxy for Δ. Such a measure is, however, not readily available. Therefore we opt for the gini-coefficient as measure of inequality. This variable is taken from Deininger and Squire's new database on inequality [1994]. We add a country to our database if it is of high quality according to Deininger and Squire and if has at least two gini coefficients available based on a similar underlying concept of income or expenditure (household or personal, gross or net). From these observations annual average growth rates are computed with which the gini coefficients are re-adjusted to 1975 and 1989[4]. Average investment shares in physical capital (s_k) are taken from the Penn World Table mark 5.6. The growth rates of the working population (n) are computed from the same source. Averages are taken for 1975-1985. As for the average investment share in education (s_h) we borrowed Barro's and Lee's "GEETOT" variable (total government expenditure on education relative to GDP). All data can be found in appendix.

C. Results

We estimate equations (11) and (12) in which we assume that x+δ is 5 percent; reasonable changes in this assumption have little effect on the estimates. Because the gini-coefficients are not based on a similar concept of income and expenditure for all the countries, we add three control variables (dummies) to equations (11) and (12) viz. I/G

[4] We opted for 1989 as the endpoint because this required the least number of adjustments. Adjustments were carried out using a linear interpolation.

(income or expenditure), H/P (household or personal) and N/G (net or gross). The samples encompass 23 OECD countries and 30 LDCs respectively. Table I reports the results.

Table I: Estimation Results for the Modified Kuznets Model

	OECD-sample		LDC-sample	
	dep.var.: $\ln(\Delta_*)$	**dep.var.: $\ln(\Delta_t/\Delta_0)$**	**dep.var.: $\ln(\Delta_*)$**	**dep.var.: $\ln(\Delta_t/\Delta_0)$**
variable:				
constant	3.725	2.512	3.649	3.417
	(0.235)$^{++}$	(0.703)$^{++}$	(0.063)$^{++}$	(0.373)$^{++}$
$\ln(s_k)-\ln(n+0.05)$	-0.398	-0.286	0.111	0.093
	(0.139)$^{++}$	(0.143)$^{++}$	(0.047)$^{++}$	(0.056)$^{+}$
$\ln(s_h)-\ln(n+0.05)$	-0.217	-0.070	0.029	0.025
	(0.095)$^{++}$	(0.120)	(0.058)	(0.060)
$\ln(\Delta_0)$	—	-0.649	—	-0.0932
		(0.193)$^{++}$		(0.107)$^{++}$
I/E	0.253	0.154	0.365	0.373
	(0.126)$^{+}$	(0.130)	(0.139)$^{++}$	(0.141)$^{++}$
H/P	0.064	-0.015	-0.142	-0.143
	(0.090)	(0.095)	(0.053)$^{++}$	(0.054)$^{++}$
G/N	0.069	0.063	-0.094	-0.119
	(0.058)	(0.054)	(0.132)	(0.139)
implied μ	—	6.98 %	—	17.73 %
# obs	23	23	30	30
R^2	59.62 %	58.48 %	67.51 %	83.21 %

Standard errors between brackets.

$^{+}$: significant at the 10% level, $^{++}$: significant at the 5% level or better.

For the readers's information, we also provide estimates of the following typical Kuznets equation:

$$\Delta_{i_*} = \hat{c}_0 + \hat{c}_1 \cdot y_{i_*} + \hat{c}_2 \cdot y_{i_*}^2 \ (+\text{dummies}) \quad (13).$$

Table II: The traditional Kuznets curve estimated

	dep.var.: Δ_*	**dep.var.: Δ_***
variable:		
constant	43.431	39.258
	(2.964)$^{++}$	(2.128)$^{++}$
y_*	1.83 E-04	- 1.60 E-04
	(9.05 E-04)	(7.38 E-04)
y^2_*	- 6.41 E-08	- 5.31 E-08
	(5.27 E-08)	(4.03 E-08)
I/E	—	8.043
		(2.911)$^{++}$
H/P	—	- 5.087
		(1.930)
G/N	—	5.766
		(2.233)
# obs	53	53
R^2	30.23 %	65.80 %
adj. R^2	27.44 %	62.16 %

Standard errors between brackets

$^{+}$: significant at the 10% level, $^{++}$: significant at the 5% level or better.

Although the signs of the coefficients on y and y^2 in table II confirm Kuznets conjecture (inverted U-shape), it is clear that they are not estimated statistically significant at the conventional confidence levels, which precisely forms the basis of much debate in the literature. It is also hard to interpret the estimates in an economic way, because the Kuznets equation is not derived from a particular model.

Three messages from the results in table I learn us that controlling for factors which influence the steady state income level turns out to be a valuable alternative, consistent with the neoclassical theory. First, the coefficients on the traditional growth fundamentals have the predicted signs indicating that ω is negative in the OECD and positive in LDCs, and wald-tests do not reject the restriction on the coefficients. The investment share in physical capital is estimated statistically significant at the conventional confidence levels. Assuming one third for the capital share α, the steady state share of human capital in GDP (β) can be easily computed from the coefficients on $\ln(s_k)$ and $\ln(s_h)$ ($\alpha/\beta=c_1/c_2$). Based on the steady state regressions, β amounts to 18.2 percent for the OECD which is less than the value reported in Mankiw, Romer and Weil [1992] for this sample, but close to the one reported in Nonneman and Vanhoudt [1996]. LDCs' steady state share of human capital in GDP turns out to be only 8.7 percent, which is a rather low estimate. We were, however, unable to estimate the coefficient on the share invested in education very precisely except for the steady state OECD regression.

