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The impact of population and economic growth on the achievement of the Millennium Development Goals

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(QUITE) EXTENDED ABSTRACT

1. Introduction

In September 2000, the United Nations (henceforth UN) presented the Millennium Declaration, a milestone in international cooperation inspiring development efforts in order to improve the living conditions of millions of people around the world. The Millennium Declaration committed the world nations to a new global partnership to reduce extreme poverty and setting out a series of time-bound targets – with a deadline of 2015 – by which progress in reducing income poverty, hunger, disease, lack of adequate shelter and exclusion – while promoting gender equality, health, education and environmental sustainability – can be measured. These time-bound targets have become known as the Millennium Development Goals (henceforth MDGs). The MDGs project is one of the major efforts undertaken by the international community to fulfill the promise for a better world. In this paper, we aim to investigate the nature and significance of the impact of population *and* economic growth on the achievement of the MDGs. Will the dramatic rise in the number of people be an obstacle to reduce poverty while improving global health, expanding education and promoting environmental sustainability? Or will the historically unprecedented increases in GDP per capita improve the overall quality of life around the globe? Which of these two forces will be more decisive in driving the success of countries towards MDGs achievement? These are the main questions this papers aims to address.

It is hard to find any two other social phenomena that have attracted more attention in the last decades than the so-called 'population explosion' and the unprecedented boost in economic growth experienced in many areas of the world that some have denoted as the 'income explosion' (Firebaugh 2003). On the one hand, the study of the impact of population growth on countries' well-being has been a matter of contentious debate for a long time (see Ahlburg et al 1996). While the views in this debate have ranged from alarmism (e.g. Ehrlich 1968) to optimism (e.g. Simon 1981), the commonly held view nowadays stipulates that countries with higher rates of population growth have tended to face more severe social and environmental problems (see Birdsall et al 2001). On the other hand, the study of the impact of economic growth on countries' well-being has

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been much less investigated. Since it is usually taken for granted that economic growth naturally goes hand-in-hand with improvements in societies' living conditions, the matter has received scant attention from the specialized literature (see Easterly 1999 for an interesting exception). In this paper, we take advantage of the increasing availability of internationally comparable datasets to investigate the *joint* impact of population *and* economic growth on the improvement of key social variables belonging to the MDGs – an issue that, to the best of our knowledge, has not been investigated so far and which has clear implications for the elaboration of the post-MDGs global development agenda that is currently underway. The paper is structured as follows. In section 2 we introduce the data, variables and methods used in our analysis. In section 3 we investigate whether, and to what extent, the world countries have achieved the goals of the corresponding MDG indicators. In section 4 we present the results of our analysis investigating the impact of population and economic growth on countries' MDGs achievement. The concluding remarks are presented in section 5.

2. Data and Methods

Within each of the MDGs there are different targets and each target is monitored using several indicators. According to the UN Statistical office there are 8 goals, 21 targets and 60indicators (see http://www.un.org/millenniumgoals). However, when it comes to incorporate these goals, targets and indicators into an international comparative analysis like the one performed here a number of difficulties arise. First, despite the increasing availability of internationally comparable datasets there are some variables for which data simply does not exist. Second, many of the targets are not clearly specified and/or are hard to quantify (or non-quantifiable at all)[2]. Third, some targets and indicators are not defined at the country level, so they cannot be incorporated in a country-basis analysis like the one we are carrying out in this paper[3]. Finally, some targets and indicators are simply not defined for all countries of the world[4], so their inclusion would seriously compromise our comparative analysis. The final choice of targets and indicators to be included in our measures has been constrained by the aforementioned limitations and by the existing trade-offs between geographical coverage and inclusion of further indicators. Therefore, we have decided to work with the following list of indicators (and the corresponding official targets proposed by the UN):

> I_1: Percentage of population below $1.25 (PPP) per day (MDG#1, Target: Halve between 1990 and 2015 the proportion of people below the poverty line).
>
> I_2: Net enrolment ratio in primary education (MDG#2, Target: Ensure that, by 2015, children everywhere will be able to complete a full course of primary education).

[2] Take, for instance, most of the targets included in MDG8 (Develop a global partnership for development). Targets 8A, 8B, 8C, 8D are very loose statements whose progress is hard to quantify to say the least.

[3] For instance, Target 7D specifies: "By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers". There is no clear-cut way of knowing how much should the number of slum dwellers be reduced in a given country to declare that it has successfully reached that target.

[4] Take, for instance, Targets 8B, 8C, 8D or 8E, referring to small islands or landlocked countries.

I_3: Ratios of girls to boys in primary education (MDG#3, Target: Eliminate gender disparity in primary education).

I_4: Under-five mortality rate (MDG#4, Target: Reduce by two thirds, between 1990 and 2015, the under-five mortality rate).

I_5: Maternal mortality ratio (MDG#5, Target: Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio).

I_6: Death rates associated with tuberculosis (MDG#6, Target: Have halted by 2015 and begun to reverse the incidence of tuberculosis and other major diseases).

I_7: Percentage of population using an improved drinking water source (MDG#7, Target: Halve by 2015 the proportion of people without sustainable access to safe drinking water).

I_8: Percentage of population using an improved sanitation facility (MDG#7, Target: Halve by 2015 the proportion of people without sustainable access to basic sanitation).

Overall, this group of indicators offers a reasonably faithful portrait of countries' evolution towards the achievement of the MDGs. While the geographical and temporal coverage varies by indicator, we have been able to collect comparable information for around 150-200 countries during the last 25 years (at least). To facilitate the presentation of results, world countries have been partitioned in the following regions: Oceania (OC), North Africa (NA), East Asia (EA), South Asia (SA), South East Asia (SEA), West Asia (WA), Caucasus and Central Asia (CCA), Latin America and the Caribbean (LAC), Developed Countries (DC) and Sub-Saharan Africa (SSA). The statistical data used in this paper has been (freely) accessed through the internet from the following institutions: the World Bank (http://data.worldbank.org/indicator), the World Health Organization (http://www.who.int/gho/indicator_registry), UNESCO (http://data.uis.unesco.org), UNICEF (http://data.unicef.org/) and the Center for Systemic Peace (http://www.systemicpeace.org/polityproject.html).

