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## Variety Expansion Redux: A Cross-Country Estimation of the Spillover Effects of Innovation and Imitation

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# Variety Expansion Redux: A Cross-Country Estimation of the Spillover Effects of Innovation and Imitation

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#### Abstract

The complex interactions between imitation and innovation are frequently examined in endogenous growth models: imitation serves as a *stepping stone* to innovation; innovation exhibits spillover to imitation; for both, the accumulative stock provides a *standing-on-shoulders* effect to further growth. However, empirical estimation of these concepts in true Romerian product variety interpretation is scarce. This is due to variety expansion often being treated only as imitative activities in the relatively popular Schumpeterian interpretation to innovation. Using an overlapping generations framework that models innovation and imitation as semi-symmetric ideas production functions, this paper estimates these spillover effects using cross-country data by treating each 4-digit ISIC industries as a separate industrial variety. We find robust and significant estimates for all three spillover effects, with both imitation and innovation being complementary to each other. In addition, the growth regressions also reaffirm the significance of product variety expansion as a source of innovation-driven growth.

JEL Classification Numbers: O11, O40, O47

**Keywords:** Growth, Ideas Production, Imitation, Innovation, Product Variety Expansion.

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### 1 Introduction

The dynamics of imitation and innovation, together with their interactions, are fundamental to the industrial transformation of many developing economies. Broadly, there are two main interpretations. First, theories in the Nelson-Phelps, Aghion-Howitt tradition interpret innovation as a leap at the edge of the knowledge frontier while other firms jostle along the quality ladder where imitative activities take place. Conversely, industrial transformation theories in the Romerian tradition view both as sectors with semi-symmetric ideas production functions, where gains in innovation arise horizontally in the form of product variety expansion as a result of spillovers from the imitation sector. Existing empirical studies analyzing the tradeoff between imitation and innovation are predominantly based on the former, largely due to difficulties in empirically examining the industrial transformation thesis in Romerian product variety interpretation. As such, the learning and spillover effects between the two sectors and to others in an economy remain underexplored. We contribute to the empirical literature on growth regressions by estimating the elasticities to well-known theoretical concepts such as "standing-on-shoulder" (Caballero and Jaffe 1993; Jones 2005) and "stepping-stone" effects (Glass 1999; Collins 2015). Using highly disaggregated industrial data, to our knowledge, this paper is the first to empirically establish the presence of a positive stepping-stone effect across countries. Further, by estimating a positive effect of innovative variety on the expansion of imitative varieties, we also find empirical evidence in support of a complementary relationship between innovative and imitative industrial varieties.

In terms of theoretical contributions, studies such as Davidson and Segerstrom (1998) and Aghion et al. (2000) find that too much imitation hinders economic growth, whereas studies such as Glass (1999), Agénor and Dinh (2013), and Collins (2015) argue

that imitation is a key stepping stone for innovation. Though, Mukoyama (2003) and Benhabib et al. (2014) are examples of studies that show that imitation is neither good nor bad, as it is merely the optimal choice of firms or economies in their production.

The theories discussed are non-exhaustive, and the many studies concerning imitation and innovation adopt various interpretations to the two ideas production activities. Most existing empirical contributions on ideas production-based endogenous growth models mainly follow the tradition of Nelson and Phelps (1966), Aghion and Howitt (1992, 1998), Vandenbussche et al. (2006), and therefore rest on a Schumpeterian and distance-to-frontier interpretation to innovation ("vertical innovation"). Comparisons between Schumpeterian and semi-endogenous growth models, such as Ha and Howitt (2007) and Madsen (2008) find the former to have superior empirical validity. However, the theoretical framework underpinning their empirical analysis is premised on adopting the distance-to-frontier interpretation to innovation, while product variety is generally specified as imitation by firms playing catching-up along the quality ladder. Such an interpretation, in essence, already imposes a prior association of variety expansion to imitation as a source of growth. As argued in studies such as Gustafsson and Segerstrom (2010), Puga and Trefler (2010), and Ang et al. (2015), horizontal innovation in the form of expanding new varieties is as important a source of innovation as the jumps along the frontier, especially for emerging industrial economies.

Moreover, the lack of empirical support for what are known as semi-endogenous growth models in the aforementioned empirical studies (compared to Schumpeterian models) is also largely due to the use of aggregate R&D expenditure data—and its lack of correlation with TFP growth—which in itself does not capture the essence of the original interpretation of Romerian expanding variety models. R&D expenditure is an input measure, whereas in a Romerian horizontal innovation-driven growth model, productivity in the final goods sector depends directly on the expansion of intermediate

varieties, which are inherently output based.

As pointed out in Ang and Madsen (2015a), existing studies do not test for the returns to ideas stock in the ideas production function. As such, they will not be able to provide any empirical insight for the sign and magnitude of the spillover/externality effects that are inherent in Romerian models. Ang and Madsen (2015a) test for this channel, commonly dubbed the standing-on-shoulder effect, in a single ideas production function using data from selected economies from 1870-2010. While they control for international knowledge spillover, the study by design, does not reveal much about the dynamics between innovation and imitation. In a separate study, Ang and Madsen (2015b) partly address this by examining the productivity growth effects of education across different age cohorts through the channels of innovation and imitation; but their interpretations of the two sectors are based heavily on models with vertical innovation. Innovation is interpreted as gains along the frontier while imitation as product variety in the lower rung of the ladder, often proxied by employment or population (inherently flawed measures). If both imitation and innovation are modelled as product varieties driven by interacting ideas production functions, as in Rustichini and Schmilz (1991), Walz (1996), and more recently, Agénor and Dinh (2013) and Lim (2015), an appropriate empirical strategy is one that is based on a horizontal innovation interpretation.

In terms of measurement, in the existing literature, innovation is mainly measured by patent applications while imitation by trademarks or employment. While patent data is a good measure for innovation, the proxies used for imitation and product variety are often flawed.<sup>2</sup> Conceptually, the use of measures such as employment or R&D

<sup>&</sup>lt;sup>1</sup>Indeed, the significance of the spillover mechanism of a Romerian ideas production functionbased, horizontal innovation model can often be seen in multisectorial growth models examining developmental issues such as industrial transformation and stages of development, such as Funke and Strulik (2000), Sequiera (2011), and Agenor and Dinh (2013).

<sup>&</sup>lt;sup>2</sup>See Bottazzi and Peri (2003) and Ang and Madsen (2013) for examples. Their justification is often that the number of products tend to grow at the same rate of population in the steady state, but this assumption (i) is primarily Schumpeterian-based, and (ii) the steady-state assumption is ill-suited when estimating coefficients of a dynamic system.

researchers as a proxy for product variety is no longer valid once the scale effect is adjusted for. For another popular measure, the input measure of R&D expenditure, it is well-documented in the empirical literature to have failed in explaining innovation-driven productivity growth. The direct use of a product space-based measure is therefore essential.

Recent releases of the INDSTAT 4 by the United Nations Industrial Development Organization (UNIDO) provide us with sufficiently long disaggregated industrial data across countries. This, coupled with the progression in product sophistication studies such as Hausmann et al. (2007), allows us to examine empirically the interactions of imitation and innovation—as semi-symmetric ideas production functions—directly in the industrial output variety dimension, which is fully consistent with the Romerian interpretation of product variety expansion. Specifically, we present a simple version of an industrial transformation model that is based on Agénor and Dinh (2013) in Section 2. This allows us to derive a 2x2 linear difference equation system characterizing the solutions,

$$\begin{bmatrix} \hat{m}_{t+1}^R \\ \hat{m}_{t+1}^I \end{bmatrix} = \begin{bmatrix} \Omega_R^1 & \Omega_I^1 \\ \Omega_R^2 & \Omega_I^2 \end{bmatrix} \begin{bmatrix} \hat{m}_t^R \\ \hat{m}_t^I \end{bmatrix},$$
(1)

where  $\hat{m}_t^R = \ln m_t^R$  denotes innovative and  $\hat{m}_t^I = \ln m_t^I$  denotes imitative varieties. Given the log-deviations from steady-state form, the model to be tested empirically is therefore not bounded by the steady-state assumption. By also introducing public capital and skilled labor (though the model specification is such that a reduced form 2x2 dynamics system with only imitation and innovation can be derived), we also test and control for their role in influencing the imitation-innovation dynamics. Section 3 derives an empirical structure for the theoretical model. This is followed by Section 4, which discusses the empirical strategy and the estimation results. Section 5 concludes the paper.

### 2 The Model

The model belongs to a group of Romerian (1990) expanding variety models on industrial transformation developed in the tradition of Rustichini and Schmilz (1991). Based primarily on the overlapping generations model of Agénor and Dinh (2013), the economy is populated by individuals with identical preferences but different innate abilities, who live for two periods. Population is constant at  $\bar{N}$ . Each individual is endowed with one unit of time in the first period of life, and zero unit in old age. Abilities are instantly observable by all and follow a continuous distribution with density function  $f(a_t)$  and cumulative distribution function  $F(a_t)$ , with support (0, 1). For tractability and critical to the subsequent derivation of the 2x2 reduced form, ability is assumed to be uniformly distributed on its support<sup>3</sup>. At the beginning of adulthood, individuals choose whether to spend a fraction  $\varepsilon \in (0,1)$  and training cost,  $tc_t$ , to undergo training. This decision determines the proportion of skilled and unskilled workers in the economy.

Let  $c_{t+j}^{h,t}$  denote consumption at period t+j of an individual of skill level h=U,S, born at the beginning of period t, with j=0,1. The individual's discounted utility function is given by

$$V_t^h = \ln c_t^{h,t} + \frac{\ln c_{t+1}^{h,t}}{1+\rho}, \ h = U, S, \quad j = 0, 1$$
 (2)

where  $\rho > 0$  is the discount rate, while the period-specific budget constraints are given by

$$c_t^{U,t} + s_t^U = (1 - \tau)w_t^U, (3)$$

$$c_t^{S,t} + s_t^S = (1 - \tau)[(1 - \varepsilon)w_t^S - tc_t],$$
 (4)

<sup>&</sup>lt;sup>3</sup>An alternative distribution that can be used is the Pareto distribution, which will also give a tractable expression for the average value of ability.

$$c_{t+1}^{h,t} = (1 + r_{t+1})s_t^h, \quad h = U, S,$$
 (5)

where  $w_t^h$  is the wages,  $s_t^h$  the savings,  $1 + r_{t+1}$  the gross rate of return on holding assets, and  $\tau \in (0,1)$  the tax rate.

It is optimal for an individual with ability  $a_t \in (a_m, 1)$  to train and become skilled if and only if

$$V_t^S \ge V_t^U, \tag{6}$$

where, the training cost,  $tc_t$ , is proportional to the wage that skilled workers earn (after accounted for training time,  $\varepsilon$ )<sup>4</sup>,

$$tc_t = \mu(1-\varepsilon)w_t^S/a_t$$
, where  $\mu \in (0,1)$ . (7)

As shown in Appendix A, holding equation (6) as an equality, together with (7), we can derive the threshold level of ability  $a_t^C$  such that all individuals with ability lower than  $a_t^C$  choose to remain unskilled as a function of the relative wage ratio:

$$a_t^C = 2\mu \left( 1 - \frac{w_t^U}{(1 - \varepsilon)w_t^S} \right)^{-1} - 1.$$
 (8)

The productivity of unskilled workers, independently of abilities, is constant and normalized to unity. Given (8), the proportion of unskilled labor,  $\theta_t^U$ , is given by

$$\theta_t^U = \frac{N_t^U}{\bar{N}} = \int_0^{a_t^C} f(a_t) da = F(a_t^C) = a_t^C.$$
 (9)

The raw supply of skilled labor, at any time t, is  $N_t \int_{a_t^C}^1 f(a_t) da = (1 - a_t^C) N_t$ . However, the average skill level of workers with ability  $a \in (a_t^C, 1)$  who have undergone training equals  $0.5(1 + a_t^C)$ ; thus, the proportion of *effective* supply of skilled labor at

<sup>&</sup>lt;sup>4</sup>For papers with similar specification, see Galor and Moav (2000), Tanaka and Iwaisako (2009), and Agénor and Canuto (2017).

time t, is

$$\theta_t^S = \frac{N_t^S}{\bar{N}} = \frac{1 - (a_t^C)^2}{2}.$$
 (10)

#### 2.1 Final Good

The final good is produced by a continuum of unit mass competitive firms, indexed by  $i \in (0,1)$ , employing  $\chi N_t^U$  of unskilled labor in the economy. For each firm, production of  $Y_t^i$  uses untrained labor,  $N_{i,t}^U$ , private capital,  $K_{i,t}^P$ , and the combination of intermediate inputs,  $x_{i,s,t}$ , with  $s \in (0, M_t)$ , with the production function given by

$$Y_t^i = \left[ \frac{K_t^G}{(K_t^P)^{\zeta_K} (N_t)^{\zeta_N}} \right]^{\omega} (\chi N_{i,t}^U)^{\beta} (K_{i,t}^P)^{\alpha} (X_t^i)^{\gamma}, \tag{11}$$

where  $\beta, \alpha, \gamma \in (0, 1), \omega > 0$ ,  $\zeta_K, \zeta_N > 0$ ,  $\gamma = 1 - \beta - \alpha$ ,  $K_t^P$  the aggregate private capital, and  $X_t^i = [\int_0^{M_t^I} (x_{s,t}^{i,I})^{\eta} ds]^{\nu/\eta} \cdot [\int_0^{M_t^R} (x_{s,t}^{i,R})^{\eta} ds]^{(1-\nu)/\eta}$  the composite intermediate input for firm i, where  $\eta \in (0,1)$  and  $1/(1-\eta) > 1$  is the price elasticity of demand for each intermediate good, and  $\nu \in (0,1)$ . Thus, the composite intermediate input exhibits constant returns to scale with respect to innovation- and imitation-based inputs.

Assuming full depreciation, firm i's profits are defined as

$$\Pi_{i,t}^{Y} = Y_{t}^{i} - \int_{0}^{M_{t}^{I}} P_{t}^{I,s} x_{s,t}^{I} ds - \int_{0}^{M_{t}^{R}} P_{t}^{R,s} x_{s,t}^{R} ds - w_{t}^{U} \chi N_{i,t}^{U} - (1 + r_{t}) K_{i,t}^{P},$$

where standard profits maximization by each firm yields the first-order conditions: for unskilled wage,  $w_t^U = \beta \frac{Y_{i,t}}{\chi N_{i,t}^U}$ , interest rate,  $1 + r_t = \alpha(\frac{Y_{i,t}}{K_{i,t}^P})$ , and the demand for intermediate inputs as follows:

$$x_{s,t}^{j} = \left(\frac{\gamma \nu^{j} Z_{t}^{j}}{P_{t}^{j,s}}\right)^{1/(1-\eta)}, \ s = 1, \dots M_{t}^{j}, \ j = I, R, \ \nu^{I} = \nu, \nu^{R} = 1 - \nu, \tag{12}$$

$$Z_t^j = Y_t / \int_0^{M_t^j} (x_{s,t}^j)^{\eta} ds.$$
 (13)

In a symmetric equilibrium,  $\int_0^{M_t^I} (x_{s,t}^I)^{\eta} ds = M_t^I (x_t^I)^{\eta}$  and  $\int_0^{M_t^R} (x_{s,t}^R)^{\eta} ds = M_t^R (x_t^R)^{\eta}$ . The composite intermediate input can then be written as

$$X_t = [(M_t^I)^{1/\eta} x_t^I]^{\nu} [(M_t^R)^{1/\eta} x_t^R]^{1-\nu}.$$

The number of firms is normalized to unity, which gives the aggregate final output  $Y_t$  as:

$$Y_t = \left[\frac{K_t^G}{(K_t^P)^{\zeta_K}(N_t)^{\zeta_N}}\right]^{\omega} (\chi N_t^U)^{\beta} (X_t)^{\gamma} (K_t^P)^{\alpha}. \tag{14}$$

#### 2.2 Intermediate Inputs

There are two sets of intermediate goods producers: those producing imitation-based inputs (index I) using blueprints from the imitation sector, and those producing innovation-based inputs (index R), based on blueprints from the innovation sector. Using one unit of final good, each firm produces one horizontally-differentiated intermediate input.

The two sectors are treated symmetrically, modelled in similar fashion to Romer (1990) and Gustafsson and Segerstrom (2010). Each producer in sector j=I,R pays the relevant blueprint fee  $Q_t^j$ . Then, each producer sets its price to maximize profits, given the perceived demand function for its good (12), which determines marginal revenue. Under a symmetric equilibrium, profits are given by  $\Pi_t^j = (P_t^j - 1)x_t^j$  or using (12) and (13),  $\Pi_t^j = (P_t^j - 1)[\gamma \nu^j Y_t/P_t^j M_t^j (x_t^j)^{\eta}]^{1/(1-\eta)}$ , j=I,R. The solution yields the optimal price,

$$P_t^{j,s} = \eta^{-1}. \ \forall s = 1, ... M_t^I, \ j = I, R$$
 (15)

Using (12), the quantity demanded at this price is  $x_{s,t}^j = (\gamma \eta \nu^j Z_t^j)^{1/(1-\eta)}, \forall s$ , that

is, noting that under symmetry  $\int_0^{M_t^j} (x_{s,t}^j)^{\eta} ds = M_t^j (x_t^j)^{\eta}$ ,

$$x_t^j = \gamma \eta \nu^j \left(\frac{Y_t}{M_t^j}\right), \quad j = I, R \tag{16}$$

with maximum profit given by

$$\Pi_t^j = (1 - \eta)\gamma \nu^j \left(\frac{Y_t}{M_t^j}\right), \quad j = I, R$$
(17)

For simplicity, intermediate-input producing firms in both sub-sectors are assumed to last only one period, and that the blueprints are auctioned off randomly to a new group of firms in each period. Thus, each producer of a new intermediate good holds the blueprint only for the period during which it is bought, implying monopoly profits during that period only; yet the blueprints would last forever.<sup>5</sup> By arbitrage, therefore,

$$Q_t^j = \Pi_t^j. \quad j = I, R \tag{18}$$

#### 2.3 Ideas Production Sectors: *Imitation* and *Innovation*

Blueprints are produced in two sectors: an innovative sector, which employs skilled labor, in quantity  $N_t^S$ , to produce variety,  $M_t^R$ , and an imitation sector, which employs a constant share of unskilled labor,  $(1 - \chi)N_t^U$  to produce variety,  $M_t^I$ . First, consider the imitation sector. The aggregate technology is defined as

$$M_{t+1}^{I} - M_{t}^{I} = A_{t}^{I} \left( \frac{(1-\chi)N_{t}^{U}}{N_{t}} \right), \tag{19}$$

<sup>&</sup>lt;sup>5</sup>See Agénor and Canuto (2012) for a more detailed discussion of this assumption.

where  $A_t^I$  is a productivity factor,

$$A_t^I = (\frac{M_t^R}{K_t^P})^{\phi_1^I} (k_t^G)^{\phi_2^I} M_t^I.$$
 (20)

Consistent with the literature in the tradition of Romer (1990), this specification includes the direct learning effect from stock of imitation  $(M_t^I)$ , with a constant return specification following the empirical estimate of Ang and Madsen (2015), and the spillover effect from innovation (which can be either positive or negative, as in Lim (2015)). In addition, as in Agénor and Neanidis (2015), and subject to congestion measured by private capital stock, a positive productivity effect from access to public capital  $(k_t^G)$  is specified. To eliminate scale effects, it is the ratio of employed workers to total population that is taken to affect activity in that sector.<sup>6</sup>

Firms in the imitation sector choose labor so as to maximize profits,  $\Pi_t^I = Q_t^I(M_{t+1}^I - M_t^I) - w_t^U(1-\chi)N_t^U$ , subject to (19), and taking the wage rate, the patent price,  $Q_t^I$ , and productivity  $A_t^I$ , as given. The first-order condition with strictly positive employment is given by

$$w_t^U = \frac{Q_t^I A_t^I}{N_t},\tag{21}$$

Consider now the innovation sector. The aggregate technology is defined as

$$M_{t+1}^R - M_t^R = A_t^R \left[ \frac{(1-\varepsilon)N_t^S}{N_t} \right],$$
 (22)

where  $A_t^R$  is a productivity factor,

$$A_t^R = \left(\frac{M_t^I}{K_t^P}\right)^{\phi_1^R} (k_t^G)^{\phi_2^R} M_t^R. \tag{23}$$

<sup>&</sup>lt;sup>6</sup>See Dinopoulos and Thompson (1998), Dinopoulos and Segerstrom (1999), and Perez-Sebastian (2007).

Again, the direct learning effect is modelled, and  $\phi_1^R$  is known as the *stepping-stone* effect in the literature (Glass 1999; Collins 2015).

Standard profit maximization based on  $\Pi_t^R = Q_t^R(M_{t+1}^R - M_t^R) - w_t^S(1-\varepsilon)N_t^{S,R}$ , subject to (22), taking the wage rate, the patent price,  $Q_t^R$ , and productivity as given, gives

$$w_t^S = \frac{Q_t^R A_t^R}{N_t}. (24)$$

#### 2.4 Government & Market-clearing Conditions

The government taxes only wages. A constant fraction of government revenue is spent on public capital investment,  $G_t^I$ , and the remaining on all other non-productive spending,  $G_t^O$ . It is assumed that the government cannot borrow.

$$G_t = \sum_{t} G_t^h = v_h \tau \{ w_t^U N_t^U + [(1 - \varepsilon) w_t^S - t c_t] N_t^S \}, \ h = I, O,$$
 (25)

where  $v_h \in (0,1)$ ,  $\sum_i v_i = 1$ .

Assuming full depreciation, public capital stock evolves according to

$$K_{t+1}^G = G_t^I. (26)$$

Both the skilled and unskilled labor markets clear. The supply of the unskilled and the effective skilled labor can be expressed in the shares of population, as follows:

$$\theta_t^U = \frac{N_t^U}{N_t}, \quad \theta_t^S = \frac{N_t^S}{N_t}. \tag{27}$$

Assuming full depreciation ( $\delta_P = 1$ ), the saving-investment balance requires the private capital stock in t + 1 to be equal to savings in period t by individuals born in

t - 1:

$$K_{t+1}^P = s_t^U N_t^U + s_t^S N_t^S. (28)$$

## 3 From Dynamic System to Empirical Form

The *dynamic* and *balanced growth equilibriums* of the model economy are defined as follows:

**Definition:** The dynamic equilibrium is a sequence of consumption and saving allocations  $\{c_t^{h,t}, c_{t+1}^{h,t}, s_t^h\}_{t=0}^{\infty}$ , for h = U, S, private capital stock  $\{K_t^P\}_{t=0}^{\infty}$ , public capital stocks  $\{K_t^G\}_{t=0}^{\infty}$ , prices of production inputs  $\{w_t^U, w_t^S, r_{t+1}\}_{t=0}^{\infty}$ , prices and quantities of intermediate inputs  $\{P_t^{s,j}, x_{s,t}^j\}_{t=0}^{\infty}$ ,  $\forall s \in (0, M_t)$  and j = I, R, existing varieties,  $\{M_t^I, M_t^R\}_{t=0}^{\infty}$ , such that, given initial stocks  $K_0 > 0$ ,  $K_0^G > 0$ ,  $M_0^I$ ,  $M_0^R > 0$ , (a) all individuals maximize utility by choosing consumption subject to their intertemporal budget constraint, taking prices and tax rate as given, (b) final good firms maximize profits by choosing inputs taking the respective prices as given, (c) intermediate input producers set prices so as to maximize profits while internalizing the effect of their decisions on the perceived aggregate demand curve for their product, (d) knowledge sector firms maximize profits by choosing labor, taking wages, blueprint prices, productivity, and population as given, (e) each equilibrium blueprint price extracts all profits made by the corresponding intermediate producer, and (f) all markets clear.

**Definition:** A balanced growth equilibrium is an equilibrium with imperfect competition in which (a)  $\{c_t^{h,t}, c_{t+1}^{h,t}, s_t^h\}_{t=0}^{\infty}$ , for h = U, S, and  $K_t^P$ ,  $K_t^G$ ,  $Y_t$ ,  $M_t^I$ ,  $M_t^R$ ,  $w_t^U$ ,  $w_t^S$ , grow at the constant, endogenous rate  $1 + \gamma$ , implying that the knowledge-capital ratios, and public-private capital ratios, are constant; (b) the rate of return on capital  $1 + r_{t+1}$  is constant; (c) the price of intermediate goods  $P_t^j$  and the blueprint prices  $Q_t^j$ , j = I, R, are constant; (d) the threshold level of individuals who choose to remain

unskilled,  $a_t^C$ , is constant; (e) the skilled and unskilled labor share,  $\theta_t^S$  and  $\theta_t^U$  are constant.

As shown in Appendix A, when we solve the model, the share of skilled labor,  $\theta_t^S$ , can be substituted out fully from the system while public capital is independent of t. These then allow us to condense the dynamic form of the solution into a first-order linear difference equation system in log-deviations from the steady state,  $\hat{m}_t^R = \ln m_t^R$  and  $\hat{m}_t^I = \ln m_t^I$ , where

$$\begin{bmatrix} \hat{m}_{t+1}^R \\ \hat{m}_{t+1}^I \end{bmatrix} = \begin{bmatrix} \Omega_R^1 & \Omega_I^1 \\ \Omega_R^2 & \Omega_I^2 \end{bmatrix} \begin{bmatrix} \hat{m}_t^R \\ \hat{m}_t^I \end{bmatrix}. \tag{29}$$

 $\Omega_R^1$  and  $\Omega_I^2$  are interpretable as the respective aggregate standing-on-shoulder effects,  $\Omega_1^I$  the stepping-stone effect, and  $\Omega_R^2$  the spillover effect from innovation to imitation. As also shown in Appendix A, upon imposing certain restrictions on the congestion parameters, we can write (14) in standard AK-form of  $Y_t = f(m_t^R, m_t^I; \tilde{k}^G) K_t^P$ . With  $Y_t$  and  $K_t^P$  growing at the same rate along the balanced growth path, we can then write the long-run growth rate as depending on the imitative varieties, the innovation varieties, and public capital.

Modifying the theoretical dynamic system into an empirically testable form for dynamic panel estimation, the benchmark empirical setup is represented by:

$$innov_{jt} = \alpha_0 + \alpha_1 innov_{jt-1} + \alpha_2 imit_{jt} + \alpha_3 imit_{jt-1} + \alpha_4 pubcap_{jt}$$
 (30)  
  $+\alpha_5 initGDP_{jt} + \sum_{l=1}^{L} \psi_l X_{l,jt} + \sum_{m=1}^{n-1} \lambda_m Z_{m,jt} + \mu_{jt} + u_{jt},$ 

<sup>&</sup>lt;sup>7</sup>As shown in the derivations in Appendix A,  $f(m_t^R, m_t^I, \tilde{k}^G) = \frac{(k_t^G)^{\omega/(1-\gamma)}}{(\Psi_1)^{-\beta/(1-\gamma)}} (m_t^I)^{\xi_2} (m_t^R)^{\xi_1}$ , with  $\Psi_1 = (\beta/\chi)(1-\eta)^{-1}(\gamma\nu)^{-1}[\sigma(1-\tau)/(\upsilon_I\tau)]^{\phi_2^I}$ ,  $\xi_1 = [\gamma(1-\nu)(1-\eta) - \phi_1^I\beta\eta]/[\eta(1-\gamma)]$ , and  $\xi_2 = [\gamma\nu(1-\eta)]/[\eta(1-\gamma)]$ . Further, given that  $\tilde{k}^G = k_t^G = k_{t+1}^G = \frac{K_{t+1}^G}{K_{t+1}^P} = \frac{\upsilon_I\tau}{\sigma(1-\tau)}$ ,  $\forall t$ , public capital can be treated as exogenous from the system in the empirical specification.

$$imit_{jt} = \beta_0 + \beta_1 innov_{jt} + \beta_2 innov_{jt-1} + \beta_3 imit_{jt-1} + \beta_4 pubcap_{jt} + (31)$$
$$+ \beta_5 initGDP_{jt} + \sum_{l=1}^{L} \psi_l X_{l,jt} + \sum_{m=1}^{n-1} \lambda_m Z_{m,jt} + \mu_{jt} + v_{jt},$$

$$pubcap_{j,t} = \gamma_0 + \gamma_1 urban_{jt} + \gamma_2 popdens_{jt} + \sum_{m=1}^{n-1} \lambda_m Z_{m,jt} + \mu_{jt} + z_{jt}, \qquad (32)$$

$$g_{j,t} = \delta_0 + \delta_1 initGDP_{jt} + \delta_2 innov_{jt} + \delta_3 imit_{jt} + \delta_4 pubcap_{jt}$$

$$+ \delta_5 \Delta innov_{jt} + \delta_6 \Delta imit_{jt} + \sum_{k=1}^K \xi_k \Upsilon_{k,jt} + \mu_{jt} + \varepsilon_{jt},$$
(33)

where j(t) is a country (time) index;  $innov_{jt}$  and  $imit_{jt}$  are innovative and imitative varieties;  $pubcap_{j,t}$  is public capital stock;  $g_{j,t}$  is growth rate of per capita real GDP;  $initGDP_{jt}$  is the logarithm of initial per capita GDP (introduced to capture the conditional convergence effects). In line with Agénor and Neanidis (2015), we also examine the contemporaneous effects between the two main endogenous variables, introduce urban shares and population density in the equation for public capital stock, as well as use  $\{Z_{m,jt}\}_{m=1}^{n-1}$ , a set of fiscal variables in levels (measured as fractions of GDP) for exclusion restriction, with the excluded factor being tax revenue.  $\{X_{l,jt}\}_{l=1}^{L}$  and  $\{\Upsilon_{k,jt}\}_{k=1}^{K}$  denote the set of control variables for the ideas production functions and economic growth. Lastly,  $\mu_{jt}$  captures time-invariant country-specific effects, while  $u_{jt}$ ,  $v_{jt}$ ,  $z_{jt}$ , and  $\varepsilon_{jt}$  are the error terms.

The coefficients of interest are  $\alpha_1$ ,  $\alpha_2$ ,  $\alpha_3$ ,  $\beta_1$ ,  $\beta_2$ ,  $\beta_3$ ,  $\delta_2$ ,  $\delta_3$ ,  $\delta_5$ ,  $\delta_6$ .  $\alpha_1$  and  $\beta_3$  give the aggregate standing-on-shoulder effects for innovative and imitative varieties respectively.  $\alpha_2$  and  $\alpha_3$  are coefficients for the stepping-stone effect, with the former depicts a contemporaneous effect and a combination of the two (adjusted by the lagged dependent variable) would allow for a quick calculation of the stepping-stone effects;  $\beta_1$  and  $\beta_2$  give the corresponding spillover effects from innovation to imitation, for which

firm-level empirical studies have found conflicting results.<sup>8</sup> The  $\delta$ 's allow us to compare the stock and flow effects of ideas-driven growth. Though the public capital equation is estimated as in Agénor (2012) and related models, the coefficients associated with public capital are not of main interest, though they allow for an empirical validation of the effects of public capital stocks on industrial transformation.

## 4 Empirical Analysis

#### 4.1 Data and Empirical Measurement

The key challenge in this study is in constructing the measures for imitative and innovative varieties. We employ a bottom-up approach by constructing the measures using disaggregated industrial data from the UNIDO database of INDSTAT-4 2016 Revision 3, down to the 4-digit level of ISIC. The validity of the measures therefore depends heavily on what ISICs constitute imitation and what are defined as innovative varieties. To minimize arbitrariness and to ensure robustness, six different pairs of imitative and innovative varieties are constructed. Two of these (Innov1-Imit1 and Innov2-Imit2) are based on OECD's technology intensity classification of manufacturing industries, where the first pairing considers only the high-tech ISICs as innovative varieties while the second pairing includes both high- and medium-high tech ISICs as innovative varieties. One pair, Innov3-Imit3, is based on the primary industrial baskets of leading innovative economies as defined by the country ranking of Global Innovation Index (INSEAD 2017). Finally, three pairs are based on an income-based

<sup>&</sup>lt;sup>8</sup>See empirical studies in the area of international production networks, such as Athukorala and Hill (2010), for positive evidence, and studies such as Djankov and Hoekman (2000) for negative effects.

<sup>&</sup>lt;sup>9</sup>This imitation-innovation pairing, *Innov3-Imit3*, is constructed by first identifying the top five ISICs (in terms of output value) respectively for the five most innovative economies in the world, as defined by the average rankings of the countries over 2013-17. These five economies are Singapore, Switzerland, Ireland, Slovakia, and Germany. These ISICs (down to 4-digit level) identified constitute innovative varieties, while the rest constitutes imitative varieties.

product sophistication index constructed based on a similar approach to the PRODY measure of Hausmann et al. (2007). Contrary to PRODY, our index is a production-based, weighted-average of the per capita GNIs of countries producing a given product variety, and so it represents the income level associated with said ISICs<sup>10</sup>.

The constructed index ranks all the 4-digit ISICs along a continuum of income-based sophistication values, which then allows us to classify these ISICs using World Bank's 2013 income-level cut-off values in grouping countries by income level. Specifically, given that the per capita GNI numbers used in constructing the index are based on the Atlas method, we categorize the 4-digit ISICs to four groups: high-, upper-middle-, lower-middle, and low-income. After that, three innovation-imitation pairings are constructed: (i) Innov4-Imit4: only ISICs with high-income values are considered innovative, while only the ISICs with upper-middle-income values are considered imitation (dropping the rest); (ii) Innov5-Imit5: only ISICs with high-income values are considered innovative, but ISICS with both upper- and lower-middle-income values constitute imitation; and (iii) Innov6-Imit6: innovation includes ISICs with high- and upper-middle income values, and imitation constitutes the rest. Further descriptions of the six pairs of innovative-imitative variety measures, as well as the income-based industrial production sophistication index, are summarized in Appendix B.

For the benchmark analysis, the innovative and imitative varieties are proxied by the total value added of the ISIC at 4-digit level. In other words, we measure innovation and imitation using a bottom-up aggregate measure, assuming each 4-digit ISIC as a different type of product variety, with the respective values being the values of the variety types. For further robustness, for each of these six pairs, we repeat the same

<sup>&</sup>lt;sup>10</sup>Specifically, for the index, the product sophistication level associated with an ISIC k is given by  $\sum_{j} \frac{z_{jk}/Z_{j}}{\sum_{j} (z_{jk}/Z_{j})} Y_{j}$ , where  $z_{jk}/Z_{j}$  is the share of value-added of the product variety in a country j's overall production basket. The denominator aggregates these value shares across all the economies. As such, the weights correspond to a revealed comparative production strength of a country in variety k.

estimation exercise using two additional measures, which include the logarithm of output per employee and the logarithm of value added per employee. Strictly speaking, the two per worker measures are more productivity based measures than raw varieties. However, given the stationary nature of the variables,  $m_t^R$  and  $m_t^I$  in the dynamic system, the variety per worker measures do allow for some additional robustness checks to our benchmark estimation.

On the other variables, recall from (32) that public capital is a key explanatory variable whose determination is independent of the imitative and innovative varieties. To measure public capital, we use two indicators: (i) a direct use of the recently published public capital stock data from the International Monetary Fund (IMF), and (ii) all telephone (including cellular) lines. The former is by definition the stock of public capital, while the latter is a telecommunication based public infrastructure measure that is commonly used as a proxy for advanced infrastruture (see Röller and Waverman 2001; Esfahani and Ramírez 2003).<sup>11</sup>

In line with Ang and Madsen (2013, 2015a, 2015b) and related studies, we use the gross tertiary enrolment rate as a proxy for the skilled workforce in the two ideas production equations. While they capture knowledge spillovers through imports, given that our specification focuses on domestic industrial transformation, we use FDI inflows instead as a controlling variables. In the growth equation, in addition to the stock effects, we also model the flows effects for both innovation and imitation. The remaining controls are standard variables employed in cross-country growth regressions, drawn from sources such as the World Bank World Development Indicators, the various statistical databases of the International Monetary Fund, and the UNESCO database for

<sup>&</sup>lt;sup>11</sup>There are also other indicators of public infrastructure that can be used as alternative measures, as discussed in Romp and de Haan (2007) and Straub (2008). However, the main coefficients of interest in this paper are not associated with the public capital measure. Moreoever, existing empirical studies show that the different measures tend to give similar elasticities. Extra robustness analysis for infrastructure is therefore not explored.

educational statistics. Further details on these variables are also presented in Appendix B.

Our data is an unbalanced panel, spanning 91 countries for the period 1990-2013, with a total of 1070 observations. However, for some countries, there are missing observations in between the years. The chosen time period is largely restricted by data availability in the INDSTAT-4 database. Following standard approach of growth regressions, we construct 3-year period averages (1990-92, 1993-95, ..., 2011-13) to minimize business cycle effects. While this leaves us with T=8, the reasonably large N means we have a maximum sample size of 495 observations. However, in actual implementation, when the use of lags as instruments and the differencing in (33) are accounted for, this drops significantly to a range of 205-332 observations. We prioritize estimating equations (30)-(33) as a system. Given the disparity of INDSTAT-4 data across countries, the system-GMM approach of Blundell and Bond (1998) is applied in favour of the difference-GMM estimator, since the latter is susceptible to weakinstruments problem and is less efficient for data with many panels and few periods. In addition, given the importance of joint-estimation of a general equilibrium system, we also apply the three-stage-least-squares (3SLS) estimator, controlling for country and time fixed effects.

## 4.2 Empirical Implementation and Results

Benchmark: We start off by using total value added in the benchmark regressions, with the empirical results (for the six combination of variety and two public capital measures) presented in Table 1-3. For the system-GMM estimation, we treat the non-public capital control variables in the two ideas production equations as exogenous. This is mainly to address the "too many instruments" problem highlighted by Roodman (2009), where an excessive number of instruments can result in overfit-

ting of the instrumented variables, therefore biasing the results. While the choice of the Blundell-Bond estimator does partly mitigate the weak-instruments problem associated with difference-GMM, we restrict the lagged variable used as instruments to one period. Further, we also apply the rule of thumb of Agénor and Neanidis (2015), where the number of instruments is less than the number of countries and subject the empirical model to various robustness tests. Since we use one-period lagged terms, the validity of the instruments can be verified indirectly by applying the Arellano and Bond (1991) test for serial correlation up to two lags. Further, the Hansen (1982) J-test of overidentifying restrictions is applied to check for the exogeneity of the instruments. A two-step estimator is applied, hence necessitating the use of the Windmeijer robust standard errors (Windmeijer 2005).