Second, the evidence strongly supports the idea of conditional convergence in inequality. It is noteworthy that LDCs converge much faster to their steady state level of inequality than OECD members (cf. implied μ in table I) after an economic shock has taken place. In general inequality converges at a substantially higher rate towards its steady state level than the typically reported 2 percent p.a. for per capita income (see e.g. Mankiw, Romer and Weil [1992], or Barro and Sala-i-Martin [1995]). The elasticities regarding the investment shares are also smaller in absolute terms than similar elasticities in growth regressions. Compare our results for instance with the ones reported in Mankiw Romer and Weil [1992]: the elasticity of economic growth w.r.t. the share invested in physical capital is about 0.40, and the elasticity regarding investment in human capital about 0.25

for the OECD sample. For their intermediate sample these values turn out to be 0.50 and 0.27 respectively. Shocks in economic fundamentals have apparently a far more important impact on economic growth than on changes in inequality. Especially the accumulation of physical capital seems to contribute much more to the process of economic growth than it affects the trend rate of the income distribution. A similar conclusion holds for the levels of per capita income and inequality.

Third, the model explains about 60 percent of the variation in the level of the gini coefficients, and on average 75 percent of the variation in the evolution of inequality.

Finally, we can show that the mere fact of controlling for economic fundamentals which influence the steady state per capita income level in the ad hoc Kuznets equation (13) pretty much solves the puzzle in the literature on the existents of a Kuznets curve. Therefore table III shows results for the estimation of:

$$\begin{aligned}\Delta_{i*} &= \breve{c}_0 + \breve{c}_1 \cdot s_{k_i} + \breve{c}_2 \cdot s_{k_i}^2 + \breve{c}_3 \cdot s_{h_i} + \breve{c}_4 \cdot s_{h_i}^2 \\ &\quad + \breve{c}_5 \cdot (n_i + 0.05) + \breve{c}_6 \cdot (n_i + 0.05)^2 \ (+\text{dummies})\end{aligned} \qquad (14).$$

Table III: **estimates for the extended Kuznets equation.**

	dep.var.: Δ*	**dep.var.: Δ***
variable:		
constant	- 112.728	- 88.510
	(43.016)++	(33.300)++
s_k	182.965	125.981
	(54.618)++	(43.722)++
s_k^2	- 502.995	- 375.170
	(147.611)++	(117.905)++
s_h	449.257	450.104
	(315.863)	(252.064)+
s_h^2	- 5750.524	- 5622.156
	(3470.424)+	(2782.093)++
(n+0.05)	3644.248	2850.613
	(1237.528)++	(998.125)++
$(n+0.05)^2$	- 24449.22	- 18148.420
	(9027.89)++	(7319.285)++
I/E	—	8.411
		(2.846)++
H/P	—	- 4.015
		(2.846)++
G/N	—	3.021
		(2.197)
# obs	53	53
R^2	50.84 %	72.10 %
adj. R^2	44.43 %	66.26 %

Standard errors between brackets

$^{++}$: significant at the 10% level, $^{++}$: significant at the 5% level or better.

Our intuition indeed turns out to be successfully confirmed. Compared to the results in table II, the explanatory power of the ad hoc Kuznets regression has increased substantially (cf. adj. R^2), the economic fundamentals show up statistically significant at the conventional confidence levels, and their signs confirm Kuznets' belief, albeit weaker interpreted: inequality is related to the fundamentals which determine a country's level of development in an inverted U-shaped way.

III. SUMMARY AND CONCLUSION.

In this paper we proposed the idea that the unsatisfactory empirical results for typical Kuznets regressions are possibly due to the fact that the level of per capita GDP may not be a sufficient metric for the level of development. Per capita income is indeed endogenously determined by economic fundamentals. We therefore used a neoclassical growth model to analyze the impact of those fundamentals on inequality. Contrary to Kuznets' story, changes in inequality are no longer explained as a shift of the share of the working force but as responses to shocks in policy variables and changes in the capital stocks. The economic rationale followed in this paper also leads to the conclusion that every nation converges to a level of inequality dictated by the determinants of the ultimate steady state level of per capita income.

The data do not seem to reject this model's predictions. Both the level of, and changes in inequality are well described by the specifications which follow from the model. The main conclusion of this paper indeed is that easily observable economic fundamentals are able to account for most of the cross-country variation in the level and trend rate of inequality. Higher investment shares, especially in physical capital, and population growth are associated with lower inequality in industrialized countries, while the opposite holds for less developed countries. This work should be seen as complementary to the models in the political economy literature, where it is modeled that inequality has an impact on investment through social instability associated with high levels of inequality, and hence on economic growth (e.g. Person and Tabellini [1994]). Apparently, an inverse relation between inequality and growth is not rejected by the data either.

Moreover, we find support for the idea of conditional convergence in inequality. From the estimates from growth regressions reported in the literature and our findings, we conclude that shocks in economic fundamentals drive measures of inequality faster towards their new steady state than measures of productivity growth. Changes in economic fundamentals also have a larger impact on productivity growth than on the level and trend rate of inequality.

Based on the empirical evidence put forward in this paper we therefore believe that the data support the idea of a modified Kuznets model rather well, and that there is no need to reject Kuznets' conjecture as a stylized fact, albeit weaker interpreted.

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