2.1. Econometric techniques

In order to estimate the effect of population and economic growth on MDGs achievement we use multivariate statistical techniques. Because of the way in which it has been constructed, our dataset is an unbalanced panel (i.e: the same country is followed across several years but some observations might be missing). The panel nature of the data allows controlling for any unobserved heterogeneity across countries in the form of time-invariant characteristics that affect either the MDG-indicator being studied, its measured determinants, or both (examples of these factors can be cultural norms, climate, geography or the presence of continuous government development programs). To do so we estimate a country and time fixed-effects (FE) model which relies on the "within" variation (changes over time for each country and changes across countries for a fixed moment in time) as follows:

$$I_{it} = \alpha + \sum_{k=1}^{K} \beta_k X_{k,it} + \mu_i + \lambda_t + v_{it}. \qquad [1]$$

In equation [1] α is a scalar, the βs are the regression coefficients we want to estimate corresponding to the independent variables X_k, μ_i are the unobservable country-specific time-invariant effects, λ_t are the time-effects and, lastly, v_{it} is the stochastic error term. The dependent variable (*I*) is one of the eight MDG indicators considered in this paper, so equation [1] is estimated for each one of the variables shown in section 2. The key explanatory variables X_k considered in this paper are (logged) population size ('*logpop*') and yearly population growth ('*popgr1*') together with economic size (logged GDP per capita: '*loggdp*') and yearly economic growth ('*gdpgr1*'). Since the notion of 'growth' can be defined for different time frames (e.g: on an annual, quinquennial or decennial basis), we have experimented not only with short term (i.e: 1-year) effects, but also with medium (5-years) and longer term (10-years) ones[5]; the corresponding labels of the variables are '*popgr1*', '*popgr5*', '*popgr10*' and '*gdpgr1*', '*gdpgr5*', '*gdpgr10*'. Other explanatory variables – commonly used in conceptually related studies – which have been included in our models are: population density ('*pden*'), degree of urbanization ('*urb*'), contraceptive prevalence rate ('*cpr*'), level of democracy ('*demo*') and capital formation ('*capf*').

The actual estimating equation is obtained by transforming the observations on each variable into deviations from country-specific averages:

$$I_{it} - \overline{I_\iota} = \sum_{k=1}^{K} \beta_k \left(X_{k,it} - \overline{X_{k,\iota}}\right) + (\mu_i - \overline{\mu_\iota}) + (\lambda_t - \overline{\lambda_t}) + (v_{it} - \overline{v_\iota}). \qquad [2]$$

Since the μ_i are time-invariant, $(\mu_i - \overline{\mu_\iota}) = 0$, so the term drops out of the model. Unbiased and consistent estimates of the β_k can be obtained applying Ordinary Least Squares (OLS) techniques to equation [2].

To more directly ensure that a causal effect is being identified, and that only the causal portion of the observed relationship is represented by the regression coefficient estimates, we conduct endogeneity tests for those determinants where we suspect that bi-directional causality might be at work. If found, we take this endogeneity into account by estimating the above equations using instrumental variables (IV). Doing so is important for detecting and correcting reverse causality, incidental association and attenuation bias due to measurement error. To correct for these potential problems we instrument with classical variables from the empirical growth literature – appropriately lagged population and economic size and growth, inflation and financial depth.

In order to assess how strong are the long-run impacts of the explanatory variables on MDGs achievement we will report elasticities derived from the regression coefficients β_k along with related statistics. More specifically, we report by how much the explanatory variables have contributed to the corresponding MDG-indicator change that has taken place during the last decades. To do that, one must account both for the

[5] When a variable *X* changes from X_1 to X_2 between years t_1 and t_2, the *growth* of *X* is defined as $g = (X_2/X_1)^{1/(t_2-t_1)} - 1$.

coefficient *size* and the magnitude of the relevant *changes* in the X_ks. Formally, these contributions are calculated as follows

$$\beta_k \Delta \overline{X_k} = \beta_k \left(\overline{X_{kt_2}} - \overline{X_{kt_1}} \right), \qquad [3]$$

where $\overline{X_{kt_i}}$ is the average value of X_k across countries in time t_i.

3. Are countries achieving the MDGs?

In this section we describe the evolution of the MDG-indicators (from I_1 up to I_8) during the last decades. In Table 1 we report the average values of each indicator at the regional level both in 1990 and in the latest available year (typically around 2012). In addition, we show the target that each region should attain to consider that the corresponding goal has been achieved – according to the official criterion established by the UN. To facilitate its interpretation, the cells of Table 1 have been colored depending on whether the corresponding goal has been achieved or not: the cells in green correspond to those regions and indicators where the goal has been achieved, those in orange denote those cases where the improvements that have occurred over time have not been enough to reach the target, while red cells correspond to those cases where the corresponding indicator has deteriorated over time.

As shown in Table 1, neither the world as a whole nor its different regions have been particularly successful overall in achieving the MDGs (except, perhaps, for the case of East Asia). The only variables where the targets have been achieved *for the world at large* are the 'poverty' and 'tuberculosis' ones (I_1 and I_6). On the one hand, the reduction in world poverty levels from 35% to 16% has been truly remarkable and is largely attributable to the success of India and, specially, China. However, five world regions have *not* been able to attain the poverty reduction goal (Oceania, North Africa, West Asia, the Developed Countries and Sub-Saharan Africa). On the other hand, even if the improvements in death rates associated with tuberculosis have not been particularly large, they have been enough to reach a quite undemanding target (unsurprisingly, the target associated to I_6 has been attained by all regions except for Oceania). Except for the case of maternal mortality (I_5) – where the improvements that have been observed across the board have not been enough to reach the target (the world as a whole has halved the 1990 level of maternal mortality, but it has not been able to reduce it by three quarters) – the regional attainments in the other variables have been quite heterogeneous. To illustrate: among the 10 regions partitioning the world, the targets corresponding to gender equality and child mortality (I_3 and I_4) have only been achieved in three of them and the targets of the two environmental sustainability indices corresponding to MDG#7 (I_7 and I_8) have been achieved in 5 and 4 regions respectively. Lastly, the target of achieving universal primary education enrolment has been achieved in none of the 10 regions – a discouraging result that is largely explained by the fact that regional results average the experience of many countries, so the target is only achieved when there is no variation and *all* those countries within the region achieve universal education (a particularly demanding scenario).

[[[Table 1 around here]]]

The social progress experienced by the different regions has been quite uneven and there is no clearly discernible pattern. Except for the case of East Asia (which has achieved 6 of the 8 targets corresponding to $I_1,\ldots, I_8$), the fact of achieving one goal does not seem to be related with the achievement of other goals. This is a relevant observation with implications for our understanding of societies' pathways to development. In order to explore this important issue in more detail, Figure 1 plots the *joint* country level changes between 1990 and the most recent available data for all possible couples of indicators among the ones considered in this paper. The scatterplots included in the Matrix of Figure 1 show how *changes* in one indicator 'i' ($\Delta I_i = I_{i_2} - I_{i_1}$) are related to *changes* in another indicator 'j' ($\Delta I_j = I_{j_2} - I_{j_1}$). As shown in Figure 1, there is a remarkable lack of association between changes in alternative couples of MDG-indicators – an important finding with profound and far-reaching implications. This is not particularly encouraging for international development agencies or national governments, as it seems that, at the moment, advances in one front are not necessarily accompanied by advances in other fronts as well (as opposed to what would happen if strong associations were observed between indicators).

[[[Figure 1 around here]]]

4. The impact of population and economic growth

In the light of the results shown in the previous section, it remains to be seen how the different dimensions of human development can be advanced *simultaneously* for those countries with lower development levels. In this respect, further research is needed to explore the existence (or lack thereof) of underlying factors that might help to understand the mechanisms promoting *joint* improvement in the different MDGs. In this paper, we are particularly interested in assessing the impact of demographic and economic forces on countries' evolution towards MDGs achievement. The results of our country and time fixed-effects models are shown in the tables below. Equation [1] is estimated eight times, one per MDG-indicator, so we have generated eight tables with the corresponding results. For each of the tables, the structure is exactly the same: the first, third and fifth columns (labelled as FE1, FE5 and FE10) show the results of our FE models when using the 1-year, 5-year and 10-year definition of 'growth' respectively. The second, fourth and sixth columns (labelled as FE_IV1, FE_IV5 and FE_IV10) show the corresponding results of our FE models corrected by endogeneity using the instrumental variables (IV) approach (see section 2.1). In order to ensure model comparability across indicators, special care has been taken to choose the same set of regressors across models.