While the outlined strategy with respect to system-GMM estimation allows us to reduce the risk of potential over-identification causing biased estimates, the flip side is that the relatively restrictive criterion, coupled with the nature of an instrumented approach, means we have an increasing chance of poorly-fitting a model, hence obtaining statistically insignificant estimates. Indeed, this is the case when estimating the growth equation: Given the unit horizon of three-year averages, finding appropriate instruments is challenging as even the one-period lagged growth rate is unlikely to be an excellent choice. This is reflected in the relatively low p-values associated with the Hansen J-statistics calculated for some of the estimated growth equations. The use of 3SLS estimation therefore partly mitigates this problem by providing a complementary approach to the estimation (at a cost of not controlling for the lagged variables' endogeneity over time; which is not as much of a problem here given the objective is to estimate spillover effects that are inherently dynamic in nature).

Out of the 24 sets of results in the benchmark estimation, we observe statistically significant positive estimates for *standing-on-shoulder* effects in 21 of the estimated

coefficients: average elasticity values of 0.725 and 0.744 for innovative and imitative varieties respectively (0.661 and 0.714 if we included the non-significant estimates). These are lower compared to the 0.99 estimated by Ang and Madsen (2015a) for single ideas production function. It is also worth noting that the estimated *standing-on-shoulder* effects based on the system-GMM approach are generally lower, which gives an average of 0.579 and 0.668 for innovation and imitation respectively.

In terms of the *stepping-stone* effect, all the estimates for the contemporaneous coefficient,  $\alpha_2$ , are positive and statistically significant, at an average of 0.872. All but five estimates of the lagged term,  $\alpha_3$ , are significant too, which together with the contemporaneous term, gives an estimated average *stepping-stone* effect of 0.255. However, if we were to consider only the statistically significant estimates, the average drops to 0.153. In addition, for a more dynamic context to the *stepping-stone* effect, the associated multiplier effect is also calculated, which yields an average of 0.948.<sup>12</sup> This shows that the long-run impact of imitative industrial expansion on the innovative industries is positive, with a one-percent increase in imitative variety believed to translate to just slightly below a one-percent increase in innovative variety over the long-run.

Next, for the spillover from innovation to imitation, dubbed as the "creative-imitation" effect, the contemporaneous effect is about 0.845; though after accounting for the lagged terms, we have an average creative-imitation effect of 0.210. This value is lower too if we included only the statistically significant estimates, which then yields an average of 0.139. A relatively smaller dynamic multiplier associated with the creative-imitation effect is also calculated at 0.650. The positive value indicates that

 $<sup>^{12}</sup>$ This is calculated using the standard time series approach, where the estimated dynamic *stepping-stone* effect equals  $(\hat{\alpha}_2 + \hat{\alpha}_3)/(1 - \hat{\alpha}_1)$ . The value quoted is the average of the 12 values. Given the three-year averaging, this estimate is therefore valid in the context of a six-year period, covering the usual five-year horizon of most medium-term development plans in developing countries. Also, given that the estimated results are mostly free from second-order autocorrelations, the long-term elasticity should be close to the estimated figure too.

innovative variety expansion does have both short- and long-term positive externalities to the development of imitative industries.

For the other coefficients of interest, in the growth equation, the estimated coefficients for the stocks of imitative and innovative varieties are mostly negative. Nevertheless, the growth effects associated with the idea flows from innovative variety expansion  $(\hat{\delta}_5)$  are significantly positive. This corroborates the finding suggested in studies such as Dinopoulos and Thompson (1998) and Perez-Sebastian (2007) that it is the flow of knowledge that drives growth, not the stocks. Given that the overfitting risk of "too many instruments" is low with the estimated growth equation (as evidenced by the Hansen J-statistics being on the low side), this suggests that industrial variety expansion is a valid alternative source of innovation-driven growth. Lastly, in terms of the role of public capital on innovation and imitation, the empirical evidence associated with the relevant coefficients is mixed. Most benchmark estimates are insignificant, if not negative. This suggests that the strength of public capital stock in simultaneously driving both imitative and innovative industrial development, as implied in Agénor and Dinh (2013), may be overstated and will require further empirical investigation.

Robustness analysis: As mentioned, by design, the use of the six pairs of innovative-imitative variety measures is partly for robustness purposes. By construction, the OECD-based Innov1-Imit1 measure, the income content-based Innov4-Imit4 and Innov5-Imit5 measures have a relatively strict interpretation as to what product variety constitutes innovation. On the other hand, the other OECD-based measure, Innov2-Imit2, and the income content-based pair of Innov6-Imit6 have a broader definition to innovation, where products in the medium-high-tech industries (or industries with the sophistication content of upper-middle-income economies) are also classified as innovative varieties. Lastly, the Innov3-Imit3 pair classifies industries solely based

on their significance in the overall industrial production of the top five most innovative economies in the world. Overall, these different measures therefore implicitly allow for robustness checks of the estimated elasticities, regardless of how strictly innovation ought to be interpreted.

In this respect, we estimate the system again by using output per employee (Tables 4-6) and value added per employee as product variety measures (Tables 7-9), therefore also giving a conventional productivity interpretation to the variables. Adding the additional 48 sets of estimates to the benchmark and repeating the same calculation exercises yield overall average standing-on-shoulder effects of 0.587 and 0.606 for the innovative and imitative varieties respectively. While the benchmark results mostly hold for the different variations of the estimated system, it is important to note that the estimated standing-on-shoulder effects have much lower statistical significance when the per employee numbers are used with system-GMM approach. For instance, half of the estimated  $\hat{\alpha}_1$  (12 out of the 24 estimated coefficients using system-GMM) are not significant at the ten-percent level. Moreover, when value added per employee is used as a proxy measure for the *Innov6-Imit6* combination in a system-GMM estimation, we get a contradicting result with respect to the estimated coefficients for the  $\hat{\alpha}_1$ (see Table 9). The former reaffirms that Jones' (2005) standing-on-shoulder effect is a much weaker concept when the scale effect of ideas production is controlled for using per worker numbers. The latter indicates an inherent weakness in the definition of the Innov6-Imit6 pairing, which classifies industrial varieties with both high- and upper-middle-income as innovation. This suggests a need to distinguish between the truly high-income content industrial varieties and the upper-middle income content varieties, given that the latter, as often suggested in the middle-income traps literature, is likely to consist of industries with imitation in nature. <sup>13</sup> Taking the insignificance into

<sup>&</sup>lt;sup>13</sup>See Gill and Kharas (2007), Eichengreen et al. (2014), and Agénor (2017) for studies specifically on the middle-income traps.

consideration, we re-calculate the overall average with only the significant estimates (57 out of 72), which yields *standing-on-shoulder* effects of 0.681 and 0.700 for the innovative and imitative varieties respectively.

For the *stepping-stone* effect, the estimated average is now 0.340 while the dynamic multiplier effect associated with it is 0.921. While all the estimates for the contemporaneous term are significant, about one-third of the estimates for the lagged term are not. While this is good news for the validity of our approach in calculating the dynamic multiplier, this requires us to re-calculate and present the *stepping-stone* effect with the two-thirds of the estimated coefficients that are statistically significant: 0.187, which is within the range of our benchmark estimate earlier. Similarly, the dynamic multiplier effect with only significant estimates is 0.963, which is close to the benchmark averages. These suggest that, unlike the *standing-on-shoulder* effects, the *stepping-stone* effects are independent of the scale effect.

We face similar issues with the robustness analysis for  $\beta_1$  and  $\beta_2$ , though we still have a representative set to support the empirical validity of the positive creative-imitation effects from innovative varieties to imitation. Overall, based on two-thirds of the estimated coefficients that are statistically significant (both  $\hat{\beta}_1$  and  $\hat{\beta}_2$  need to be significant), the creative-imitation effect has an average value of 0.137, with the associated dynamic multiplier being 0.762, much lower than the corresponding value associated with the stepping-stone effect. Nevertheless, the obtained estimates reinforce the benchmark finding that innovative and imitative varieties are complements in an industrial development context.

On the other estimates, the estimated positive coefficient for the ideas flow of innovation remains robust in the growth equation with per worker numbers, though not for imitation flows. While we still do not find a conclusive result for the impact of public capital, it is worth pointing out that, when the advanced infrastructure measure of phone lines is used, the positive effects of public capital on innovative variety and growth per capita become a lot more significant. This is especially when the system-GMM approach is applied, suggesting that the positive productivity effect of public capital depends on the specific type of public infrastructure.

In addition to the two public capital measures considered, we also repeat the same estimation exercises using the infrastructure quality-measure of non-hydropower, renewable energy-generated electricity. This measure is akin to public infrastructure stocks with codified knowledge, believed to correlate well with the progression of ideas in an economy (Agénor and Neanidis 2015). To save space, the full set of estimation results with this measure can be referred to Tables B3-B8 in Appendix B. Overall, the estimated spillover effects between imitative and innovative varieties remain robust. For example, the averages of the *standing-on-shoulder* effects for innovative and imitative varieties remain in the 0.6 range. Some of the limitations in the preceding analysis, namely the lower statistical significance associated with system-GMM estimation and the shortcoming of the *Innov6-Imit6* pairing, are observed too. Indeed, in terms of the coefficients associated with public capital, the strength of the infrastructure effect on innovative varieties is much weaker compared to when telecommunication variable is used as proxy. Overall, the additional analysis here reinforces the robustness of the estimated results obtained in the previous sections.

Comparing across different stages of development: Lastly, a common practice in growth regression is to repeat the same estimation exercises using annual intervals, mainly to extend the number of observations at the cost of not controlling for business cycle effects. We implement this strategy in order to estimate the model across three different samples: high-income, upper-middle-income, and low-and-lower-middle-income economies. The estimation by different country groupings is meaningful

and in consistent with studies such as Perez-Sebastian (2007), who documents that imitation tends to play a more important role in emerging economies before it is gradually phased out by innovation as an economy develops. For this particular exercise, the sample size of the low-and-lower-middle-income economies is particularly restrictive. The econometric estimation implemented therefore uses only the total value added data and public capital stock as proxies in estimating all six variants of the product variety specification. Moreover, given the annual interval, the dynamic multiplier becomes a meaningless measure without implementing a full time-series analysis, and is therefore omitted from this exercise.

Given the two different estimation procedures employed, for all three country-groups, we obtain 12 sets of estimates. The averages for the key estimated coefficients of interest are summarized in Table 10. As we have relatively few observations to estimate the model for the low-and-lower-middle-income group, an interpretation of estimates for this particular group requires caution. For all three groups, all the estimated standing-on-shoulder effects are statistically significant. However, the lower income group has much smaller estimated standing-on-shoulder effects compared to the other two groups, and there is no positive knowledge spillover mechanism between the two variety types. In comparing the upper-middle-income economy and the high-income economy, the former has a much significant stepping-stone effect, though the latter registers a slightly higher elasticity value of within-variety spillover from the existing knowledge stock for both imitative and innovative varieties.

Overall, these results are largely consistent with the present state of understanding of industrial policy in developing economies. For less-developed economies with inadequate industrial structures, the focus of industrial policy ought to be one that promotes development within-industry, and when necessary, protectionist measures may be warranted due to the negative spillover effects—albeit with limited statistical significance—

observed across product varieties. On the other hand, for an upper-middle-income economy, growth policies need to be designed in maximizing the inter-knowledge spillover among product varieties in the economy, as the development of imitative varieties remains significant in promoting the eventual expansion of innovative varieties. For a high-income economy, interestingly, the *stepping-stone* effect of imitative varieties is positive, and the *standing-on-shoulder* effect for imitative varieties remains robust. This suggests that an across-the-board industrial development strategy remains significant as the relationship between imitation and innovation is largely complementary.

#### 5 Conclusion

The main purpose of this paper is to fill a gap in the economic growth literature where empirical estimation of commonly used theoretical concepts associated with Romerian and Jones type of ideas-based growth models, such as the "standing-on-shoulder" and "stepping-stone" effects, is scarce. The present empirical literature is predominantly based on a Schumpeterian interpretation to innovation, with an existing bias in relegating expanding variety to merely being imitation activities. Using highly disaggregated industrial data as measures for product varieties, we test for the relationship between imitation and innovation in a dynamic general equilibrium setup. Consistent with the single ideas production function-based findings of Ang and Madsen (2015a), we document robust and statistically significant standing-on-shoulder effects for both innovation and imitation, albeit at lower elasticities. We also document a significant stepping-stone effect of imitation on innovation, a key finding that has provided empirical validity to the implicit assumptions made in the many theoretical studies such as Glass and Saggi (1998) and Collins (2015). Based on our knowledge, our study is the first to empirically estimate the stepping-stone effect, as well as its associated dynamic

multiplier effect over a medium-term horizon of 5-6 years. This has significant implication for the industrial plans, which typically cover about 5 years, in many developing countries.

The corresponding spillover from innovation to imitation, dubbed as the *creative-imitation* effect, is found to be positive too, though at a slightly lower magnitude than the *stepping-stone* effect. In the growth regression, we also find significant positive effects of the change in innovative varieties on per capita GDP growth. This reaffirms the need to treat product variety expansion as an alternative source of innovation-driven growth. These findings have important implications for industrial policies designed to foster innovation-driven growth, especially in middle-income and developing economies.

Given that the empirical implementation in this paper is largely conditioned by data availability, there are obvious improvements that can be implemented as more cross-country disaggregated industrial data becomes available in future. In terms of the theoretical specification, the model setup here neither explicitly accounts for the different types of foreign investment in a host economy, nor the effects of inter-industrial trade within an economy. Prior to this study, most of these elements are modelled in the niche area of computational general equilibrium (CGE) studies. The rich information on highly disaggregated industrial production—hence the different product varieties—often contained in input-output tables and specialized manufacturing surveys, could allow for a more elaborate empirical examinations based on rigorous theoretical growth models of variety expansion-based growth, such as one that includes intra- and interindustry trades, at cross-country level are potential venues for future research. In terms of empirical setup, the use of a threshold model, such as Caner and Hansen (2004), to examine for any potential threshold associated with the spillover effects is also a worthy exercise to pursue in the future.

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	1		le 1: Ben		Results, ublic capital			added a					res ure stock (pro:	ried by tala-1	iona maari	•)
·		System	1 GMM			3SLS,	with FE			System	GMM	-	-	3SLS,	with FE	
Initial GDP per capita (log)	-0.078	0.908	P.capital 1.127	-4.128	-0.632	Unitation 0.542	P.capital 1.037	-0.106	-0.271	0.040	P.capital 1.072	2.629	-2.421	Imitation 1.952	P.capital 0.913	1.782
Innovation, t (log)	(0.915)	(0.573) 0.959 (0.000)	(0.000)	(0.585) -3.360 (0.079)	(0.001)	(0.002) 0.886 (0.000)	(0.000)	(0.874) -0.405 (0.000)	(0.584)	(0.955) 0.913 (0.000)	(0.000)	(0.444) -2.319 (0.157)	(0.000)	(0.000) 0.959 (0.000)	(0.000)	(0.202) -0.397 (0.000)
Innovation, t-1 (log)	0.539	-0.402		(0.079)	0.865	-0.767		(0.000)	0.780	-0.697		(0.137)	0.941	-0.905		(0.000)
Imitation, t (log)	(0.000)	(0.001)		1.682	(0.000) 0.943 (0.000)	(0.000)		-0.195	(0.000) 0.684 (0.000)	(0.002)		-0.370	(0.000)	(0.000)		-0.170
Imitation, t-1 (log)	(0.014) -0.389 (0.032)	0.348 (0.001)		(0.403)	-0.819 (0.000)	0.854 (0.000)		(0.160)	-0.569 (0.029)	0.614 (0.051)		(0.852)	(0.000) -0.785 (0.000)	0.823		(0.209)
Public capital (log)	0.304 (0.581)	-0.874 (0.474)		6.391 (0.186)	0.601 (0.002)	-0.484 (0.008)		0.721 (0.294)	0.655	-0.405 (0.364)		1.954 (0.184)	2.534 (0.000)	-2.010 (0.000)		-1.294 (0.380)
FDI	0.020 (0.104)	0.004 (0.839)		(0.180)	0.000 (0.903)	0.001		(0.254)	0.001 (0.964)	0.013 (0.239)		(0.164)	-0.002 (0.188)	0.002		(0.380)
Skilled workforce	0.020 (0.424)	0.002 (0.928)			0.003	-0.002 (0.329)			-0.003 (0.806)	0.023			0.001 (0.612)	0.000 (0.870)		
Gov. expenditure	0.040 (0.562)	-0.059 (0.263)	-0.016 (0.479)		0.028	-0.025 (0.012)	-0.006 (0.484)		0.069 (0.149)	-0.122 (0.002)	0.053 (0.494)		0.036 (0.008)	-0.035 (0.002)	-0.001 (0.889)	
Non-tax revenue	0.078 (0.459)	-0.086 (0.279)	0.012 (0.216)		-0.010 (0.087)	0.009 (0.117)	0.007 (0.140)		0.118 (0.207)	-0.086 (0.132)	-0.040 (0.424)		-0.009 (0.208)	0.009 (0.146)	0.001 (0.780)	
Gov. debt			0.006 (0.016)				0.004 (0.000)				-0.020 (0.059)				0.000 (0.788)	
Urban			-0.004 (0.708)				-0.002 (0.275)				0.000 (0.978)				-0.003 (0.031)	
Population density			0.000 (0.169)				0.000 (0.398)				0.001 (0.490)				0.000 (0.287)	
Current account balance			-0.002 (0.845)				0.003 (0.518)				0.029 (0.324)				-0.003 (0.407)	
Trade				0.098 (0.014)				0.006 (0.134)				0.108 (0.021)				0.007 (0.082)
Investment				0.060 (0.717)				0.204 (0.000)				-0.203 (0.114)				0.184 (0.000)
Inflation				-0.047 (0.398)				-0.004 (0.828)				0.033 (0.350)				-0.001 (0.952)
D.Innovation [t - t-1]				3.553 (0.034)				0.751 (0.003)				2.368 (0.149)				0.576 (0.082)
D.Imitation [t - t-1]				0.031 (0.982)				1.136 (0.000)				1.908 (0.139)				1.281 (0.000)
Country Effect Time Effect	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes
Countries/Observations R <sup>2</sup>	68/235	68/235	94/403	80/309	69/236 0.963	69/236 0.944	69/236 0.943	69/236 0.412	66/220	66/220	88/369	73/282	67/221 0.871	67/221 0.843	67/221 0.939	67/221 0.280
Number of Instruments Hansen J-statistics (p-value)	37 0.779	37	46	42					32	32	39	34				
riansen J-statistics (p-value)																
AR(2) test (p-value)	0.210	0.394 0.407	0.859 0.149	0.690 0.122					0.832 0.703	0.760 0.511	0.185 0.105	0.192 0.211				
AR(2) test (p-value)		0.407 In	0.149 nov2 & Imit2	0.122	public capital				0.703	0.511 mov2 & Imit	0.105 2, with public	0.211	ure stock (pro			•)
	0.210 Innovation	0.407  In  System  Imitation	0.149 anov2 & Imit2 n GMM P.capital	0.122 2, with IMF p	Innovation	3SLS,	with FE P.capital	Growth	0.703 Innovation	0.511 nnov2 & Imit2 System Imitation	0.105 2, with public a GMM P.capital	0.211 infrastructi	Innovation	3SLS,	with FE P.capital	Growth
AR(2) test (p-value)  Initial GDP per capita (log)	0.210	0.407 In System	0.149 nov2 & Imit2 n GMM	0.122 2, with IMF p	-	3SLS,	with FE	Growth 0.143 (0.841)	0.703 In	0.511 nov2 & Imit2 System	0.105 2, with public GMM	0.211 infrastructi	-	3SLS,	with FE	
	0.210 Innovation -0.980	0.407 In System Imitation 0.546 (0.682) 0.567	0.149 anov2 & Imit2 a GMM P.capital 1.127	0.122 2, with IMF p Growth -3.984 (0.423) 0.995	Innovation -0.754	3SLS, Imitation 0.660 (0.000) 0.619	P.capital	0.143 (0.841) -0.143	0.703 Innovation 0.365	0.511 nnov2 & Imita System Imitation 0.310 (0.528) 0.577	0.105 2, with public GMM P.capital 1.072	0.211 infrastructu Growth -2.501 (0.570) -0.384	Innovation 1.803	3SLS, 1 Imitation -1.546 (0.000) 0.678	P.capital 0.920	2.731 (0.060) -0.140
Initial GDP per capita (log)	0.210 Innovation -0.980 (0.666)	0.407	0.149 anov2 & Imit2 a GMM P.capital 1.127	0.122 2, with IMF p Growth -3.984 (0.423)	Innovation -0.754 (0.003)	3SLS, Imitation 0.660 (0.000) 0.619 (0.000) -0.483	P.capital	0.143 (0.841)	0.703  Innovation 0.365 (0.666)  0.850	0.511 mov2 & Imit: System Imitation 0.310 (0.528) 0.577 (0.004) -0.599	0.105 2, with public GMM P.capital 1.072	0.211 infrastructu Growth -2.501 (0.570)	Innovation 1.803 (0.000) 0.861	3SLS, 1 Imitation -1.546 (0.000) 0.678 (0.000) -0.581	P.capital 0.920	2.731 (0.060)
Initial GDP per capita (log) Innovation, t (log)	0.210 Innovation -0.980 (0.666) 0.197 (0.478) 1.054	0.407 In System Initation 0.546 (0.682) 0.567 (0.001)	0.149 anov2 & Imit2 a GMM P.capital 1.127	0.122 2, with IMF p Growth -3.984 (0.423) 0.995 (0.449)	1nnovation -0.754 (0.003) 0.789 (0.000) 1.319	3SLS, Imitation 0.660 (0.000) 0.619 (0.000)	P.capital	0.143 (0.841) -0.143 (0.211)	0.703 Innovation 0.365 (0.666) 0.850 (0.011) 1.066	0.511 nnov2 & Imital System Imitation 0.310 (0.528) 0.577 (0.004)	0.105 2, with public GMM P.capital 1.072	0.211 infrastructu Growth -2.501 (0.570) -0.384 (0.840) -1.858	1.803 (0.000) 0.861 (0.000) 1.335	3SLS, 1 Imitation -1.546 (0.000) 0.678 (0.000)	P.capital 0.920	Growth 2.731 (0.060) -0.140 (0.228)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log)	0.210 Innovation -0.980 (0.666) 0.197 (0.478) 1.054 (0.000) -0.114	0.407 In System Initation 0.546 (0.682) 0.567 (0.001) -0.302 (0.099) 0.383	0.149 anov2 & Imit2 a GMM P.capital 1.127	0.122 2, with IMF p Growth -3.984 (0.423) 0.995 (0.449)	0.789 (0.000) 1.319 (0.000) -0.905	3SLS, 1 Imitation 0.660 (0.000) 0.619 (0.000) -0.483 (0.000)	P.capital	0.143 (0.841) -0.143 (0.211)	0.703 Innovation 0.365 (0.666) 0.850 (0.011) 1.066 (0.000) -0.872	0.511 nov2 & Imit. System Imitation 0.310 (0.528) 0.577 (0.004) -0.599 (0.062)	0.105 2, with public GMM P.capital 1.072	0.211 infrastructu Growth -2.501 (0.570) -0.384 (0.840)	Innovation 1.803 (0.000) 0.861 (0.000) 1.335 (0.000) -1.090	3SLS, v Imitation -1.546 (0.000) 0.678 (0.000) -0.581 (0.000)	P.capital 0.920	Growth 2.731 (0.060) -0.140 (0.228)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Imitation, t (log)	0.210 Innovation -0.980 (0.666) 0.197 (0.478) 1.054 (0.000) -0.114 (0.855) 1.021	0.407  In  System  Initation  0.546 (0.682) 0.567 (0.001) -0.302 (0.099)  0.383 (0.036) -0.319	0.149 anov2 & Imit2 a GMM P.capital 1.127	0.122 2, with IMF p Growth -3.984 (0.423) 0.995 (0.449) -3.527 (0.005)	0.789 (0.000) 1.319 (0.000) -0.905 (0.000) 0.574	3SLS, Imitation 0.660 (0.000) 0.619 (0.000) -0.483 (0.000) 0.679 (0.000) -0.486	P.capital	0.143 (0.841) -0.143 (0.211) -0.497 (0.016)	0.703  Innovation 0.365 (0.666)  0.850 (0.011) 1.066 (0.000) -0.872 (0.034) -0.660	0.511 mov2 & Imit2 System Imitation 0.310 (0.528) 0.577 (0.004) -0.599 (0.062)  0.589 (0.104) -0.026	0.105 2, with public GMM P.capital 1.072	0.211 infrastructi Growth -2.501 (0.570) -0.384 (0.840) -1.858 (0.563) 3.940	1.803 (0.000) 0.861 (0.000) 1.335 (0.000) -1.090 (0.000) -2.052	3SLS, v Imitation -1.546 (0.000) 0.678 (0.000) -0.581 (0.000) 0.811 (0.000) 1.767	P.capital 0.920	Growth 2.731 (0.060) -0.140 (0.228) -0.440 (0.060)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log)	0.210  Innovation -0.980 (0.666)  0.197 (0.478) 1.054 (0.000) -0.114 (0.855) 1.021 (0.523) 0.041	0.407  In System  System  Initation 0.546 (0.682) 0.567 (0.001) -0.302 (0.099)  0.383 (0.036) -0.319 (0.803) -0.002	0.149 anov2 & Imit2 a GMM P.capital 1.127	0.122 2, with IMF p Growth -3.984 (0.423) 0.995 (0.449) -3.527 (0.005)	0.789 (0.000) 1.319 (0.000) -0.905 (0.000) 0.574 (0.027) 0.001	3SLS, Imitation 0.660 (0.000) 0.619 (0.000) -0.483 (0.000) 0.679 (0.000) -0.486 (0.008) 0.001	P.capital	0.143 (0.841) -0.143 (0.211) -0.497 (0.016)	0.703  Innovation 0.365 (0.666)  0.850 (0.011) 1.066 (0.000) -0.872 (0.034) -0.660 (0.182) 0.026	0.511 mov2 & Imit. System Imitation 0.310 (0.528) 0.577 (0.004) -0.599 (0.062)  0.589 (0.104) -0.026 (0.930) 0.006	0.105 2, with public GMM P.capital 1.072	0.211 infrastructi Growth -2.501 (0.570) -0.384 (0.840) -1.858 (0.563)	1.803 (0.000) 0.861 (0.000) 1.335 (0.000) -1.090 (0.000) -2.052 (0.000) 0.001	3SLS, 1 Imitation -1.546 (0.000) -0.581 (0.000) -0.581 (0.000) 0.811 (0.000) 1.767 (0.000) 0.000	P.capital 0.920	Growth 2.731 (0.060) -0.140 (0.228) -0.440 (0.060)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log)	0.210  Innovation -0.980 (0.666)  0.197 (0.478) 1.054 (0.000) -0.114 (0.855) 1.021 (0.523) 0.041 (0.408) 0.007	0.407  In System  Imitation 0.546 (0.682) 0.567 (0.001) -0.302 (0.099)  0.383 (0.036) -0.319 (0.803) -0.002 (0.852) 0.010	0.149 anov2 & Imit2 a GMM P.capital 1.127	0.122 2, with IMF p Growth -3.984 (0.423) 0.995 (0.449) -3.527 (0.005)	0.789 (0.000) 1.319 (0.000) 0.574 (0.027) 0.001 (0.454)	3SLS, Imitation 0.660 (0.000) 0.619 (0.000) -0.483 (0.000) -0.486 (0.008) 0.001 (0.282) 0.000	P.capital	0.143 (0.841) -0.143 (0.211) -0.497 (0.016)	0.703 In Innovation 0.365 (0.666) 0.850 (0.011) 1.066 (0.000) -0.872 (0.034) -0.660 (0.182) 0.026 (0.181) 0.018	0.511 inov2 & Imit.i System Imitation 0.310 (0.528) 0.577 (0.004) -0.599 (0.104) -0.026 (0.930) 0.006 (0.570)	0.105 2, with public GMM P.capital 1.072	0.211 infrastructi Growth -2.501 (0.570) -0.384 (0.840) -1.858 (0.563) 3.940	1.803 (0.000) 0.861 (0.000) 1.335 (0.000) -1.090 (0.000) -2.052 (0.000) 0.001 (0.701) 0.000	3SLS, Imitation -1.546 (0.000) 0.678 (0.000) -0.581 (0.000)  0.811 (0.000) 1.767 (0.000) 0.000 (0.915) 0.000	P.capital 0.920	Growth 2.731 (0.060) -0.140 (0.228) -0.440 (0.060)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI	0.210  Innovation -0.980 (0.666)  0.197 (0.478) 1.054 (0.000) -0.114 (0.855) 1.021 (0.523) 0.041 (0.408) 0.007 (0.766)	0.407 In System Imitation 0.546 (0.682) 0.567 (0.001) -0.302 (0.099)  0.383 (0.036) -0.319 (0.803) -0.002 (0.852) 0.010 (0.284) -0.065	0.149 minute	0.122 2, with IMF p Growth -3.984 (0.423) 0.995 (0.449) -3.527 (0.005)	1.00 (0.000)	3SLS, Imitation 0.660 (0.000) 0.619 (0.000) -0.483 (0.000)  0.679 (0.000) -0.486 (0.008) 0.001 (0.282) 0.000 (0.851)	with FE P-capital 1.020 (0.000)	0.143 (0.841) -0.143 (0.211) -0.497 (0.016)	0.703 Innovation 0.365 (0.666)  0.850 (0.011) 1.066 (0.000) -0.872 (0.034) -0.660 (0.182) 0.026 (0.181) 0.018 (0.509)	0.511  invov2 & witem  System  Imitation  0.310  (0.528)  0.577  (0.004)  -0.599  (0.062)  0.589  (0.104)  -0.026  (0.930)  0.006  (0.570)  0.017  (0.176)  -0.071	0.105 2, with public 1 GMM P-capital 1.072 (0.000)	0.211 infrastructi Growth -2.501 (0.570) -0.384 (0.840) -1.858 (0.563) 3.940	1.803 (0.000) 0.861 (0.000) 1.335 (0.000) -1.090 (0.000) -2.052 (0.000) (0.701) 0.000 (0.961) -0.007	3SLS, 1 Initation - 1,546 (0.000) 0.678 (0.000) -0.581 (0.000) -0.581 (0.000) 1.767 (0.000) 0.000 (0.915) 0.000 (0.915) 0.000 (0.930) 0.004	with FE P.capital 0.920 (0.000)	Growth 2.731 (0.060) -0.140 (0.228) -0.440 (0.060)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce	0.210  Innovation -0.980 (0.666)  0.197 (0.478) 1.054 (0.000) -0.114 (0.855) 1.021 (0.523) 0.041 (0.408) 0.007 (0.766) 0.066 (0.621) 0.037	0.407  System  Imitation 0.546 (0.682) 0.567 (0.001) -0.302 (0.099)  0.383 (0.036) -0.319 (0.852) 0.010 (0.284) -0.065 (0.136) -0.0065	0.149 and 24 Initial CMM P-capital 1.127 (0.000)  -0.016 (0.479) 0.012	0.122 2, with IMF p Growth -3.984 (0.423) 0.995 (0.449) -3.527 (0.005)	1.0.002 (0.869) (0.002) (0.600) (0.002) (0.600) (0.000	3SLS, Imitation 0.660 (0.000) 0.619 (0.000) 0.619 (0.000) -0.483 (0.000) -0.486 (0.008) 0.001 (0.282) 0.000 (0.851) -0.002 (0.855) 0.002	with FE P-capital 1.020 (0.000)  -0.005 (0.546) 0.005	0.143 (0.841) -0.143 (0.211) -0.497 (0.016)	0.703 Innovation 0.365 (0.666)  0.850 (0.011) 1.066 (0.000) -0.872 (0.034) -0.660 (0.182) 0.026 (0.181) 0.018 (0.509) 0.007 (0.956)	0.511  unov2 & Intitation 0.310 (0.528) 0.577 (0.004) -0.599 (0.062)  0.589 (0.104) -0.026 (0.930) 0.006 (0.570) 0.017 (0.176) -0.071 (0.130)	0.105 2, with public 1 GMM P.capital 1.072 (0.000) 0.053 (0.494) -0.040	0.211 infrastructi Growth -2.501 (0.570) -0.384 (0.840) -1.858 (0.563)	1.803 (0.000) 0.861 (0.000) 1.335 (0.000) -1.090 (0.000) -2.052 (0.000) 0.001 (0.701) 0.000 (0.961) -0.007 (0.600)	3SLS, 1 Initation -1.546 (0.000) 0.678 (0.000) -0.581 (0.000) -0.581 (0.000) 1.767 (0.000) (0.915) 0.000 (0.915) 0.000 (0.930) 0.004 (0.703) 0.004 (0.703) 0.002	with FE P.capital 0.920 (0.000)	Growth 2.731 (0.060) -0.140 (0.228) -0.440 (0.060)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Imitation, t-1 (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure	0.210  Innovation -0.980 (0.666) 0.197 (0.478) 1.054 (0.000) -0.114 (0.855) 1.021 (0.523) 0.041 (0.408) 0.007 (0.766) 0.066 (0.621)	0.407 In  System  Imitation 0.546 (0.682) 0.567 (0.001) -0.302 (0.099)  0.383 (0.036) -0.319 (0.803) -0.002 (0.852) 0.010 (0.284) -0.065 (0.136)	0.149  and 24 Imiti 1 GMM P.capital 1.127 (0.000)  -0.016 (0.479) 0.012 (0.216) 0.006	0.122 2, with IMF p Growth -3.984 (0.423) 0.995 (0.449) -3.527 (0.005)	0.789 (0.000) 1.319 (0.000) 1.319 (0.000) -0.905 (0.000) 0.574 (0.027) 0.001 (0.454) 0.001 (0.640) 0.002	3SLS, Imitation 0.660 (0.000) 0.619 (0.000) -0.483 (0.000) 0.679 (0.000) -0.486 (0.008) 0.001 (0.282) 0.000 (0.851) -0.002 (0.855)	### FE   P.capital   1.020   (0.000)   (0.000)   (0.000)   (0.000)   (0.546)   (0.005)   (0.265)   (0.005)   (0.005)   (0.004)	0.143 (0.841) -0.143 (0.211) -0.497 (0.016)	0.703 Innovation 0.365 (0.666)  0.850 (0.011) 1.066 (0.000) -0.872 (0.034) -0.660 (0.182) 0.026 (0.181) 0.018 (0.509) 0.007 (0.956)	0.511  unov2 & Imitition  0.310  (0.528)  0.577  (0.004)  -0.599  (0.104) -0.026  (0.930)  0.006  (0.570)  0.017  (0.176) -0.071  (0.132)	0.105 (with public (c. GMM) P.capital 1.072 (0.000) 0.053 (0.494) -0.040 (0.424) -0.020	0.211 infrastructi Growth -2.501 (0.570) -0.384 (0.840) -1.858 (0.563)	0.861 (0.000) 1.335 (0.000) 1.335 (0.000) -2.052 (0.000) 0.001 (0.701) 0.000 (0.961) -0.007 (0.609)	3SLS, 1 Initiation - 1.546 (0.000) 0.678 (0.000) -0.581 (0.000) 0.000 (0.000) 1.767 (0.000) 0.000 (0.915) 0.000 (0.915) 0.000 (0.930) 0.004 (0.703)	0.000 (0.966) 0.000 (0.000)	Growth 2.731 (0.060) -0.140 (0.228) -0.440 (0.060)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue	0.210  Innovation -0.980 (0.666)  0.197 (0.478) 1.054 (0.000) -0.114 (0.855) 1.021 (0.523) 0.041 (0.408) 0.007 (0.766) 0.066 (0.621) 0.037	0.407  System  Imitation 0.546 (0.682) 0.567 (0.001) -0.302 (0.099)  0.383 (0.036) -0.319 (0.852) 0.010 (0.284) -0.065 (0.136) -0.0065	0.149  Martin 100 Mm  P.capital  1.127 (0.000)  -0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004	0.122 2, with IMF p Growth -3.984 (0.423) 0.995 (0.449) -3.527 (0.005)	1.0.002 (0.869) (0.002) (0.600) (0.002) (0.600) (0.000	3SLS, Imitation 0.660 (0.000) 0.619 (0.000) 0.619 (0.000) -0.483 (0.000) -0.486 (0.008) 0.001 (0.282) 0.000 (0.851) -0.002 (0.855) 0.002	-0.005 (0.265) (0.265) (0.004)	0.143 (0.841) -0.143 (0.211) -0.497 (0.016)	0.703 Innovation 0.365 (0.666)  0.850 (0.011) 1.066 (0.000) -0.872 (0.034) -0.660 (0.182) 0.026 (0.181) 0.018 (0.509) 0.007 (0.956)	0.511  unov2 & Intitation 0.310 (0.528) 0.577 (0.004) -0.599 (0.062)  0.589 (0.104) -0.026 (0.930) 0.006 (0.570) 0.017 (0.176) -0.071 (0.130)	0.105 2, with public GMM P.capital 1.072 (0.000) 0.053 (0.494) -0.040 (0.424) -0.020 (0.059)	0.211 infrastructi Growth -2.501 (0.570) -0.384 (0.840) -1.858 (0.563)	1.803 (0.000) 0.861 (0.000) 1.335 (0.000) -1.090 (0.000) -2.052 (0.000) 0.001 (0.701) 0.000 (0.961) -0.007 (0.600)	3SLS, 1 Initation -1.546 (0.000) 0.678 (0.000) -0.581 (0.000) -0.581 (0.000) 1.767 (0.000) (0.915) 0.000 (0.915) 0.000 (0.930) 0.004 (0.703) 0.004 (0.703) 0.002	0.000 (0.926 (0.000) (0.000) (0.966) (0.001 (0.921) (0.294)	Growth 2.731 (0.060) -0.140 (0.228) -0.440 (0.060)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt	0.210  Innovation -0.980 (0.666)  0.197 (0.478) 1.054 (0.000) -0.114 (0.855) 1.021 (0.523) 0.041 (0.408) 0.007 (0.766) 0.066 (0.621) 0.037	0.407  System  Imitation 0.546 (0.682) 0.567 (0.001) -0.302 (0.099)  0.383 (0.036) -0.319 (0.852) 0.010 (0.284) -0.065 (0.136) -0.0065	0.149  MOM M  P.capital  1.127 (0.000)  -0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708)	0.122 2, with IMF p Growth -3.984 (0.423) 0.995 (0.449) -3.527 (0.005)	1.0.002 (0.869) (0.002) (0.600) (0.002) (0.600) (0.000	3SLS, Imitation 0.660 (0.000) 0.619 (0.000) 0.619 (0.000) -0.483 (0.000) -0.486 (0.008) 0.001 (0.282) 0.000 (0.851) -0.002 (0.855) 0.002	-0.005 (0.265) (0.265) (0.265) (0.004) (0.000) -0.002 (0.369) 0.000	0.143 (0.841) -0.143 (0.211) -0.497 (0.016)	0.703 Innovation 0.365 (0.666)  0.850 (0.011) 1.066 (0.000) -0.872 (0.034) -0.660 (0.182) 0.026 (0.181) 0.018 (0.509) 0.007 (0.956)	0.511  unov2 & Intitation 0.310 (0.528) 0.577 (0.004) -0.599 (0.062)  0.589 (0.104) -0.026 (0.930) 0.006 (0.570) 0.017 (0.176) -0.071 (0.130)	0.105 2, with public GMM P-capital 1.072 (0.000) 0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978)	0.211 infrastructi Growth -2.501 (0.570) -0.384 (0.840) -1.858 (0.563)	1.803 (0.000) 0.861 (0.000) 1.335 (0.000) -1.090 (0.000) -2.052 (0.000) 0.001 (0.701) 0.000 (0.961) -0.007 (0.600)	3SLS, 1 Initation -1.546 (0.000) 0.678 (0.000) -0.581 (0.000) -0.581 (0.000) 1.767 (0.000) (0.915) 0.000 (0.915) 0.000 (0.930) 0.004 (0.703) 0.004 (0.703) 0.002	0.000 (0.920 (0.000) (0.000) (0.966) (0.966) (0.001 (0.001 (0.291) -0.001 (0.294) -0.001 (0.000)	Growth 2.731 (0.060) -0.140 (0.228) -0.440 (0.060)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban	0.210  Innovation -0.980 (0.666)  0.197 (0.478) 1.054 (0.000) -0.114 (0.855) 1.021 (0.523) 0.041 (0.408) 0.007 (0.766) 0.066 (0.621) 0.037	0.407  System  Imitation 0.546 (0.682) 0.567 (0.001) -0.302 (0.099)  0.383 (0.036) -0.319 (0.852) 0.010 (0.284) -0.065 (0.136) -0.0065	0.149  are considered to the c	0.122 2, with IMF p Growth -3.984 (0.423) 0.995 (0.449) -3.527 (0.005)	1.0.002 (0.869) (0.002) (0.600) (0.002) (0.600) (0.000	3SLS, Imitation 0.660 (0.000) 0.619 (0.000) 0.619 (0.000) -0.483 (0.000) -0.486 (0.008) 0.001 (0.282) 0.000 (0.851) -0.002 (0.855) 0.002	-0.005 (0.265) (0.000) (0.000) (0.000)	0.143 (0.841) -0.143 (0.211) -0.497 (0.016)	0.703 Innovation 0.365 (0.666)  0.850 (0.011) 1.066 (0.000) -0.872 (0.034) -0.660 (0.182) 0.026 (0.181) 0.018 (0.509) 0.007 (0.956)	0.511  unov2 & Intitation 0.310 (0.528) 0.577 (0.004) -0.599 (0.062)  0.589 (0.104) -0.026 (0.930) 0.006 (0.570) 0.017 (0.176) -0.071 (0.130)	0.105 2, with public GMM P-capital 1.072 (0.000) 0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.001 (0.978) 0.001 (0.929)	0.211 infrastructi Growth -2.501 (0.570) -0.384 (0.840) -1.858 (0.563)	1.803 (0.000) 0.861 (0.000) 1.335 (0.000) -1.090 (0.000) -2.052 (0.000) 0.001 (0.701) 0.000 (0.961) -0.007 (0.600)	3SLS, 1 Initation -1.546 (0.000) 0.678 (0.000) -0.581 (0.000) -0.581 (0.000) 1.767 (0.000) (0.915) 0.000 (0.915) 0.000 (0.930) 0.004 (0.703) 0.004 (0.703) 0.002	0.000 (0.000) 0.000 (0.000) 0.000 (0.000) (0.000) (0.291) -0.001 (0.294) -0.001 (0.464) 0.000 (0.659)	Growth 2.731 (0.060) -0.140 (0.228) -0.440 (0.060)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Imitation, t-1 (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density	0.210  Innovation -0.980 (0.666)  0.197 (0.478) 1.054 (0.000) -0.114 (0.855) 1.021 (0.523) 0.041 (0.408) 0.007 (0.766) 0.066 (0.621) 0.037	0.407  System  Imitation 0.546 (0.682) 0.567 (0.001) -0.302 (0.099)  0.383 (0.036) -0.319 (0.852) 0.010 (0.284) -0.065 (0.136) -0.0065	0.149  minute 1 (20 Mm)  P.capital  1.127 (0.000)  -0.016 (0.479) (0.12) (0.216) (0.06) (0.016) -0.004 (0.708) (0.006) (0.0169)	0.122 2, with IMF p Growth -3.984 (0.423) 0.995 (0.449) -3.527 (0.005) 4.360 (0.357)	1.0.002 (0.869) (0.002) (0.600) (0.002) (0.600) (0.000	3SLS, Imitation 0.660 (0.000) 0.619 (0.000) 0.619 (0.000) -0.483 (0.000) -0.486 (0.008) 0.001 (0.282) 0.000 (0.851) -0.002 (0.855) 0.002	### FE P.capital 1.020 (0.000)  -0.005 (0.546) 0.005 (0.265) 0.004 (0.002) (0.369) 0.000 (0.563)	0.143 (0.841) -0.143 (0.211) -0.497 (0.016) 0.411 (0.544)	0.703 Innovation 0.365 (0.666)  0.850 (0.011) 1.066 (0.000) -0.872 (0.034) -0.660 (0.182) 0.026 (0.181) 0.018 (0.509) 0.007 (0.956)	0.511  unov2 & Intitation 0.310 (0.528) 0.577 (0.004) -0.599 (0.062)  0.589 (0.104) -0.026 (0.930) 0.006 (0.570) 0.017 (0.176) -0.071 (0.130)	0.105 2, with public GMM P.capital 1.072 (0.000) 0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001	0.211 infrastructi Growth -2.501 (0.570) -0.384 (0.840) -1.858 (0.563) 3.940 (0.136)	1.803 (0.000) 0.861 (0.000) 1.335 (0.000) -1.090 (0.000) -2.052 (0.000) 0.001 (0.701) 0.000 (0.961) -0.007 (0.600)	3SLS, 1 Initation -1.546 (0.000) 0.678 (0.000) -0.581 (0.000) -0.581 (0.000) 1.767 (0.000) (0.915) 0.000 (0.915) 0.000 (0.930) 0.004 (0.703) 0.004 (0.703) 0.002	0.000 (0.920 (0.000) (0.000) (0.966) (0.001) (0.966) (0.001) (0.921) (0.464) (0.000) (0.464) (0.0059)	Growth 2.731 (0.060) -0.140 (0.228) -0.440 (0.060) -2.433 (0.106)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Imitation, t-1 (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance	0.210  Innovation -0.980 (0.666)  0.197 (0.478) 1.054 (0.000) -0.114 (0.855) 1.021 (0.523) 0.041 (0.408) 0.007 (0.766) 0.066 (0.621) 0.037	0.407  System  Imitation 0.546 (0.682) 0.567 (0.001) -0.302 (0.099)  0.383 (0.036) -0.319 (0.852) 0.010 (0.284) -0.065 (0.136) -0.0065	0.149  are considered to the c	0.122 2, with IMF p Growth -3.984 (0.423) 0.995 (0.449) -3.527 (0.005) 4.360 (0.357)	1.0.002 (0.869) (0.002) (0.600) (0.002) (0.600) (0.000	3SLS, Imitation 0.660 (0.000) 0.619 (0.000) 0.619 (0.000) -0.483 (0.000) -0.486 (0.008) 0.001 (0.282) 0.000 (0.851) -0.002 (0.855) 0.002	-0.005 (0.265) (0.000) (0.000) (0.000)	0.143 (0.841) -0.143 (0.211) -0.497 (0.016) 0.411 (0.544) 0.002 (0.600) 0.205	0.703 Innovation 0.365 (0.666)  0.850 (0.011) 1.066 (0.000) -0.872 (0.034) -0.660 (0.182) 0.026 (0.181) 0.018 (0.509) 0.007 (0.956)	0.511  unov2 & Intitation 0.310 (0.528) 0.577 (0.004) -0.599 (0.062)  0.589 (0.104) -0.026 (0.930) 0.006 (0.570) 0.017 (0.176) -0.071 (0.130)	0.105 2, with public GMM P-capital 1.072 (0.000) 0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.001 (0.978) 0.001 (0.929)	0.211 infrastructi Growth -2.501 (0.570) -0.384 (0.840) -1.858 (0.563) 3.940 (0.136)  0.050 (0.455) -0.068	1.803 (0.000) 0.861 (0.000) 1.335 (0.000) -1.090 (0.000) -2.052 (0.000) 0.001 (0.701) 0.000 (0.961) -0.007 (0.600)	3SLS, 1 Initation -1.546 (0.000) 0.678 (0.000) -0.581 (0.000) -0.581 (0.000) 1.767 (0.000) (0.915) 0.000 (0.915) 0.000 (0.930) 0.004 (0.703) 0.004 (0.703) 0.002	0.000 (0.000) 0.000 (0.000) 0.000 (0.000) (0.000) (0.291) -0.001 (0.294) -0.001 (0.464) 0.000 (0.659)	Growth 2.731 (0.060) -0.140 (0.228) -0.440 (0.060) -2.433 (0.106)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade	0.210  Innovation -0.980 (0.666)  0.197 (0.478) 1.054 (0.000) -0.114 (0.855) 1.021 (0.523) 0.041 (0.408) 0.007 (0.766) 0.066 (0.621) 0.037	0.407  System  Imitation 0.546 (0.682) 0.567 (0.001) -0.302 (0.099)  0.383 (0.036) -0.319 (0.852) 0.010 (0.284) -0.065 (0.136) -0.0065	0.149  are considered to the c	0.122 2, with IMF p Growth -3.984 (0.423) 0.995 (0.449) -3.527 (0.005) 4.360 (0.357)	1.0.002 (0.869) (0.002) (0.600) (0.002) (0.600) (0.000	3SLS, Imitation 0.660 (0.000) 0.619 (0.000) 0.619 (0.000) -0.483 (0.000) -0.486 (0.008) 0.001 (0.282) 0.000 (0.851) -0.002 (0.855) 0.002	-0.005 (0.265) (0.000) (0.000) (0.000)	0.143 (0.841) -0.143 (0.211) -0.497 (0.016) 0.411 (0.544) 0.002 (0.600) 0.205 (0.000) -0.008	0.703 Innovation 0.365 (0.666)  0.850 (0.011) 1.066 (0.000) -0.872 (0.034) -0.660 (0.182) 0.026 (0.181) 0.018 (0.509) 0.007 (0.956)	0.511  unov2 & Intitation 0.310 (0.528) 0.577 (0.004) -0.599 (0.062)  0.589 (0.104) -0.026 (0.930) 0.006 (0.570) 0.017 (0.176) -0.071 (0.130)	0.105 2, with public GMM P-capital 1.072 (0.000) 0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.001 (0.978) 0.001 (0.929)	0.211 infrastructi Growth -2.501 (0.570) -0.384 (0.840) -1.858 (0.563) 3.940 (0.136)  0.050 (0.455) -0.068 (0.807) (0.027)	1.803 (0.000) 0.861 (0.000) 1.335 (0.000) -1.090 (0.000) -2.052 (0.000) 0.001 (0.701) 0.000 (0.961) -0.007 (0.600)	3SLS, 1 Initation -1.546 (0.000) 0.678 (0.000) -0.581 (0.000) -0.581 (0.000) 1.767 (0.000) (0.915) 0.000 (0.915) 0.000 (0.930) 0.004 (0.703) 0.004 (0.703) 0.002	0.000 (0.000) 0.000 (0.000) 0.000 (0.000) (0.000) (0.291) -0.001 (0.294) -0.001 (0.464) 0.000 (0.659)	0.002 (0.668) 0.194 (0.000)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Imitation, t-1 (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment	0.210  Innovation -0.980 (0.666)  0.197 (0.478) 1.054 (0.000) -0.114 (0.855) 1.021 (0.523) 0.041 (0.408) 0.007 (0.766) 0.066 (0.621) 0.037	0.407  System  Imitation 0.546 (0.682) 0.567 (0.001) -0.302 (0.099)  0.383 (0.036) -0.319 (0.852) 0.010 (0.284) -0.065 (0.136) -0.0065	0.149  are considered to the c	0.122 2, with IMF p Growth -3.984 (0.423) 0.995 (0.449) -3.527 (0.005) 4.360 (0.357) 0.038 (0.171) 0.221 (0.521) -0.063 (0.273)	1.0.002 (0.869) (0.002) (0.600) (0.002) (0.600) (0.000	3SLS, Imitation 0.660 (0.000) 0.619 (0.000) 0.619 (0.000) -0.483 (0.000) -0.486 (0.008) 0.001 (0.282) 0.000 (0.851) -0.002 (0.855) 0.002	-0.005 (0.265) (0.000) (0.000) (0.000)	0.143 (0.841) -0.143 (0.211) -0.497 (0.016) 0.411 (0.544) 0.002 (0.600) 0.205 (0.000) -0.008 (0.574) 0.316	0.703 Innovation 0.365 (0.666)  0.850 (0.011) 1.066 (0.000) -0.872 (0.034) -0.660 (0.182) 0.026 (0.181) 0.018 (0.509) 0.007 (0.956)	0.511  unov2 & Intitation 0.310 (0.528) 0.577 (0.004) -0.599 (0.062)  0.589 (0.104) -0.026 (0.930) 0.006 (0.570) 0.017 (0.176) -0.071 (0.130)	0.105 2, with public GMM P-capital 1.072 (0.000) 0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.001 (0.978) 0.001 (0.929)	0.211 infrastructi Growth -2.501 (0.570) -0.384 (0.840) -1.858 (0.563) 3.940 (0.136)  0.050 (0.455) -0.068 (0.807) 0.027 (0.490) 6.039	1.803 (0.000) 0.861 (0.000) 1.335 (0.000) -1.090 (0.000) -2.052 (0.000) 0.001 (0.701) 0.000 (0.961) -0.007 (0.600)	3SLS, 1 Initation -1.546 (0.000) 0.678 (0.000) -0.581 (0.000) -0.581 (0.000) 1.767 (0.000) (0.915) 0.000 (0.915) 0.000 (0.930) 0.004 (0.703) 0.004 (0.703) 0.002	0.000 (0.000) 0.000 (0.000) 0.000 (0.000) (0.000) (0.291) -0.001 (0.294) -0.001 (0.464) 0.000 (0.659)	0.002 (0.668) 0.194 (0.000) 0.001 0.002 (0.668) 0.194 (0.000) 0.001 (0.957)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Imitation, t-1 (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation	0.210  Innovation -0.980 (0.666)  0.197 (0.478) 1.054 (0.000) -0.114 (0.855) 1.021 (0.523) 0.041 (0.408) 0.007 (0.766) 0.066 (0.621) 0.037	0.407  System  Imitation 0.546 (0.682) 0.567 (0.001) -0.302 (0.099)  0.383 (0.036) -0.319 (0.852) 0.010 (0.284) -0.065 (0.136) -0.0065	0.149  are considered to the c	0.122 2, with IMF p Growth -3.984 (0.423) 0.995 (0.449) -3.527 (0.005) 4.360 (0.357)  0.038 (0.171) 0.221 -0.063 (0.273) 1.046 (0.285)	1.0.002 (0.869) (0.002) (0.600) (0.002) (0.600) (0.000	3SLS, Imitation 0.660 (0.000) 0.619 (0.000) 0.619 (0.000) -0.483 (0.000) -0.486 (0.008) 0.001 (0.282) 0.000 (0.851) -0.002 (0.855) 0.002	-0.005 (0.265) (0.000) (0.000) (0.000)	0.143 (0.841) -0.143 (0.211) -0.497 (0.016) 0.411 (0.544) 0.002 (0.600) 0.205 (0.000) -0.008 (0.574) 0.316 (0.126)	0.703 Innovation 0.365 (0.666)  0.850 (0.011) 1.066 (0.000) -0.872 (0.034) -0.660 (0.182) 0.026 (0.181) 0.018 (0.509) 0.007 (0.956)	0.511  unov2 & Intitation 0.310 (0.528) 0.577 (0.004) -0.599 (0.062)  0.589 (0.104) -0.026 (0.930) 0.006 (0.570) 0.017 (0.176) -0.071 (0.130)	0.105 2, with public GMM P-capital 1.072 (0.000) 0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.001 (0.978) 0.001 (0.929)	0.211 infrastructi Growth -2.501 (0.570) -0.384 (0.840)  -1.858 (0.563)  3.940 (0.136)  0.050 (0.455) -0.068 (0.807) 0.027 (0.490) 6.039 (0.07) -2.472	1.803 (0.000) 0.861 (0.000) 1.335 (0.000) -1.090 (0.000) -2.052 (0.000) 0.001 (0.701) 0.000 (0.961) -0.007 (0.600)	3SLS, 1 Initation -1.546 (0.000) 0.678 (0.000) -0.581 (0.000) -0.581 (0.000) 1.767 (0.000) (0.915) 0.000 (0.915) 0.000 (0.930) 0.004 (0.703) 0.004 (0.703) 0.002	0.000 (0.000) 0.000 (0.000) 0.000 (0.000) (0.000) (0.291) -0.001 (0.294) -0.001 (0.464) 0.000 (0.659)	0.002 (0.668) 0.1060 0.000 0.002 (0.668) 0.104 (0.000) 0.001 (0.957) 0.059 (0.852
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Imitation, t-1 (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation D.Innovation [t - t-1] D.Imitation [t - t-1] Country Effect	0.210  Innovation -0.980 (0.666)  0.197 (0.478) 1.054 (0.000) -0.114 (0.855) 1.021 (0.523) 0.041 (0.408) 0.007 (0.766) 0.066 (0.621) 0.037	0.407  System  Imitation 0.546 (0.682) 0.567 (0.001) -0.302 (0.099)  0.383 (0.036) -0.319 (0.852) 0.010 (0.284) -0.065 (0.136) -0.0065	0.149  are considered to the c	0.122 2, with IMF p Growth -3.984 (0.423) 0.995 (0.449) -3.527 (0.005) 4.360 (0.357) 0.038 (0.171) 0.221 (0.521) -0.063 (0.273) 1.046 (0.281)	Innovation -0.754 (0.003)  0.789 (0.000) 1.319 (0.000) -0.905 (0.000) 0.574 (0.027) 0.001 (0.454) 0.001 (0.640) 0.002 (0.369) -0.002 (0.772)	3SLS, Imitation 0.660 (0.000) 0.619 (0.000) 0.619 (0.000) -0.483 (0.000) -0.486 (0.008) 0.001 (0.282) 0.000 (0.851) -0.002 (0.855) 0.002	-0.005 (0.265) (0.000) (0.000) (0.000)	0.143 (0.841) -0.143 (0.211) -0.497 (0.016) 0.411 (0.544) 0.002 (0.600) 0.205 (0.000) -0.008 (0.574) 0.316	0.703 Innovation 0.365 (0.666)  0.850 (0.011) 1.066 (0.000) -0.872 (0.034) -0.660 (0.182) 0.026 (0.181) 0.018 (0.509) 0.007 (0.956)	0.511  unov2 & Intitation 0.310 (0.528) 0.577 (0.004) -0.599 (0.062)  0.589 (0.104) -0.026 (0.930) 0.006 (0.570) 0.017 (0.176) -0.071 (0.130)	0.105 2, with public GMM P-capital 1.072 (0.000) 0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.001 (0.978) 0.001 (0.929)	0.211 infrastructi Growth -2.501 (0.570) -0.384 (0.840)  -1.858 (0.563)  3.940 (0.136)  0.050 (0.455) -0.068 (0.807) (0.490) 6.039 (0.490)	1.803 (0.000) 0.861 (0.000) 1.335 (0.000) -1.090 (0.000) -2.052 (0.000) 0.001 (0.701) 0.000 (0.961) -0.007 (0.600)	381.8,1 Imitation -1.546 (0.000) -0.581 (0.000) -0.581 (0.000) -0.581 (0.000) -0.581 (0.000) 0.000 (0.915) 0.000 (0.915) 0.000 (0.930) 0.004 (0.703) 0.002 (0.742)	with FE P-capital 0.920 (0.000)  0.000 (0.966) 0.000 (0.921) -0.001 (0.294) -0.001 (0.464) 0.000 (0.659) -0.005 (0.167)	0.002 (0.668) 0.194 (0.957) 0.001 (0.957) 0.002 (0.822)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation D.Innovation [t - t-1] D.Imitation [t - t-1]	0.210  Innovation -0.980 (0.666)  0.197 (0.478) 1.054 (0.000) -0.114 (0.855) 1.021 (0.523) 0.041 (0.408) 0.007 (0.766) 0.066 (0.621) 0.037 (0.845)	0.407 In  System Imitation 0.546 (0.682) 0.567 (0.001) -0.302 (0.099)  0.383 (0.036) -0.319 (0.803) -0.002 (0.852) 0.010 (0.284) -0.065 (0.136) -0.008 (0.920)	0.149  MOM M P.capital 1.127 (0.000)  -0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169) -0.002 (0.845)	0.122 2, with IMF p Growth -3.984 (0.423) 0.995 (0.449) -3.527 (0.005) 4.360 (0.357) 0.038 (0.171) 0.221 (0.521) -0.063 (0.273) 1.046 (0.281) 2.553	Innovation -0.754 (0.003) 0.789 (0.000) 1.319 (0.000) -0.905 (0.000) 0.574 (0.027) 0.001 (0.454) 0.001 (0.459) -0.002 (0.869) -0.002 (0.772)	3SLS, 2 Initation 0.660 (0.000) (0.000	-0.005 (0.565) (0.000) (0.663) (0.000) (0.663) (0.000) (0.663) (0.000) (0.663) (0.009)	0.143 (0.841) -0.143 (0.211) -0.497 (0.016) 0.411 (0.544) 0.002 (0.600) 0.205 (0.000) -0.008 (0.574) 0.316 (0.126) 1.905	0.703 Innovation 0.365 (0.666) 0.850 (0.011) 1.066 (0.007) -0.872 (0.034) -0.660 (0.182) 0.026 (0.181) 0.018 (0.509) 0.007 (0.956) 0.065 (0.301)	0.511  mov2 & Imitation  0.310  (0.528)  0.577  (0.004)  -0.599  (0.104) -0.026  (0.930)  0.006  (0.570)  0.117  (0.176) -0.071  (0.132) -0.007  (0.926)	0.105 2, with public GMM P-capital 1.072 (0.000) 0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.972) 0.000 (0.972) 0.000 (0.972)	0.211 infrastructi Growth -2.501 (0.570) -0.384 (0.840)  -1.858 (0.563)  3.940 (0.136)  0.050 (0.455) -0.068 (0.807) -0.070 (0.499) (0.070) -2.472 (0.469)	Innovation 1.803 (0.000)  0.861 (0.000) 1.335 (0.000) -1.090 (0.000) -2.052 (0.000) 0.001 (0.701) 0.000 (0.961) -0.007 (0.609) -0.002 (0.775)	381.8.,  Imitation -1.546 (0.000) 0.678 (0.000) -0.581 (0.000) 0.811 (0.000) 1.767 (0.000) (0.915) 0.000 (0.915) 0.000 (0.830) 0.000 (0.830) 0.002 (0.742)	0.000 (0.000) (0.000) (0.000) (0.000) (0.000) (0.921) -0.001 (0.294) -0.001 (0.464) 0.000 (0.659) -0.005 (0.167)	0.002 (0.668) 0.194 (0.000) 0.001 (0.928)