[[[Regression Results Tables around here]]]

Examining the regression results tables numerous findings arise. We start with our key demographic and economic variables and then turn to the other controls incorporated in the models. Population *size* typically reveals significant positive impacts on all MDG-

indicators except for the cases of 'tuberculosis' (I_6) and 'sanitation' (I_8), where the impact is non-significant or inconclusive (i.e: positive in some model specifications and negative in others). However, the effect of population *growth* is unclear on all MDG-indicators considered in this paper: the coefficients switch signs across different model specifications and quite often they are not significant. The lack of strongly conclusive results regarding population growth effects is in line with previous findings attempting to estimate the impact of demographic change on economic growth and other well-being dimensions (e.g: Ahlburg et al. 1996, Birdsall et al. 2001). The fact that population growth can occur through a great variety of channels (e.g: increasing fertility, declining mortality, increasing migration) and affect different sectors of the population (e.g: the young, the adults, the working age-population or the elderly) varying from place to place and over time probably explains the impossibility of making blanket statements about overall effects.

Regarding the impact of the economies' *size* (i.e: logged GPD per capita) on MDG-indicators performance, the findings are rather mixed. It has (i) a positive impact for poverty (I_1), maternal mortality (I_5), tuberculosis (I_6) and, to a lesser extent, sanitation (I_8), (ii) an inconclusive effect for education (I_2), gender equality (I_3) and water access (I_7) and (iii) a negative effect for child mortality (I_4). On the other hand, the impact of economic *growth* is (i) positive for child and maternal mortality (I_4, I_5), (ii) unclear for education (I_2), water access (I_7) and sanitation (I_8), and (iii) negative for poverty (I_1), gender equality (I_3) and tuberculosis (I_6). The fact that economic growth does not have a clear positive impact on most MDG-indicators – indeed, it does have a clear negative effect on the key indicator of poverty – is truly remarkable. These findings could support the hypothesis that when growth is not equitably distributed, the society at large might not draw benefits from it. Given the blind reliance of many international institutions on economic growth as *the* main pathway to ensure countries' development, the results reported here might have far-reaching implications warranting discussion upon which it will be necessary to reflect.

The effect of the other control variables introduced in our models is quite heterogeneous as well. The effects of population density and those of the level of democracy can be positive, negative or unclear depending on the MDG-indicator we are dealing with, but the size of the coefficients tends to be quite small. The level of urbanization has positive effects for child mortality and access to water and sanitation, but it has a non-conclusive effect on the other variables. Interestingly, it turns out that the level of capital formation and the contraceptive prevalence rate have clear positive and significant effects on virtually all our MDG-indicators. This suggests that investments in countries' fixed assets (such as hospitals, schools, roads, railways and the like) and in family planning programs can have synergistic and cumulative effects on the simultaneous improvement of most MDG-indicators considered in this study.

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	I_1 (MDG1)			I_2 (MDG2)			I_3 (MDG3)			I_4 (MDG4)		
Region	**1990**	**2012**	**Goal 2015**	**1990**	**2012**	**Goal 2015**	**1990**	**2012**	**Goal 2015**	**1990**	**2014**	**Goal 2015**
OC	34.8	32.5	17.4	73.7	87	100	0.9	0.94	1	82.3	53	27.4
NA	4.6	2.9	2.3	81.4	96.3	100	0.82	0.97	1	77.3	23.6	25.8
EA	56	6.8	28	93.3	87.3	100	0.95	1	1	42.4	12.7	14.1
SA	51	25	25.5	76.6	90.3	100	0.77	0.96	1	114.9	53.5	38.3
SEA	42.8	11.9	21.4	90.8	91.2	100	0.96	1	1	61.9	28.1	20.6
WA	3	2.5	1.5	83.2	90.8	100	0.87	0.96	1	67.3	23	22.4
CCA	18.7	5.5	9.4	89.3	89.3	100	0.99	0.99	1	77.2	33.7	25.7
LAC	11.3	4.8	5.7	88.4	92.9	100	0.98	1.01	1	52.6	16.7	17.5
DC	0.7	0.8	0.4	96.5	95.6	100	1	1	1	13.8	5.9	4.6
SSA	59.2	48.8	29.6	56.6	72.5	100	0.85	0.92	1	180.4	89.2	60.1
WORLD	**35.4**	**15.9**	**17.7**	**85.4**	**88.9**	**100**	**0.91**	**0.98**	**1**	**70.3**	**34.3**	**23.4**

	I_5 (MDG5)			I_6 (MDG6)			I_7 (MDG7 - Water)			I_8 (MDG7 - Sanitation)		
Region	**1990**	**2013**	**Goal 2015**	**1990**	**2013**	**Goal 2015**	**1990**	**2012**	**GOAL2015**	**1990**	**2012**	**GOAL2015**
OC	382.8	189.6	95.7	242.4	264.81	<242.3	52	55.6	76	34.8	35.1	67.4
NA	162.8	68.5	40.7	64.23	49.7	<64.22	86.8	90.9	93.4	72.4	91.4	86.2
EA	94	32.9	23.5	156.53	77.25	<156.5	68	92.2	84	26.9	66.7	63.4
SA	524.2	180.4	131.1	211.62	178.57	<211.6	71.8	91.4	85.9	23.1	42.1	61.6
SEA	311.1	131.9	77.8	259.34	203.84	<259.3	70.8	89.1	85.4	47.9	70.7	73.9
WA	102.9	57.9	25.7	53.17	24.25	<53.17	84.7	90.7	92.4	68.8	88.7	84.4
CCA	70.8	37.9	17.7	121.33	99.05	<121.3	84.6	86.2	92.3	87	95.5	93.5
LAC	131.4	79.3	32.8	84.45	44.1	<84.45	85.2	94	92.6	67.4	82.2	83.7
DC	25.5	15.2	6.4	30.4	23.96	<30.40	97.9	99.1	98.9	94.9	95.3	97.4
SSA	965.2	488.5	241.3	279.1	285.78	<279.0	47.6	64.2	73.8	23.9	29.6	62
WORLD	**284.1**	**140.9**	**71**	**150.76**	**124.65**	**<150.7**	**76.1**	**89.4**	**88.1**	**48.5**	**64.4**	**74.3**

Table 1. Achievement of the 10 world regions in the 8 variables corresponding to the different MDGs (Oceania (OC), North Africa (NA), East Asia (EA), South Asia (SA), South East Asia (SEA), West Asia (WA), Caucasus and Central Asia (CCA), Latin America and the Caribbean (LAC), Developed Countries (DC), Sub-Saharan Africa (SSA)). Green cells indicate that the corresponding goal has been achieved. Orange cells indicate that the corresponding indicator has improved but the target has not been achieved. Red cells indicate that the corresponding indicator has deteriorated over time. Author calculations using international data sources.