 Time Effect
 Yes
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			nnov3 & Imit. n GMM	3, with IMF p	oublic capital		re with FE		In In		3, with public 1 GMM	: infrastructi	re stock (pro:		hone measure with FE	")
		Imitation	P.capital	Growth		Imitation	P.capital	Growth		Imitation	P.capital	Growth	Innovation	Imitation	P.capital	Growth
Initial GDP per capita (log)	-0.025 (0.981)	0.210 (0.834)	1.127 (0.000)	-2.663 (0.192)	0.846 (0.000)	-0.772 (0.000)	1.023 (0.000)	0.188 (0.787)	-0.572 (0.613)	0.083 (0.844)	1.072 (0.000)	-0.903 (0.867)	-1.850 (0.000)	1.555 (0.000)	0.917 (0.000)	2.149 (0.112)
innovation, t (log)		0.967 (0.000)		0.164 (0.854)		1.015 (0.000)		-0.467 (0.002)		0.720 (0.000)		-1.946 (0.579)		1.130 (0.000)		-0.293 (0.045)
nnovation, t-1 (log)	0.371 (0.090)	-0.237 (0.262)			0.833 (0.000)	-0.871 (0.000)			0.796 (0.001)	-0.733 (0.024)			0.864 (0.000)	-0.984 (0.000)		
mitation, t (log)	0.487 (0.013)			1.264 (0.158)	0.789 (0.000)			-0.149 (0.296)	0.649 (0.000)			0.053 (0.990)	0.791 (0.000)			-0.185 (0.161)
mitation, t-1 (log)	-0.164 (0.375)	0.384 (0.101)			-0.640 (0.000)	0.816 (0.000)			-0.572 (0.006)	0.978 (0.000)			-0.670 (0.000)	0.849 (0.000)		
Public capital (log)	0.349 (0.680)	-0.540 (0.609)		2.746 (0.663)	-0.762 (0.000)	0.746 (0.001)		0.371 (0.584)	0.197 (0.467)	-0.381 (0.348)		3.280 (0.255)	2.060 (0.000)	-1.718 (0.000)		-1.874 (0.204)
<sup>F</sup> DI	0.015 (0.180)	0.001 (0.908)		(01000)	0.000 (0.715)	0.000 (0.975)		(,	0.007 (0.614)	0.014 (0.422)		(0.200)	-0.001 (0.367)	0.001 (0.231)		(0.20.)
Skilled workforce	0.032 (0.009)	-0.016 (0.517)			-0.001 (0.598)	0.002 (0.417)			0.010 (0.543)	0.026 (0.249)			0.001 (0.538)	-0.001 (0.790)		
Gov. expenditure	0.004 (0.946)	-0.081 (0.522)	-0.016 (0.479)		0.019 (0.041)	-0.022 (0.033)	-0.005 (0.582)		-0.031 (0.715)	-0.095 (0.265)	0.053 (0.494)		0.014 (0.199)	-0.018 (0.088)	0.001 (0.934)	
Non-tax revenue	-0.030	0.055	0.012		-0.007	0.008	0.004		-0.003	0.026	-0.040		-0.007	0.009	0.000	
Gov. debt	(0.508)	(0.279)	0.216)		(0.208)	(0.173)	(0.338)		(0.931)	(0.550)	(0.424) -0.020		(0.226)	(0.098)	(0.987)	
Jrban			(0.016) -0.004				(0.000) -0.001				(0.059) 0.000				(0.651) -0.002	
Population density			(0.708) 0.000				(0.521) 0.000				(0.978) 0.001				(0.214) 0.000	
Current account balance			(0.169) -0.002				(0.159) 0.005				(0.490) 0.029				(0.226) -0.001	
Trade			(0.845)	0.067			(0.273)	0.002			(0.324)	0.086			(0.682)	0.003
nvestment				(0.256) 0.220				(0.555) 0.204				(0.170) -0.026				(0.430) 0.177
nflation				(0.335)				(0.000)				(0.926)				(0.000)
				(0.798)				(0.653)				(0.917)				(0.779)
O.Innovation [t - t-1]				0.186 (0.746)				1.335 (0.000)				0.536 (0.878)				2.063 (0.000)
O.Imitation [t - t-1]				0.657 (0.150)				0.784 (0.002)				2.945 (0.401)				0.269 (0.328)
Country Effect	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes
Countries/Observations R <sup>2</sup>	72/245	72/245	94/403	87/333	73/246 0.952	73/246 0.925	73/246 0.942	73/246 0.416	68/227	68/227	88/369	79/298	69/228 0.879	69/228 0.870	69/228 0.939	69/228 0.233
Number of Instruments	38	38	46	44					32	32	39	34		*****		
Hansen J-statistics (p-value) AR(2) test (p-value)	0.703	0.625	0.859	0.508					0.631	0.176	0.185	0.196				
rr(2) test (p-varue)	0.427	0.359	0.149	0.158					0.156	0.258	0.105	0.173				
IN(2) test (p-value)	0.427	In	nnov4 & Imit		oublic capital					nov4 & Imit	4, with public		ure stock (pro			•)
	Innovation	Systen Imitation	nnov4 & Imita n GMM P.capital	4, with IMF p	Innovation	3SLS,	with FE P.capital	Growth	Innovation	nov4 & Imit- System Imitation	4, with public 1 GMM P.capital	Growth	Innovation	3SLS, Imitation	with FE P.capital	Growth
		Ir Systen	nnov4 & Imit- n GMM	4, with IMF p		3SLS,	with FE	Growth 0.256 (0.716)	Iı	nov4 & Imit- System	4, with public 1 GMM	infrastructi	-	3SLS,	with FE	Growth 1.620
Initial GDP per capita (log)	Innovation 0.442	System System Imitation -0.181 (0.883) 0.651	nnov4 & Imit- n GMM P.capital 1.127	Growth 7.149 (0.130) -4.102	Innovation 0.545	3SLS, Imitation -0.266 (0.197) 0.781	P.capital	0.256 (0.716) -0.452	Innovation 0.366	System System Imitation -0.330 (0.518) 0.687	4, with public 1 GMM P.capital 1.072	Growth -1.994 (0.593) -5.278	Innovation -1.679	3SLS, Imitation 1.153 (0.000) 0.921	P.capital 0.920	1.620 (0.242) -0.251
Initial GDP per capita (log)	Innovation 0.442 (0.645) 0.424	In System System Imitation -0.181 (0.883) 0.651 (0.000) -0.309	nnov4 & Imit- n GMM P.capital 1.127	4, with IMF p Growth 7.149 (0.130)	1nnovation 0.545 (0.016) 0.731	3SLS, Imitation -0.266 (0.197) 0.781 (0.000) -0.604	P.capital	0.256 (0.716)	Innovation 0.366 (0.107) 0.592	Nov4 & Imitation -0.330 (0.518) 0.687 (0.000) -0.718	4, with public 1 GMM P.capital 1.072	Growth -1.994 (0.593)	Innovation -1.679 (0.000)	3SLS, Imitation 1.153 (0.000) 0.921 (0.000) -0.771	P.capital 0.920	Growth 1.620 (0.242)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log)	0.442 (0.645) 0.424 (0.072) 0.870	System System Imitation -0.181 (0.883) 0.651 (0.000)	nnov4 & Imit- n GMM P.capital 1.127	4, with IMF I Growth 7.149 (0.130) -4.102 (0.065)	0.545 (0.016) 0.731 (0.000) 0.914	3SLS, Imitation -0.266 (0.197) 0.781 (0.000)	P.capital	0.256 (0.716) -0.452 (0.010) -0.198	Innovation 0.366 (0.107) 0.592 (0.002) 0.902	Nov4 & Imitation -0.330 (0.518) 0.687 (0.000)	4, with public 1 GMM P.capital 1.072	Growth -1.994 (0.593) -5.278 (0.130)	1.679 (0.000) 0.822 (0.000) 0.947	3SLS, Imitation 1.153 (0.000) 0.921 (0.000)	P.capital 0.920	Growth 1.620 (0.242) -0.251 (0.151)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Initiation, t (log)	0.442 (0.645) 0.424 (0.072) 0.870 (0.000) -0.550	Instation -0.181 (0.883) 0.651 (0.000) -0.309 (0.141)	nnov4 & Imit- n GMM P.capital 1.127	Growth 7.149 (0.130) -4.102 (0.065)	0.545 (0.016) 0.731 (0.000) 0.914 (0.000) -0.699	3SLS, 1 Imitation -0.266 (0.197) 0.781 (0.000) -0.604 (0.000)	P.capital	0.256 (0.716) -0.452 (0.010)	0.366 (0.107) 0.592 (0.002) 0.902 (0.000) -0.844	System System Imitation -0.330 (0.518) 0.687 (0.000) -0.718 (0.000)	4, with public 1 GMM P.capital 1.072	Growth -1.994 (0.593) -5.278 (0.130)	Innovation -1.679 (0.000)  0.822 (0.000) 0.947 (0.000) -0.772	3SLS, Imitation 1.153 (0.000) 0.921 (0.000) -0.771 (0.000) 0.823	P.capital 0.920	Growth 1.620 (0.242) -0.251 (0.151)
nitial GDP per capita (log) nnovation, t (log) nnovation, t-1 (log) mitation, t (log) mitation, t-1 (log)	0.442 (0.645) 0.424 (0.072) 0.870 (0.000) -0.550 (0.071) -0.073	5 System  System  Imitation -0.181 (0.883) 0.651 (0.000) -0.309 (0.141)  0.582 (0.039) -0.019	nnov4 & Imit- n GMM P.capital 1.127	4, with IMF p Growth 7.149 (0.130) -4.102 (0.065) 0.797 (0.733)	0.545 (0.016) 0.731 (0.000) 0.914 (0.000) -0.699 (0.000) -0.407	3SLS, 1 Imitation -0.266 (0.197) 0.781 (0.000) -0.604 (0.000)	P.capital	0.256 (0.716) -0.452 (0.010) -0.198 (0.198)	0.366 (0.107) 0.592 (0.002) 0.902 (0.000) -0.844 (0.000) 0.131	mov4 & Imit- System Imitation -0.330 (0.518) 0.687 (0.000) -0.718 (0.000)  1.086 (0.000) 0.042	4, with public 1 GMM P.capital 1.072	Growth -1.994 (0.593) -5.278 (0.130)  3.956 (0.228)	1.679 (0.000) 0.822 (0.000) 0.947 (0.000) -0.772 (0.000) 1.883	3SLS, Imitation 1.153 (0.000) 0.921 (0.000) -0.771 (0.000) 0.823 (0.000) -1.273	P.capital 0.920	Growtl 1.620 (0.242) -0.251 (0.151) -0.250 (0.081)
mitial GDP per capita (log)  nnovation, t (log)  innovation, t-1 (log)  imitation, t (log)  imitation, t-1 (log)  Public capital (log)	0.442 (0.645) 0.424 (0.072) 0.870 (0.000) -0.550 (0.071)	Fig. 1. System   System   Imitation   -0.181   (0.883)   0.651   (0.000)   -0.309   (0.141)   0.582   (0.039)	nnov4 & Imit- n GMM P.capital 1.127	4, with IMF I Growth 7.149 (0.130) -4.102 (0.065)  0.797 (0.733)	0.545 (0.016) 0.731 (0.000) 0.914 (0.000) -0.699 (0.000)	3SLS, 1 Imitation -0.266 (0.197) 0.781 (0.000) -0.604 (0.000) 0.782 (0.000)	P.capital	0.256 (0.716) -0.452 (0.010) -0.198 (0.198)	0.366 (0.107) 0.592 (0.002) 0.902 (0.000) -0.844 (0.000)	mov4 & Imit- System Imitation -0.330 (0.518) 0.687 (0.000) -0.718 (0.000)  1.086 (0.000)	4, with public 1 GMM P.capital 1.072	Growth -1.994 (0.593) -5.278 (0.130)  3.956 (0.228)	1.679 (0.000) 0.822 (0.000) 0.947 (0.000) -0.772 (0.000)	3SLS, Imitation 1.153 (0.000) 0.921 (0.000) -0.771 (0.000) 0.823 (0.000)	P.capital 0.920	Growth 1.620 (0.242) -0.251 (0.151) -0.250 (0.081)
initial GDP per capita (log) innovation, t (log) innovation, t-1 (log) imitation, t (log) imitation, t-1 (log) Public capital (log)	0.424 (0.645) 0.424 (0.072) 0.870 (0.000) -0.550 (0.071) -0.073 (0.928) 0.002 (0.895)	Initiation -0.181 (0.883) 0.651 (0.000) -0.309 (0.141) 0.582 (0.039) -0.019 (0.984) 0.009 (0.542)	nnov4 & Imit- n GMM P.capital 1.127	4, with IMF p Growth 7.149 (0.130) -4.102 (0.065) 0.797 (0.733)	0.545 (0.016) 0.731 (0.000) 0.914 (0.000) -0.699 (0.000) -0.407 (0.091) 0.000 (0.881)	3SLS, Imitation -0.266 (0.197) 0.781 (0.000) -0.604 (0.000)  0.782 (0.000) 0.243 (0.264) 0.001 (0.492)	P.capital	0.256 (0.716) -0.452 (0.010) -0.198 (0.198)	Innovation 0.366 (0.107)  0.592 (0.002) 0.902 (0.000) -0.844 (0.000) 0.131 (0.491) 0.006 (0.623)	mov4 & Imite System Imitation -0.330 (0.518) 0.687 (0.000) -0.718 (0.000)  1.086 (0.000) 0.042 (0.904) (0.004 (0.809)	4, with public 1 GMM P.capital 1.072	Growth -1.994 (0.593) -5.278 (0.130)  3.956 (0.228)	1nnovation -1.679 (0.000)  0.822 (0.000) 0.947 (0.000) -0.772 (0.000) 1.883 (0.000) -0.001 (0.331)	3SLS, Imitation 1.153 (0.000) 0.921 (0.000) -0.771 (0.000) 0.823 (0.000) -1.273 (0.000) 0.001 (0.168)	P.capital 0.920	Growth 1.620 (0.242) -0.251 (0.151) -0.250 (0.081)
initial GDP per capita (log) innovation, t (log) innovation, t-1 (log) imitation, t (log) imitation, t-1 (log) Public capital (log) FDI Skilled workforce	0.442 (0.645) 0.424 (0.072) 0.870 (0.000) -0.550 (0.071) -0.073 (0.928) 0.002 (0.895) 0.004 (0.665)	5 System  System  Imitation -0.181 (0.883) 0.651 (0.000) -0.309 (0.141)  0.582 (0.039) -0.019 (0.984) (0.094) (0.005) (0.542) (0.005)	nnov4 & Imit- n GMM P.capital 1.127 (0.000)	4, with IMF p Growth 7.149 (0.130) -4.102 (0.065) 0.797 (0.733)	0.545 (0.016) 0.731 (0.000) 0.914 (0.000) -0.699 (0.000) -0.407 (0.091) 0.000 (0.881) 0.000 (0.865)	3SLS, Imitation -0.266 (0.197) 0.781 (0.000) -0.604 (0.000) 0.782 (0.000) 0.243 (0.264) 0.001 (0.492) 0.001 (0.737)	with FE P.capital 1.019 (0.000)	0.256 (0.716) -0.452 (0.010) -0.198 (0.198)	0.366 (0.107) 0.592 (0.002) 0.902 (0.000) -0.844 (0.000) 0.131 (0.491) 0.006 (0.623) 0.008 (0.426)	mov4 & Imit- System Imitation -0.330 (0.518) 0.687 (0.000) -0.718 (0.000) -0.700 1.086 (0.000) 0.042 (0.004 (0.809) 0.005 (0.729)	4, with public 10MM P.capital 1.072 (0.000)	Growth -1.994 (0.593) -5.278 (0.130)  3.956 (0.228)	1.679 (0.000) 0.822 (0.000) 0.947 (0.000) 0.971 (0.000) 1.883 (0.000) -0.001 (0.331) 0.000 (0.963)	3SLS, Imitation 1.153 (0.000) 0.921 (0.000) -0.771 (0.000) 0.823 (0.000) -1.273 (0.000) 0.001 (0.168) 0.001 (0.674)	with FE P.capital 0.920 (0.000)	Growth 1.620 (0.242) -0.251 (0.151) -0.250 (0.081)
initial GDP per capita (log) innovation, t (log) innovation, t-1 (log) imitation, t (log) imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure	0.424 (0.645) 0.424 (0.072) 0.870 (0.000) -0.550 (0.071) -0.073 (0.928) 0.002 (0.895) 0.004 (0.665) 0.010	5 System  System  Imitation -0.181 (0.883) 0.651 (0.000) -0.309 (0.141)  0.582 (0.039) -0.019 (0.984) 0.009 (0.542) 0.005 (0.720) -0.059 (0.327)	nnov4 & Imit- n GMM P.capital 1.127 (0.000)	4, with IMF p Growth 7.149 (0.130) -4.102 (0.065) 0.797 (0.733)	0.545 (0.016) 0.731 (0.000) 0.914 (0.000) -0.699 (0.000) -0.407 (0.091) 0.000 (0.881) 0.000 (0.885) 0.010 (0.343)	3SLS, Imitation -0.266 (0.197) -0.781 (0.000) -0.604 (0.000) -0.782 (0.000) 0.243 (0.264) 0.001 (0.492) 0.001 (0.492) -0.001 (0.737) -0.011 (0.251)	with FE P-capital 1.019 (0.000)	0.256 (0.716) -0.452 (0.010) -0.198 (0.198)	1.0006 (0.426) (0.890) (0.890) (0.890) (0.890) (0.692) (0.000) (0.814) (0.900) (0.613) (0.623)	mov4 & Imit- System	4, with public 1 GMM P.capital 1.072 (0.000)	Growth -1.994 (0.593) -5.278 (0.130)  3.956 (0.228)	1.679 (0.000) 0.822 (0.000) 0.947 (0.000) 1.883 (0.000) -0.001 (0.331) 0.000 (0.963) 0.002 (0.862)	3SLS, Imitation 1.153 (0.000) 0.921 (0.000) -0.771 (0.000)  0.823 (0.000) -1.273 (0.000) 0.001 (0.168) 0.001 (0.1674) -0.003 (0.732)	with FE P.capital 0.920 (0.000)	Growth 1.620 (0.242) -0.251 (0.151) -0.250 (0.081)
initial GDP per capita (log) innovation, t (log) innovation, t-1 (log) imitation, t (log) imitation, t-1 (log) Public capital (log) Public capital (log) Skilled workforce Gov. expenditure Non-tax revenue	0.442 (0.645) 0.424 (0.072) 0.870 (0.000) -0.550 (0.071) -0.073 (0.928) 0.002 (0.895) 0.004 (0.665) 0.010	5 System  System  Initation -0.181 (0.883) 0.651 (0.000) -0.309 (0.141)  0.582 (0.039) -0.019 (0.984) 0.009 (0.542) 0.005 (0.720) -0.059	-0.016 (0.479) -0.012 -0.012 -0.016 (0.479) -0.012	4, with IMF p Growth 7.149 (0.130) -4.102 (0.065) 0.797 (0.733)	0.545 (0.016) 0.731 (0.000) 0.914 (0.000) -0.699 (0.000) -0.407 (0.091) 0.000 (0.881) 0.000 (0.865)	3SLS, Imitation -0.266 (0.197) 0.781 (0.000) -0.604 (0.000) 0.243 (0.264) 0.001 (0.492) 0.001 (0.737) -0.011	### FE   P.capital   1.019   (0.000)	0.256 (0.716) -0.452 (0.010) -0.198 (0.198)	0.366 (0.107) 0.592 (0.002) 0.902 (0.000) -0.844 (0.000) 0.131 (0.491) 0.006 (0.623) 0.008 (0.426) 0.007	mov4 & Imit- System Imitation -0.330 (0.518) 0.687 (0.000) -0.718 (0.000)  1.086 (0.000) 0.042 (0.904) 0.004 (0.809) 0.005 (0.729) -0.102	4, with public 1 GMM P.capital 1.072 (0.000)  0.053 (0.494) -0.040 (0.424)	Growth -1.994 (0.593) -5.278 (0.130)  3.956 (0.228)	1.679 (0.000)	3SLS, Imitation 1.153 (0.000) 0.921 (0.000) -0.771 (0.000) 0.823 (0.000) -1.273 (0.000) (0.168) 0.001 (0.674) (0.674)	with FE P-capital 0.920 (0.000)  -0.001 (0.887) 0.001 (0.884)	Growth 1.620 (0.242) -0.251 (0.151) -0.250 (0.081)
initial GDP per capita (log) innovation, t (log) innovation, t-1 (log) imitation, t (log) imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt	0.442 (0.645) 0.424 (0.072) 0.870 (0.000) -0.550 (0.071) -0.073 (0.928) 0.002 (0.895) 0.004 (0.665) 0.010 (0.898)	5 Nysten  Nuitation  -0.181 (0.883) 0.651 (0.000) -0.309 (0.141)  0.582 (0.039) -0.019 (0.984) 0.009 (0.542) 0.005 (0.720) -0.059 (0.327) 0.008	-0.016 (0.479) 0.026 (0.216) 0.006 (0.479) 0.012 (0.216) 0.006 (0.016)	4, with IMF p Growth 7.149 (0.130) -4.102 (0.065) 0.797 (0.733)	0.545 (0.016) 0.731 (0.000) 0.914 (0.000) -0.699 (0.000) -0.407 (0.981) 0.000 (0.881) 0.000 (0.865) 0.010 (0.343)	3SLS, Initation	-0.004 (0.334) (0.334) -0.005	0.256 (0.716) -0.452 (0.010) -0.198 (0.198)	0.366 (0.107)  0.592 (0.002) (0.900) -0.844 (0.000) (0.131 (0.491) 0.006 (0.623) 0.008 (0.426) 0.007 (0.890) 0.001	mov4 & Imit- System Imitation -0.330 (0.518) 0.687 (0.000) -0.718 (0.000) 1.086 (0.000) 0.042 (0.904) 0.004 (0.809) 0.005 (0.729) -0.102 (0.422)	4. with public 1 GMM P.capital 1.072 (0.000)  0.053 (0.494) -0.040 (0.424) -0.020 (0.050)	Growth -1.994 (0.593) -5.278 (0.130)  3.956 (0.228)	1.679 (0.000) 0.822 (0.000) 0.947 (0.000) 1.883 (0.000) 0.901 (0.331) 0.000 (0.963) 0.002 (0.862)	3SLS, Initation 1.153 (0.000) 0.921 (0.000) -0.771 (0.000) 0.823 (0.000) -1.273 (0.000) 0.001 (0.168) 0.001 (0.674) -0.003 (0.732) -0.002 -0.002	with FE P.capital 0.920 (0.000)  -0.001 (0.884) 0.000 (0.465)	Growth 1.620 (0.242) -0.251 (0.151) -0.250 (0.081)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt	0.442 (0.645) 0.424 (0.072) 0.870 (0.000) -0.550 (0.071) -0.073 (0.928) 0.002 (0.895) 0.004 (0.665) 0.010 (0.898)	5 Nysten  Nuitation  -0.181 (0.883) 0.651 (0.000) -0.309 (0.141)  0.582 (0.039) -0.019 (0.984) 0.009 (0.542) 0.005 (0.720) -0.059 (0.327) 0.008	nnov4 & Imit- n GMM P.capital 1.127 (0.000) -0.016 (0.479) 0.012 (0.216)	4, with IMF p Growth 7.149 (0.130) -4.102 (0.065) 0.797 (0.733)	0.545 (0.016) 0.731 (0.000) 0.914 (0.000) -0.699 (0.000) -0.407 (0.981) 0.000 (0.881) 0.000 (0.865) 0.010 (0.343)	3SLS, Initation	### FE   P.capital   1.019   (0.000)	0.256 (0.716) -0.452 (0.010) -0.198 (0.198)	0.366 (0.107)  0.592 (0.002) (0.900) -0.844 (0.000) (0.131 (0.491) 0.006 (0.623) 0.008 (0.426) 0.007 (0.890) 0.001	mov4 & Imit- System Imitation -0.330 (0.518) 0.687 (0.000) -0.718 (0.000) 1.086 (0.000) 0.042 (0.904) 0.004 (0.809) 0.005 (0.729) -0.102 (0.422)	4, with public GMM P.capital 1.072 (0.000)  0.053 (0.494) -0.040 (0.424) -0.020	Growth -1.994 (0.593) -5.278 (0.130)  3.956 (0.228)	1.679 (0.000) 0.822 (0.000) 0.947 (0.000) 1.883 (0.000) 0.901 (0.331) 0.000 (0.963) 0.002 (0.862)	3SLS, Initation 1.153 (0.000) 0.921 (0.000) -0.771 (0.000) 0.823 (0.000) -1.273 (0.000) 0.001 (0.168) 0.001 (0.674) -0.003 (0.732) -0.002 -0.002	with FE P-capital 0.920 (0.000)  -0.001 (0.887) 0.001 (0.887) 0.001	Growth 1.620 (0.242) -0.251 (0.151) -0.250 (0.081)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Innitiation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban	0.442 (0.645) 0.424 (0.072) 0.870 (0.000) -0.550 (0.071) -0.073 (0.928) 0.002 (0.895) 0.004 (0.665) 0.010 (0.898)	5 Nysten  Nuitation  -0.181 (0.883) 0.651 (0.000) -0.309 (0.141)  0.582 (0.039) -0.019 (0.984) 0.009 (0.542) 0.005 (0.720) -0.059 (0.327) 0.008	-0.016 (0.479) 0.006 (0.006) 0.006 (0.016) 0.006	4, with IMF p Growth 7.149 (0.130) -4.102 (0.065) 0.797 (0.733)	0.545 (0.016) 0.731 (0.000) 0.914 (0.000) -0.699 (0.000) -0.407 (0.981) 0.000 (0.881) 0.000 (0.865) 0.010 (0.343)	3SLS, Initation	-0.004 (0.612) (0.004) -0.004 (0.612) (0.004) (0.004) (0.000)	0.256 (0.716) -0.452 (0.010) -0.198 (0.198)	0.366 (0.107)  0.592 (0.002) (0.900) -0.844 (0.000) (0.131 (0.491) 0.006 (0.623) 0.008 (0.426) 0.007 (0.890) 0.001	mov4 & Imit- System Imitation -0.330 (0.518) 0.687 (0.000) -0.718 (0.000) 1.086 (0.000) 0.042 (0.904) 0.004 (0.809) 0.005 (0.729) -0.102 (0.422)	4, with public GMM P.capital 1.072 (0.000)  0.053 (0.494) -0.040 (0.424) (0.020 (0.059) 0.000	Growth -1.994 (0.593) -5.278 (0.130)  3.956 (0.228)	1.679 (0.000) 0.822 (0.000) 0.947 (0.000) 1.883 (0.000) 0.901 (0.331) 0.000 (0.963) 0.002 (0.862)	3SLS, Initation 1.153 (0.000) 0.921 (0.000) -0.771 (0.000) 0.823 (0.000) -1.273 (0.000) 0.001 (0.168) 0.001 (0.674) -0.003 (0.732) -0.002 -0.002	with FE P-capital 0.920 (0.000)  -0.001 (0.887) 0.001 (0.884) 0.000 (0.465) -0.001	Growth 1.620 (0.242) -0.251 (0.151) -0.250 (0.081)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Initiation, t-1 (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density	0.442 (0.645) 0.424 (0.072) 0.870 (0.000) -0.550 (0.071) -0.073 (0.928) 0.002 (0.895) 0.004 (0.665) 0.010 (0.898)	5 Nysten  Nuitation  -0.181 (0.883) 0.651 (0.000) -0.309 (0.141)  0.582 (0.039) -0.019 (0.984) 0.009 (0.542) 0.005 (0.720) -0.059 (0.327) 0.008	-0.016 (0.479) 0.002 (0.216) 0.006 (0.006) 0.000 (0.169) 0.000 (0.000) 0.000 (0.169) 0	4, with IMF p Growth 7.149 (0.130) -4.102 (0.065) 0.797 (0.733)	0.545 (0.016) 0.731 (0.000) 0.914 (0.000) -0.699 (0.000) -0.407 (0.981) 0.000 (0.881) 0.000 (0.865) 0.010 (0.343)	3SLS, Initation	-0.004 (0.612) 0.005 (0.334) 0.000 (0.270) 0.000 (0.270) 0.000 (0.270) 0.000 (0.270) 0.000 (0.270) 0.000	0.256 (0.716) -0.452 (0.010) -0.198 (0.198)	0.366 (0.107)  0.592 (0.002) (0.900) -0.844 (0.000) (0.131 (0.491) 0.006 (0.623) 0.008 (0.426) 0.007 (0.890) 0.001	mov4 & Imit- System Imitation -0.330 (0.518) 0.687 (0.000) -0.718 (0.000) 1.086 (0.000) 0.042 (0.904) 0.004 (0.809) 0.005 (0.729) -0.102 (0.422)	4, with public 1GMM P.capital 1.072 (0.000)  0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001 (0.490) 0.029	Growth -1.994 (0.593) -5.278 (0.130)  3.956 (0.228)	1.679 (0.000) 0.822 (0.000) 0.947 (0.000) 1.883 (0.000) 0.901 (0.331) 0.000 (0.963) 0.002 (0.862)	3SLS, Initation 1.153 (0.000) 0.921 (0.000) -0.771 (0.000) 0.823 (0.000) -1.273 (0.000) 0.001 (0.168) 0.001 (0.674) -0.003 (0.732) -0.002 -0.002	### PE P.capital 0.920 (0.000)  -0.001 (0.887) (0.001 (0.884) (0.006) (0.465) (0.206) (0.000) (0.485) (0.000) (0.485) (0.000) (0.485) (0.000) (0.485) (0.000) (0.485) (0.000) (0.485) (0.000)	Growth 1.620 (0.242) -0.251 (0.151) -0.250 (0.081)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Imitation, t-1 (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance	0.442 (0.645) 0.424 (0.072) 0.870 (0.000) -0.550 (0.071) -0.073 (0.928) 0.002 (0.895) 0.004 (0.665) 0.010 (0.898)	5 Nysten  Nuitation  -0.181 (0.883) 0.651 (0.000) -0.309 (0.141)  0.582 (0.039) -0.019 (0.984) 0.009 (0.542) 0.005 (0.720) -0.059 (0.327) 0.008	-0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169) 0.000 (0.169)	4, with IMF <sub>F</sub> Growth 7.149 (0.130) -4.102 (0.065)  0.797 (0.733)  -3.573 (0.262)	0.545 (0.016) 0.731 (0.000) 0.914 (0.000) -0.699 (0.000) -0.407 (0.981) 0.000 (0.881) 0.000 (0.865) 0.010 (0.343)	3SLS, Initation	### FE   P.capital   1.019   (0.000)	0.256 (0.716) -0.452 (0.010) -0.198 (0.198) 0.314 (0.641)	0.366 (0.107)  0.592 (0.002) (0.900) -0.844 (0.000) (0.131 (0.491) 0.006 (0.623) 0.008 (0.426) 0.007 (0.890) 0.001	mov4 & Imit- System Imitation -0.330 (0.518) 0.687 (0.000) -0.718 (0.000) 1.086 (0.000) 0.042 (0.904) 0.004 (0.809) 0.005 (0.729) -0.102 (0.422)	0.053 (0.000) 0.053 (0.494) -0.040 (0.424) -0.020 (0.090) (0.978) 0.001	Growth -1.994 -1.994 (0.593) -5.278 (0.130) -3.956 (0.228) -4.939 (0.054)	1.679 (0.000) 0.822 (0.000) 0.947 (0.000) 1.883 (0.000) 0.901 (0.331) 0.000 (0.963) 0.002 (0.862)	3SLS, Initation 1.153 (0.000) 0.921 (0.000) -0.771 (0.000) 0.823 (0.000) -1.273 (0.000) 0.001 (0.168) 0.001 (0.674) -0.003 (0.732) -0.002 -0.002	with FE P-capital 0.920 (0.000)  -0.001 (0.887) 0.001 (0.887) 0.001 (0.480) (0.468)	Growth 1.620 (0.242) -0.251 (0.151) -0.250 (0.081) -1.319 (0.374)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Innivation, t-1 (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade	0.442 (0.645) 0.424 (0.072) 0.870 (0.000) -0.550 (0.071) -0.073 (0.928) 0.002 (0.895) 0.004 (0.665) 0.010 (0.898)	5 Nysten  Nuitation  -0.181 (0.883) 0.651 (0.000) -0.309 (0.141)  0.582 (0.039) -0.019 (0.984) 0.009 (0.542) 0.005 (0.720) -0.059 (0.327) 0.008	-0.016 (0.479) 0.002 (0.216) 0.006 (0.006) 0.000 (0.169) 0.000 (0.000) 0.000 (0.169) 0	4, with IMF <sub>F</sub> Growth 7.149 (0.130) -4.102 (0.065)  0.797 (0.733)  -3.573 (0.262)  0.048 (0.269) 0.117	0.545 (0.016) 0.731 (0.000) 0.914 (0.000) -0.699 (0.000) -0.407 (0.981) 0.000 (0.881) 0.000 (0.865) 0.010 (0.343)	3SLS, Initation	-0.004 (0.612) 0.005 (0.334) 0.000 (0.270) 0.000 (0.270) 0.000 (0.270) 0.000 (0.270) 0.000 (0.270) 0.000	0.256 (0.716) -0.452 (0.010) -0.198 (0.198) 0.314 (0.641) 0.002 (0.642) 0.208	0.366 (0.107)  0.592 (0.002) (0.900) -0.844 (0.000) (0.131 (0.491) 0.006 (0.623) 0.008 (0.426) 0.007 (0.890) 0.001	mov4 & Imit- System Imitation -0.330 (0.518) 0.687 (0.000) -0.718 (0.000) 1.086 (0.000) 0.042 (0.904) 0.004 (0.809) 0.005 (0.729) -0.102 (0.422)	4, with public 1GMM P.capital 1.072 (0.000)  0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001 (0.490) 0.029	Growth -1.994 -(0.593) -5.278 -(0.130) -3.956 -(0.228) -4.939 -(0.054)	1.679 (0.000) 0.822 (0.000) 0.947 (0.000) 1.883 (0.000) 0.901 (0.331) 0.000 (0.963) 0.002 (0.862)	3SLS, Initation 1.153 (0.000) 0.921 (0.000) -0.771 (0.000) 0.823 (0.000) -1.273 (0.000) 0.001 (0.168) 0.001 (0.674) -0.003 (0.732) -0.002 -0.002	### PE P.capital 0.920 (0.000)  -0.001 (0.887) (0.001 (0.884) (0.006) (0.465) (0.206) (0.000) (0.485) (0.000) (0.485) (0.000) (0.485) (0.000) (0.485) (0.000) (0.485) (0.000) (0.485) (0.000)	Growth 1.620 (0.242) -0.251 (0.151) -0.250 (0.081) -1.319 (0.374)  0.003 (0.515) 0.178
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Innivation, t (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment	0.442 (0.645) 0.424 (0.072) 0.870 (0.000) -0.550 (0.071) -0.073 (0.928) 0.002 (0.895) 0.004 (0.665) 0.010 (0.898)	5 Nysten  Nuitation  -0.181 (0.883) 0.651 (0.000) -0.309 (0.141)  0.582 (0.039) -0.019 (0.984) 0.009 (0.542) 0.005 (0.720) -0.059 (0.327) 0.008	-0.016 (0.479) 0.002 (0.216) 0.006 (0.006) 0.000 (0.169) 0.000 (0.000) 0.000 (0.169) 0	4, with IMF <sub>I</sub> Growth 7,149 (0.130) -4,102 (0.065) 0.797 (0.733) -3.573 (0.262)	0.545 (0.016) 0.731 (0.000) 0.914 (0.000) -0.699 (0.000) -0.407 (0.981) 0.000 (0.881) 0.000 (0.865) 0.010 (0.343)	3SLS, Initation	-0.004 (0.612) 0.005 (0.334) 0.000 (0.270) 0.000 (0.270) 0.000 (0.270) 0.000 (0.270) 0.000 (0.270) 0.000	0.256 (0.716) -0.452 (0.010) -0.198 (0.198) 0.314 (0.641)	0.366 (0.107)  0.592 (0.002) (0.900) -0.844 (0.000) (0.131 (0.491) 0.006 (0.623) 0.008 (0.426) 0.007 (0.890) 0.001	mov4 & Imit- System Imitation -0.330 (0.518) 0.687 (0.000) -0.718 (0.000) 1.086 (0.000) 0.042 (0.904) 0.004 (0.809) 0.005 (0.729) -0.102 (0.422)	4, with public 1GMM P.capital 1.072 (0.000)  0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001 (0.490) 0.029	Growth -1.994 (0.593) -5.278 (0.130)  3.956 (0.228)  4.939 (0.054)	1.679 (0.000) 0.822 (0.000) 0.947 (0.000) 1.883 (0.000) 0.901 (0.331) 0.000 (0.963) 0.002 (0.862)	3SLS, Initation 1.153 (0.000) 0.921 (0.000) -0.771 (0.000) 0.823 (0.000) -1.273 (0.000) 0.001 (0.168) 0.001 (0.674) -0.003 (0.732) -0.002 -0.002	### PE P.capital 0.920 (0.000)  -0.001 (0.887) (0.001 (0.884) (0.006) (0.465) (0.206) (0.000) (0.485) (0.000) (0.485) (0.000) (0.485) (0.000) (0.485) (0.000) (0.485) (0.000) (0.485) (0.000)	Growth 1.620 (0.242) -0.251 (0.151) -0.250 (0.081) -1.319 (0.374)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Innitiation, t-1 (log) Imitation, t-1 (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation	0.442 (0.645) 0.424 (0.072) 0.870 (0.000) -0.550 (0.071) -0.073 (0.928) 0.002 (0.895) 0.004 (0.665) 0.010 (0.898)	5 Nysten  Nuitation  -0.181 (0.883) 0.651 (0.000) -0.309 (0.141)  0.582 (0.039) -0.019 (0.984) 0.009 (0.542) 0.005 (0.720) -0.059 (0.327) 0.008	-0.016 (0.479) 0.002 (0.216) 0.006 (0.006) 0.000 (0.169) 0.000 (0.000) 0.000 (0.169) 0	0.048 (0.22) 0.048 (0.53) 0.048 (0.262)	0.545 (0.016) 0.731 (0.000) 0.914 (0.000) -0.699 (0.000) -0.407 (0.981) 0.000 (0.881) 0.000 (0.865) 0.010 (0.343)	3SLS, Initation	-0.004 (0.612) 0.005 (0.334) 0.000 (0.270) 0.000 (0.270) 0.000 (0.270) 0.000 (0.270) 0.000 (0.270) 0.000	0.256 (0.716) -0.452 (0.010) -0.198 (0.198) 0.314 (0.641) 0.002 (0.642) 0.208 (0.000) -0.005 (0.748)	0.366 (0.107)  0.592 (0.002) (0.900) -0.844 (0.000) (0.131 (0.491) 0.006 (0.623) 0.008 (0.426) 0.007 (0.890) 0.001	mov4 & Imit- System Imitation -0.330 (0.518) 0.687 (0.000) -0.718 (0.000) 1.086 (0.000) 0.042 (0.904) 0.004 (0.809) 0.005 (0.729) -0.102 (0.422)	4, with public 1GMM P.capital 1.072 (0.000)  0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001 (0.490) 0.029	Growth -1.994 -1.994 -1.994 -1.995 -5.278 -5.278 -6.130) -3.956 -6.228) -4.939 -6.054) -6.112 -6.652) -6.64 -6.652) -6.644 -6.652)	1.679 (0.000) 0.822 (0.000) 0.947 (0.000) 1.883 (0.000) 0.901 (0.331) 0.000 (0.963) 0.002 (0.862)	3SLS, Initation 1.153 (0.000) 0.921 (0.000) -0.771 (0.000) 0.823 (0.000) -1.273 (0.000) 0.001 (0.168) 0.001 (0.674) -0.003 (0.732) -0.002 -0.002	### PE P.capital 0.920 (0.000)  -0.001 (0.887) (0.001 (0.884) (0.006) (0.465) (0.206) (0.000) (0.485) (0.000) (0.485) (0.000) (0.485) (0.000) (0.485) (0.000) (0.485) (0.000) (0.485) (0.000)	0.003 (0.515) 0.0374) 0.0374) 0.0374)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Innitation, t-1 (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation D.Innovation [t-t-1]	0.442 (0.645) 0.424 (0.072) 0.870 (0.000) -0.550 (0.071) -0.073 (0.928) 0.002 (0.895) 0.004 (0.665) 0.010 (0.898)	5 Nysten  Nuitation  -0.181 (0.883) 0.651 (0.000) -0.309 (0.141)  0.582 (0.039) -0.019 (0.984) 0.009 (0.542) 0.005 (0.720) -0.059 (0.327) 0.008	-0.016 (0.479) 0.002 (0.216) 0.006 (0.006) 0.000 (0.169) 0.000 (0.000) 0.000 (0.169) 0	4, with IMF <sub>F</sub> Growth 7.149 (0.130) -4.102 (0.065)  0.797 (0.733)  -3.573 (0.262)  0.048 (0.269) 0.117 (0.531) 0.009 (0.883) 2.890 (0.016)	0.545 (0.016) 0.731 (0.000) 0.914 (0.000) -0.699 (0.000) -0.407 (0.981) 0.000 (0.881) 0.000 (0.865) 0.010 (0.343)	3SLS, Initation	-0.004 (0.612) 0.005 (0.334) 0.000 (0.270) 0.000 (0.270) 0.000 (0.270) 0.000 (0.270) 0.000 (0.270) 0.000	0.256 (0.716) -0.452 (0.010) -0.198 (0.198) 0.314 (0.641) -0.002 (0.642) 0.208 (0.000) -0.005 (0.748) 0.980	0.366 (0.107)  0.592 (0.002) (0.900) -0.844 (0.000) (0.131 (0.491) 0.006 (0.623) 0.008 (0.426) 0.007 (0.890) 0.001	mov4 & Imit- System Imitation -0.330 (0.518) 0.687 (0.000) -0.718 (0.000) 1.086 (0.000) 0.042 (0.904) 0.004 (0.809) 0.005 (0.729) -0.102 (0.422)	4, with public 1GMM P.capital 1.072 (0.000)  0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001 (0.490) 0.029	Growth -1.994 -(0.593) -5.278 -(0.130) -3.956 -(0.228) -4.939 -(0.054) -0.094 -(0.082) -0.112 -(0.652) -0.064 -(0.324) -1.315 -(0.704)	1.679 (0.000) 0.822 (0.000) 0.947 (0.000) 1.883 (0.000) 0.901 (0.331) 0.000 (0.963) 0.002 (0.862)	3SLS, Initation 1.153 (0.000) 0.921 (0.000) -0.771 (0.000) 0.823 (0.000) -1.273 (0.000) 0.001 (0.168) 0.001 (0.674) -0.003 (0.732) -0.002 -0.002	### PE P.capital 0.920 (0.000)  -0.001 (0.887) (0.001 (0.884) (0.006) (0.465) (0.206) (0.000) (0.485) (0.000) (0.485) (0.000) (0.485) (0.000) (0.485) (0.000) (0.485) (0.000) (0.485) (0.000)	Growth 1.620 (0.242) -0.251 (0.151) -0.250 (0.081) -1.319 (0.374)  0.003 (0.515) 0.178 (0.000) (0.005) (0.735) 1.645 (0.000)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation D.Innovation [t - t-1] D.Imitation [t - t-1]	Innovation   0.442   (0.645)	5 Nysten  Nutritation  -0.181 (0.883) 0.651 (0.000) -0.309 (0.141)  0.582 (0.039) -0.019 (0.984) 0.009 (0.542) 0.005 (0.720) (0.327) 0.008 (0.916)	-0.016 (0.479) 0.002 (0.216) 0.000 (0.169) -0.002 (0.845)	0.048 (0.262) 0.048 (0.262) 0.048 (0.262) 0.048 (0.262) 0.048 (0.262) 0.117 (0.531) 0.009 (0.883) 2.890 (0.16) 1.495 (0.000)	Innovation 0.545 (0.016)  0.731 (0.000) 0.914 (0.000) -0.699 (0.000) -0.407 (0.091) 0.000 (0.881) 0.000 (0.883) -0.010 (0.343) -0.001 (0.841)	3SLS, Initation -0.266 (0.197) 0.781 (0.000) -0.604 (0.000) 0.782 (0.000) 0.243 (0.264) 0.001 (0.492) 0.001 (0.492) 0.001 (0.734)	-0.004 (0.612) 0.000 (0.2700) 0.000 (0.2700) 0.000 (0.2700) 0.000 (0.2700) 0.000 (0.2700) 0.000 (0.2700) 0.000 (0.	0.256 (0.716) -0.452 (0.010) -0.198 (0.198) 0.314 (0.641) -0.002 (0.642) 0.208 (0.000) -0.005 (0.748) 0.980 (0.000) 1.147	1. Innovation 0.366 (0.107) 0.592 (0.002) 0.902 (0.000) -0.844 (0.000) 0.131 (0.491) 0.006 (0.623) 0.008 (0.426) 0.007 (0.890) 0.001 (0.976)	mov4 & Imit- System Imitation -0.330 (0.518) 0.687 (0.000) -0.718 (0.000) 0.042 (0.904) 0.004 (0.809) 0.005 (0.729) 0.005 (0.729) 0.007 (0.422) (0.497)	0.053 0.053 0.053 0.494 0.040 0.059 0.000 0.978 0.001 0.420 0.099 0.091 0.420 0.059 0.001	Growth -1.994 (0.593) -5.278 (0.130)  3.956 (0.228)  4.939 (0.054)  0.094 (0.082) -0.112 (0.652) 0.064 (0.324) 1.315 (0.704) 1.510 (0.689)	Innovation -1.679 (0.000)  0.822 (0.000) 0.947 (0.000) -0.772 (0.000) -1.883 (0.000) -0.001 (0.331) 0.000 (0.963) 0.002 (0.862) 0.003 (0.625)	0.000 (0.640) (0.640) (0.640)	-0.001 -0.884) 0.000 (0.465) -0.001 (0.488) -0.005 (0.137)	0.003 (0.250 (0.242) -0.251 (0.151) -0.250 (0.081) -1.319 (0.374) 0.003 (0.515) 0.178 (0.000) 0.005 (0.735) 1.645 (0.000) 0.560 (0.005)
nitial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Innitiation, t-1 (log) Initiation, t-1 (log) Initiation Initia	0.442 (0.645) 0.424 (0.072) 0.870 (0.000) -0.550 (0.071) -0.073 (0.928) 0.002 (0.895) 0.004 (0.665) 0.010 (0.898)	5 Nysten  Nuitation  -0.181 (0.883) 0.651 (0.000) -0.309 (0.141)  0.582 (0.039) -0.019 (0.984) 0.009 (0.542) 0.005 (0.720) -0.059 (0.327) 0.008	-0.016 (0.479) 0.002 (0.216) 0.006 (0.006) 0.000 (0.169) 0.000 (0.000) 0.000 (0.169) 0	0.048 (0.269) 0.149 0.130) 0.4.102 (0.065) 0.797 (0.733) -3.573 (0.262)	0.545 (0.016) 0.731 (0.000) 0.914 (0.000) -0.699 (0.000) -0.407 (0.981) 0.000 (0.881) 0.000 (0.865) 0.010 (0.343)	3SLS, Initation	-0.004 (0.612) 0.005 (0.334) 0.000 (0.270) 0.000 (0.270) 0.000 (0.270) 0.000 (0.270) 0.000 (0.270) 0.000	0.256 (0.716) -0.452 (0.010) -0.198 (0.198) 0.314 (0.641) -0.002 (0.642) 0.208 (0.000) -0.005 (0.748) 0.980 (0.000)	0.366 (0.107)  0.592 (0.002) (0.900) -0.844 (0.000) (0.131 (0.491) 0.006 (0.623) 0.008 (0.426) 0.007 (0.890) 0.001	mov4 & Imit- System Imitation -0.330 (0.518) 0.687 (0.000) -0.718 (0.000) 1.086 (0.000) 0.042 (0.904) 0.004 (0.809) 0.005 (0.729) -0.102 (0.422)	4, with public 1GMM P.capital 1.072 (0.000)  0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001 (0.490) 0.029	Growth -1.994 (0.593) -5.278 (0.130)  3.956 (0.228)  4.939 (0.054)  0.094 (0.082) -0.112 (0.652) 0.064 (0.324) 1.315 (0.704)	1.679 (0.000) 0.822 (0.000) 0.947 (0.000) 1.883 (0.000) 0.901 (0.331) 0.000 (0.963) 0.002 (0.862)	3SLS, Initation 1.153 (0.000) 0.921 (0.000) -0.771 (0.000) 0.823 (0.000) -1.273 (0.000) 0.001 (0.168) 0.001 (0.674) -0.003 (0.732) -0.002 -0.002	### PE P.capital 0.920 (0.000)  -0.001 (0.887) (0.001 (0.884) (0.006) (0.465) (0.206) (0.000) (0.485) (0.000) (0.485) (0.000) (0.485) (0.000) (0.485) (0.000) (0.485) (0.000) (0.485) (0.000)	0.003 (0.250 (0.242) -0.251 (0.151) -0.250 (0.081) -1.319 (0.374) 0.033 (0.515) 0.178 (0.000) 0.005 (0.005) 1.645 (0.000)

| Country Effect | Yes |

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		Systen	n GMM			3SLS,	with FE			System	GMM	-		3SLS,	with FE	
Initial GDP per capita (log)	Innovation 0.334	Imitation -0.405	P.capital 1.127	Growth 6.512	0.938	-0.772	P.capital 1.024	0.136	Unnovation 0.133	1mitation 0.137	P.capital 1.072	-2.411	Innovation -1.611	Imitation 1.121	P.capital 0.920	2.119
	(0.779)	(0.723)	(0.000)	(0.021)	(0.000)	(0.000)	(0.000)	(0.848)	(0.521)	(0.785)	(0.000)	(0.489)	(0.000)	(0.000)	(0.000)	(0.131)
Innovation, t (log)		(0.000)		-3.577 (0.049)		(0.000)		-0.465 (0.007)		0.720 (0.000)		-4.400 (0.220)		0.947 (0.000)		-0.275 (0.112)
Innovation, t-1 (log)	(0.096)	-0.313 (0.201)			0.767 (0.000)	-0.655 (0.000)			0.537 (0.021)	-0.685 (0.013)			(0.000)	-0.794 (0.000)		
Imitation, t (log)	0.626	(0.201)		0.225 (0.905)	0.943	(01000)		-0.204 (0.209)	0.840 (0.000)	(******)		3.119 (0.407)	0.938	(01000)		-0.242 (0.108)
Imitation, t-1 (log)	-0.376	0.627		(0.505)	-0.718	0.771		(0.209)	-0.656	0.918		(0.407)	-0.767	0.824		(0.108)
Public capital (log)	(0.137) 0.149	(0.035) 0.163		-2.892	(0.000) -0.841	(0.000) 0.729		0.453	(0.000) 0.288	(0.000) -0.415		4.701	(0.000) 1.801	(0.000) -1.235		-1.846
FDI	(0.874) 0.005	(0.852) 0.011		(0.286)	(0.001)	(0.001)		(0.510)	(0.272) 0.002	(0.279) 0.013		(0.056)	(0.000) -0.001	(0.000) 0.001		(0.219)
Skilled workforce	(0.728) 0.010	(0.437) 0.003			(0.887) -0.002	(0.724) 0.002			(0.881)	(0.339) 0.019			(0.389)	(0.212) 0.001		
Gov. expenditure	(0.329)	(0.859)	-0.016		(0.535)	(0.309)	-0.005		(0.581) 0.012	(0.327)	0.053		(0.959)	(0.719)	-0.001	
	(0.644)	(0.464)	(0.479)		(0.390)	(0.342)	(0.594)		(0.861)	(0.292)	(0.494)		(0.938)	(0.814)	(0.927)	
Non-tax revenue	0.033 (0.361)	0.039 (0.485)	0.012 (0.216)		0.001 (0.845)	-0.001 (0.888)	0.005 (0.291)		-0.014 (0.725)	0.044 (0.456)	-0.040 (0.424)		0.002 (0.695)	-0.002 (0.721)	0.001 (0.875)	
Gov. debt			0.006 (0.016)				0.003 (0.000)				-0.020 (0.059)				0.000 (0.499)	
Urban			-0.004 (0.708)				-0.002 (0.373)				0.000 (0.978)				-0.001 (0.403)	
Population density			0.000				0.000				0.001				0.000	
Current account balance			-0.002				0.005				0.029				-0.005	
Trade			(0.845)	0.050			(0.232)	0.001			(0.324)	0.092			(0.119)	0.002
Investment				(0236) 0.127				(0.715) 0.208				(0.090) -0.079				(0.634) 0.185
Inflation				(0.487) 0.010				(0.000)				(0.778) 0.063				(0.000) 0.004
				(0.880)				(0.737)				(0.391)				(0.775)
D.Innovation [t - t-1]				2.772 (0.011)				1.036 (0.000)				0.954 (0.803)				1.758 (0.000)
D.Imitation [t - t-1]				(0.003)				1.043 (0.002)				1.676 (0.698)				0.441 (0.136)
Country Effect Time Effect	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes
Countries/Observations	72/245	72/245	94/403	86/330	73/246	73/246	73/246	73/246	68/227	68/227	88/369	78/297	69/228	69/228	69/228	69/228
R <sup>2</sup> Number of Instruments	38	38	46	44	0.934	0.930	0.942	0.411	32	32	39	34	0.893	0.915	0.940	0.236
Hansen J-statistics (p-value)	0.302	0.297	0.859	0.226					0.363	0.390	0.185	0.148				
AR(2) test (p-value)	0.261	0.175	0.149 nnov6 & Imitt	0.108 6. with IMF	oublic capital	stock measu	re		0.960 In	0.348 11000 & Imite	0.105 6. with public	0.356 infrastructu	re stock (pro	xied by teleph	ione measure	.)
				, ,												′
			n GMM				with FE				GMM			3SLS,		
Initial GDP per capita (log)	Innovation 0.324	Imitation	P.capital	Growth		Imitation	P.capital	Growth	Innovation	Imitation	P.capital	Growth		Imitation	P.capital	Growth 0.124
Initial GDP per capita (log)	0.324 (0.700)	0.368 (0.820)		-2.448 (0.694)	1.648 (0.000)	-2.055 (0.000)		-1.293 (0.064)	Innovation -0.132 (0.755)	-0.134 (0.898)		-6.400 (0.140)	0.636 (0.000)	-0.995 (0.000)		0.124 (0.933)
Initial GDP per capita (log) Innovation, t (log)	0.324	0.368 (0.820) 0.983	P.capital 1.127	-2.448 (0.694) 0.313	1.648	-2.055 (0.000) 1.077	P.capital 1.048	-1.293 (0.064) -0.103	-0.132	-0.134 (0.898) 0.956	P.capital 1.072	-6.400 (0.140) -0.607	0.636	-0.995 (0.000) 1.089	P.capital 0.927	0.124 (0.933) -0.186
	0.324 (0.700) 0.364	0.368 (0.820) 0.983 (0.000) -0.606	P.capital 1.127	-2.448 (0.694)	1.648 (0.000) 0.867	-2.055 (0.000) 1.077 (0.000) -0.942	P.capital 1.048	-1.293 (0.064)	-0.132 (0.755)	-0.134 (0.898) 0.956 (0.000) -0.356	P.capital 1.072	-6.400 (0.140)	0.636 (0.000) 0.853	-0.995 (0.000) 1.089 (0.000) -0.925	P.capital 0.927	0.124 (0.933)
Innovation, t (log) Innovation, t-1 (log)	0.324 (0.700) 0.364 (0.215)	0.368 (0.820) 0.983 (0.000)	P.capital 1.127	-2.448 (0.694) 0.313 (0.887)	1.648 (0.000) 0.867 (0.000)	-2.055 (0.000) 1.077 (0.000)	P.capital 1.048	-1.293 (0.064) -0.103 (0.517)	-0.132 (0.755) 0.065 (0.844)	-0.134 (0.898) 0.956 (0.000)	P.capital 1.072	-6.400 (0.140) -0.607 (0866)	0.636 (0.000) 0.853 (0.000)	-0.995 (0.000) 1.089 (0.000)	P.capital 0.927	0.124 (0.933) -0.186 (0.247)
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log)	0.324 (0.700) 0.364 (0.215) 0.807 (0.000)	1mitation 0.368 (0.820) 0.983 (0.000) -0.606 (0.117)	P.capital 1.127	-2.448 (0.694) 0.313	1.648 (0.000) 0.867 (0.000) 0.861 (0.000)	1.077 (0.000) 1.077 (0.000) -0.942 (0.000)	P.capital 1.048	-1.293 (0.064) -0.103	-0.132 (0.755) 0.065 (0.844) 0.890 (0.000)	Imitation -0.134 (0.898) 0.956 (0.000) -0.356 (0.540)	P.capital 1.072	-6.400 (0.140) -0.607	0.636 (0.000) 0.853 (0.000) 0.833 (0.000)	1.089 (0.000) 1.089 (0.000) -0.925 (0.000)	P.capital 0.927	0.124 (0.933) -0.186
Innovation, t (log) Innovation, t-1 (log)	0.324 (0.700) 0.364 (0.215) 0.807	0.368 (0.820) 0.983 (0.000) -0.606	P.capital 1.127	-2.448 (0.694) 0.313 (0.887) -1.657	1.648 (0.000) 0.867 (0.000) 0.861	-2.055 (0.000) 1.077 (0.000) -0.942	P.capital 1.048	-1.293 (0.064) -0.103 (0.517)	-0.132 (0.755) 0.065 (0.844) 0.890	-0.134 (0.898) 0.956 (0.000) -0.356	P.capital 1.072	-6.400 (0.140) -0.607 (0866)	0.636 (0.000) 0.853 (0.000) 0.833	-0.995 (0.000) 1.089 (0.000) -0.925	P.capital 0.927	0.124 (0.933) -0.186 (0.247)
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log)	0.324 (0.700) 0.364 (0.215) 0.807 (0.000) -0.338 (0.173) -0.322	Imitation   0.368   (0.820)   0.983   (0.000)   -0.606   (0.117)     0.556   (0.130)   -0.048	P.capital 1.127	-2.448 (0.694) 0.313 (0.887) -1.657 (0.372)	0.867 (0.000) 0.861 (0.000) -0.620 (0.000) -1.713	Imitation   -2.055   (0.000)   1.077   (0.000)   -0.942   (0.000)     0.719   (0.000)   2.141	P.capital 1.048	-1.293 (0.064) -0.103 (0.517) -0.495 (0.002)	0.132 (0.755) 0.065 (0.844) 0.890 (0.000) -0.157 (0.590) 0.168	Imitation -0.134 (0.898) 0.956 (0.000) -0.356 (0.540)  0.476 (0.055) 0.056	P.capital 1.072	-6.400 (0.140) -0.607 (0866) 0.607 (0.767)	0.636 (0.000) 0.853 (0.000) 0.833 (0.000) -0.724 (0.000) -0.674	Imitation	P.capital 0.927	0.124 (0.933) -0.186 (0.247) -0.266 (0.163)
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log)	0.324 (0.700) 0.364 (0.215) 0.807 (0.000) -0.338 (0.173)	1	P.capital 1.127	-2.448 (0.694) 0.313 (0.887) -1.657 (0.372)	1.648 (0.000) 0.867 (0.000) 0.861 (0.000) -0.620 (0.000)	Imitation   -2.055   (0.000)   1.077   (0.000)   -0.942   (0.000)     0.719   (0.000)	P.capital 1.048	-1.293 (0.064) -0.103 (0.517) -0.495 (0.002)	-0.132 (0.755) 0.065 (0.844) 0.890 (0.000) -0.157 (0.590)	Imitation -0.134 (0.898) 0.956 (0.000) -0.356 (0.540)  0.476 (0.055)	P.capital 1.072	-6.400 (0.140) -0.607 (0866) 0.607 (0.767)	0.636 (0.000) 0.853 (0.000) 0.833 (0.000) -0.724 (0.000)	Imitation	P.capital 0.927	0.124 (0.933) -0.186 (0.247) -0.266 (0.163)
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI	0.324 (0.700) 0.364 (0.215) 0.807 (0.000) -0.338 (0.173) -0.322 (0.663) 0.012 (0.655)	0.368 (0.820) 0.983 (0.000) -0.606 (0.117) 0.556 (0.130) -0.048 (0.964) -0.001 (0.965)	P.capital 1.127	-2.448 (0.694) 0.313 (0.887) -1.657 (0.372)	1.648 (0.000) 0.867 (0.000) 0.861 (0.000) -0.620 (0.000) -1.713 (0.000) 0.002 (0.030)	0.000) 0.719 0.000) 0.719 0.000) 2.141 0.000) 0.003 0.052)	P.capital 1.048	-1.293 (0.064) -0.103 (0.517) -0.495 (0.002)	0.132 (0.755) 0.065 (0.844) 0.890 (0.000) -0.157 (0.590) 0.168 (0.472) 0.009 (0.675)	0.134 (0.898) 0.956 (0.000) -0.356 (0.540) 0.476 (0.055) 0.056 (0.900) -0.003 (0.878)	P.capital 1.072	-6.400 (0.140) -0.607 (0866) 0.607 (0.767)	0.636 (0.000) 0.853 (0.000) 0.833 (0.000) -0.724 (0.000) -0.674 (0.000) 0.001 (0.241)	Imitation	P.capital 0.927	0.124 (0.933) -0.186 (0.247) -0.266 (0.163)
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log)	0.324 (0.700) 0.364 (0.215) 0.807 (0.000) -0.338 (0.173) -0.322 (0.663) 0.012	0.368 (0.820) 0.983 (0.000) -0.606 (0.117) 0.556 (0.130) -0.048 (0.964) -0.001	P.capital 1.127	-2.448 (0.694) 0.313 (0.887) -1.657 (0.372)	1.648 (0.000) 0.867 (0.000) 0.861 (0.000) -0.620 (0.000) -1.713 (0.000) 0.002	Imitation   -2.055   (0.000)   1.077   (0.000)   -0.942   (0.000)     0.719   (0.000)   2.141   (0.000)   -0.003	P.capital 1.048	-1.293 (0.064) -0.103 (0.517) -0.495 (0.002)	-0.132 (0.755) 0.065 (0.844) 0.890 (0.000) -0.157 (0.590) 0.168 (0.472) 0.009	0.134 (0.898) 0.956 (0.000) -0.356 (0.540) 0.476 (0.055) 0.056 (0.900) -0.003	P.capital 1.072	-6.400 (0.140) -0.607 (0866) 0.607 (0.767)	0.636 (0.000) 0.853 (0.000) 0.833 (0.000) -0.724 (0.000) -0.674 (0.000) 0.001	Imitation	P.capital 0.927	0.124 (0.933) -0.186 (0.247) -0.266 (0.163)
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI	0.324 (0.700) 0.364 (0.215) 0.807 (0.000) -0.338 (0.173) -0.322 (0.663) 0.012 (0.655) 0.028 (0.204) -0.109	Imitation   0.368   (0.820)   0.983   (0.000)   -0.606   (0.117)     0.556   (0.130)   -0.048   (0.964)   -0.001   (0.965)   -0.022   (0.540)   0.091	P.capital 1.127 (0.000)	-2.448 (0.694) 0.313 (0.887) -1.657 (0.372)	1.648 (0.000) 0.867 (0.000) 0.861 (0.000) -0.620 (0.000) 0.002 (0.030) -0.006 (0.002) -0.032	Initation	P.capital 1.048 (0.000)	-1.293 (0.064) -0.103 (0.517) -0.495 (0.002)	0.132 (0.755) 0.065 (0.844) 0.890 (0.000) -0.157 (0.590) 0.168 (0.472) 0.009 (0.675) 0.009 (0.608) -0.067	Imitation	P.capital 1.072 (0.000)	-6.400 (0.140) -0.607 (0866) 0.607 (0.767)	0.636 (0.000) 0.853 (0.000) 0.833 (0.000) -0.724 (0.000) -0.674 (0.000) 0.001 (0.241) 0.002 (0.296) -0.017	Imitation	P.capital 0.927 (0.000)	0.124 (0.933) -0.186 (0.247) -0.266 (0.163)
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce	0.324 (0.700) 0.364 (0.215) 0.807 (0.000) -0.338 (0.173) -0.322 (0.663) 0.012 (0.655) 0.028 (0.204) -0.109 (0.372) -0.071	Imitation   0.368   (0.820)   0.983   (0.000)   -0.606   (0.117)     0.556   (0.130)   -0.048   (0.964)   -0.001   (0.965)   -0.022   (0.540)   (0.991   (0.470)   (0.489)   (0.489)   (0.489)   (0.488)	P.capital 1.127 (0.000) -0.016 (0.479) 0.012	-2.448 (0.694) 0.313 (0.887) -1.657 (0.372)	1.648 (0.000) 0.867 (0.000) 0.861 (0.000) -0.620 (0.000) -1.713 (0.000) 0.002 (0.032) -0.006 (0.002) -0.032 (0.002)	Initiation   -2.055   (0.000)   1.077   (0.000)   1.077   (0.000)   -0.019   (0.000)   2.141   (0.000)   -0.003   (0.052)   0.008   (0.001)   0.039   (0.002)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001	P.capital 1.048 (0.000) -0.006 (0.488) 0.009	-1.293 (0.064) -0.103 (0.517) -0.495 (0.002)	0.132 (0.755) 0.065 (0.844) 0.890 (0.000) -0.157 (0.590) 0.168 (0.472) 0.009 (0.675) 0.009 (0.608) -0.067 (0.562)	Initiation	P.capital 1.072 (0.000)  0.053 (0.494) -0.040	-6.400 (0.140) -0.607 (0866) 0.607 (0.767)	0.636 (0.000) 0.853 (0.000) 0.833 (0.000) -0.674 (0.000) 0.001 (0.241) 0.002 (0.296) -0.017 (0.040)	Imitation	P.capital 0.927 (0.000)	0.124 (0.933) -0.186 (0.247) -0.266 (0.163)
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure	0.324 (0.700) 0.364 (0.215) 0.807 (0.000) -0.338 (0.173) -0.322 (0.663) 0.012 (0.655) 0.028 (0.204) -0.109 (0.372)	Imitation   0.368   (0.820)   0.983   (0.000)   -0.606   (0.117)     0.556   (0.130)   -0.048   (0.964)   -0.001   (0.965)   -0.022   (0.540)   0.091   (0.470)   (0.470)   (0.470)   (0.470)   (0.470)   (0.470)   (0.470)   (0.470)   (0.470)   (0.868)   (0.470)   (0.470)   (0.868)   (0.868)   (0.470)   (0.470)   (0.470)   (0.870)   (0.870)   (0.470)   (0.870)   (0.870)   (0.470)   (0.870)   (0.470)   (0	P.capital 1.127 (0.000)  -0.016 (0.479) 0.012 (0.216) 0.006	-2.448 (0.694) 0.313 (0.887) -1.657 (0.372)	1.648 (0.000) 0.867 (0.000) 0.861 (0.000) -0.620 (0.000) -1.713 (0.000) 0.002 (0.033) -0.006 (0.002) -0.032 (0.002)	Initation	P.capital 1.048 (0.000)  -0.006 (0.488) 0.009 (0.073)	-1.293 (0.064) -0.103 (0.517) -0.495 (0.002)	0.132 (0.755) 0.065 (0.844) 0.890 (0.000) -0.157 (0.590) 0.168 (0.472) 0.009 (0.675) 0.009 (0.608) -0.067	Imitation	0.053 (0.494) -0.040 (0.424) -0.020	-6.400 (0.140) -0.607 (0866) 0.607 (0.767)	0.636 (0.000) 0.853 (0.000) 0.833 (0.000) -0.724 (0.000) 0.001 (0.241) 0.002 (0.296) -0.017 (0.040)	Imitation	P.capital 0.927 (0.000)  -0.002 (0.803) 0.001 (0.828) 0.000	0.124 (0.933) -0.186 (0.247) -0.266 (0.163)
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue	0.324 (0.700) 0.364 (0.215) 0.807 (0.000) -0.338 (0.173) -0.322 (0.663) 0.012 (0.655) 0.028 (0.204) -0.109 (0.372) -0.071	Imitation   0.368   (0.820)   0.983   (0.000)   -0.606   (0.117)     0.556   (0.130)   -0.048   (0.964)   -0.001   (0.965)   -0.022   (0.540)   (0.991   (0.470)   (0.489)   (0.489)   (0.489)   (0.488)	P.capital 1.127 (0.000)  -0.016 (0.479) 0.012 (0.216) 0.006 (0.016)	-2.448 (0.694) 0.313 (0.887) -1.657 (0.372)	1.648 (0.000) 0.867 (0.000) 0.861 (0.000) -0.620 (0.000) -1.713 (0.000) 0.002 (0.032) -0.006 (0.002) -0.032 (0.002)	Initiation   -2.055   (0.000)   1.077   (0.000)   1.077   (0.000)   -0.019   (0.000)   2.141   (0.000)   -0.003   (0.052)   0.008   (0.001)   0.039   (0.002)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001	-0.006 (0.488) 0.0073 0.001 (0.233)	-1.293 (0.064) -0.103 (0.517) -0.495 (0.002)	0.132 (0.755) 0.065 (0.844) 0.890 (0.000) -0.157 (0.590) 0.168 (0.472) 0.009 (0.675) 0.009 (0.608) -0.067 (0.562)	Initiation	P.capital 1.072 (0.000)  0.053 (0.494) -0.040 (0.424) -0.020 (0.059)	-6.400 (0.140) -0.607 (0866) 0.607 (0.767)	0.636 (0.000) 0.853 (0.000) 0.833 (0.000) -0.674 (0.000) 0.001 (0.241) 0.002 (0.296) -0.017 (0.040)	Imitation	P.capital 0.927 (0.000) -0.002 (0.803) 0.001 (0.828)	0.124 (0.933) -0.186 (0.247) -0.266 (0.163)
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban	0.324 (0.700) 0.364 (0.215) 0.807 (0.000) -0.338 (0.173) -0.322 (0.663) 0.012 (0.655) 0.028 (0.204) -0.109 (0.372) -0.071	Imitation   0.368   (0.820)   0.983   (0.000)   -0.606   (0.117)     0.556   (0.130)   -0.048   (0.964)   -0.001   (0.965)   -0.022   (0.540)   (0.991   (0.470)   (0.489)   (0.489)   (0.489)   (0.488)	P.capital 1.127 (0.000)  -0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708)	-2.448 (0.694) 0.313 (0.887) -1.657 (0.372)	1.648 (0.000) 0.867 (0.000) 0.861 (0.000) -0.620 (0.000) -1.713 (0.000) 0.002 (0.032) -0.006 (0.002) -0.032 (0.002)	Initiation   -2.055   (0.000)   1.077   (0.000)   1.077   (0.000)   -0.019   (0.000)   2.141   (0.000)   -0.003   (0.052)   0.008   (0.001)   0.039   (0.002)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001	-0.006 (0.488) 0.001 (0.233) -0.002 (0.129)	-1.293 (0.064) -0.103 (0.517) -0.495 (0.002)	0.132 (0.755) 0.065 (0.844) 0.890 (0.000) -0.157 (0.590) 0.168 (0.472) 0.009 (0.675) 0.009 (0.608) -0.067 (0.562)	Initiation	0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.0059	-6.400 (0.140) -0.607 (0866) 0.607 (0.767)	0.636 (0.000) 0.853 (0.000) 0.833 (0.000) -0.674 (0.000) 0.001 (0.241) 0.002 (0.296) -0.017 (0.040)	Imitation	P.capital 0.927 (0.000)  -0.002 (0.803) 0.001 (0.828)	0.124 (0.933) -0.186 (0.247) -0.266 (0.163)
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density	0.324 (0.700) 0.364 (0.215) 0.807 (0.000) -0.338 (0.173) -0.322 (0.663) 0.012 (0.655) 0.028 (0.204) -0.109 (0.372) -0.071	Imitation   0.368   (0.820)   0.983   (0.000)   -0.606   (0.117)     0.556   (0.130)   -0.048   (0.964)   -0.001   (0.965)   -0.022   (0.540)   (0.991   (0.470)   (0.489)   (0.489)   (0.489)   (0.488)	-0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169)	-2.448 (0.694) 0.313 (0.887) -1.657 (0.372)	1.648 (0.000) 0.867 (0.000) 0.861 (0.000) -0.620 (0.000) -1.713 (0.000) 0.002 (0.032) -0.006 (0.002) -0.032 (0.002)	Initiation   -2.055   (0.000)   1.077   (0.000)   1.077   (0.000)   -0.019   (0.000)   2.141   (0.000)   -0.003   (0.052)   0.008   (0.001)   0.039   (0.002)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001	-0.006 (0.488) 0.0001 (0.233) -0.002 (0.129) 0.002	-1.293 (0.064) -0.103 (0.517) -0.495 (0.002)	0.132 (0.755) 0.065 (0.844) 0.890 (0.000) -0.157 (0.590) 0.168 (0.472) 0.009 (0.675) 0.009 (0.608) -0.067 (0.562)	Initiation	0.053 (0.494) -0.040 (0.059) 0.009 (0.978) 0.001	-6.400 (0.140) -0.607 (0866) 0.607 (0.767)	0.636 (0.000) 0.853 (0.000) 0.833 (0.000) -0.674 (0.000) 0.001 (0.241) 0.002 (0.296) -0.017 (0.040)	Imitation	-0.002 (0.803) (0.828) 0.000 (0.828) 0.000 (0.903) -0.003 (0.082) 0.000 (0.162)	0.124 (0.933) -0.186 (0.247) -0.266 (0.163)
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance	0.324 (0.700) 0.364 (0.215) 0.807 (0.000) -0.338 (0.173) -0.322 (0.663) 0.012 (0.655) 0.028 (0.204) -0.109 (0.372) -0.071	Imitation   0.368   (0.820)   0.983   (0.000)   -0.606   (0.117)     0.556   (0.130)   -0.048   (0.964)   -0.001   (0.965)   -0.022   (0.540)   (0.991   (0.470)   (0.489)   (0.489)   (0.489)   (0.488)	-0.016 (0.479) 0.012 (0.216) -0.004 (0.708) 0.000	-2.448 (0.694) 0.313 (0.887) -1.657 (0.372) 2.452 (0.541)	1.648 (0.000) 0.867 (0.000) 0.861 (0.000) -0.620 (0.000) -1.713 (0.000) 0.002 (0.032) -0.006 (0.002) -0.032 (0.002)	Initiation   -2.055   (0.000)   1.077   (0.000)   1.077   (0.000)   -0.019   (0.000)   2.141   (0.000)   -0.003   (0.052)   0.008   (0.001)   0.039   (0.002)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001	-0.006 (0.488) 0.009 (0.073) 0.001 (0.233) -0.002 (0.129) 0.000	-1.293 (0.064) -0.103 (0.517) -0.495 (0.002) 1.689 (0.016)	0.132 (0.755) 0.065 (0.844) 0.890 (0.000) -0.157 (0.590) 0.168 (0.472) 0.009 (0.675) 0.009 (0.608) -0.067 (0.562)	Initiation	0.053 (0.494) -0.040 (0.000) 0.0424) -0.020 (0.059) 0.000 (0.978)	-6.400 (0.140) -0.607 (0.866) 0.607 (0.767) 5.460 (0.007)	0.636 (0.000) 0.853 (0.000) 0.833 (0.000) -0.674 (0.000) 0.001 (0.241) 0.002 (0.296) -0.017 (0.040)	Imitation	-0.002 (0.803) 0.001 (0.803) 0.001 (0.828) 0.000 (0.903) -0.003 (0.903)	0.124 (0.933) -0.186 (0.247) -0.266 (0.163) 0.234 (0.878)
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density	0.324 (0.700) 0.364 (0.215) 0.807 (0.000) -0.338 (0.173) -0.322 (0.663) 0.012 (0.655) 0.028 (0.204) -0.109 (0.372) -0.071	Imitation   0.368   (0.820)   0.983   (0.000)   -0.606   (0.117)     0.556   (0.130)   -0.048   (0.964)   -0.001   (0.965)   -0.022   (0.540)   (0.991   (0.470)   (0.489)   (0.489)   (0.489)   (0.488)	P.capital 1.127 (0.000)  -0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169) -0.002	-2.448 (0.6943) 0.313 (0.887) -1.657 (0.372) 2.452 (0.541)	1.648 (0.000) 0.867 (0.000) 0.861 (0.000) -0.620 (0.000) -1.713 (0.000) 0.002 (0.032) -0.006 (0.002) -0.032 (0.002)	Initiation   -2.055   (0.000)   1.077   (0.000)   1.077   (0.000)   -0.019   (0.000)   2.141   (0.000)   -0.003   (0.052)   0.008   (0.001)   0.039   (0.002)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001	P.capital 1.048 (0.000)  -0.006 (0.488) 0.009 (0.073) 0.001 (0.233) -0.002 (0.129) 0.000 (0.282) 0.001	-1.293 (0.064) -0.103 (0.517) -0.495 (0.002) 1.689 (0.016)	0.132 (0.755) 0.065 (0.844) 0.890 (0.000) -0.157 (0.590) 0.168 (0.472) 0.009 (0.675) 0.009 (0.608) -0.067 (0.562)	Initiation	0.053 (0.494) -0.040 (0.424) -0.040 (0.978) 0.001 (0.499)	-6.400 (0.140) -0.607 (0.866) 0.607 (0.767) 5.460 (0.007)	0.636 (0.000) 0.853 (0.000) 0.833 (0.000) -0.674 (0.000) 0.001 (0.241) 0.002 (0.296) -0.017 (0.040)	Imitation	P.capital 0.927 (0.000)  -0.002 (0.803) 0.001 (0.828) 0.000 (0.903) -0.002 (0.082) 0.000 (0.1612)	0.124 (0.933) -0.186 (0.247) -0.266 (0.163) 0.234 (0.878) 0.004 (0.373)
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance	0.324 (0.700) 0.364 (0.215) 0.807 (0.000) -0.338 (0.173) -0.322 (0.663) 0.012 (0.655) 0.028 (0.204) -0.109 (0.372) -0.071	Imitation   0.368   (0.820)   0.983   (0.000)   -0.606   (0.117)     0.556   (0.130)   -0.048   (0.964)   -0.001   (0.965)   -0.022   (0.540)   (0.991   (0.470)   (0.489)   (0.489)   (0.489)   (0.488)	P.capital 1.127 (0.000)  -0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169) -0.002	-2.448 (0.694) 0.313 (0.887) -1.657 (0.372) 2.452 (0.541) 0.026 (0.351) 0.272	1.648 (0.000) 0.867 (0.000) 0.861 (0.000) -0.620 (0.000) -1.713 (0.000) 0.002 (0.032) -0.006 (0.002) -0.032 (0.002)	Initiation   -2.055   (0.000)   1.077   (0.000)   1.077   (0.000)   -0.019   (0.000)   2.141   (0.000)   -0.003   (0.052)   0.008   (0.001)   0.039   (0.002)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001	P.capital 1.048 (0.000)  -0.006 (0.488) 0.009 (0.073) 0.001 (0.233) -0.002 (0.129) 0.000 (0.282) 0.001	-1.293 (0.064) -0.103 (0.517) -0.495 (0.002) 1.689 (0.016) 0.011	0.132 (0.755) 0.065 (0.844) 0.890 (0.000) -0.157 (0.590) 0.168 (0.472) 0.009 (0.675) 0.009 (0.608) -0.067 (0.562)	Initiation	0.053 (0.494) -0.040 (0.424) -0.040 (0.978) 0.001 (0.499)	-6,400 (0.140) -0,607 (0.866) 0.607 (0.767) 5.460 (0.007) 0.981 (0.111) -0.118	0.636 (0.000) 0.853 (0.000) 0.833 (0.000) -0.674 (0.000) 0.001 (0.241) 0.002 (0.296) -0.017 (0.040)	Imitation	P.capital 0.927 (0.000)  -0.002 (0.803) 0.001 (0.828) 0.000 (0.903) -0.002 (0.082) 0.000 (0.1612)	0.124 (0.933) -0.186 (0.247) -0.266 (0.163) 0.234 (0.878) 0.004 (0.373) 0.173
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade	0.324 (0.700) 0.364 (0.215) 0.807 (0.000) -0.338 (0.173) -0.322 (0.663) 0.012 (0.655) 0.028 (0.204) -0.109 (0.372) -0.071	Imitation   0.368   (0.820)   0.983   (0.000)   -0.606   (0.117)     0.556   (0.130)   -0.048   (0.964)   -0.001   (0.965)   -0.022   (0.540)   (0.991   (0.470)   (0.489)   (0.489)   (0.489)   (0.488)	P.capital 1.127 (0.000)  -0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169) -0.002	-2.448 (0.694) 0.313 (0.887) -1.657 (0.372) 2.452 (0.541) 0.026 (0.351) 0.272 (0.163)	1.648 (0.000) 0.867 (0.000) 0.861 (0.000) -0.620 (0.000) -1.713 (0.000) 0.002 (0.032) -0.006 (0.002) -0.032 (0.002)	Initiation   -2.055   (0.000)   1.077   (0.000)   1.077   (0.000)   -0.019   (0.000)   2.141   (0.000)   -0.003   (0.052)   0.008   (0.001)   0.039   (0.002)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001	P.capital 1.048 (0.000)  -0.006 (0.488) 0.009 (0.073) 0.001 (0.233) -0.002 (0.129) 0.000 (0.282) 0.001	-1.293 (0.064) -0.103 (0.517) -0.495 (0.002) 1.689 (0.016) 0.001 (0.740) 0.212 (0.000)	0.132 (0.755) 0.065 (0.844) 0.890 (0.000) -0.157 (0.590) 0.168 (0.472) 0.009 (0.675) 0.009 (0.608) -0.067 (0.562)	Initiation	0.053 (0.494) -0.040 (0.424) -0.040 (0.978) 0.001 (0.499)	-6.400 (0.140) -0.607 (0.866) 0.607 (0.767) 5.460 (0.007) 0.981 (0.111) -0.118 (0.592) 0.063	0.636 (0.000) 0.853 (0.000) 0.833 (0.000) -0.674 (0.000) 0.001 (0.241) 0.002 (0.296) -0.017 (0.040)	Imitation	P.capital 0.927 (0.000)  -0.002 (0.803) 0.001 (0.828) 0.000 (0.903) -0.002 (0.082) 0.000 (0.1612)	0.124 (0.933) -0.186 (0.247) -0.266 (0.163) 0.234 (0.878) 0.004 (0.373) 0.173 (0.000)
Innovation, t (log) Innovation, t-1 (log) Imitation, t-1 (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment	0.324 (0.700) 0.364 (0.215) 0.807 (0.000) -0.338 (0.173) -0.322 (0.663) 0.012 (0.655) 0.028 (0.204) -0.109 (0.372) -0.071	Imitation   0.368   (0.820)   0.983   (0.000)   -0.606   (0.117)     0.556   (0.130)   -0.048   (0.964)   -0.001   (0.965)   -0.022   (0.540)   (0.991   (0.470)   (0.489)   (0.489)   (0.489)   (0.488)	P.capital 1.127 (0.000)  -0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169) -0.002	-2.448 (0.694) 0.313 (0.887) -1.657 (0.372) 2.452 (0.541) 0.026 (0.351) 0.272 (0.163) -0.031 (0.623) 2.866	1.648 (0.000) 0.867 (0.000) 0.861 (0.000) -0.620 (0.000) -1.713 (0.000) 0.002 (0.032) -0.006 (0.002) -0.032 (0.002)	Initiation   -2.055   (0.000)   1.077   (0.000)   1.077   (0.000)   -0.019   (0.000)   2.141   (0.000)   -0.003   (0.052)   0.008   (0.001)   0.039   (0.002)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001	P.capital 1.048 (0.000)  -0.006 (0.488) 0.009 (0.073) 0.001 (0.233) -0.002 (0.129) 0.000 (0.282) 0.001	-1.293 (0.064) -0.103 (0.517) -0.495 (0.002) 1.689 (0.016) 0.001 (0.740) 0.212 (0.000) -0.006 (0.712)	0.132 (0.755) 0.065 (0.844) 0.890 (0.000) -0.157 (0.590) 0.168 (0.472) 0.009 (0.675) 0.009 (0.608) -0.067 (0.562)	Initiation	0.053 (0.494) -0.040 (0.424) -0.040 (0.978) 0.001 (0.499)	-6.400 (0.140) -0.607 (0.866) 0.607 (0.767) 5.460 (0.007) 0.981 (0.111) -0.118 (0.592) 0.063 (0.461) 5.091	0.636 (0.000) 0.853 (0.000) 0.833 (0.000) -0.674 (0.000) 0.001 (0.241) 0.002 (0.296) -0.017 (0.040)	Imitation	P.capital 0.927 (0.000)  -0.002 (0.803) 0.001 (0.828) 0.000 (0.903) -0.002 (0.082) 0.000 (0.1612)	0.124 (0.933) -0.186 (0.247) -0.266 (0.163) 0.234 (0.878) 0.004 (0.373) 0.173 (0.000) 0.004 (0.790) 1.886
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation	0.324 (0.700) 0.364 (0.215) 0.807 (0.000) -0.338 (0.173) -0.322 (0.663) 0.012 (0.655) 0.028 (0.204) -0.109 (0.372) -0.071	Imitation   0.368   (0.820)   0.983   (0.000)   -0.606   (0.117)     0.556   (0.130)   -0.048   (0.964)   -0.001   (0.965)   -0.022   (0.540)   (0.991   (0.470)   (0.489)   (0.489)   (0.489)   (0.488)	P.capital 1.127 (0.000)  -0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169) -0.002	-2.448 (0.694) 0.313 (0.887) -1.657 (0.372) 2.452 (0.541) 0.026 (0.351) 0.272 (0.163) -0.013 (0.623)	1.648 (0.000) 0.867 (0.000) 0.861 (0.000) -0.620 (0.000) -1.713 (0.000) 0.002 (0.032) -0.006 (0.002) -0.032 (0.002)	Initiation   -2.055   (0.000)   1.077   (0.000)   1.077   (0.000)   -0.019   (0.000)   2.141   (0.000)   -0.003   (0.052)   0.008   (0.001)   0.039   (0.002)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001)   -0.018   (0.001	P.capital 1.048 (0.000)  -0.006 (0.488) 0.009 (0.073) 0.001 (0.233) -0.002 (0.129) 0.000 (0.282) 0.001	-1.293 (0.064) -0.103 (0.517) -0.495 (0.002) 1.689 (0.016) 0.001 (0.740) 0.740) 0.212 (0.000) -0.006 (0.716)	0.132 (0.755) 0.065 (0.844) 0.890 (0.000) -0.157 (0.590) 0.168 (0.472) 0.009 (0.675) 0.009 (0.608) -0.067 (0.562)	Initiation	0.053 (0.494) -0.040 (0.424) -0.040 (0.978) 0.001 (0.499)	-6.400 (0.140) -0.607 (0.866) 0.607 (0.767) 5.460 (0.007) 0.981 (0.111) -0.118 (0.592) 0.063 (0.461)	0.636 (0.000) 0.853 (0.000) 0.833 (0.000) -0.674 (0.000) 0.001 (0.241) 0.002 (0.296) -0.017 (0.040)	Imitation	P.capital 0.927 (0.000)  -0.002 (0.803) 0.001 (0.828) 0.000 (0.903) -0.002 (0.082) 0.000 (0.1612)	0.124 (0.933) -0.186 (0.247) -0.266 (0.163) 0.234 (0.878) 0.004 (0.373) 0.173 (0.000) 0.004 (0.790)
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation D.Innovation [t - t-1] D.Imitation [t - t-1]	0.324 (0.700) 0.364 (0.215) 0.807 (0.000) -0.338 (0.173) -0.322 (0.663) 0.012 (0.655) 0.028 (0.204) -0.109 (0.372) -0.071 (0.285)	Initation   0.368 (0.820)   0.983 (0.800)   -0.606 (0.117)   0.556 (0.130)   -0.048 (0.964)   -0.001 (0.965)   -0.022 (0.540) (0.970)   0.091 (0.470) (0.899) (0.421)   0.480 (0.421)   0.480 (0.480)   0.480 (0.480)   0.480 (0.480)   0.480 (0.480)   0.480 (0.480)   0.880 (0.480)   0.880 (0.480)   0.880 (0.480)   0.880 (0.480)   0.880 (0.480)   0.880 (0.480)   0.880 (0.480)   0.880 (0.480)   0.880 (0.480)   0.880 (0.480)   0.880 (0.480)   0.880 (0.480)   0.880 (0.480)   0.880 (0.480)   0.880 (0.480)   0.880 (0.880)   0.88	-0.016 (0.479) 0.012 (0.216) -0.004 (0.708) -0.000 (0.169) -0.002 (0.845)	-2.448 (0.694) 0.313 (0.887) -1.657 (0.372) -2.452 (0.541) -1.0541 (0.272 (0.163) -0.031 (0.623) 2.866 (0.102) 0.454 (0.817)	1.648 (0.000) 0.867 (0.000) 0.861 (0.000) -0.620 (0.000) -1.713 (0.000) 0.002 (0.030) -0.006 (0.002) 0.002 (0.002)	Initation   -2.055   (0.000)   1.077   (0.000)   1.077   (0.000)   -0.942   (0.000)   -0.942   (0.000)   -0.003   (0.000)   -0.003   (0.000)   -0.003   (0.000)   -0.018   (0.001)   (0.000)   -0.018   (0.001)   (0.002)   -0.018   (0.019)   -0.018   (0.019)   -0.018   (0.019)   -0.018   (0.019)   -0.018   (0.019)   -0.018   (0.019)   -0.018   (0.019)   -0.018   (0.019)   -0.018   -0.018   (0.019)   -0.018	-0.006 (0.488) 0.009 (0.073) 0.001 (0.233) -0.002 (0.129) 0.000 (0.282) 0.001 (0.800)	-1.293 (0.064) -0.103 (0.517) -0.495 (0.002) 1.689 (0.016) 0.001 (0.740) 0.212 (0.000) -0.006 (0.716) 2.129 (0.000) -0.006 (0.716)	-0.132 (0.755) 0.065 (0.844) 0.890 (0.000) -0.157 (0.590) (0.675) 0.009 (0.675) 0.009 (0.675) -0.067 (0.567) -0.062 (0.343)	Initiation	0.053 (0.494) -0.040 (0.029) (0.059) 0.001 (0.424) -0.020 (0.059) 0.001 (0.490) 0.029 (0.324)	-6.400 (0.140) -0.607 (0.866) 0.607 (0.767) 5.460 (0.007) 0.981 (0.111) -0.118 (0.592) 0.063 (0.461) 5.091 (0.183) -3.824 (0.169)	0.636 (0.000) 0.853 (0.000) -0.724 (0.000) -0.674 (0.000) 0.001 (0.241) 0.002 (0.296) -0.017 (0.040) -0.007 (0.143)	Initation	-0.002 (0.803) 0.001 (0.828) 0.000 (0.162) -0.012 (0.002)	0.124 (0.933) -0.186 (0.247) -0.266 (0.163) 0.234 (0.878) 0.004 (0.373) 0.173 (0.000) 0.004 (0.790) 1.886 (0.000) 0.091
Innovation, t (log) Innovation, t-1 (log) Imitation, t-1 (log) Imitation, t-1 (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation D.Innovation [t - t-1] D.Imitation [t - t-1] Country Effect	0.324 (0.700)  0.364 (0.215) 0.807 (0.000) -0.338 (0.173) -0.322 (0.663) 0.012 (0.655) 0.028 (0.204) -0.109 (0.372) (0.285)	Initation   0.368   (0.820)   0.983   (0.900)   -0.606   (0.117)   0.556   (0.130)   -0.048   (0.964)   -0.001   (0.965)   -0.022   (0.540)   0.901   (0.470)   0.089   (0.421)   (0.421)   (0.865	-0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169) -0.002 (0.845)	-2.448 (0.694) (0.313 (0.887) -1.657 (0.372) -1.657 (0.372) -1.657 (0.372) -1.657 (0.372) -1.657 (0.351) (0.541) -1.657 (0.163	1.648 (0.000)  0.867 (0.000) 0.861 (0.000) -0.620 (0.000) -1.713 (0.000) -0.002 (0.030) -0.032 (0.002) -0.032 (0.002) -0.014 (0.024)	Initation	-0.006 (0.488) 0.009 (0.073) 0.001 (0.233) -0.002 (0.129) 0.009 (0.282) 0.001 (0.800)	-1.293 (0.064) -0.103 (0.517) -0.495 (0.002) 1.689 (0.016) 0.001 (0.740) 0.212 (0.000) -0.006 (0.716) 2.129 (0.000) -0.038 (0.889) Yes	-0.132 (0.755)  0.065 (0.844) 0.890 (0.000) -0.157 (0.590) 0.168 (0.472) 0.009 (0.675) 0.009 (0.675) -0.067 (0.567) -0.062 (0.343)	Initiation	0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.001 (0.499) 0.002 (0.324)	-6.400 (0.140) -0.607 (0.866) 0.607 (0.767) 5.460 (0.007) 5.460 (0.007) 0.981 (0.111) -0.118 (0.592) 0.063 (0.461) 5.091 (0.183) -3.824 (0.169) Yes	0.636 (0.000)  0.853 (0.000) 0.833 (0.000) -0.724 (0.000) -0.674 (0.000) 0.001 (0.241) 0.002 (0.296) -0.017 (0.143)	Initation	-0.002 (0.803) 0.001 (0.828) 0.000 (0.162) -0.012 (0.002)	0.124 (0.933) -0.186 (0.247) -0.266 (0.163) 0.234 (0.878) 0.004 (0.373) 0.173 (0.000) 0.004 (0.790) 1.886 (0.000) 0.091 (0.795) Yes
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation D.Innovation [t - t-1] D.Imitation [t - t-1] Country Effect	0.324 (0.700) 0.364 (0.215) 0.807 (0.000) -0.338 (0.173) -0.322 (0.663) 0.012 (0.655) 0.028 (0.204) -0.109 (0.372) -0.071 (0.285)	Initation   0.368   (0.820)   (0.820)   (0.982)   (0.900)   (0.900)   (0.900)   (0.117)   (0.556   (0.130)   (0.964)   (0.964)   (0.964)   (0.964)   (0.964)   (0.964)   (0.964)   (0.964)   (0.964)   (0.964)   (0.964)   (0.964)   (0.964)   (0.964)   (0.964)   (0.964)   (0.964)   (0.964)   (0.964)   (0.421)   (0.470)   (0.968)   (0.421)   (0.470)   (0.968)   (0.421)   (0.968)   (0.421)   (0.968)   (0.96	-0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169) -0.002 (0.845)	-2.448 (0.694) 0.313 (0.887) -1.657 (0.372) 2.452 (0.541) 0.026 (0.351) 0.272 (0.163) -0.031 (0.623) 2.866 (0.102) 0.454 (0.817) Yes	1.648 (0.000) 0.867 (0.000) 0.861 (0.000) -0.620 (0.000) -1.713 (0.000) 0.002 (0.330) -0.006 (0.002) -0.032 (0.002) 0.002 (0.002)	Initiation   -2.055 (0.000)   1.077 (0.000)   1.077 (0.000)   1.079 (0.000)   1.0719 (0.000)   1.141 (0.000)   1.141 (0.000)   1.003 (0.052) (0.001)   1.003 (0.052) (0.001)   1.003 (0.001) (0.001) (0.001)   1.003 (0.001) (0.001)   1.003	-0.006 (0.488) 0.009 (0.073) 0.001 (0.282) 0.001 (0.800)	-1.293 (0.064) -0.103 (0.517) -0.495 (0.002) 1.689 (0.016) 0.011 (0.740) 0.212 (0.000) -0.006 (0.716) 2.129 (0.000) -0.038 (0.88) (0.89) -0.038	-0.132 (0.755)  0.065 (0.844) 0.890 (0.000) -0.157 (0.590) 0.168 (0.472) 0.009 (0.675) 0.009 (0.675) -0.062 (0.343)	<u>Imitation</u> -0.134 (0.898) (0.9898) (0.9898) (0.900) -0.356 (0.540) (0.540) (0.560) (0.900) -0.003 (0.878) -0.007 (0.797) (0.55) (0.900) (0.797) (0.	0.053 (0.494) -0.020 (0.420) -0.020 (0.490) 0.000 (0.490) 0.029 (0.324)	-6,400 (0.140) -0,607 (0.866) 0.607 (0.767) 5.460 (0.007) 0.981 (0.111) -0.118 (0.592) 0.063 (0.461) 5.091 (0.183) -3.824 (0.169) Yes	0.636 (0.000)  0.853 (0.000) 0.833 (0.000) -0.724 (0.000) 0.001 (0.241) 0.002 (0.296) -0.017 (0.040) -0.007 (0.143)	Initation	-0.002 (0.803) 0.001 (0.828) 0.000 (0.162) -0.012 (0.002)	0.124 (0.933) -0.186 (0.247) -0.266 (0.163) 0.234 (0.878) 0.004 (0.373) 0.173 (0.000) 0.004 (0.790) 1.886 (0.000) 0.091 (0.795) Yes