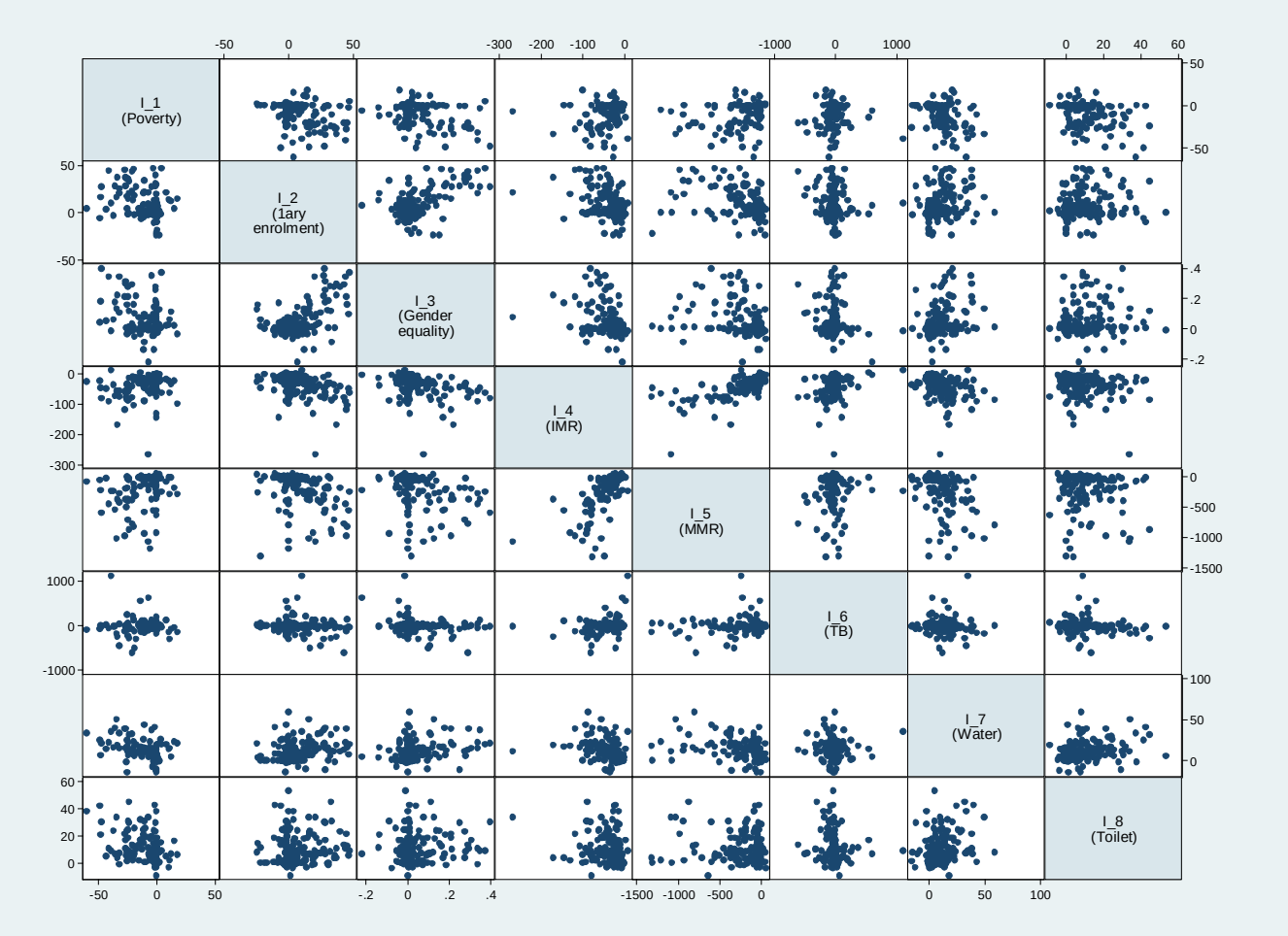

Figure 1. Pairwise country level improvements for the 8 MDG indicators. Author calculations using international data sources.

REGRESSION RESULTS TABLES

MDG 1

Variable	FE1	FE_IV1	FE5	FE_IV5	FE10	FE_IV10
logpop	-16.3059***	-11.0211***	-17.5045***	-13.9992***	-15.5436***	-13.2097***
	(2.1086)	(4.1604)	(2.2065)	(2.5191)	(2.2597)	(2.8529)
popgr1	44.3335***	-24.6586				
	(16.6173)	(86.188)				
loggdp	-9.5549***	-1.7953	-11.7157***	-9.9516***	-12.0709***	-12.5154***
	(0.7352)	(2.7435)	(0.8119)	(1.0543)	(0.8507)	(1.2041)
gdpgr1	3.7079**	57.7835***				
	(1.8384)	(17.7456)				
demo	-0.0006	-0.0537	-0.0123	-0.0051	-0.0328	-0.0548
	(0.0423)	(0.0598)	(0.0427)	(0.0488)	(0.043)	(0.0491)
urb	-0.1479**	-0.18**	-0.0863	-0.1029	-0.0842	-0.1131
	(0.0596)	(0.078)	(0.0609)	(0.0825)	(0.0616)	(0.0727)
capf	-0.0756***	-0.2269***	-0.1196***	-0.1256***	-0.1119***	-0.1449***
	(0.0243)	(0.0561)	(0.0251)	(0.0458)	(0.0248)	(0.033)
cpr	-0.1493***	-0.2333***	-0.1499***	-0.214*	-0.196***	-0.3619***
	(0.032)	(0.0441)	(0.0337)	(0.1107)	(0.0339)	(0.0447)
pden	-0.0199***	-0.0462***	-0.0185**	-0.0391*	-0.0187**	-0.0228**
	(0.0074)	(0.0144)	(0.0075)	(0.0207)	(0.0073)	(0.0113)
Period Fixed Effects						
80–85	3.0674	0.7987	4.0647	3.867	3.7957	3.0077
	(3.2477)	(3.8463)	(3.2328)	(3.1193)	(3.1743)	(3.2273)
85–90	5.3132	2.6758	7.9703**	7.9336**	7.8501**	9.8356***
	(3.257)	(4.0327)	(3.266)	(3.2296)	(3.2048)	(3.3273)
90–95	9.4517***	5.4347	12.5624***	11.6938***	13.636***	16.6041***
	(3.304)	(4.2343)	(3.3219)	(3.3102)	(3.2852)	(3.5861)
95–00	11.6707***	7.1164	15.4793***	14.6879***	16.5544***	19.9947***
	(3.3536)	(4.5053)	(3.3916)	(3.4343)	(3.3586)	(3.742)
00–05	12.8368***	6.1175	16.817***	15.7934***	18.2144***	21.5713***
	(3.4202)	(4.9324)	(3.4643)	(3.5518)	(3.4483)	(3.9146)
05–10	13.8129***	3.9171	17.8645***	16.5812***	19.3515***	21.7469***
	(3.5308)	(5.7613)	(3.575)	(3.6201)	(3.5586)	(4.0367)
popgr5			70.7285***	23.7538		
			(22.3041)	(284.7142)		
gdpgr5			29.2184***	21.0944		
			(4.6327)	(16.6221)		
popgr10					73.6749**	-410***
					(32.3698)	(86.8118)
gdpgr10					54.47***	115.6069***
					(7.4545)	(23.6251)
_cons	376.2475***	242.322***	406.8643***	344.3057***	378.1958***	359.1953***
	(34.2769)	(79.8579)	(35.8456)	(45.2034)	(36.5879)	(46.4916)
N	2308	2017	2256	1956	2169	1874
r2	0.3701		0.3848		0.394	0
r2_o	0.1936	0.1365	0.2042	0.2666	0.2748	0.3797
r2_b	0.208	0.1348	0.2146	0.2526	0.2691	0.3002
r2_w	0.3701	0.1054	0.3848	0.3785	0.394	0.3473
sigma_u	29.7885	26.6119	31.2025	27.9428	28.826	27.3013
sigma_e	5.3018	6.0297	5.2698	4.9734	5.1725	5.1724
rho	0.9693	0.9512	0.9723	0.9693	0.9688	0.9654

*,** and *** denote 10%, 5% and 1% significance levels respectively. Standard errors are in parenthesis.
Author calculations.