| Time Effect | Yes | Ye

	i		nov1 & Imit1  GMM	, with IMF p	public capital .	stock measur 3SLS, v		ļ	In	mov1 & Imit1 System		infrastructu	ure stock (prox		hone measure with FE	)
	Innovation	Imitation	P.capital	Growth	Innovation		P.capital	Growth	Innovation		P.capital	Growth	Innovation		P.capital	Growth
Initial GDP per capita (log)	-0.076	0.025	1.127	2.902	2.086	-1.806	1.050	-0.906	-0.392	0.475	1.072	-2.742	-0.261	-0.509	0.924	2.570
Innovation, t (log)	(0.938)	(0.962) 0.779	(0.000)	(0.536) -0.763	(0.000)	(0.388)	(0.000)	(0.243) -0.321	(0.254)	(0.302) 0.987	(0.000)	(0.108)	(0.246)	(0.032) 0.978	(0.000)	(0.151) -0.394
Innovation, t-1 (log)	0.722	(0.000) -0.546		(0.570)	0.718	(0.000) -0.668		(0.144)	0.397	(0.000) -0.478		(0.621)	0.783	(0.000) -0.758		(0.159)
mitation, t (log)	(0.042) 1.041	(0.000)		-1.477	(0.000) 1.025	(0.000)		-0.475	(0.303) 0.786	(0.118)		-1.536	(0.000) 0.911	(0.000)		-0.398
	(0.000)	0.427		(0.398)	(0.000)	0.662		(0.062)	(0.000)	0.329		(0.484)	(0.000)	0.803		(0.162)
mitation, t-1 (log)	-0.447 (0.234)	(0.065)			-0.656 (0.000)	0.662 (0.000)			-0.225 (0.498)	(0.289)			-0.749 (0.000)	(0.000)		
Public capital (log)	-0.082 (0.921)	0.159 (0.694)		-4.018 (0.251)	-2.013 (0.000)	(0.000)		1.013 (0.169)	0.323 (0.358)	-0.317 (0.509)		2.610 (0.137)	0.295 (0.236)	0.560 (0.033)		-2.645 (0.178)
FDI	0.005 (0.768)	-0.004 (0.722)			0.002 (0.054)	-0.002 (0.042)			0.010 (0.388)	-0.013 (0.390)			0.000 (0.747)	0.000 (0.716)		
Skilled workforce	-0.004	0.004			-0.008	0.008			0.004	0.002			-0.001	0.001		
Gov. expenditure	(0.751) -0.003	(0.648) 0.016	-0.016		(0.000) 0.019	(0.000) -0.017	-0.004		(0.776) 0.070	(0.908) -0.070	0.053		(0.552) 0.017	(0.463) -0.019	0.003	
Non-tax revenue	(0.980) 0.009	(0.837) -0.014	(0.479) 0.012		(0.129) 0.019	(0.124) -0.018	(0.651) 0.006		(0.194) 0.023	(0.334) -0.025	(0.494) -0.040		(0.069) 0.005	(0.064) -0.001	(0.699) -0.002	
	(0.854)	(0.366)	(0.216)		(0.006)	(0.005)	(0.212)		(0.281)	(0.328)	(0.424)		(0.330)	(0.823)	(0.656)	
Gov. debt	1		0.006 (0.016)				0.001 (0.146)	ļ			-0.020 (0.059)				0.000 (0.896)	
Urban	i		-0.004 (0.708)				0.000 (0.923)				0.000 (0.978)				-0.001 (0.650)	
opulation density	i		0.000				0.000				0.001				0.000	
Current account balance	1		(0.169) -0.002				(0.635) 0.002	ļ			(0.490) 0.029				(0.357) -0.009	
rade `	1		(0.845)	0.031			(0.634)	0.005			(0.324)	0.100			(0.011)	0.004
nvestment	1			(0.342) 0.111				(0.258) 0.185				(0.038) -0.078				(0.376) 0.172
nvestment	1			(0.432)				(0.000)				(0.663)				(0.001)
nflation	1			-0.002 (0.974)				-0.026 (0.200)				-0.013 (0.855)				-0.030 (0.138)
D.Innovation [t - t-1]	1			-0.536				0.136				-1.162				0.063
D.Imitation [t - t-1]	i			(0.776) 3.421				(0.664) 0.969				(0.635) 3.658				(0.874) 1.171
	Yes	Yes	Yes	(0.097) Yes	Yes	Yes	Yes	(0.003) Yes	Yes	Yes	Yes	(0.070) Yes	Yes	Yes	Yes	(0.001) Yes
Country Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Countries/Observations R <sup>2</sup>	71/248	71/248	94/403	84/331	71/248 0.667	71/248 0.659	71/248 0.939	71/248 0.280	69/233	69/233	88/369	78/302	69/233 0.915	69/233 0.869	69/233 0.936	69/233 0.076
Number of Instruments	39	39	46	44	0.007	0.009	0.757	0.200	33	33	39	35	0.515	0.009	0.550	0.070
Hansen J-statistics (p-value) AR(2) test (p-value)	0.314 0.511	0.473 0.614	0.859 0.149	0.297 0.175					0.608 0.115	0.387 0.272	0.185 0.105	0.524 0.240				
it(2) test (p-varue)	0.511				public capital .	stock measur	e						ure stock (prox	xied by telepł	hone measure	)
	Innovation	System	n GMM P.capital	Growth	Innovation	3SLS, v	vith FE P.capital	Growth	Innovation	System Imitation	GMM P.capital	Growth	Innovation		with FE P.capital	Growth
Initial GDP per capita (log)	-0.070	0.227	1.127	0.025	1.255	-1.076	1.039	-1.664	-0.226	0.272	1.072	-6.415	1.046	-1.075	0.913	6.852
Innovation, t (log)	(0.927)	(0.503) 0.535	(0.000)	(0.996) 0.665	(0.000)	(0.000) 0.767	(0.000)	(0.035) 0.074	(0.585)	(0.206) 0.752	(0.000)	(0.042) 2.206	(0.000)	(0.000) 0.769	(0.000)	(0.000)
		(0.000)		(0.725)		(0.000)		(0.726)		(0.000)		(0.457)		(0.000)		(0.205)
Innovation, t-1 (log)	0.208 (0.269)	0.055 (0.758)			0.740 (0.000)	-0.561 (0.000)		ļ	0.291 (0.210)	-0.203 (0.280)			0.736 (0.000)	-0.562 (0.000)		
mitation, t (log)	1.099 (0.000)			-3.003	1.232			-0.936	1.048			-4.164	1.241			
																-0.417
mitation, t-1 (log)	-0.041	-0.021		(0.151)	(0.000)	0.692		(0.001)	(0.000) -0.257	0.266		(0.257)	(0.000)	0.781		-0.417 (0.221)
	-0.041 (0.888)	(0.944)		(0.151)	(0.000) -0.869 (0.000)	(0.000)		(0.001)	-0.257 (0.415)	(0.319)		(0.257)	(0.000) -0.979 (0.000)	(0.000)		(0.221)
Public capital (log)	-0.041 (0.888) -0.185 (0.788)	(0.944) 0.083 (0.790)			(0.000) -0.869 (0.000) -1.207 (0.000)	(0.000) 1.040 (0.000)			-0.257 (0.415) 0.228 (0.712)	(0.319) -0.247 (0.446)			(0.000) -0.979 (0.000) -1.124 (0.000)	(0.000) 1.166 (0.000)		-7.475
Public capital (log)	-0.041 (0.888) -0.185 (0.788) 0.021	(0.944) 0.083 (0.790) -0.012		(0.151)	(0.000) -0.869 (0.000) -1.207 (0.000) 0.001	(0.000) 1.040 (0.000) -0.001		(0.001)	-0.257 (0.415) 0.228 (0.712) -0.026	(0.319) -0.247 (0.446) 0.009		(0.257)	(0.000) -0.979 (0.000) -1.124 (0.000) 0.000	(0.000) 1.166 (0.000) 0.000		(0.221)
Public capital (log)	-0.041 (0.888) -0.185 (0.788) 0.021 (0.056) 0.017	(0.944) 0.083 (0.790) -0.012 (0.350) -0.009		(0.151)	(0.000) -0.869 (0.000) -1.207 (0.000) 0.001 (0.362) -0.006	(0.000) 1.040 (0.000) -0.001 (0.349) 0.005		(0.001)	-0.257 (0.415) 0.228 (0.712) -0.026 (0274) 0.016	(0.319) -0.247 (0.446) 0.009 (0.54) -0.006		(0.257)	(0.000) -0.979 (0.000) -1.124 (0.000) 0.000 (0.934) 0.001	(0.000) 1.166 (0.000) 0.000 (0.954) -0.001		-7.475
Public capital (log)  FDI  Skilled workforce	-0.041 (0.888) -0.185 (0.788) 0.021 (0.056)	(0.944) 0.083 (0.790) -0.012 (0.350)	-0.016	(0.151)	(0.000) -0.869 (0.000) -1.207 (0.000) 0.001 (0.362)	(0.000) 1.040 (0.000) -0.001 (0.349)	-0.004	(0.001)	-0.257 (0.415) 0.228 (0.712) -0.026 (0274)	(0.319) -0.247 (0.446) 0.009 (0.54)	0.053	(0.257)	(0.000) -0.979 (0.000) -1.124 (0.000) 0.000 (0.934)	(0.000) 1.166 (0.000) 0.000 (0.954)	0.003	-7.475
Public capital (log)  FDI  Skilled workforce  Gov. expenditure	-0.041 (0.888) -0.185 (0.788) 0.021 (0.056) 0.017 (0.196) -0.020 (0.759)	(0.944) 0.083 (0.790) -0.012 (0.350) -0.009 (0.448) -0.002 (0.979)	(0.479)	(0.151)	(0.000) -0.869 (0.000) -1.207 (0.000) 0.001 (0.362) -0.006 (0.013) 0.013	(0.000) 1.040 (0.000) -0.001 (0.349) 0.005 (0.011) -0.007 (0.424)	(0.615)	(0.001)	-0.257 (0.415) 0.228 (0.712) -0.026 (0274) 0.016 (0.546) -0.013 (0.849)	(0.319) -0.247 (0.446) 0.009 (0.54) -0.006 (0.708) -0.004 (0.393)	(0.494)	(0.257)	(0.000) -0.979 (0.000) -1.124 (0.000) 0.000 (0.934) 0.001 (0.536) 0.018	(0.000) 1.166 (0.000) 0.000 (0.954) -0.001 (0.549) -0.015 (0.083)	(0.653)	-7.475
Public capital (log)  FDI  Skilled workforce  Gov. expenditure  Non-tax revenue	-0.041 (0.888) -0.185 (0.788) 0.021 (0.056) 0.017 (0.196) -0.020	(0.944) 0.083 (0.790) -0.012 (0.350) -0.009 (0.448) -0.002	(0.479) 0.012 (0.216)	(0.151)	(0.000) -0.869 (0.000) -1.207 (0.000) 0.001 (0.362) -0.006 (0.013) 0.013	(0.000) 1.040 (0.000) -0.001 (0.349) 0.005 (0.011) -0.007	(0.615) 0.003 (0.433)	(0.001)	-0.257 (0.415) 0.228 (0.712) -0.026 (0274) 0.016 (0.546) -0.013	(0.319) -0.247 (0.446) 0.009 (0.54) -0.006 (0.708) -0.004	(0.494) -0.040 (0.424)	(0.257)	(0.000) -0.979 (0.000) -1.124 (0.000) 0.000 (0.934) 0.001 (0.536) 0.018	(0.000) 1.166 (0.000) 0.000 (0.954) -0.001 (0.549) -0.015	(0.653) 0.000 (0.994)	-7.475
Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenus	-0.041 (0.888) -0.185 (0.788) 0.021 (0.056) 0.017 (0.196) -0.020 (0.759) 0.026	(0.944) 0.083 (0.790) -0.012 (0.350) -0.009 (0.448) -0.002 (0.979) -0.010	(0.479) 0.012 (0.216) 0.006	(0.151)	(0.000) -0.869 (0.000) -1.207 (0.000) 0.001 (0.362) -0.006 (0.013) 0.013 (0.256) 0.016	(0.000) 1.040 (0.000) -0.001 (0.349) 0.005 (0.011) -0.007 (0.424) -0.013	(0.615) 0.003 (0.433) 0.002	(0.001)	-0.257 (0.415) 0.228 (0.712) -0.026 (0274) 0.016 (0.546) -0.013 (0.849) -0.023	(0.319) -0.247 (0.446) 0.009 (0.54) -0.006 (0.708) -0.004 (0.393) 0.005	(0.494) -0.040 (0.424) -0.020	(0.257)	(0.000) -0.979 (0.000) -1.124 (0.000) 0.000 (0.934) 0.001 (0.536) 0.018 .(0.081)	(0.000) 1.166 (0.000) 0.000 (0.954) -0.001 (0.549) -0.015 (0.083) 0.001	(0.653) 0.000 (0.994) 0.000	-7.475
Public capital (log)  FDI  Skilled workforce  Gov. expenditure  Non-tax revenue  Gov. debt	-0.041 (0.888) -0.185 (0.788) 0.021 (0.056) 0.017 (0.196) -0.020 (0.759) 0.026	(0.944) 0.083 (0.790) -0.012 (0.350) -0.009 (0.448) -0.002 (0.979) -0.010	(0.479) 0.012 (0.216) 0.006 (0.016) -0.004	(0.151)	(0.000) -0.869 (0.000) -1.207 (0.000) 0.001 (0.362) -0.006 (0.013) 0.013 (0.256) 0.016	(0.000) 1.040 (0.000) -0.001 (0.349) 0.005 (0.011) -0.007 (0.424) -0.013	(0.615) 0.003 (0.433) 0.002 (0.007) -0.001	(0.001)	-0.257 (0.415) 0.228 (0.712) -0.026 (0274) 0.016 (0.546) -0.013 (0.849) -0.023	(0.319) -0.247 (0.446) 0.009 (0.54) -0.006 (0.708) -0.004 (0.393) 0.005	(0.494) -0.040 (0.424) -0.020 (0.059) 0.000	(0.257)	(0.000) -0.979 (0.000) -1.124 (0.000) 0.000 (0.934) 0.001 (0.536) 0.018 .(0.081)	(0.000) 1.166 (0.000) 0.000 (0.954) -0.001 (0.549) -0.015 (0.083) 0.001	(0.653) 0.000 (0.994) 0.000 (0.674) 0.000	-7.475
Imitation, t-1 (log)  Public capital (log)  FDI  Skilled workforce  Gov. expenditure  Non-tax revenue  Gov. debt  Urban  Population density	-0.041 (0.888) -0.185 (0.788) 0.021 (0.056) 0.017 (0.196) -0.020 (0.759) 0.026	(0.944) 0.083 (0.790) -0.012 (0.350) -0.009 (0.448) -0.002 (0.979) -0.010	(0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000	(0.151)	(0.000) -0.869 (0.000) -1.207 (0.000) 0.001 (0.362) -0.006 (0.013) 0.013 (0.256) 0.016	(0.000) 1.040 (0.000) -0.001 (0.349) 0.005 (0.011) -0.007 (0.424) -0.013	(0.615) 0.003 (0.433) 0.002 (0.007) -0.001 (0.538) 0.000	(0.001)	-0.257 (0.415) 0.228 (0.712) -0.026 (0274) 0.016 (0.546) -0.013 (0.849) -0.023	(0.319) -0.247 (0.446) 0.009 (0.54) -0.006 (0.708) -0.004 (0.393) 0.005	(0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001	(0.257)	(0.000) -0.979 (0.000) -1.124 (0.000) 0.000 (0.934) 0.001 (0.536) 0.018 .(0.081)	(0.000) 1.166 (0.000) 0.000 (0.954) -0.001 (0.549) -0.015 (0.083) 0.001	(0.653) 0.000 (0.994) 0.000 (0.674) 0.000 (0.878) 0.000	-7.475
Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density	-0.041 (0.888) -0.185 (0.788) 0.021 (0.056) 0.017 (0.196) -0.020 (0.759) 0.026	(0.944) 0.083 (0.790) -0.012 (0.350) -0.009 (0.448) -0.002 (0.979) -0.010	(0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169)	(0.151)	(0.000) -0.869 (0.000) -1.207 (0.000) 0.001 (0.362) -0.006 (0.013) 0.013 (0.256) 0.016	(0.000) 1.040 (0.000) -0.001 (0.349) 0.005 (0.011) -0.007 (0.424) -0.013	(0.615) 0.003 (0.433) 0.002 (0.007) -0.001 (0.538) 0.000 (0.279)	(0.001)	-0.257 (0.415) 0.228 (0.712) -0.026 (0274) 0.016 (0.546) -0.013 (0.849) -0.023	(0.319) -0.247 (0.446) 0.009 (0.54) -0.006 (0.708) -0.004 (0.393) 0.005	(0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001 (0.490)	(0.257)	(0.000) -0.979 (0.000) -1.124 (0.000) 0.000 (0.934) 0.001 (0.536) 0.018 .(0.081)	(0.000) 1.166 (0.000) 0.000 (0.954) -0.001 (0.549) -0.015 (0.083) 0.001	(0.653) 0.000 (0.994) 0.000 (0.674) 0.000 (0.878) 0.000 (0.633)	-7.475
Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance	-0.041 (0.888) -0.185 (0.788) 0.021 (0.056) 0.017 (0.196) -0.020 (0.759) 0.026	(0.944) 0.083 (0.790) -0.012 (0.350) -0.009 (0.448) -0.002 (0.979) -0.010	(0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000	(0.151)	(0.000) -0.869 (0.000) -1.207 (0.000) 0.001 (0.362) -0.006 (0.013) 0.013 (0.256) 0.016	(0.000) 1.040 (0.000) -0.001 (0.349) 0.005 (0.011) -0.007 (0.424) -0.013	(0.615) 0.003 (0.433) 0.002 (0.007) -0.001 (0.538) 0.000	(0.001) 1.703 (0.024)	-0.257 (0.415) 0.228 (0.712) -0.026 (0274) 0.016 (0.546) -0.013 (0.849) -0.023	(0.319) -0.247 (0.446) 0.009 (0.54) -0.006 (0.708) -0.004 (0.393) 0.005	(0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001	(0.257) 4.867 (0.049)	(0.000) -0.979 (0.000) -1.124 (0.000) 0.000 (0.934) 0.001 (0.536) 0.018 .(0.081)	(0.000) 1.166 (0.000) 0.000 (0.954) -0.001 (0.549) -0.015 (0.083) 0.001	(0.653) 0.000 (0.994) 0.000 (0.674) 0.000 (0.878) 0.000	(0.221) -7.475 (0.000)
Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance	-0.041 (0.888) -0.185 (0.788) 0.021 (0.056) 0.017 (0.196) -0.020 (0.759) 0.026	(0.944) 0.083 (0.790) -0.012 (0.350) -0.009 (0.448) -0.002 (0.979) -0.010	(0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169) -0.002	(0.151)	(0.000) -0.869 (0.000) -1.207 (0.000) 0.001 (0.362) -0.006 (0.013) 0.013 (0.256) 0.016	(0.000) 1.040 (0.000) -0.001 (0.349) 0.005 (0.011) -0.007 (0.424) -0.013	(0.615) 0.003 (0.433) 0.002 (0.007) -0.001 (0.538) 0.000 (0.279) 0.006	(0.001)	-0.257 (0.415) 0.228 (0.712) -0.026 (0274) 0.016 (0.546) -0.013 (0.849) -0.023	(0.319) -0.247 (0.446) 0.009 (0.54) -0.006 (0.708) -0.004 (0.393) 0.005	(0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001 (0.490) 0.029	(0.257)	(0.000) -0.979 (0.000) -1.124 (0.000) 0.000 (0.934) 0.001 (0.536) 0.018 .(0.081)	(0.000) 1.166 (0.000) 0.000 (0.954) -0.001 (0.549) -0.015 (0.083) 0.001	(0.653) 0.000 (0.994) 0.000 (0.674) 0.000 (0.878) 0.000 (0.633) -0.011	-7.475
Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance	-0.041 (0.888) -0.185 (0.788) 0.021 (0.056) 0.017 (0.196) -0.020 (0.759) 0.026	(0.944) 0.083 (0.790) -0.012 (0.350) -0.009 (0.448) -0.002 (0.979) -0.010	(0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169) -0.002	(0.151)	(0.000) -0.869 (0.000) -1.207 (0.000) 0.001 (0.362) -0.006 (0.013) 0.013 (0.256) 0.016	(0.000) 1.040 (0.000) -0.001 (0.349) 0.005 (0.011) -0.007 (0.424) -0.013	(0.615) 0.003 (0.433) 0.002 (0.007) -0.001 (0.538) 0.000 (0.279) 0.006	(0.001) 1.703 (0.024) 0.002 (0.692) 0.211	-0.257 (0.415) 0.228 (0.712) -0.026 (0274) 0.016 (0.546) -0.013 (0.849) -0.023	(0.319) -0.247 (0.446) 0.009 (0.54) -0.006 (0.708) -0.004 (0.393) 0.005	(0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001 (0.490) 0.029	(0.257) 4.867 (0.049) 0.124 (0.061) -0.228	(0.000) -0.979 (0.000) -1.124 (0.000) 0.000 (0.934) 0.001 (0.536) 0.018 .(0.081)	(0.000) 1.166 (0.000) 0.000 (0.954) -0.001 (0.549) -0.015 (0.083) 0.001	(0.653) 0.000 (0.994) 0.000 (0.674) 0.000 (0.878) 0.000 (0.633) -0.011	-0.004 (0.443) 0.222
Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade	-0.041 (0.888) -0.185 (0.788) 0.021 (0.056) 0.017 (0.196) -0.020 (0.759) 0.026	(0.944) 0.083 (0.790) -0.012 (0.350) -0.009 (0.448) -0.002 (0.979) -0.010	(0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169) -0.002	(0.151)	(0.000) -0.869 (0.000) -1.207 (0.000) 0.001 (0.362) -0.006 (0.013) 0.013 (0.256) 0.016	(0.000) 1.040 (0.000) -0.001 (0.349) 0.005 (0.011) -0.007 (0.424) -0.013	(0.615) 0.003 (0.433) 0.002 (0.007) -0.001 (0.538) 0.000 (0.279) 0.006	(0.001) 1.703 (0.024) 0.002 (0.692)	-0.257 (0.415) 0.228 (0.712) -0.026 (0274) 0.016 (0.546) -0.013 (0.849) -0.023	(0.319) -0.247 (0.446) 0.009 (0.54) -0.006 (0.708) -0.004 (0.393) 0.005	(0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001 (0.490) 0.029	(0.257) 4.867 (0.049) 0.124 (0.061)	(0.000) -0.979 (0.000) -1.124 (0.000) 0.000 (0.934) 0.001 (0.536) 0.018 .(0.081)	(0.000) 1.166 (0.000) 0.000 (0.954) -0.001 (0.549) -0.015 (0.083) 0.001	(0.653) 0.000 (0.994) 0.000 (0.674) 0.000 (0.878) 0.000 (0.633) -0.011	-0.004 (0.443)
Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Frade investment inflation	-0.041 (0.888) -0.185 (0.788) 0.021 (0.056) 0.017 (0.196) -0.020 (0.759) 0.026	(0.944) 0.083 (0.790) -0.012 (0.350) -0.009 (0.448) -0.002 (0.979) -0.010	(0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169) -0.002	(0.151) -1.693 (0.645)	(0.000) -0.869 (0.000) -1.207 (0.000) 0.001 (0.362) -0.006 (0.013) 0.013 (0.256) 0.016	(0.000) 1.040 (0.000) -0.001 (0.349) 0.005 (0.011) -0.007 (0.424) -0.013	(0.615) 0.003 (0.433) 0.002 (0.007) -0.001 (0.538) 0.000 (0.279) 0.006	0.002 (0.092) 0.002 (0.692) 0.211 (0.000) -0.034 (0.070)	-0.257 (0.415) 0.228 (0.712) -0.026 (0274) 0.016 (0.546) -0.013 (0.849) -0.023	(0.319) -0.247 (0.446) 0.009 (0.54) -0.006 (0.708) -0.004 (0.393) 0.005	(0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001 (0.490) 0.029	0.124 (0.049) 0.124 (0.061) -0.228 (0.354) 0.068 (0.313)	(0.000) -0.979 (0.000) -1.124 (0.000) 0.000 (0.934) 0.001 (0.536) 0.018 .(0.081)	(0.000) 1.166 (0.000) 0.000 (0.954) -0.001 (0.549) -0.015 (0.083) 0.001	(0.653) 0.000 (0.994) 0.000 (0.674) 0.000 (0.878) 0.000 (0.633) -0.011	-0.004 (0.443) 0.222 (0.000) -0.035
Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation D.Innovation [t-t-1]	-0.041 (0.888) -0.185 (0.788) 0.021 (0.056) 0.017 (0.196) -0.020 (0.759) 0.026	(0.944) 0.083 (0.790) -0.012 (0.350) -0.009 (0.448) -0.002 (0.979) -0.010	(0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169) -0.002	(0.151)	(0.000) -0.869 (0.000) -1.207 (0.000) 0.001 (0.362) -0.006 (0.013) 0.013 (0.256) 0.016	(0.000) 1.040 (0.000) -0.001 (0.349) 0.005 (0.011) -0.007 (0.424) -0.013	(0.615) 0.003 (0.433) 0.002 (0.007) -0.001 (0.538) 0.000 (0.279) 0.006	0.001) 1.703 (0.024) 0.002 (0.692) 0.211 (0.000) -0.018 (0.070)	-0.257 (0.415) 0.228 (0.712) -0.026 (0274) 0.016 (0.546) -0.013 (0.849) -0.023	(0.319) -0.247 (0.446) 0.009 (0.54) -0.006 (0.708) -0.004 (0.393) 0.005	(0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001 (0.490) 0.029	0.124 (0.049) 0.124 (0.061) -0.228 (0.354) 0.068 (0.313) -2.211 (0.351)	(0.000) -0.979 (0.000) -1.124 (0.000) 0.000 (0.934) 0.001 (0.536) 0.018 .(0.081)	(0.000) 1.166 (0.000) 0.000 (0.954) -0.001 (0.549) -0.015 (0.083) 0.001	(0.653) 0.000 (0.994) 0.000 (0.674) 0.000 (0.878) 0.000 (0.633) -0.011	-0.004 (0.443) 0.222 (0.000) -0.035 (0.097) -0.454 (0.214)
Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation D.Innovation [t - t-1]	-0.041 (0.888) -0.185 (0.788) 0.021 (0.056) 0.017 (0.196) -0.020 (0.759) 0.026	(0.944) 0.083 (0.790) -0.012 (0.350) -0.009 (0.448) -0.002 (0.979) -0.010	(0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169) -0.002	-0.357 (0.724) 2.671	(0.000) -0.869 (0.000) -1.207 (0.000) 0.001 (0.362) -0.006 (0.013) 0.013 (0.256) 0.016	(0.000) 1.040 (0.000) -0.001 (0.349) 0.005 (0.011) -0.007 (0.424) -0.013	(0.615) 0.003 (0.433) 0.002 (0.007) -0.001 (0.538) 0.000 (0.279) 0.006	0.002 (0.024) 0.002 (0.692) 0.211 (0.000) -0.034 (0.979) -0.018 (0.949)	-0.257 (0.415) 0.228 (0.712) -0.026 (0274) 0.016 (0.546) -0.013 (0.849) -0.023	(0.319) -0.247 (0.446) 0.009 (0.54) -0.006 (0.708) -0.004 (0.393) 0.005	(0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001 (0.490) 0.029	0.124 (0.049) 0.124 (0.061) -0.228 (0.354) 0.068 (0.313) -2.211 (0.351) 4.861	(0.000) -0.979 (0.000) -1.124 (0.000) 0.000 (0.934) 0.001 (0.536) 0.018 .(0.081)	(0.000) 1.166 (0.000) 0.000 (0.954) -0.001 (0.549) -0.015 (0.083) 0.001	(0.653) 0.000 (0.994) 0.000 (0.674) 0.000 (0.878) 0.000 (0.633) -0.011	-0.004 (0.443) 0.222 (0.000) -0.035 (0.097) -0.454 (0.214)
Public capital (log)  FDI  Skilled workforce  Gov. expenditure  Non-tax revenue  Gov. debt  Urban  Population density  Current account balance  Trade  Inflation  D.Innovation [t - t-1]  D.Imitation [t - t-1]  Country Effect	-0.041 (0.888) -0.185 (0.788) 0.021 (0.056) -0.020 (0.759) -0.026 (0.412)	(0.944) (0.083 (0.790) -0.012 (0.350) -0.009 (0.448) -0.002 (0.979) -0.010 (0.763)	(0.479) (0.112) (0.216) (0.016) (0.016) (0.016) (0.708) (0.000) (0.169) (0.002) (0.845)	-0.357 (0.724) 2.671 (0.131) Yes	(0.000) -0.869 (0.000) -1.207 (0.000) 0.001 (0.362) -0.006 (0.013) (0.256) 0.016 (0.013)	(0.000) 1.040 (0.000) -0.001 (0.349) 0.005 (0.011) -0.007 (0.424) -0.013 (0.019)	(0.615) (0.033) (0.433) (0.002) (0.007) -0.001 (0.538) (0.007) (0.279) (0.006) (0.136)	0.002 (0.024) 0.002 (0.692) 0.211 (0.000) -0.018 (0.949) 1.022 (0.004) Yes	-0.257 (0.415) 0.228 (0.712) -0.026 (0.546) -0.013 (0.849) -0.023 (0.572)	(0.319) -0.247 (0.446) 0.009 (0.54) -0.006 (0.708) -0.004 (0.393) 0.005 (0.842)	(0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001 (0.490) 0.029 (0.324)	0.124 (0.049) 0.124 (0.061) -0.228 (0.354) 0.068 (0.313) -2.211 (0.053) Yes	(0.000) -0.979 (0.000) -1.124 (0.000) 0.000 (0.934) 0.001 (0.536) 0.018 (0.081) 0.001 (0.899)	(0.000) 1.166 (0.000) 0.000 (0.954) -0.001 (0.549) -0.015 (0.083) 0.001 (0.907)	(0.653) 0.000 (0.994) 0.000 (0.674) 0.000 (0.878) 0.000 (0.633) -0.011 (0.001)	-0.004 (0.443) 0.222 (0.000) -0.035 (0.097) -0.454 (0.214) 1.901 (0.000) Yes
Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Frade Investment Inflation D.Innovation [t - t-1] D.Imitation [t - t-1]	-0.041 (0.888) -0.185 (0.788) 0.021 (0.056) 0.017 (0.196) -0.020 (0.752) (0.412)	(0.944) 0.083 (0.790) -0.012 (0.350) -0.009 (0.448) -0.002 (0.979) -0.010 (0.763)	(0.479) (0.012) (0.216) (0.016) (0.016) (0.016) (0.000) (0.000) (0.169) (0.002) (0.845)	-0.357 (0.724) 2.671 (0.131)	(0.000) -0.869 (0.000) -1.207 (0.001) (0.001) (0.013) (0.013) (0.256) (0.013)	(0.000) 1.040 (0.000) -0.001 (0.349) 0.005 (0.011) -0.007 (0.424) -0.013 (0.019)	(0.615) (0.003 (0.433) (0.002 (0.007) -0.001 (0.538) (0.000 (0.279) (0.006 (0.136)	0.002 (0.692) 0.211 (0.094) 0.000 (0.692) 0.211 (0.000) -0.018 (0.949) 1.022 (0.004)	-0.257 (0.415) 0.228 (0.712) -0.026 (0274) 0.016 (0.546) -0.013 (0.849) -0.023 (0.572)	(0.319) -0.247 (0.446) -0.009 (0.54) -0.006 (0.708) -0.004 (0.393) 0.005 (0.842)	(0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001 (0.490) 0.029 (0.324)	0.124 (0.049) 0.124 (0.061) -0.228 (0.354) 0.068 (0.313) -2.211 (0.551) 4.861 (0.053)	(0.000) -0.979 (0.000) -1.124 (0.0000) (0.934) (0.001) (0.536) (0.018) (0.081) (0.899)	(0.000) 1.166 (0.000) 0.000 (0.954) -0.001 (0.549) -0.015 (0.083) 0.001 (0.907)	(0.653) 0.000 (0.994) 0.000 (0.674) 0.000 (0.878) 0.000 (0.633) -0.011 (0.001)	-0.004 (0.443) 0.222 (0.009) -0.035 (0.097) -0.454 (0.214) 1.901 (0.000)

Table 5: Benchmark Results, where output per employee are used as product variety measures (cont.)

_			nnov3 & Imit	3, with IMF p		stock measu	re			nov3 & Imit.	3, with public		re stock (pro	xied by teleph		•)
	Innovation	Systen Imitation	P.capital	Growth	Innovation	3SLS, Imitation	with FE P.capital	Growth	Innovation	System Imitation	P.capital	Growth	Innovation	3SLS,	P.capital	Growth
Initial GDP per capita (log)	1.408 (0.285)	-0.480 (0.266)	1.127 (0.000)	9.617 (0.022)	1.680 (0.000)	-1.640 (0.000)	1.048 (0.000)	-1.574 (0.058)	-0.045 (0.896)	0.010 (0979)	1.072 (0.000)	-4.836 (0.074)	0.034 (0.883)	-0.592 (0.010)	0.918 (0.000)	6.176 (0.002)
Innovation, t (log)	(0.200)	0.677 (0.003)	(0.000)	-4.539 (0.000)	(0.000)	0.933	(0.000)	-0.591 (0.001)	(0.050)	0.815 (0.000)	(0.000)	-3.716 (0.487)	(0.005)	0.896 (0.000)	(0.000)	-0.624 (0.002)
Innovation, t-1 (log)	0.384 (0.071)	-0.135 (0.681)		(0.000)	0.791 (0.000)	-0.747 (0.000)		(0.001)	0.583 (0.007)	-0.574 (0.021)		(0.407)	0.768 (0.000)	-0.691 (0.000)		(0.002)
Imitation, t (log)	0.668	(0.081)		1.880	0.925	(0.000)		-0.291	0.878	(0.021)		1.616	0.937	(0.000)		-0.231
Imitation, t-1 (log)	(0.023) -0.282	0.423		(0.367)	(0.000)	0.753		(0.079)	(0.000)	0.655		(0.744)	(0.000)	0.784		(0.215)
Public capital (log)	(0.203) -1.132	(0.038) 0.130		-9.206	(0.000) -1.544	(0.000) 1.525		1.647	(0.068) 0.028	(0.000) 0.065		5.469	(0.000) 0.018	(0.000) 0.614		-6.693
FDI	(0.427) 0.002	(0.841) 0.001		(0.006)	(0.000) 0.001	(0.000) -0.001		(0.037)	(0.953) 0.007	(0.866) -0.007		(0.114)	(0.943) 0.000	(0.014) 0.001		(0.002)
Skilled workforce	(0.942) 0.029	(0.956) -0.011			(0.626) -0.002	(0.560) 0.002			(0.787) 0.034	(0.758) -0.026			(0.694) 0.003	(0.549) -0.002		
Gov. expenditure	(0.199) -0.054	(0.434) 0.026	-0.016		(0.416) 0.008	(0.359) -0.003	-0.001		(0.145) -0.062	(0.110) 0.036	0.053		(0.141) 0.004	(0.224) -0.007	0.006	
Non-tax revenue	(0.496) -0.030	(0.419) 0.053	(0.479) 0.012		(0.506) -0.011	(0.784) 0.011	(0.921) 0.003		(0.461) -0.040	(0.681) 0.059	(0.494) -0.040		(0.679) -0.022	(0.493) 0.023	(0.378) 0.001	
Gov. debt	(0.244)	(0.130)	(0.216) 0.006		(0.130)	(0.110)	(0.457) 0.002		(0.133)	(0.051)	(0.424) -0.020		(0.000)	(0.000)	(0.718) 0.000	
Urban			(0.016) -0.004				(0.033) -0.002				(0.059) 0.000				(0.777) -0.001	
Population density			(0.708) 0.000				(0.179) 0.000				(0.978) 0.001				(0.406) 0.000	
Current account balance			(0.169) -0.002				(0.377) 0.003				(0.490) 0.029				(0.612) -0.012	
Trade			(0.845)	0.004			(0.388)	0.001			(0.324)	0.102			(0.000)	-0.003
Investment				(0.901) 0.213				(0.762) 0.183				(0.082) -0.112				(0.543) 0.219
Inflation				(0.191) -0.013				(0.000)				(0.669) 0.012				(0.000)
D.Innovation [t - t-1]				(0.885) 5.035				(0.036) 1.164				(0.897) 2.929				(0.112) 1.244
D.Imitation [t - t-1]				(0.000)				(0.000)				(0.349)				(0.000)
Country Effect	Yes	Yes	Yes	(0.181) Yes	Yes	Yes	Yes	(0.507) Yes	Yes	Yes	Yes	(0.903) Yes	Yes	Yes	Yes	(0.796) Yes
Time Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Countries/Observations R <sup>2</sup>	77/266	77/266	94/403	94/373	77/266 0.690	77/266 0.720	77/266 0.943	77/266 0.202	73/247	73/247	88/369	86/333	73/247 0.864	73/247 0.862	73/247 0.937	73/247 0.804
Number of Instruments Hansen J-statistics (p-value)	41 0.385	41 0.261	46 0.859	44 0.222					33 0.845	33 0.834	39 0.185	35 0.280				
AR(2) test (p-value)	0.137	0.516	0.149	0.491					0.382	0.119	0.105	0.401				
		Iı	nnov4 & Imit	4. with IMF p	ublic capital	stock measu	re		I1	ınov4 & İmit-	4. with public	: infrastructu	re stock (pro	xied by teleph	ione measure	.)
	Innovation	Systen	n GMM	4, with IMF p		3SLS,	with FE	Crowth		System	4, with public	-		3SLS,	with FE	
Initial GDP per capita (log)	Innovation -0.607	Systen Imitation 0.894	P.capital	Growth 5.178	Innovation -0.227	3SLS, Imitation 0.243	P.capital 1.023	-0.836	Innovation -0.044	System Imitation -0.013	P.capital	Growth -3.844	Innovation -0.902	3SLS, Imitation 0.343	P.capital 0.925	Growth 4.571
Initial GDP per capita (log) Innovation, t (log)		System 1mitation 0.894 (0.372) 0.826	n GMM P.capital	Growth 5.178 (0.308) -1.345	Innovation	3SLS, Imitation 0.243 (0.258) 0.871	with FE P.capital	-0.836 (0.301) -0.554	Innovation	System Imitation -0.013 (0.974) 0.728	GMM P.capital	Growth -3.844 (0.141) -1.141	Innovation	3SLS, 1 Imitation 0.343 (0.072) 0.856	with FE P.capital	Growth 4.571 (0.013) -0.403
	-0.607	System Imitation 0.894 (0.372)	P.capital	Growth 5.178 (0.308)	Innovation -0.227	3SLS, Imitation 0.243 (0.258)	P.capital 1.023	-0.836 (0.301)	Innovation -0.044	System Imitation -0.013 (0.974)	P.capital	Growth -3.844 (0.141)	Innovation -0.902	3SLS, 1 Imitation 0.343 (0.072)	P.capital 0.925	Growth 4.571 (0.013)
Innovation, t (log)	-0.607 (0.562)	System 0.894 (0.372) 0.826 (0.000)	P.capital	Growth 5.178 (0.308) -1.345	-0.227 (0.330)	3SLS, Imitation 0.243 (0.258) 0.871 (0.000)	P.capital 1.023	-0.836 (0.301) -0.554	Innovation -0.044 (0.911)	System Imitation -0.013 (0.974) 0.728 (0.000)	P.capital	Growth -3.844 (0.141) -1.141	-0.902 (0.000)	3SLS, 1 Imitation 0.343 (0.072) 0.856 (0.000)	P.capital 0.925	Growth 4.571 (0.013) -0.403
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log)	-0.607 (0.562) 0.310 (0.086) 0.763 (0.000)	System 0.894 (0.372) 0.826 (0.000) -0.298 (0.348)	P.capital	Growth 5.178 (0.308) -1.345 (0.509)	0.227 (0.330) 0.773 (0.000) 1.038 (0.000)	3SLS, Imitation 0.243 (0.258) 0.871 (0.000) -0.683 (0.000)	P.capital 1.023	-0.836 (0.301) -0.554 (0.005)	Innovation	System Imitation -0.013 (0.974) 0.728 (0.000) -0.175 (0.357)	P.capital	Growth -3.844 (0.141) -1.141 (0.693)	0.761 (0.000) 0.762 (0.000)	3SLS, v Imitation 0.343 (0.072) 0.856 (0.000) -0.655 (0.000)	P.capital 0.925	Growth 4.571 (0.013) -0.403 (0.101)
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log)	0.562) 0.310 (0.086) 0.763 (0.000) -0.270 (0.286)	System  0.894 (0.372) 0.826 (0.000) -0.298 (0.348)  0.370 (0.329)	P.capital	Growth 5.178 (0.308) -1.345 (0.509) -1.105 (0.548)	10.000 -0.227 (0.330) 0.773 (0.000) 1.038 (0.000) -0.794 (0.000)	3SLS, Imitation 0.243 (0.258) 0.871 (0.000) -0.683 (0.000) 0.761 (0.000)	P.capital 1.023	-0.836 (0.301) -0.554 (0.005) -0.384 (0.055)	Innovation -0.044 (0.911)  0.297 (0.164) 0.934 (0.000) -0.369 (0.117)	System Imitation -0.013 (0.974) 0.728 (0.000) -0.175 (0.357)  0.243 (0.217)	P.capital	Growth -3.844 (0.141) -1.141 (0.693) -0.758 (0.778)	Innovation -0.902 (0.000)  0.761 (0.000) 1.062 (0.000) -0.757 (0.000)	3SLS, 1 Imitation 0.343 (0.072) 0.856 (0.000) -0.655 (0.000) 0.711 (0.000)	P.capital 0.925	Growth 4.571 (0.013) -0.403 (0.101) -0.484 (0.094)
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log)	0.562)  0.310 (0.086) 0.763 (0.000) -0.270 (0.286) 0.807 (0.460)	System  0.894 (0.372) 0.826 (0.000) -0.298 (0.348)  0.370 (0.329) -1.200 (0.258)	P.capital	Growth 5.178 (0.308) -1.345 (0.509)	0.773 (0.000) 1.038 (0.000) -0.794 (0.000) 0.274 (0.228)	3SLS, Imitation 0.243 (0.258) 0.871 (0.000) -0.683 (0.000) 0.761 (0.000) -0.270 (0.197)	P.capital 1.023	-0.836 (0.301) -0.554 (0.005)	0.297 (0.164) 0.934 (0.000) -0.369 (0.117) 0.262 (0.571)	System Imitation -0.013 (0.974) 0.728 (0.000) -0.175 (0.357)  0.243 (0.217) -0.049 (0.910)	P.capital	Growth -3.844 (0.141) -1.141 (0.693)	0.761 (0.000) 0.761 (0.000) 1.062 (0.000) -0.757 (0.000) 1.018 (0.000)	3SLS, v Imitation 0.343 (0.072) 0.856 (0.000) -0.655 (0.000) 0.711 (0.000) -0.398 (0.058)	P.capital 0.925	Growth 4.571 (0.013) -0.403 (0.101)
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI	0.607 (0.562) 0.310 (0.086) 0.763 (0.000) -0.270 (0.286) 0.807 (0.460) 0.003 (0.876)	System  Initation 0.894 (0.372) 0.826 (0.000) -0.298 (0.348)  0.370 (0.329) -1.200 (0.258) 0.015 (0.234)	P.capital	5.178 (0.308) -1.345 (0.509) -1.105 (0.548)	10.000	3SLS, Imitation 0.243 (0.258) 0.871 (0.000) -0.683 (0.000) 0.761 (0.000) -0.270 (0.197) 0.001 (0.403)	P.capital 1.023	-0.836 (0.301) -0.554 (0.005) -0.384 (0.055)	Innovation	System Imitation -0.013 (0.974) 0.728 (0.000) -0.175 (0.357)  0.243 (0.217) -0.049 (0.910) -0.014 (0.317)	P.capital	Growth -3.844 (0.141) -1.141 (0.693) -0.758 (0.778)	1nnovation -0.902 (0.000)  0.761 (0.000) 1.062 (0.000) -0.757 (0.000) 1.018 (0.000) -0.001 (0.491)	3SLS, v Imitation 0.343 (0.072) 0.856 (0.000) -0.655 (0.000) 0.711 (0.000) -0.398 (0.058) 0.001 (0.368)	P.capital 0.925	Growth 4.571 (0.013) -0.403 (0.101) -0.484 (0.094)
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce	0.607 (0.562) 0.310 (0.086) 0.763 (0.000) -0.270 (0.286) 0.807 (0.460) 0.003 (0.876) 0.005 (0.728)	System Imitation 0.894 (0.372) 0.826 (0.000) -0.298 (0.348)  0.370 (0.329) -1.200 (0.258) 0.015 (0.234) -0.002 (0.925)	n GMM P.capital 1.127 (0.000)	5.178 (0.308) -1.345 (0.509) -1.105 (0.548)	0.227 (0.330) 0.773 (0.000) 1.038 (0.000) 0.0794 (0.000) 0.274 (0.228) -0.001 (0.321) 0.003 (0.159)	3SLS, Initation 0.243 (0.258) 0.871 (0.000) -0.683 (0.000)  0.761 (0.000) -0.270 (0.197) 0.001 (0.403) -0.003 (0.217)	with FE P.capital 1.023 (0.000)	-0.836 (0.301) -0.554 (0.005) -0.384 (0.055)	0.297 (0.164) 0.334 (0.000) 0.117) 0.262 (0.117) 0.262 (0.571) 0.011 (0.543) 0.014 (0.486)	System Imitation -0.013 (0.974) 0.728 (0.000) -0.175 (0.357)  0.243 (0.217) -0.049 (0.910) -0.014 (0.317) -0.015 (0.444)	a GMM P.capital 1.072 (0.000)	Growth -3.844 (0.141) -1.141 (0.693) -0.758 (0.778)	0.761 (0.000) 0.761 (0.000) 1.062 (0.000) -0.757 (0.000) 1.018 (0.000) -0.001 (0.491) 0.000 (0.945)	3SLS, Imitation 0.343 (0.072) 0.856 (0.000) -0.655 (0.000)  0.711 (0.000) -0.398 (0.058) 0.001 (0.368) 0.000 (0.843)	with FE P.capital 0.925 (0.000)	Growth 4.571 (0.013) -0.403 (0.101) -0.484 (0.094)
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure	0.310 (0.086) 0.763 (0.000) -0.270 (0.286) 0.807 (0.460) 0.003 (0.876) 0.005 (0.728) -0.029 (0.630)	System   Initiation   0.894   (0.372)   0.826   (0.000)   (0.298   (0.348)   (0.370   (0.329)   -1.200   (0.258)   (0.15   (0.234)   -0.002   (0.925)   (0.925)   (0.977   (0.172)   (0.	n GMM P.capital 1.127 (0.000)	5.178 (0.308) -1.345 (0.509) -1.105 (0.548)	0.277 (0.330) 0.773 (0.000) 1.038 (0.000) -0.794 (0.000) 0.274 (0.228) -0.001 (0.321) 0.003 (0.159) -0.016 (0.113)	3SLS, Imitation 0.243 (0.258) 0.871 (0.000) -0.683 (0.000)  0.761 (0.000) -0.270 (0.197) 0.001 (0.403) -0.003 (0.217) 0.018 (0.057)	with FE Peapital 1.023 (0.000)	-0.836 (0.301) -0.554 (0.005) -0.384 (0.055)	0.297 (0.164) 0.297 (0.164) 0.934 (0.000) -0.369 (0.17) 0.262 (0.571) 0.011 (0.543) 0.014 (0.486) -0.014 (0.777)	System Imitation -0.013 (0.974) 0.728 (0.000) -0.175 (0.357)  0.243 (0.217) -0.049 (0.910) -0.014 (0.317) -0.015 (0.4444) 0.018 (0.715)	0.053 (0.494)	Growth -3.844 (0.141) -1.141 (0.693) -0.758 (0.778)	0.761 (0.000) 0.761 (0.000) 1.062 (0.000) -0.757 (0.000) -0.001 (0.491) 0.000 (0.491) -0.019 (0.000) (0.495) -0.019 (0.004)	3SLS, Imitation 0.343 (0.072) 0.856 (0.000) -0.655 (0.000) -0.711 (0.000) -0.398 (0.058) 0.001 (0.368) 0.000 (0.843) 0.015 (0.090)	with FE P-capital 0.925 (0.000)  0.000	Growth 4.571 (0.013) -0.403 (0.101) -0.484 (0.094)
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue	0.607 (0.562) 0.310 (0.086) 0.763 (0.000) -0.270 (0.286) 0.807 (0.460) 0.003 (0.876) 0.005 (0.728) -0.029	System   Initiation   0.894   (0.372)   0.826   (0.000)   -0.298   (0.348)     -1.200   (0.258)   (0.234)   -0.002   (0.258)   (0.002)	-0.016 (0.479) -0.012 -0.016 (0.479) -0.012 (0.216)	5.178 (0.308) -1.345 (0.509) -1.105 (0.548)	0.227 (0.330) 0.773 (0.000) 1.038 (0.000) 0.274 (0.228) -0.001 (0.321) 0.003 (0.159) -0.016	3SLS, Initation 0.243 (0.258) 0.871 (0.000) -0.683 (0.000)  0.761 (0.000) -0.270 (0.197) 0.001 (0.403) -0.003 (0.217) 0.018	### P.capital 1.023 (0.000)  -0.001 (0.929) 0.004 (0.419)	-0.836 (0.301) -0.554 (0.005) -0.384 (0.055)	Innovation	System Imitation -0.013 -0.013 -0.974) -0.728 -0.0000 -0.175 -0.357)  0.243 -0.217 -0.049 -0.910 -0.014 -0.014 -0.015 -0.044 -0.018	0.053 (0.494) -0.042 (0.424)	Growth -3.844 (0.141) -1.141 (0.693) -0.758 (0.778)	0.761 (0.000) 1.062 (0.000) 1.062 (0.000) -0.757 (0.000) 1.018 (0.000) -0.001 (0.491) 0.000 (0.945) -0.019	3SLS, Imitation 0.343 (0.072) 0.856 (0.000) -0.655 (0.000) -0.655 (0.000) -0.398 (0.058) 0.001 (0.368) 0.000 (0.843) 0.015	with FE P.capital 0,925 (0,000)  0,000  0,000  0,000  0,000  0,000  0,000  0,000  0,000  0,000  0,000  0,000  0,000  0,000  0,000	Growth 4.571 (0.013) -0.403 (0.101) -0.484 (0.094)
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure	0.310 (0.086) 0.763 (0.008) 0.763 (0.000) 0.270 (0.286) 0.807 (0.460) 0.003 (0.876) 0.005 (0.728) -0.029 (0.630) -0.027	Nysten   Initiation   0.894   (0.372)   0.826   (0.000)   -0.298   (0.348)   (0.370   (0.329)   -1.200   (0.258)   (0.234)   -0.002   (0.925)   (0.077   (0.172)   (0.072)   (	-0.016 (0.216) -0.016 (0.216) -0.016 (0.479) -0.012 (0.216) 0.006 (0.016)	5.178 (0.308) -1.345 (0.509) -1.105 (0.548)	1.0.0000	3SLS, Initiation 0.243 (0.258) 0.871 (0.000) -0.683 (0.000)  0.761 (0.000) -0.270 (0.197) 0.001 (0.403) -0.003 (0.217) 0.018 (0.057) 0.013	with FE Peapital 1.023 (0.000)  -0.001 (0.929) 0.004	-0.836 (0.301) -0.554 (0.005) -0.384 (0.055)	Innovation	System Imitation -0.013 (0.974) 0.728 (0.000) -0.175 (0.357)  0.243 (0.217) -0.049 (0.910) -0.014 (0.317) -0.015 (0.4444) 0.018 (0.715) 0.065	0.053 0.494)	Growth -3.844 (0.141) -1.141 (0.693) -0.758 (0.778)	0.761 (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.491) (0.000) (0.491) (0.000) (0.945) (0.001)	3SLS, Initation 0.343 (0.072) 0.856 (0.000) -0.655 (0.000) -0.655 (0.000) (0.000) -0.398 (0.058) 0.000 (0.368) 0.000 (0.368) 0.000 (0.369) 0.001 (0.15 (0.000) 0.011	0.003 0.003 0.003 0.003	Growth 4.571 (0.013) -0.403 (0.101) -0.484 (0.094)
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue	0.310 (0.086) 0.763 (0.008) 0.763 (0.000) 0.270 (0.286) 0.807 (0.460) 0.003 (0.876) 0.005 (0.728) -0.029 (0.630) -0.027	Nysten   Initiation   0.894   (0.372)   0.826   (0.000)   -0.298   (0.348)   (0.370   (0.329)   -1.200   (0.258)   (0.234)   -0.002   (0.925)   (0.077   (0.172)   (0.072)   (	-0.016 (0.479) 0.012 -0.012 0.216	5.178 (0.308) -1.345 (0.509) -1.105 (0.548)	1.0.0000	3SLS, Initiation 0.243 (0.258) 0.871 (0.000) -0.683 (0.000)  0.761 (0.000) -0.270 (0.197) 0.001 (0.403) -0.003 (0.217) 0.018 (0.057) 0.013	### PE P.capital 1.023 (0.000)  -0.001 (0.929) (0.004 (0.419) (0.004) (0.004) (0.004)	-0.836 (0.301) -0.554 (0.005) -0.384 (0.055)	Innovation	System Imitation -0.013 (0.974) 0.728 (0.000) -0.175 (0.357)  0.243 (0.217) -0.049 (0.910) -0.014 (0.317) -0.015 (0.4444) 0.018 (0.715) 0.065	0.053 (0.494) -0.040 (0.424)	Growth -3.844 (0.141) -1.141 (0.693) -0.758 (0.778)	0.761 (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.491) (0.000) (0.491) (0.000) (0.945) (0.001)	3SLS, Initation 0.343 (0.072) 0.856 (0.000) -0.655 (0.000) -0.655 (0.000) (0.000) -0.398 (0.058) 0.000 (0.368) 0.000 (0.368) 0.000 (0.369) 0.001 (0.15 (0.000) 0.011	0.003 (0.673) 0.000 (0.000)	Growth 4.571 (0.013) -0.403 (0.101) -0.484 (0.094)
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt	0.310 (0.086) 0.763 (0.008) 0.763 (0.000) 0.270 (0.286) 0.807 (0.460) 0.003 (0.876) 0.005 (0.728) -0.029 (0.630) -0.027	Nysten   Initiation   0.894   (0.372)   0.826   (0.000)   -0.298   (0.348)   (0.370   (0.329)   -1.200   (0.258)   (0.234)   -0.002   (0.925)   (0.077   (0.172)   (0.072)   (	-0.016 (0.479) (0.006) (0.016) (0.006)	5.178 (0.308) -1.345 (0.509) -1.105 (0.548)	1.0.0000	3SLS, Initiation 0.243 (0.258) 0.871 (0.000) -0.683 (0.000)  0.761 (0.000) -0.270 (0.197) 0.001 (0.403) -0.003 (0.217) 0.018 (0.057) 0.013	-0.001 (0.24) -0.001 (0.49) -0.001 (0.419) 0.004 (0.419) 0.004 (0.000) -0.002 (0.166)	-0.836 (0.301) -0.554 (0.005) -0.384 (0.055)	Innovation	System Imitation -0.013 (0.974) 0.728 (0.000) -0.175 (0.357)  0.243 (0.217) -0.049 (0.910) -0.014 (0.317) -0.015 (0.4444) 0.018 (0.715) 0.065	0.053 (0.494) -0.020 (0.000)	Growth -3.844 (0.141) -1.141 (0.693) -0.758 (0.778)	0.761 (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.491) (0.000) (0.491) (0.000) (0.945) (0.001)	3SLS, Initation 0.343 (0.072) 0.856 (0.000) -0.655 (0.000) -0.655 (0.000) (0.000) -0.398 (0.058) 0.000 (0.368) 0.000 (0.368) 0.000 (0.369) 0.001 (0.15 (0.000) 0.011	0.003 (0.673) 0.000 (0.000)	Growth 4.571 (0.013) -0.403 (0.101) -0.484 (0.094)
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban	0.310 (0.086) 0.763 (0.008) 0.763 (0.000) 0.270 (0.286) 0.807 (0.460) 0.003 (0.876) 0.005 (0.728) -0.029 (0.630) -0.027	Nysten   Initiation   0.894   (0.372)   0.826   (0.000)   -0.298   (0.348)   (0.370   (0.329)   -1.200   (0.258)   (0.234)   -0.002   (0.925)   (0.077   (0.172)   (0.072)   (	-0.016 (0.479) 0.012 (0.216) 0.006 (0.006) 0.000 (0.169) -0.000	5.178 (0.308) -1.345 (0.509) -1.105 (0.548)	1.0.0000	3SLS, Initiation 0.243 (0.258) 0.871 (0.000) -0.683 (0.000)  0.761 (0.000) -0.270 (0.197) 0.001 (0.403) -0.003 (0.217) 0.018 (0.057) 0.013	### FE   P.capital   1.023   (0.000)    -0.001   (0.929)   (0.004   (0.419)   (0.000)	-0.836 (0.301) -0.554 (0.005) -0.384 (0.055)	Innovation	System Imitation -0.013 (0.974) 0.728 (0.000) -0.175 (0.357)  0.243 (0.217) -0.049 (0.910) -0.014 (0.317) -0.015 (0.4444) 0.018 (0.715) 0.065	0.053 (0.494) -0.020 (0.000) 0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001 (0.490)	Growth -3.844 (0.141) -1.141 (0.693) -0.758 (0.778)	0.761 (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.491) (0.000) (0.491) (0.000) (0.945) (0.001)	3SLS, Initation 0.343 (0.072) 0.856 (0.000) -0.655 (0.000) -0.655 (0.000) (0.000) -0.398 (0.058) 0.000 (0.368) 0.000 (0.368) 0.000 (0.369) 0.001 (0.15 (0.000) 0.011	0.003 (0.673) 0.000 (0.954) 0.000 (0.954) 0.000 (0.645) 0.000 (0.645) 0.000 (0.645) 0.000	Growth 4.571 (0.013) -0.403 (0.101) -0.484 (0.094)
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density	0.310 (0.086) 0.763 (0.008) 0.763 (0.000) 0.270 (0.286) 0.807 (0.460) 0.003 (0.876) 0.005 (0.728) -0.029 (0.630) -0.027	Nysten   Initiation   0.894   (0.372)   0.826   (0.000)   -0.298   (0.348)   (0.370   (0.329)   -1.200   (0.258)   (0.234)   -0.002   (0.925)   (0.077   (0.172)   (0.072)   (	-0.016 (0.479) (0.12) -0.006 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169)	Growth 5.178 (0.308) -1.345 (0.509) -1.105 (0.548) -5.417 (0.135)	1.0.0000	3SLS, Initiation 0.243 (0.258) 0.871 (0.000) -0.683 (0.000)  0.761 (0.000) -0.270 (0.197) 0.001 (0.403) -0.003 (0.217) 0.018 (0.057) 0.013	### P.capital 1.023 1.023 (0.000)  -0.001 (0.929) 0.004 (0.419) 0.004 (0.000) -0.002 (0.166) 0.000 (0.378)	-0.836 (0.301) -0.554 (0.005) -0.384 (0.055) 0.970 (0.203)	Innovation	System Imitation -0.013 (0.974) 0.728 (0.000) -0.175 (0.357)  0.243 (0.217) -0.049 (0.910) -0.014 (0.317) -0.015 (0.4444) 0.018 (0.715) 0.065	0.053 (0.494) -0.020 (0.059) 0.078) 0.078) 0.078)	Growth -3.844 (0.141) -1.141 (0.693) -0.758 (0.778) 3.559 (0.093)	0.761 (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.491) (0.000) (0.491) (0.000) (0.945) (0.001)	3SLS, Initation 0.343 (0.072) 0.856 (0.000) -0.655 (0.000) -0.655 (0.000) (0.000) -0.398 (0.058) 0.000 (0.368) 0.000 (0.368) 0.000 (0.369) 0.001 (0.15 (0.000) 0.011	No.003	Growth 4.571 (0.013) -0.403 (0.101) -0.484 (0.094) -4.848 (0.018)
Innovation, t (log) Innovation, t-1 (log) Imitation, t-1 (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance	0.310 (0.086) 0.763 (0.008) 0.763 (0.000) 0.270 (0.286) 0.807 (0.460) 0.003 (0.876) 0.005 (0.728) -0.029 (0.630) -0.027	Nysten   Initiation   0.894   (0.372)   0.826   (0.000)   -0.298   (0.348)   (0.370   (0.329)   -1.200   (0.258)   (0.234)   -0.002   (0.925)   (0.077   (0.172)   (0.072)   (	-0.016 (0.479) 0.012 (0.216) 0.006 (0.006) 0.000 (0.169) -0.000	Growth 5.178 (0.308) -1.345 (0.509) -1.105 (0.548) -5.417 (0.135)	1.0.0000	3SLS, Initiation 0.243 (0.258) 0.871 (0.000) -0.683 (0.000)  0.761 (0.000) -0.270 (0.197) 0.001 (0.403) -0.003 (0.217) 0.018 (0.057) 0.013	### FE   P.capital   1.023   (0.000)    -0.001   (0.929)   (0.004   (0.419)   (0.000)	-0.836 (0.301) -0.554 (0.005) -0.384 (0.055) 0.970 (0.203)	Innovation	System Imitation -0.013 (0.974) 0.728 (0.000) -0.175 (0.357)  0.243 (0.217) -0.049 (0.910) -0.014 (0.317) -0.015 (0.4444) 0.018 (0.715) 0.065	0.053 (0.494) -0.020 (0.000) 0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001 (0.490)	Growth -3.844 (0.141) -1.141 (0.693) -0.758 (0.778) 3.559 (0.093)	0.761 (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.491) (0.000) (0.491) (0.000) (0.945) (0.001)	3SLS, Initation 0.343 (0.072) 0.856 (0.000) -0.655 (0.000) -0.655 (0.000) (0.000) -0.398 (0.058) 0.000 (0.368) 0.000 (0.368) 0.000 (0.369) 0.001 (0.15 (0.000) 0.011	0.003 (0.673) 0.000 (0.954) 0.000 (0.954) 0.000 (0.645) 0.000 (0.645) 0.000 (0.645) 0.000	Growth 4.571 (0.013) -0.403 (0.101) -0.484 (0.094) -4.848 (0.018)
Innovation, t (log) Innovation, t-1 (log) Imitation, t-1 (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade	0.310 (0.086) 0.763 (0.008) 0.763 (0.000) 0.270 (0.286) 0.807 (0.460) 0.003 (0.876) 0.005 (0.728) -0.029 (0.630) -0.027	Nysten   Initiation   0.894   (0.372)   0.826   (0.000)   -0.298   (0.348)   (0.370   (0.329)   -1.200   (0.258)   (0.234)   -0.002   (0.925)   (0.077   (0.172)   (0.072)   (	-0.016 (0.479) 0.012 (0.216) 0.006 (0.006) 0.000 (0.169) -0.000	Growth 5.178 (0.308) -1.345 (0.509) -1.105 (0.548) -5.417 (0.135)	1.0.0000	3SLS, Initiation 0.243 (0.258) 0.871 (0.000) -0.683 (0.000)  0.761 (0.000) -0.270 (0.197) 0.001 (0.403) -0.003 (0.217) 0.018 (0.057) 0.013	### FE   P.capital   1.023   (0.000)    -0.001   (0.929)   (0.004   (0.419)   (0.000)	-0.836 (0.301) -0.554 (0.005) -0.384 (0.055) -0.970 (0.203) -0.002 (0.639) 0.186 (0.000) -0.039	Innovation	System Imitation -0.013 (0.974) 0.728 (0.000) -0.175 (0.357)  0.243 (0.217) -0.049 (0.910) -0.014 (0.317) -0.015 (0.4444) 0.018 (0.715) 0.065	0.053 (0.494) -0.020 (0.000) 0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001 (0.490)	Growth -3.844 (0.141) -1.141 (0.693) -0.758 (0.778) 3.559 (0.093)	0.761 (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.491) (0.000) (0.491) (0.000) (0.945) (0.001)	3SLS, Initation 0.343 (0.072) 0.856 (0.000) -0.655 (0.000) -0.655 (0.000) (0.000) -0.398 (0.058) 0.000 (0.368) 0.000 (0.368) 0.000 (0.369) 0.001 (0.15 (0.000) 0.011	0.003 (0.673) 0.000 (0.954) 0.000 (0.954) 0.000 (0.645) 0.000 (0.645) 0.000 (0.645) 0.000	Growth 4.571 (0.013) -0.403 (0.101) -0.484 (0.094) -4.848 (0.018)  0.000 (0.950) 0.191 (0.000) -0.033
Innovation, t (log) Innovation, t-1 (log) Imitation, t-1 (log) Imitation, t-1 (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment	0.310 (0.086) 0.763 (0.008) 0.763 (0.000) 0.270 (0.286) 0.807 (0.460) 0.003 (0.876) 0.005 (0.728) -0.029 (0.630) -0.027	Nysten   Initiation   0.894   (0.372)   0.826   (0.000)   -0.298   (0.348)   (0.370   (0.329)   -1.200   (0.258)   (0.234)   -0.002   (0.925)   (0.077   (0.172)   (0.072)   (	-0.016 (0.479) 0.012 (0.216) 0.006 (0.006) 0.000 (0.169) -0.000	0.021 (0.492) 0.023 (0.768) 0.023 (0.768)	1.0.0000	3SLS, Initiation 0.243 (0.258) 0.871 (0.000) -0.683 (0.000)  0.761 (0.000) -0.270 (0.197) 0.001 (0.403) -0.003 (0.217) 0.018 (0.057) 0.013	### FE   P.capital   1.023   (0.000)    -0.001   (0.929)   (0.004   (0.419)   (0.000)	-0.836 (0.301) -0.554 (0.005) -0.384 (0.055) 0.970 (0.203) 0.002 (0.639) 0.186 (0.000) -0.039 (0.037) 0.816	Innovation	System Imitation -0.013 (0.974) 0.728 (0.000) -0.175 (0.357)  0.243 (0.217) -0.049 (0.910) -0.014 (0.317) -0.015 (0.4444) 0.018 (0.715) 0.065	0.053 (0.494) -0.020 (0.000) 0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001 (0.490)	Growth -3.844 (0.141) -1.141 (0.693) -0.758 (0.778)  3.559 (0.093)	0.761 (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.491) (0.000) (0.491) (0.000) (0.945) (0.001)	3SLS, Initation 0.343 (0.072) 0.856 (0.000) -0.655 (0.000) -0.655 (0.000) (0.000) -0.398 (0.058) 0.000 (0.368) 0.000 (0.368) 0.000 (0.369) 0.001 (0.15 (0.000) 0.011	0.003 (0.673) 0.000 (0.954) 0.000 (0.954) 0.000 (0.645) 0.000 (0.645) 0.000 (0.645) 0.000	Growth 4.571 (0.013) -0.403 (0.101) -0.484 (0.094) -4.848 (0.018)  0.000 (0.950) 0.191 (0.000) -0.033 (0.115)
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation	0.310 (0.086) 0.763 (0.008) 0.763 (0.000) 0.270 (0.286) 0.807 (0.460) 0.003 (0.876) 0.005 (0.728) -0.029 (0.630) -0.027	Nysten   Initiation   0.894   (0.372)   0.826   (0.000)   -0.298   (0.348)   (0.370   (0.329)   -1.200   (0.258)   (0.234)   -0.002   (0.925)   (0.077   (0.172)   (0.072)   (	-0.016 (0.479) 0.012 (0.216) 0.006 (0.006) 0.000 (0.169) -0.000	0.021 (0.423) (0.105) (0.548) (0.548) (0.548) (0.548) (0.548) (0.548) (0.548) (0.548) (0.135)	1.0.0000	3SLS, Initiation 0.243 (0.258) 0.871 (0.000) -0.683 (0.000)  0.761 (0.000) -0.270 (0.197) 0.001 (0.403) -0.003 (0.217) 0.018 (0.057) 0.013	### FE   P.capital   1.023   (0.000)    -0.001   (0.929)   (0.004   (0.419)   (0.000)	-0.836 (0.301) -0.554 (0.005) -0.384 (0.055) 0.970 (0.203) 0.002 (0.639) (0.000) -0.039 (0.037) 0.816 (0.004)	Innovation	System Imitation -0.013 (0.974) 0.728 (0.000) -0.175 (0.357)  0.243 (0.217) -0.049 (0.910) -0.014 (0.317) -0.015 (0.4444) 0.018 (0.715) 0.065	0.053 (0.494) -0.020 (0.000) 0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001 (0.490)	0.086 (0.061) -0.114 (0.692) 0.014 (0.810) 2.205 (0.2824)	0.761 (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.000) (0.491) (0.000) (0.491) (0.000) (0.945) (0.001)	3SLS, Initation 0.343 (0.072) 0.856 (0.000) -0.655 (0.000) -0.655 (0.000) (0.000) -0.398 (0.058) 0.000 (0.368) 0.000 (0.368) 0.000 (0.369) 0.001 (0.15 (0.000) 0.011	0.003 (0.673) 0.000 (0.954) 0.000 (0.954) 0.000 (0.645) 0.000 (0.645) 0.000 (0.645) 0.000	Growth 4.571 (0.013) -0.403 (0.101) -0.484 (0.094) -4.848 (0.018)  0.000 (0.950) 0.191 (0.000) -0.033 (0.115) 1.113 (0.000) 0.115
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation D.Innovation [t - t-1] D.Imitation [t - t-1] Country Effect	0.607 (0.562) 0.310 (0.086) 0.763 (0.000) -0.270 (0.286) 0.807 (0.460) 0.003 (0.728) -0.029 (0.630) -0.027 (0.435)	Systen   Initation   0.894   (0.372)   (0.272)   (0.000)   -0.298   (0.348)   (0.349)   -1.200   (0.258)   (0.155   (0.234)   -0.002   (0.925)   (0.925)   (0.977   (0.172)   (0.176)	-0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169) -0.002 (0.845)	0.021 (0.135) (0.134) (0.548) (0.548) (0.548) (0.548) (0.548) (0.135) (0.135)	Innovation -0.227 (0.330)  0.773 (0.000) 1.038 (0.000) -0.794 (0.000) 0.274 (0.228) -0.001 (0.321) 0.003 (0.159) -0.014 (0.014)	3SLS, Imitation 0.243 (0.258) 0.871 (0.000) -0.683 (0.000) 0.761 (0.000) -0.270 (0.197) 0.001 (0.403) -0.003 (0.217) 0.018 (0.057) 0.013 (0.016)	with FE P.capital 1.023 (0.000)  -0.001 (0.929) 0.004 (0.419) 0.002 (0.166) 0.000 (0.378) 0.012 (0.009)	-0.836 (0.301) -0.554 (0.005) -0.384 (0.055) 0.970 (0.203) 0.002 (0.639) 0.186 (0.000) -0.039 (0.037) 0.816 (0.004) 7 (0.004)	Innovation -0.044 (0.911) 0.297 (0.164) 0.934 (0.000) -0.369 (0.117) 0.262 (0.571) 0.011 (0.543) 0.014 (0.486) -0.014 (0.777) -0.043 (0.222)	System Imitation -0.013 (0.974) -0.013 (0.975) (0.283 (0.000) -0.175 (0.357)  0.243 (0.217) -0.049 (0.910) -0.014 (0.317) -0.015 (0.444) (0.115) 0.065 (0.006)	0.053 (0.494) -0.040 (0.494) -0.040 (0.424) -0.000 (0.978) 0.001 (0.490) 0.029 (0.324)	0.086 (0.061) -0.114 (0.692) 0.014 (0.810) 2.205 (0.287) 0.422 (0.848)	Innovation -0.902 (0.000)  0.761 (0.000) 1.062 (0.000) -0.757 (0.000) 1.018 (0.000) -0.001 (0.491) 0.000 (0.945) -0.011 (0.058)	3SLS, 1 Initation 0,343 0,343 (0,072) 0,856 (0,000) -0,655 (0,000) -0,055 (0,000) 0,011 (0,000) (0,368) 0,000 (0,843) 0,001 (0,368) 0,000 (0,015 (0,000) 0,011 (0,014)	with FE P.capital 0.925 (0.000)  0.003 (0.673) 0.000 (0.954) 0.000 (0.645) 0.000 (0.418) -0.001 (0.004)	0.000 (0.950) 0.115 (1.113 (0.000) 7 ys
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation D.Innovation [t - t-1] D.Imitation [t - t-1]	-0.607 (0.562) 0.310 (0.086) 0.763 (0.000) -0.270 (0.480) 0.003 (0.768) 0.005 (0.728) 0.029 (0.630) -0.029 (0.435)	System   Imitation   0.894   (0.372)   0.826   (0.000)   -0.298   (0.348)   (0.370   (0.329)   -1.200   (0.258)   (0.002   (0.258)   (0.002   (0.	-0.016 (0.479) (0.216) (0.216) (0.216) (0.000) (0.169) (0.000) (0.845)	0.021 (0.492) 0.223 (0.100) 0.100 0.000 0.	Innovation -0.227 (0.330) 0.773 (0.000) 1.038 (0.000) -0.794 (0.001) 0.274 (0.228) -0.001 (0.321) 0.003 (0.159) -0.016 (0.113) -0.014	3SLS, Initation 0.243 (0.258) 0.871 (0.000) -0.683 (0.000)  0.761 (0.000) -0.270 (0.197) 0.001 (0.403) -0.003 (0.217) 0.018 (0.057) 0.016	-0.001 (0.29) 0.004 (0.419) 0.004 (0.166) 0.000 (0.378) 0.012 (0.009)	-0.836 (0.301) -0.554 (0.005) -0.384 (0.055) -0.970 (0.203) -0.02 (0.639) 0.186 (0.000) -0.039 (0.037) 0.816 (0.004) 0.212 (0.477)	Innovation -0.044 (0.911) 0.297 (0.164) 0.934 (0.000) -0.369 (0.117) 0.262 (0.571) 0.011 (0.543) 0.014 (0.486) -0.014 (0.777) -0.043 (0.222)	System Imitation -0.013 (0.974) -0.728 (0.000) -0.175 (0.357)  0.243 (0.217) -0.049 (0.910) -0.014 (0.317) -0.015 (0.444) 0.018 (0.715) (0.656) (0.006)	0.053 (0.000) 0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001 (0.490) 0.029 (0.324)	Growth -3.844 (0.141) -1.141 (0.693) -0.758 (0.778) 3.559 (0.093)  0.086 (0.061) -0.114 (0.602) 0.014 (0.810) 2.205 (0.287) 0.422 (0.840)	Innovation -0.902 (0.000)  0.761 (0.000) 1.062 (0.000) -0.757 (0.000) 1.018 (0.000) -0.001 (0.491) 0.000 (0.945) -0.019 (0.084) -0.011 (0.058)	3SLS, 1 Initation 0.343 (0.072) 0.856 (0.000) -0.655 (0.000) 0.711 (0.000) -0.658 (0.000) 0.710 (0.000) 0.001 (0.368) 0.001 (0.368) 0.001 (0.368) 0.001 (0.404) 0.011	0.003 (0.673) (0.054) (0.000) (0.673) (0.000) (0.554) (0.000) (0.645) (0.645) (0.645) (0.645) (0.645) (0.645)	Growth 4.571 (0.013) -0.403 (0.101) -0.484 (0.094) -4.848 (0.018)  0.000 (0.950) 0.191 (0.000) -0.033 (0.115) 1.113 (0.000) 0.115 (0.738)
Innovation, t (log) Innovation, t-1 (log) Imitation, t-1 (log) Imitation, t-1 (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation D.Innovation [t - t-1] D.Imitation [t - t-1] Country Effect Time Effect Countries/Observations R <sup>2</sup>	0.607 (0.562)  0.310 (0.086) 0.763 (0.000) 0.270 (0.286) 0.807 (0.460) 0.003 (0.876) 0.005 (0.728) -0.027 (0.435)  Yes Yes Yes 76/261	Systen   Initation   0.894   (0.372)   (0.372)   (0.000)   -0.298   (0.348)   (0.348)   (0.329)   -1.200   (0.258)   (0.002)   (0.234)   -0.002   (0.925)   (0.925)   (0.977)   (0.172)   (0.976)   (0.976)   (0.976)   (0.976)   (0.976)   (0.976)   (0.977)   (0.976)	-0.016 (0.479) (0.160) (0.169) (0.169) (0.169) (0.169) (0.169) (0.169) (0.169) (0.845)	0.021 (0.492) (0.223 (0.167) -0.023 (0.166 (0.922) Yes Yes 92/364	Innovation -0.227 (0.330) 0.773 (0.000) 1.038 (0.000) -0.794 (0.001) 0.274 (0.228) -0.001 (0.321) 0.003 (0.159) -0.016 (0.113) -0.014 (0.014)	3SLS, Initation 0.243 (0.258) 0.871 (0.000) -0.683 (0.000)  0.761 (0.000) -0.270 (0.197) 0.001 (0.403) -0.003 (0.217) 0.013 (0.016)	### PE   P.capital	-0.836 (0.301) -0.554 (0.005) -0.384 (0.055) 0.970 (0.203) -0.002 (0.639) 0.186 (0.000) -0.039 (0.037) 0.816 (0.004) 0.212 (0.477) Yes	Innovation -0.044 (0.911) 0.297 (0.164) 0.934 (0.000) -0.369 (0.117) 0.262 (0.571) 0.011 (0.543) 0.014 (0.486) -0.014 (0.777) -0.043 (0.222)	System   Initation   -0.013   (0.974)   -0.013   (0.974)   -0.728   (0.000)   -0.175   (0.357)   (0.243   (0.217)   -0.044   (0.317)   -0.014   (0.317)   -0.015   (0.444)   (0.016)   (0.016)   (0.006)   (	0.053 (0.404) -0.040 (0.424) -0.040 (0.444) -0.040	0.086 (0.061) -0.114 (0.602) 0.014 (0.810) 2.205 (0.227) 0.422 (0.843) 844 (0.893) 455 (0.993)	Innovation -0.902 (0.000)  0.761 (0.000) 1.062 (0.000) -0.757 (0.000) 1.018 (0.000) -0.001 (0.491) 0.000 (0.945) -0.019 (0.084) -0.011 (0.058)	381.8,1 Imitation 0.343 (0.072) 0.3856 (0.000) -0.655 (0.000)  0.711 (0.000) -0.398 (0.058) 0.001 (0.368) 0.001 (0.368) 0.001 (0.368) 0.001 (0.343) 0.015 (0.090)	0.003	0.000 (0.950) (0.115) (0.0738) Yes Yes
Innovation, t (log) Innovation, t-1 (log) Imitation, t-1 (log) Imitation, t-1 (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation D.Innovation [t - t-1] D.Imitation [t - t-1] Country Effect Time Effect Countries/Observations	-0.607 (0.562)  0.310 (0.086) 0.763 (0.000) -0.270 (0.286) 0.807 (0.460) 0.003 (0.876) 0.005 (0.728) -0.029 (0.630) -0.027 (0.435)	System   Imitation   0.894   (0.372)   0.826   (0.000)   -0.298   (0.348)   (0.370   (0.329)   -1.200   (0.258)   (0.002   (0.258)   (0.002   (0.	-0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.798) 0.000 (0.169) -0.002 (0.845)	0.021 (0.492) (0.230 (0.509) 0.021 (0.548) 0.021 (0.492) 0.223 (0.167) -0.023 (0.166) (0.922) Yes	Innovation -0.227 (0.330) 0.773 (0.000) 1.038 (0.000) -0.794 (0.000) 0.274 (0.228) -0.001 (0.321) 0.003 (0.159) -0.014 (0.014)	3SLS, Initation 0.243 (0.258) 0.871 (0.000) -0.683 (0.000)  0.761 (0.000) -0.270 (0.197) 0.001 (0.403) -0.003 (0.217) (0.016)	### FE   P.capital	-0.836 (0.301) -0.554 (0.005) -0.554 (0.005) -0.384 (0.055) -0.970 (0.203) -0.970	Innovation -0.044 (0.911)  0.297 (0.164) 0.934 (0.000) -0.369 (0.117) 0.262 (0.571) 0.014 (0.486) -0.014 (0.777) -0.043 (0.222)	System   Initation   -0.013   (0.974)   -0.013   (0.974)   0.728   (0.000)   -0.175   (0.357)   (0.243   (0.217)   -0.049   (0.910)   -0.014   (0.317)   -0.015   (0.444)   (0.018   (0.016)   (0.006)   (0.	0.053 (0.000) 0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001 (0.490) (0.324)	0.086 (0.061) -0.114 (0.602) 0.014 (0.814) -0.114 (0.693)	Innovation -0.902 (0.000)  0.761 (0.000) 1.062 (0.000) -0.757 (0.000) 1.018 (0.000) -0.001 (0.491) 0.000 (0.4945) -0.019 (0.084) -0.011 (0.058)	\$SLS,\textsup \textsup \textsu	0.003	0.000 (0.950) 0.191 (0.000) 0.115 (0.0738) Yes Yes