MDG 2

Variable	FE1	FE_IV1	FE5	FE_IV5	FE10	FE_IV10
logpop	26.9593***	22.707***	27.394***	19.7499***	25.611***	22.2***
	(1.1975)	(2.5718)	(1.2426)	(2.9414)	(1.3039)	(1.7381)
popgr1	27.3662**	-320**				
	(13.4578)	(125.965)				
loggdp	1.3314***	-2.6942	1.5766***	-1.9722*	1.1822**	-0.3899
	(0.4743)	(2.005)	(0.5083)	(1.1044)	(0.5635)	(0.9013)
gdpgr1	-0.2822	-27.3285				
	(1.282)	(19.4052)				
demo	-0.0809**	-0.0512	-0.0686**	-0.168***	-0.0665**	-0.0753**
	(0.0318)	(0.0404)	(0.0318)	(0.0505)	(0.0319)	(0.0339)
urb	0.1201***	-0.0767*	0.0847**	0.0352	0.07*	-0.0593
	(0.0348)	(0.0414)	(0.0356)	(0.0651)	(0.0369)	(0.0461)
capf	0.1607***	0.2311***	0.1689***	0.0648	0.1725***	0.1519***
	(0.0146)	(0.0404)	(0.0149)	(0.0494)	(0.0145)	(0.0157)
cpr	0.0649***	0.0338	0.0508**	0.4255***	0.0749***	0.2228***
	(0.0206)	(0.0406)	(0.0212)	(0.1162)	(0.0219)	(0.028)
pden	0.0087**	0.0369***	0.0107**	0.0317***	0.0113**	0.0312***
	(0.0044)	(0.0075)	(0.0044)	(0.0076)	(0.0044)	(0.0069)
Period Fixed Effects						
75–80	-0.0614	2.0474**	-0.2029	0.6591	0.2017	0.69
	(0.5886)	(1.0371)	(0.5935)	(0.7943)	(0.5974)	(0.6998)
80–85	-0.9465	3.2352**	-1.1739	1.6538	-0.6081	1.135
	(0.712)	(1.4034)	(0.727)	(1.0501)	(0.7268)	(0.8815)
85–90	-1.6367**	3.412**	-1.9753**	3.2231*	-1.0041	1.2421
	(0.8055)	(1.6141)	(0.8647)	(1.9171)	(0.8751)	(1.2959)
90–95	-3.6793***	1.5674	-4.1683***	2.8537	-2.8654***	-0.1326
	(0.9154)	(1.8354)	(0.9799)	(2.3813)	(1.0543)	(1.7487)
95–00	-4.4095***	1.3504	-5.1254***	3.6665	-3.749***	-0.3726
	(1.0125)	(2.2376)	(1.0921)	(3.0353)	(1.1819)	(1.9898)
00–05	-3.2354***	3.6329	-3.8366***	5.8421*	-2.209*	1.6995
	(1.1251)	(2.8471)	(1.2002)	(3.2591)	(1.3124)	(2.1879)
05–10	-3.3318***	6.0847	-3.8576***	6.9143**	-2.0021	3.2008
	(1.2856)	(3.7673)	(1.3527)	(3.2447)	(1.4623)	(2.3258)
popgr5			-10.7877	975.0647***		
			(16.4126)	(339.0475)		
gdpgr5			-4.4551	34.0751		
			(3.1213)	(24.1142)		
popgr10					36.3511	392.6977***
					(23.2964)	(60.6839)
gdpgr10					-0.7955	-0.8286
					(5.0256)	(14.9794)
_cons	-370***	-270***	-380***	-270***	-350***	-300***
	(19.183)	(54.3706)	(19.9724)	(41.0571)	(21.0639)	(28.6264)
N	3822	3181	3788	3123	3695	2992
r2	0.4917		0.4894		0.488	
r2_o	0.0743	0.0272	0.07	0.0448	0.0719	0.044
r2_b	0.0367	0.0075	0.0339	0.0152	0.0328	0.0143
r2_w	0.4917	0.3312	0.4894	0.2689	0.488	0.4977
sigma_u	42.7363	39.7018	43.3833	37.6131	40.969	38.2881
sigma_e	6.1172	6.3789	6.0734	6.7152	6.046	5.4857
rho	0.9799	0.9748	0.9808	0.9691	0.9787	0.9799

*,** and *** denote 10%, 5% and 1% significance levels respectively. Standard errors are in parenthesis.
Author calculations.

MDG 3

Variable	FE1	FE_IV1	FE5	FE_IV5	FE10	FE_IV10
logpop	0.2919***	0.28***	0.3073***	0.3044***	0.2715***	0.2552***
	(0.0125)	(0.0209)	(0.0127)	(0.0239)	(0.0138)	(0.0293)
popgr1	-0.7209***	0.9431*				
	(0.1231)	(0.5704)				
loggdp	0.001	-0.0381**	0.008	-0.0014	-0.0031	0.0058
	(0.0049)	(0.0155)	(0.0052)	(0.008)	(0.0061)	(0.0151)
gdpgr1	-0.0065	-0.3659**				
	(0.0129)	(0.1653)				
demo	-0.0024***	-0.003***	-0.0023***	-0.0032***	-0.0023***	-0.0027***
	(0.0003)	(0.0004)	(0.0003)	(0.0004)	(0.0003)	(0.0004)
urb	0.0016***	-0.0011**	0.0006	-0.0016***	0.0001	-0.0016**
	(0.0004)	(0.0005)	(0.0004)	(0.0005)	(0.0004)	(0.0008)
capf	0.0004***	0.0009***	0.0006***	0.0007***	0.0005***	0.0001
	(0.0001)	(0.0003)	(0.0001)	(0.0003)	(0.0001)	(0.0002)
cpr	0.0005**	0.0021***	0.0003	0.0015	0.0009***	0.0027***
	(0.0002)	(0.0003)	(0.0002)	(0.001)	(0.0003)	(0.0004)
pden	0.0003***	0.0001	0.0004***	0.0001	0.0003***	0
	(0.0)	(0.0001)	(0.0)	(0.0001)	(0.0)	(0.0001)
Period Fixed Effects						
75–80	-0.0147**	-0.0039	-0.0225***	-0.0116*	-0.0115*	-0.0285***
	(0.0063)	(0.0105)	(0.0061)	(0.007)	(0.0062)	(0.0087)
80–85	-0.0342***	-0.0223*	-0.0433***	-0.0355***	-0.0292***	-0.0488***
	(0.0076)	(0.0131)	(0.0075)	(0.0093)	(0.0076)	(0.0113)
85–90	-0.0452***	-0.0436***	-0.0602***	-0.0768***	-0.0368***	-0.0851***
	(0.0087)	(0.0144)	(0.009)	(0.0149)	(0.0093)	(0.0198)
90–95	-0.0492***	-0.0365**	-0.0658***	-0.0762***	-0.0361***	-0.0953***
	(0.0099)	(0.0162)	(0.0103)	(0.0171)	(0.0113)	(0.0288)
95–00	-0.056***	-0.0312	-0.0765***	-0.0762***	-0.0411***	-0.0886***
	(0.0112)	(0.0197)	(0.0116)	(0.0199)	(0.0128)	(0.0333)
00–05	-0.0486***	-0.0059	-0.0681***	-0.061***	-0.0301**	-0.0724**
	(0.0124)	(0.0246)	(0.0128)	(0.0207)	(0.0143)	(0.0359)
05–10	-0.0545***	0.0123	-0.074***	-0.0474**	-0.032**	-0.0615
	(0.0141)	(0.0309)	(0.0144)	(0.0216)	(0.0159)	(0.0375)
popgr5			-1.2948***	0.4709		
			(0.1457)	(2.2645)		
gdpgr5			-0.1151***	-0.4342***		
			(0.0318)	(0.1476)		
popgr10					-0.7421***	3.4342***
					(0.2267)	(0.8081)
gdpgr10					-0.0499	-0.5012*
					(0.0527)	(0.2591)
_cons	-3.9028***	-3.4069***	-4.1282***	-3.9984***	-3.5135***	-3.3417***
	(0.1996)	(0.4113)	(0.205)	(0.352)	(0.2243)	(0.4899)
N	2202	1795	2181	1750	2104	1638
r2	0.6227		0.6322		0.6185	
r2_o	0.0286	0.0033	0.0225	0.0116	0.0232	0.0197
r2_b	0.0019	0.0077	0.0006	0.0028	0.0004	0.0019
r2_w	0.6227	0.4429	0.6322	0.6139	0.6185	0.5795
sigma_u	0.4733	0.4722	0.4976	0.4993	0.4443	0.4295
sigma_e	0.0475	0.0501	0.046	0.0421	0.0461	0.0431
rho	0.99	0.9889	0.9915	0.9929	0.9894	0.9901

*,** and *** denote 10%, 5% and 1% significance levels respectively. Standard errors are in parenthesis.
Author calculations.

MDG 4

Variable	FE1	FE_IV1	FE5	FE_IV5	FE10	FE_IV10
logpop	-61.3378***	-58.4805***	-56.9579***	-45.9734***	-50.3499***	-53.913***
	(2.4164)	(4.3865)	(2.5851)	(8.7268)	(2.771)	(3.9547)
popgr1	-220***	775.9641*				
	(26.1609)	(439.4215)				
loggdp	0.6846	11.446***	2.8523***	6.1281**	6.4039***	6.9286***
	(1.0001)	(3.2068)	(1.0971)	(2.8117)	(1.2328)	(2.0159)
gdpgr1	-3.1288	129.6429***				
	(2.8882)	(39.3106)				
demo	-0.815***	-0.6033***	-0.8072***	-0.2583**	-0.7848***	-0.4732***
	(0.0669)	(0.1092)	(0.0678)	(0.126)	(0.0686)	(0.078)
urb	-0.5806***	-0.2802**	-0.6267***	-0.7051***	-0.7202***	-0.4764***
	(0.0739)	(0.112)	(0.0765)	(0.176)	(0.0792)	(0.1026)
capf	-0.2233***	-0.6481***	-0.2104***	0.0092	-0.1957***	-0.2143***
	(0.0315)	(0.1014)	(0.0326)	(0.1589)	(0.0324)	(0.0407)
cpr	-0.8246***	-0.6023***	-0.8753***	-1.6745***	-0.9522***	-0.9999***
	(0.0435)	(0.1292)	(0.0451)	(0.2807)	(0.0471)	(0.0674)
pden	0.0092***	0.0036	0.0072***	0.0171***	0.0048**	0.0061**
	(0.0021)	(0.0036)	(0.0021)	(0.0031)	(0.0021)	(0.0025)
Period Fixed Effects						
75–80	-6.0365***	-10.5919***	-6.1772***	-5.6888***	-7.0983***	-2.6504*
	(1.1841)	(2.1223)	(1.2083)	(1.8817)	(1.2253)	(1.5061)
80–85	-11.127***	-18.9949***	-12.6***	-13.9762***	-14.3015***	-11.8884***
	(1.4706)	(2.7356)	(1.529)	(2.7594)	(1.5317)	(1.9608)
85–90	-11.8267***	-20.7109***	-14.7599***	-18.1334***	-18.2665***	-18.302***
	(1.6933)	(3.0995)	(1.8681)	(5.5937)	(1.8971)	(2.8897)
90–95	-8.7545***	-17.8616***	-12.3424***	-19.2616***	-18.2833***	-19.1665***
	(1.9448)	(3.4215)	(2.1385)	(6.9091)	(2.3222)	(3.8777)
95–00	-9.2096***	-19.8643***	-13.7526***	-25.0336***	-21.0233***	-21.3113***
	(2.1496)	(4.0452)	(2.3969)	(8.8407)	(2.6165)	(4.365)
00–05	-11.4621***	-25.453***	-15.7822***	-30.1338***	-24.3135***	-25.4585***
	(2.3949)	(5.0433)	(2.6328)	(9.7317)	(2.913)	(4.8471)
05–10	-11.6748***	-32.0728***	-16.4451***	-29.9036***	-25.3095***	-26.6054***
	(2.7456)	(6.4584)	(2.9621)	(9.0279)	(3.2453)	(5.1831)
popgr5			-250***	-3100***		
			(32.4717)	(861.3008)		
gdpgr5			-22.899***	-65.5662		
			(7.0653)	(72.7047)		
popgr10					-430***	-520***
					(48.6163)	(156.5976)
gdpgr10					-68.7794***	-100***
					(11.4742)	(32.206)
_cons	1100***	984.5175***	1100***	962.5623***	952.3291***	1000***
	(38.6187)	(86.2492)	(41.5115)	(121.7759)	(44.7465)	(65.0397)
N	4911	3830	4799	3749	4632	3560
r2	0.7314		0.7289		0.7313	
r2_o	0.163	0.0624	0.1753	0.1183	0.1982	0.1052
r2_b	0.0958	0.0194	0.1018	0.0525	0.1111	0.0502
r2_w	0.7314	0.5247	0.7289	0.5092	0.7313	0.7086
sigma_u	102.3402	106.3232	96.8443	97.5578	88.9606	95.9725
sigma_e	16.1335	19.8714	16.164	20.3772	16.1326	15.0643
rho	0.9758	0.9662	0.9729	0.9582	0.9682	0.976

*,** and *** denote 10%, 5% and 1% significance levels respectively. Standard errors are in parenthesis.
Author calculations.

MDG 5

Variable	FE1	FE_IV1	FE5	FE_IV5	FE10	FE_IV10
logpop	-450***	-470***	-450***	-510***	-390***	-260***
	(21.1743)	(24.662)	(23.4674)	(51.0624)	(25.0663)	(48.2603)
popgr1	-2.00E+02	939.8467				
	(143.216)	(716.2821)				
loggdp	-90.8118***	-150***	-76.6825***	-140***	-55.3203***	7.0475
	(7.0506)	(13.5716)	(8.5065)	(17.1592)	(9.9896)	(24.1388)
gdpgr1	-36.5074**	-260**				
	(16.4864)	(109.0805)				
demo	-3.5617***	-2.0837***	-3.7143***	-2.2727***	-3.6525***	-1.6069***
	(0.5524)	(0.5653)	(0.5547)	(0.5756)	(0.5712)	(0.5959)
urb	-1.8053**	0.0073	-2.1314***	0.7904	-2.6387***	-3.3532***
	(0.7474)	(0.732)	(0.7599)	(0.8581)	(0.7858)	(1.0612)
capf	0.1937	0.3714	0.4143**	-0.2319	0.1332	0.3773*
	(0.1957)	(0.2753)	(0.2046)	(0.4561)	(0.2001)	(0.2198)
cpr	-2.9946***	-2.8842***	-2.9799***	-1.9204*	-3.3182***	-4.8074***
	(0.3906)	(0.4016)	(0.4032)	(1.0342)	(0.4163)	(0.6517)
pden	0.0924***	0.0899***	0.0831***	0.0958***	0.0703***	0.039**
	(0.0177)	(0.0169)	(0.0175)	(0.0167)	(0.0177)	(0.0194)
Period Fixed Effects						
95–00	27.1622***	42.8638***	26.7785***	44.2368***	17.5505***	-3.184
	(4.4003)	(5.0373)	(4.7589)	(9.7601)	(4.9476)	(8.7454)
00–05	50.5429***	77.6762***	49.6651***	73.8419***	30.0993***	-17.6395
	(5.7301)	(8.3991)	(6.2446)	(15.4454)	(6.9445)	(15.4275)
05–10	82.6405***	131.7295***	83.2485***	122.1166***	59.5167***	0.922
	(8.0245)	(13.5586)	(8.6776)	(18.8665)	(9.4864)	(20.4785)
popgr5			135.2131	3.10E+03		
			(184.8826)	(2700)		
gdpgr5			-250***	-87.5858		
			44.7322	180.1749		
popgr10					-4.50E+02	-4400***
					(290.6771)	(1500)
gdpgr10					-690***	-2100***
					(76.6311)	(302.777)
_cons	8400***	9200***	8300***	9700***	7400***	5100***
	(326.2944)	(398.9629)	(364.8824)	(817.6845)	(393.1777)	(834.5898)
N	2853	2352	2771	2283	2643	2192
r2	0.4648		0.4798		0.4991	
r2_o	0.0929	0.1269	0.092	0.0974	0.1116	0.1395
r2_b	0.0807	0.0982	0.076	0.0679	0.0869	0.0957
r2_w	0.4648	0.495	0.4798	0.5091	0.4991	0.4816
sigma_u	713.6491	745.6858	715.0714	809.8808	638.3922	472.6605
sigma_e	69.8558	61.3578	68.7941	61.4523	68.9333	64.5217
rho	0.9905	0.9933	0.9908	0.9943	0.9885	0.9817

*,** and *** denote 10%, 5% and 1% significance levels respectively. Standard errors are in parenthesis.
Author calculations.

MDG 6

Variable	FE1	FE_IV1	FE5	FE_IV5	FE10	FE_IV10
logpop	-19.8434	-1.0523	-7.5759	-130*	9.9932	16.0939
	(23.6561)	(34.0828)	(26.9098)	(67.0417)	(29.0847)	(55.9572)
popgr1	-490***	1.40E+03				
	(160.0024)	(989.8986)				
loggdp	-51.4629***	-13.4188	-62.9852***	-130***	-46.8648***	-68.127**
	(7.877)	(18.7559)	(9.7543)	(22.5289)	(11.591)	(27.9887)
gdpgr1	60.6626***	573.342***				
	(18.4188)	(150.7488)				
demo	1.3161**	1.2773	1.1452*	1.7711**	1.0406	1.7696**
	(0.6171)	(0.7813)	(0.6361)	(0.7558)	(0.6627)	(0.691)
urb	0.8875	0.0001	0.9929	0.8728	0.5973	-0.9537
	(0.835)	(1.0117)	(0.8714)	(1.1266)	(0.9117)	(1.2304)
capf	-2.1003***	-3.5472***	-2.2143***	-4.0501***	-2.0448***	-2.5015***
	(0.2186)	(0.3804)	(0.2346)	(0.5989)	(0.2322)	(0.2549)
cpr	2.1978***	1.4625***	2.0624***	2.3753*	1.8589***	0.4768
	(0.4364)	(0.555)	(0.4624)	(1.3578)	(0.4831)	(0.7557)
pden	-0.0084	-0.0144	-0.0075	0.0133	-0.0118	-0.0099
	(0.0198)	(0.0234)	(0.0201)	(0.022)	(0.0206)	(0.0225)
Period Fixed Effects						
95–00	16.7826***	14.1399**	18.1285***	51.3139***	13.4667**	21.0964**
	(4.916)	(6.9615)	(5.457)	(12.8144)	(5.7407)	(10.1401)
00–05	24.4319***	9.2418	27.0143***	80.0583***	19.5452**	31.1412*
	(6.4018)	(11.6075)	(7.1606)	(20.2789)	(8.0578)	(17.888)
05–10	23.7434***	-9.2915	25.3493**	87.1802***	16.3184	36.6478
	(8.9651)	(18.7379)	(9.9505)	(24.7705)	(11.0071)	(23.7445)
popgr5			-640***	3.10E+03		
			(212.0026)	(3500)		
gdpgr5			169.3451***	1100***		
			(51.2938)	(236.558)		
popgr10					-1300***	-2.50E+03
					(337.2755)	(1700)
gdpgr10					69.1152	70.8198
					(88.9158)	(351.0664)
_cons	789.3186**	245.5727	688.7894*	3100***	324.5161	569.7695
	(364.5395)	(551.3649)	(418.4062)	(1100.0)	(456.208)	(967.6972)
N	2853	2352	2771	2283	2643	2192
r2	0.079		0.0765		0.0694	
r2_o	0.0089	0.0001	0.0325	0.1273	0	0.1411
r2_b	0.004	0.0022	0.0276	0.1214	0.0003	0.1333
r2_w	0.079	.	0.0765	.	0.0694	0.091
sigma_u	198.5018	215.4207	192.9506	248.7127	201.924	198.0596
sigma_e	78.0437	84.7963	78.8853	80.683	79.984	74.8122
rho	0.8661	0.8658	0.8568	0.9048	0.8644	0.8751

*,** and *** denote 10%, 5% and 1% significance levels respectively. Standard errors are in parenthesis.
Author calculations.

TABLA 7.1. WATER

Variable	FE1	FE_IV1	FE5	FE_IV5	FE10	FE_IV10
logpop	10.0297***	14.3513***	12.0572***	9.0135***	13.223***	15.389***
	(0.8521)	(1.1496)	(0.9399)	(2.7601)	(0.9941)	(2.0803)
popgr1	-14.8223**	51.8516				
	(5.7632)	(33.3887)				
loggdp	-0.6436**	-2.0881***	-0.254	-2.5795***	0.5211	0.6669
	(0.2837)	(0.6326)	(0.3407)	(0.9275)	(0.3962)	(1.0405)
gdpgr1	0.5799	-10.7467**				
	(0.6634)	(5.0847)				
demo	0.1571***	0.1051***	0.1442***	0.0963***	0.1473***	0.1162***
	(0.0222)	(0.0264)	(0.0222)	(0.0311)	(0.0227)	(0.0257)
urb	0.1895***	0.2099***	0.181***	0.2743***	0.1548***	0.2005***
	(0.0301)	(0.0341)	(0.0304)	(0.0464)	(0.0312)	(0.0457)
capf	0.0243***	0.0338***	0.0289***	-0.0226	0.0223***	0.0196**
	(0.0079)	(0.0128)	(0.0082)	(0.0247)	(0.0079)	(0.0095)
cpr	0.2403***	0.2574***	0.2334***	0.3642***	0.2333***	0.2661***
	(0.0157)	(0.0187)	(0.0161)	(0.0559)	(0.0165)	(0.0281)
pden	-0.0028***	-0.0036***	-0.003***	-0.0033***	-0.0034***	-0.004***
	(0.0007)	(0.0008)	(0.0007)	(0.0009)	(0.0007)	(0.0008)
Period Fixed Effects						
95–00	0.2722	0.1425	0.1154	0.8502	-0.085	-0.4437
	(0.1771)	(0.2348)	(0.1906)	(0.5276)	(0.1962)	(0.377)
00–05	1.0035***	1.0616***	0.6292**	2.0406**	0.2066	-0.2338
	(0.2306)	(0.3915)	(0.2501)	(0.8349)	(0.2754)	(0.665)
05–10	1.9775***	2.3178***	1.3974***	3.2566***	0.803**	0.3623
	(0.3229)	(0.632)	(0.3476)	(1.0198)	(0.3762)	(0.8827)
popgr5			-41.8798***	319.3957**		
			(7.4051)	(145.6429)		
gdpgr5			-2.313	7.8847		
			(1.7916)	(9.7392)		
popgr10					-74.1404***	65.5798
					(11.5275)	(62.6521)
gdpgr10					-13.365***	-28.3656**
					(3.039)	(13.0514)
_cons	-97.5006***	-160***	-130***	-82.4879*	-150***	-200***
	(13.1305)	(18.5972)	(14.6145)	(44.199)	(15.5924)	(35.9757)
N	2853	2352	2771	2283	2643	2192
r2	0.5386		0.5595		0.5794	
r2_o	0.1547	0.0614	0.1259	0.1404	0.1251	0.1116
r2_b	0.1393	0.0413	0.1098	0.1088	0.1045	0.0739
r2_w	0.5386	0.5137	0.5595	0.3601	0.5794	0.5692
sigma_u	21.2535	27.4469	23.6415	21.2717	24.9819	28.2147
sigma_e	2.8111	2.8601	2.7554	3.3217	2.7337	2.7813
rho	0.9828	0.9893	0.9866	0.9762	0.9882	0.9904

*,** and *** denote 10%, 5% and 1% significance levels respectively. Standard errors are in parenthesis.
Author calculations.

TABLE 7.2. SANITATION

Variable	FE1	FE_IV1	FE5	FE_IV5	FE10	FE_IV10
logpop	1.3481*	-0.7697	0.4552	-13.1452***	0.5298	10.7321***
	(0.773)	(1.1239)	(0.8566)	(3.7382)	(0.8937)	(2.2129)
popgr1	-21.1712***	35.2476				
	(5.2284)	(32.6437)				
loggdp	1.7829***	0.0607	2.4206***	-1.7298	3.7829***	8.5574***
	(0.2574)	(0.6185)	(0.3105)	(1.2562)	(0.3561)	(1.1068)
gdpgr1	0.1247	-16.7945***				
	(0.6019)	(4.9712)				
demo	-0.0765***	-0.0726***	-0.0723***	-0.0954**	-0.0561***	-0.0496*
	(0.0202)	(0.0258)	(0.0202)	(0.0421)	(0.0204)	(0.0273)
urb	0.412***	0.4522***	0.4189***	0.5755***	0.3912***	0.2342***
	(0.0273)	(0.0334)	(0.0277)	(0.0628)	(0.028)	(0.0487)
capf	0.0157**	0.0502***	0.0262***	-0.0735**	0.0243***	0.0539***
	(0.0071)	(0.0125)	(0.0075)	(0.0334)	(0.0071)	(0.0101)
cpr	0.3027***	0.337***	0.309***	0.5737***	0.3167***	0.1959***
	(0.0143)	(0.0183)	(0.0147)	(0.0757)	(0.0148)	(0.0299)
pden	-0.0005	-0.0008	-0.0005	-0.0003	-0.0009	-0.0029***
	(0.0006)	(0.0008)	(0.0006)	(0.0012)	(0.0006)	(0.0009)
Period Fixed Effects						
95–00	0.1552	0.3222	0.0071	2.1124***	-0.2206	-2.3215***
	(0.1606)	(0.2296)	(0.1737)	(0.7145)	(0.1764)	(0.401)
00–05	0.4659**	1.3169***	0.3172	3.9711***	-0.247	-4.0041***
	(0.2092)	(0.3828)	(0.2279)	(1.1307)	(0.2476)	(0.7074)
05–10	0.6385**	2.1566***	0.4274	4.9031***	-0.277	-5.089***
	(0.293)	(0.6179)	(0.3167)	(1.3812)	(0.3382)	(0.939)
popgr5			-20.9127***	652.8349***		
			(6.7483)	(197.252)		
gdpgr5			-5.297***	29.5757**		
			(1.6328)	(13.1903)		
popgr10					-29.3236***	-400***
					(10.3631)	(66.6447)
gdpgr10					-23.6624***	-92.0003***
					(2.732)	(13.8832)
_cons	-7.2111	35.2515*	0.9031	220.3913***	-9.9458	-190***
	(11.912)	(18.1822)	(13.3185)	(59.8611)	(14.0174)	(38.2683)
N	2853	2352	2771	2283	2643	2192
r2	0.5607		0.5704		0.5923	
r2_o	0.6871	0.6804	0.7217	0.2979	0.7439	0.4555
r2_b	0.6906	0.6721	0.7187	0.2844	0.7268	0.4215
r2_w	0.5607	0.446	0.5704	.	0.5923	0.4067
sigma_u	20.5933	21.1036	19.733	29.3447	19.0594	25.4627
sigma_e	2.5502	2.7963	2.511	4.4988	2.4576	2.9585
rho	0.9849	0.9827	0.9841	0.977	0.9836	0.9867

*,** and *** denote 10%, 5% and 1% significance levels respectively. Standard errors are in parenthesis.
Author calculations.