Parantheses denote p-values. For System-GMM, the test statistics are calculated based on the Windmeijer robust standard errors. The AR(2) test refers to the Arellano-Bond test for autocorrelations.

Table 6: Benchmark Results, where output per employee are used as product variety measures (cont.)

	1		nnov5 & Imit5			stock measu	re	,		nnov5 & Imit:	5, with public		ıre stock (pro			·)
	Innovation		P.capital	Growth	Innovation		with FE P.capital	Growth	Innovation	System Imitation	P.capital	Growth	Innovation		with FE P.capital	Growth
Initial GDP per capita (log)	-0.641 (0.479)	1.155 (0.201)	1.127 (0.000)	5.378 (0.303)	0.405 (0.089)	0.243 (0.258)	1.027 (0.000)	-1.229 (0.133)	-0.205 (0.643)	0.016 (0.968)	1.072 (0.000)	-3.894 (0.124)	-0.564 (0.013)	-0.044 (0.822)	0.927 (0.000)	4.730 (0.012)
Innovation, t (log)	(0.47))	0.917	(0.000)	-1.469 (0.468)	(0.007)	0.865	(0.000)	-0.559 (0.003)	(0.043)	0.736	(0.000)	-0.843 (0.721)	(0.013)	0.840 (0.000)	(0.000)	-0.456 (0.051)
Innovation, t-1 (log)	0.314 (0.077)	-0.250 (0.343)		(0.408)	0.786 (0.000)	-0.692 (0.000)		(0.003)	0.306 (0.148)	-0.173 (0.377)		(0.721)	0.774 (0.000)	-0.653 (0.000)		(0.031)
Imitation, t (log)	0.603	(0.545)		-1.020 (0.547)	1.032	(0.000)		-0.394 (0.040)	0.873	(0.577)		-1.141 (0.607)	1.061 (0.000)	(0.000)		-0.437 (0.113)
Imitation, t-1 (log)	-0.323 (0.133)	0.445 (0.074)		(0.547)	-0.794 (0.000)	0.767 (0.000)		(0.040)	-0.462 (0.037)	0.383 (0.070)		(0.007)	-0.795 (0.000)	0.745 (0.000)		(0.113)
Public capital (log)	0.822 (0.392)	-1.412 (0.147)		-5.469 (0.144)	-0.332 (0.154)	0.354 (0.099)		1.356 (0.080)	0.432 (0.409)	-0.141 (0.737)		3.627 (0.097)	0.652 (0.008)	0.024 (0.911)		-5.003 (0.017)
FDI	0.015	0.000		(0.144)	-0.001	0.001		(0.080)	0.007	-0.008		(0.097)	-0.001	0.001		(0.017)
Skilled workforce	0.027	-0.021			(0.611)	(0.624) -0.001			0.013	(0.530) -0.009			0.623)	(0.449)		
Gov. expenditure	(0.096)	(0.400)	-0.016		(0.582) -0.013	(0.706)	0.000		(0.565)	(0.519) -0.010	0.053		(0.612) -0.016	(0.807)	0.003	
Non-tax revenue	(0.991) -0.038	(0.128) 0.024	(0.479) 0.012		-0.011	(0.099)	(0.995)		(0.757) -0.034	(0.865)	(0.494) -0.040		-0.013	0.182)	0.000	
Gov. debt	(0.156)	(0.319)	0.216)		(0.050)	(0.055)	(0.400)		(0.199)	(0.057)	-0.020		(0.020)	(0.004)	0.000	
Urban			(0.016) -0.004				(0.000) -0.003				(0.059)				(0.717) -0.001	
Population density			(0.708) 0.000				(0.076) 0.000				(0.978) 0.001				(0.625) 0.000	
Current account balance			(0.169) -0.002				(0.336) 0.010				(0.490) 0.029				(0.392) -0.011	
Trade			(0.845)	0.021			(0.023)	0.002			(0.324)	0.090			(0.002)	-0.001
Investment				(0.504) 0.223				(0.601) 0.185				(0.062) -0.131				(0.920) 0.197
Inflation				(0.171) -0.019				(0.000)				(0.552) 0.018				(0.000) -0.031
D.Innovation [t - t-1]				(0.783) 2.474				(0.038) 1.016				(0.736) 1.735				(0.125) 1.204
D.Imitation [t - t-1]				(0.100) 0.235				(0.000)				(0.360) 1.019				(0.000) 0.001
Country Effect	Yes	Yes	Yes	(0.880) Yes	Yes	Yes	Yes	(0.937) Yes	Yes	Yes	Yes	(0.607) Yes	Yes	Yes	Yes	(0.998) Yes
Time Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Countries/Observations R <sup>2</sup>	76/261	76/261	94/403	92/364	76/261 0.864	76/261 0.877	76/261 0.942	76/261 0.244	72/243	72/243	88/369	84/328	72/243 0.850	72/243 0.898	72/243 0.938	72/243 0.363
Number of Instruments Hansen J-statistics (p-value)	40 0.326	40 0.812	46 0.859	44 0.194					33 0.573	33 0.762	39 0.185	35 0.451				
AR(2) test (p-value)	0.568	0.720	0.149	0.276					0.647	0.138	0.105	0.276				
			nnov6 & Imitt	with IMF	nublic canital	stock measu			1.	nnovh & Imitt	6 with nuhli		ire stock (pro	ried by teleni		
	Innevetion	Systen	nnov6 & Imite		-	3SLS,	with FE	Cwowth		System				3SLS,	with FE	
Initial GDP per capita (log)	Innovation 0.468	System Imitation -0.329	P.capital	Growth 0.866	Innovation 2.548	3SLS, Imitation -3.354	P.capital	Growth -2.772	Innovation -0.011	System Imitation 0.028	P.capital	Growth -5.291	Innovation -0.169	3SLS, Imitation -0.172	P.capital 0.922	Growth 4.521
Initial GDP per capita (log) Innovation, t (log)		System Imitation -0.329 (0.724) 0.673	n GMM P.capital	Growth 0.866 (0.839) -1.096	Innovation	3SLS, Imitation -3.354 (0.000) 1.260	with FE P.capital	-2.772 (0.001) -0.220	Innovation	System 0.028 (0.952) 0.886	GMM P.capital	Growth -5.291 (0.015) -0.574	Innovation	3SLS, Imitation -0.172 (0.470) 1.225	with FE P.capital	Growth 4.521 (0.005) -0.606
	0.468	System Imitation -0.329 (0.724)	P.capital	Growth 0.866 (0.839)	Innovation 2.548	3SLS, Imitation -3.354 (0.000)	P.capital	-2.772 (0.001)	Innovation -0.011	System Imitation 0.028 (0.952)	P.capital	Growth -5.291 (0.015)	Innovation -0.169	3SLS, Imitation -0.172 (0.470)	P.capital 0.922	Growth 4.521 (0.005)
Innovation, t (log) Innovation, t-1 (log)	0.468 (0.450)	System Imitation -0.329 (0.724) 0.673 (0.000)	P.capital	Growth 0.866 (0.839) -1.096	2.548 (0.000)	3SLS, Imitation -3.354 (0.000) 1.260 (0.000)	P.capital	-2.772 (0.001) -0.220	-0.011 (0.978)	System 0.028 (0.952) 0.886 (0.000)	P.capital	Growth -5.291 (0.015) -0.574	-0.169 (0.363)	3SLS, Imitation -0.172 (0.470) 1.225 (0.000)	P.capital 0.922	Growth 4.521 (0.005) -0.606
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log)	0.468 (0.450) 0.455 (0.082) 0.604 (0.008)	System Imitation -0.329 (0.724) 0.673 (0.000) -0.298 (0.315)	P.capital	Growth 0.866 (0.839) -1.096 (0.631)	1nnovation 2.548 (0.000) 0.539 (0.000) 0.764 (0.000)	3SLS, Imitation -3.354 (0.000) 1.260 (0.000) -0.677 (0.000)	P.capital	-2.772 (0.001) -0.220 (0.449)	Innovation	System 0.028 (0.952) 0.886 (0.000) -0.546 (0.089)	P.capital	Growth -5.291 (0.015) -0.574 (0.863)	1nnovation -0.169 (0.363) 0.678 (0.000) 0.730 (0.000)	3SLS, Imitation -0.172 (0.470) 1.225 (0.000) -0.828 (0.000)	P.capital 0.922	Growth 4.521 (0.005) -0.606 (0.036)
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log)	0.468 (0.450) 0.455 (0.082) 0.604 (0.008) -0.278 (0.183)	System Imitation -0.329 (0.724) 0.673 (0.000) -0.298 (0.315) 0.447 (0.107)	P.capital	Growth 0.866 (0.839) -1.096 (0.631) -1.180 (0.545)	0.539 (0.000) 0.764 (0.000) 0.764 (0.000) -0.291 (0.000)	3SLS, Imitation -3.354 (0.000) 1.260 (0.000) -0.677 (0.000) 0.386 (0.000)	P.capital	-2.772 (0.001) -0.220 (0.449) -0.612 (0.021)	Innovation -0.011 (0.978)  0.263 (0.213) 0.653 (0.003) -0.278 (0.289)	System	P.capital	Growth -5.291 (0.015) -0.574 (0.863) -1.298 (0.697)	0.678 (0.000) 0.730 (0.000) 0.730 (0.000) -0.491 (0.000)	3SLS, Imitation -0.172 (0.470) 1.225 (0.000) -0.828 (0.000) 0.675 (0.000)	P.capital 0.922	Growth 4.521 (0.005) -0.606 (0.036) -0.231 (0.414)
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log)	0.468 (0.450) 0.455 (0.082) 0.604 (0.008) -0.278 (0.183) -0.366 (0.490)	System Imitation -0.329 (0.724) 0.673 (0.000) -0.298 (0.315)  0.447 (0.107) 0.056 (0.949)	P.capital	Growth 0.866 (0.839) -1.096 (0.631)	0.539 (0.000) 0.764 (0.000) -0.291 (0.000) -2.401 (0.000)	3SLS, Imitation -3.354 (0.000) 1.260 (0.000) -0.677 (0.000) 0.386 (0.000) 3.168 (0.000)	P.capital	-2.772 (0.001) -0.220 (0.449) -0.612	1nnovation -0.011 (0.978) 0.263 (0.213) 0.653 (0.003) -0.278 (0.289) 0.105 (0.795)	Imitation   0.028   (0.952)   0.886   (0.000)   -0.546   (0.089)     0.756   (0.000)   -0.352   (0.471)	P.capital	Growth -5.291 (0.015) -0.574 (0.863)	0.678 (0.000) 0.730 (0.000) -0.491 (0.000) 0.233 (0.247)	3SLS, Imitation -0.172 (0.470) 1.225 (0.000) -0.828 (0.000) 0.675 (0.000) 0.139 (0.589)	P.capital 0.922	Growth 4.521 (0.005) -0.606 (0.036)
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI	0.468 (0.450) 0.455 (0.082) 0.604 (0.008) -0.278 (0.183) -0.366 (0.490) -0.005 (0.552)	System Imitation -0.329 (0.724) 0.673 (0.000) -0.298 (0.315)  0.447 (0.107) 0.056 (0.949) 0.024 (0.150)	P.capital	Growth  0.866 (0.839) -1.096 (0.631)  -1.180 (0.545)	1nnovation 2.548 (0.000) 0.539 (0.000) 0.764 (0.000) -0.291 (0.000) -2.401 (0.000) 0.002 (0.051)	3SLS, Imitation -3.354 (0.000) 1.260 (0.000) -0.677 (0.000) 0.386 (0.000) 3.168 (0.000) -0.003 (0.046)	P.capital	-2.772 (0.001) -0.220 (0.449) -0.612 (0.021)	Innovation -0.011 (0.978)  0.263 (0.213) 0.653 (0.003) -0.278 (0.289) 0.105 (0.795) -0.002 (0.902)	System  Initiation  0.028 (0.952) 0.886 (0.000) -0.546 (0.089)  0.756 (0.000) -0.352 (0.471) 0.019 (0.526)	P.capital	Growth -5.291 (0.015) -0.574 (0.863) -1.298 (0.697)	1nnovation -0.169 (0.363)  0.678 (0.000) 0.730 (0.000) -0.491 (0.000) 0.233 (0.247) -0.001 (0.446)	38LS, Imitation -0.172 (0.470) 1.225 (0.000) -0.828 (0.000) 0.675 (0.000) 0.139 (0.589) 0.001 (0.325)	P.capital 0.922	Growth 4.521 (0.005) -0.606 (0.036) -0.231 (0.414) -4.894
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce	0.468 (0.450) 0.455 (0.082) 0.604 (0.008) -0.278 (0.183) -0.366 (0.490) -0.005 (0.552) 0.003 (0.836)	System Imitation -0.329 (0.724) 0.673 (0.000) -0.298 (0.315)  0.447 (0.107) 0.056 (0.949) 0.024 (0.150) (0.015) (0.445)	n GMM P.capital 1.127 (0.000)	Growth  0.866 (0.839) -1.096 (0.631)  -1.180 (0.545)	0.539 (0.000) 0.764 (0.000) 0.764 (0.000) -2.401 (0.000) 0.002 (0.051) -0.010 (0.000)	3SLS, Imitation -3.354 (0.000) 1.260 (0.000) -0.677 (0.000) 0.386 (0.000) 3.168 (0.000) -0.003 (0.046) 0.013	with FE P.capital 1.068 (0.000)	-2.772 (0.001) -0.220 (0.449) -0.612 (0.021)	0.263 (0.213) 0.653 (0.203) 0.653 (0.003) 0.103 (0.218) 0.105 (0.289) 0.105 (0.795) -0.002 (0.902) 0.027 (0.074)	System Initiation 0.028 (0.952) 0.886 (0.000) -0.546 (0.089)  0.756 (0.000) -0.352 (0.471) 0.019 (0.526) -0.004 (0.881)	a GMM P.capital 1.072 (0.000)	Growth -5.291 (0.015) -0.574 (0.863) -1.298 (0.697)	0.678 (0.363) 0.678 (0.000) 0.730 (0.000) -0.491 (0.000) 0.233 (0.247) -0.001 (0.446) 0.001 (0.420)	3SLS, Imitation -0.172 (0.470) 1.225 (0.000) -0.828 (0.000) 0.675 (0.000) 0.139 (0.589) 0.001 (0.325) -0.002 (0.494)	with FE P.capital 0.922 (0.000)	Growth 4.521 (0.005) -0.606 (0.036) -0.231 (0.414) -4.894
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure	0.468 (0.450) 0.455 (0.082) 0.604 (0.008) -0.278 (0.183) -0.366 (0.490) -0.005 (0.552) 0.003 (0.836) 0.000 (0.994)	System Imitation -0.329 (0.724) 0.673 (0.000) -0.298 (0.315) -0.447 (0.107) 0.056 (0.949) 0.024 (0.150) 0.015 (0.445) 0.019 (0.726)	n GMM P-capital 1.127 (0.000)	Growth  0.866 (0.839) -1.096 (0.631)  -1.180 (0.545)	0.539 (0.000) 0.764 (0.000) 0.764 (0.000) -2.401 (0.000) -2.401 (0.0051) -0.010 (0.000) -0.007 (0.575)	3SLS, Imitation -3.354 (0.000) 1.260 (0.000) -0.677 (0.000) 0.386 (0.000) -0.003 (0.046) 0.013 (0.000) 0.011 (0.000)	### P.capital 1.068 (0.000)  0.000 (0.959)	-2.772 (0.001) -0.220 (0.449) -0.612 (0.021)	Innovation	System   Initiation   0.028   (0.952)   0.886   (0.900)   -0.546   (0.000)   -0.546   (0.000)   -0.352   (0.471)   (0.019   (0.526)   -0.004   (0.881)   (0.006)   (0.976)   (	0.053 (0.494)	Growth -5.291 (0.015) -0.574 (0.863) -1.298 (0.697)	0.678 (0.000) 0.730 (0.000) 0.233 (0.247) -0.001 (0.420) -0.008 (0.410) 0.000 (0.420) 0.000 (0.420) 0.000 (0.420) 0.000 (0.410) 0.000 (0.420) 0.000 (0.410)	3SLS, Imitation -0.172 (0.470) 1.225 (0.000) -0.828 (0.000) 0.675 (0.000) 0.139 (0.589) 0.001 (0.325) -0.002 (0.494) 0.008	with FE P-capital 0.922 (0.000)	Growth 4.521 (0.005) -0.606 (0.036) -0.231 (0.414) -4.894
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce	0.468 (0.450) 0.455 (0.082) 0.604 (0.008) -0.278 (0.183) -0.366 (0.490) -0.005 (0.552) 0.003 (0.3636) 0.000	System Imitation -0.329 -0.724) -0.673 -0.298 -0.315) -0.447 -0.107) -0.056 -0.949) -0.024 -0.150 -0.015 -0.045 -0.015 -0.045 -0.015 -0.015 -0.045 -0.015 -0.015 -0.015 -0.015 -0.015 -0.015 -0.015 -0.015 -0.015 -0.015 -0.015 -0.019	-0.016 (0.479) (0.216)	Growth  0.866 (0.839) -1.096 (0.631)  -1.180 (0.545)	0.539 (0.000) 0.764 (0.000) 0.764 (0.000) -0.291 (0.000) -2.401 (0.000) 0.002 (0.051) -0.010 (0.000)	3SLS, Imitation 3.3354 (0.000) 1.260 (0.000) -0.677 (0.000) 0.386 (0.000) 3.168 (0.000) -0.003 (0.046) 0.013 (0.000)	### P.capital 1.068 (0.000)  0.000 (0.000 (0.959) 0.008 (0.084)	-2.772 (0.001) -0.220 (0.449) -0.612 (0.021)	Innovation	Initiation   O.028   (0.952)   0.886   (0.952)   0.886   (0.000)   -0.546   (0.089)     0.756   (0.000)   -0.352   (0.471)   (0.526)   -0.004   (0.881)   (0.081)   (0.081)   (0.081)   (0.081)   (0.081)   (0.002)	0.053 (0.494) -0.040 (0.424)	Growth -5.291 (0.015) -0.574 (0.863) -1.298 (0.697)	0.678 (0.363) 0.678 (0.000) 0.730 (0.000) -0.491 (0.000) 0.233 (0.247) -0.001 (0.446) 0.001 (0.420) 0.000	3SLS, Imitation -0.172 (0.470) 1.225 (0.000) -0.828 (0.000) 0.139 (0.589) 0.001 (0.325) -0.002 (0.494) 0.008	with FE P.capital 0.922 (0.000)  0.006 (0.431) -0.001 (0.847)	Growth 4.521 (0.005) -0.606 (0.036) -0.231 (0.414) -4.894
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt	0.468 (0.450) 0.455 (0.082) 0.604 (0.008) -0.278 (0.183) -0.366 (0.490) -0.005 (0.552) 0.003 (0.836) 0.000 (0.994) 0.013	System   Initiation   -0.329 (0.724) 0.673 (0.000) -0.298 (0.315)     0.447 (0.107) 0.056 (0.949) 0.024 (0.150) 0.015 (0.445) 0.019 (0.726) 0.013	-0.016 (0.216) -0.012 (0.216) -0.016 (0.479) 0.012 (0.216) 0.006	Growth  0.866 (0.839) -1.096 (0.631)  -1.180 (0.545)	0.539 (0.000) 0.764 (0.000) 0.764 (0.000) -0.291 (0.000) -2.401 (0.000) -0.010 (0.0051) -0.010 (0.000) -0.007 (0.575) 0.010	3SLS, Initation 3.334 (0.000) 1.260 (0.000) -0.677 (0.000)  0.386 (0.000) 3.168 (0.000) -0.003 (0.046) (0.001) (0.001) (0.001) (0.001)	0.000 (0.959) 0.008 (0.008) 0.008 (0.084) 0.001	-2.772 (0.001) -0.220 (0.449) -0.612 (0.021)	Innovation	Initiation   O.028   O.028   O.028   O.028   O.052   O.052   O.054   O.000   O.546   O.000   O.0546   O.000   O.0546   O.000   O.052   O.0471   O.019   O.0526   O.000   O.0	0.053 (0.494) -0.020 (0.020)	Growth -5.291 (0.015) -0.574 (0.863) -1.298 (0.697)	1.000000000000000000000000000000000000	3SLS, Initation -0.172 -0.470 -1.225 -0.0000 -0.828 -0.0000 -0.828 -0.0000 -0.139 -0.001 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003	with FE P.capital 0.922 (0.000)  0.006 (0.431) -0.001 (0.847) 0.000 (0.701)	Growth 4.521 (0.005) -0.606 (0.036) -0.231 (0.414) -4.894
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue	0.468 (0.450) 0.455 (0.082) 0.604 (0.008) -0.278 (0.183) -0.366 (0.490) -0.005 (0.552) 0.003 (0.836) 0.000 (0.994) 0.013	System   Initiation   -0.329 (0.724) 0.673 (0.000) -0.298 (0.315)     0.447 (0.107) 0.056 (0.949) 0.024 (0.150) 0.015 (0.445) 0.019 (0.726) 0.013	-0.016 (0.479) 0.006	Growth  0.866 (0.839) -1.096 (0.631)  -1.180 (0.545)	0.539 (0.000) 0.764 (0.000) 0.764 (0.000) -0.291 (0.000) -2.401 (0.000) -0.010 (0.0051) -0.010 (0.000) -0.007 (0.575) 0.010	3SLS, Initation 3.334 (0.000) 1.260 (0.000) -0.677 (0.000)  0.386 (0.000) 3.168 (0.000) -0.003 (0.046) (0.001) (0.001) (0.001) (0.001)	0.000 (0.959) 0.008 (0.000)	-2.772 (0.001) -0.220 (0.449) -0.612 (0.021)	Innovation	Initiation   O.028   O.028   O.028   O.028   O.052   O.052   O.054   O.000   O.546   O.000   O.0546   O.000   O.0546   O.000   O.052   O.0471   O.019   O.0526   O.000   O.0	0.053 (0.494) -0.040 (0.424)	Growth -5.291 (0.015) -0.574 (0.863) -1.298 (0.697)	1.000000000000000000000000000000000000	3SLS, Initation -0.172 -0.470 -1.225 -0.0000 -0.828 -0.0000 -0.828 -0.0000 -0.139 -0.001 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003	with FE P-capital 0.922 0.922 0.000)  0.006 0.431) -0.001 0.847)	Growth 4.521 (0.005) -0.606 (0.036) -0.231 (0.414) -4.894
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt	0.468 (0.450) 0.455 (0.082) 0.604 (0.008) -0.278 (0.183) -0.366 (0.490) -0.005 (0.552) 0.003 (0.836) 0.000 (0.994) 0.013	System   Initiation   -0.329 (0.724) 0.673 (0.000) -0.298 (0.315)     0.447 (0.107) 0.056 (0.949) 0.024 (0.150) 0.015 (0.445) 0.019 (0.726) 0.013	-0.016 (0.476) 0.006 (0.016) -0.004 (0.708) 0.008	Growth  0.866 (0.839) -1.096 (0.631)  -1.180 (0.545)	0.539 (0.000) 0.764 (0.000) 0.764 (0.000) -0.291 (0.000) -2.401 (0.000) -0.010 (0.0051) -0.010 (0.000) -0.007 (0.575) 0.010	3SLS, Initation 3.334 (0.000) 1.260 (0.000) -0.677 (0.000)  0.386 (0.000) 3.168 (0.000) -0.003 (0.046) (0.001) (0.001) (0.001) (0.001)	0.000 (0.984) 0.003 (0.000)	-2.772 (0.001) -0.220 (0.449) -0.612 (0.021)	Innovation	Initiation   O.028   O.028   O.028   O.028   O.052   O.052   O.054   O.000   O.546   O.000   O.0546   O.000   O.0546   O.000   O.052   O.0471   O.019   O.0526   O.000   O.0	0.053 (0.494) -0.040 (0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978)	Growth -5.291 (0.015) -0.574 (0.863) -1.298 (0.697)	1.000000000000000000000000000000000000	3SLS, Initation -0.172 -0.470 -1.225 -0.0000 -0.828 -0.0000 -0.828 -0.0000 -0.139 -0.001 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003	Number   P.capital	Growth 4.521 (0.005) -0.606 (0.036) -0.231 (0.414) -4.894
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban	0.468 (0.450) 0.455 (0.082) 0.604 (0.008) -0.278 (0.183) -0.366 (0.490) -0.005 (0.552) 0.003 (0.836) 0.000 (0.994) 0.013	System   Initiation   -0.329 (0.724) 0.673 (0.000) -0.298 (0.315)     0.447 (0.107) 0.056 (0.949) 0.024 (0.150) 0.015 (0.445) 0.019 (0.726) 0.013	-0.016 (0.479) 0.012 (0.216) 0.006 (0.16) -0.004 (0.708) 0.000 (0.16) -0.004 (0.708) 0.000 (0.16) -0.002 -0.002	Growth  0.866 (0.839) -1.096 (0.631)  -1.180 (0.545)	0.539 (0.000) 0.764 (0.000) 0.764 (0.000) -0.291 (0.000) -2.401 (0.000) -0.010 (0.0051) -0.010 (0.000) -0.007 (0.575) 0.010	3SLS, Initation 3.334 (0.000) 1.260 (0.000) -0.677 (0.000)  0.386 (0.000) 3.168 (0.000) -0.003 (0.046) (0.001) (0.001) (0.001) (0.001)	0.000 (0.959) 0.084 (0.000) 0.000 (0.959) 0.008 (0.084) 0.001 (0.430) -0.005 (0.000) (0.1981)	-2.772 (0.001) -0.220 (0.449) -0.612 (0.021)	Innovation	Initiation   O.028   O.028   O.028   O.028   O.052   O.052   O.054   O.000   O.546   O.000   O.0546   O.000   O.0546   O.000   O.052   O.0471   O.019   O.0526   O.000   O.0	0.053 (0.404) 0.053 (0.404) (0.424) -0.020 (0.059) 0.001 (0.499) 0.001	Growth -5.291 (0.015) -0.574 (0.863) -1.298 (0.697)	1.000000000000000000000000000000000000	3SLS, Initation -0.172 -0.470 -1.225 -0.0000 -0.828 -0.0000 -0.828 -0.0000 -0.139 -0.001 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003	Number   N	Growth 4.521 (0.005) -0.606 (0.036) -0.231 (0.414) -4.894
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density	0.468 (0.450) 0.455 (0.082) 0.604 (0.008) -0.278 (0.183) -0.366 (0.490) -0.005 (0.552) 0.003 (0.836) 0.000 (0.994) 0.013	System   Initiation   -0.329 (0.724) 0.673 (0.000) -0.298 (0.315)     0.447 (0.107) 0.056 (0.949) 0.024 (0.150) 0.015 (0.445) 0.019 (0.726) 0.013	-0.016 (0.479) (0.12) -0.006 (0.16) (0.708) 0.006 (0.16) (0.708) 0.000 (0.169)	Crowth 0.866 (0.839) -1.096 (0.631) -1.180 (0.545) -2.165 (0.594)	0.539 (0.000) 0.764 (0.000) 0.764 (0.000) -0.291 (0.000) -2.401 (0.000) -0.010 (0.0051) -0.010 (0.000) -0.007 (0.575) 0.010	3SLS, Initation 3.334 (0.000) 1.260 (0.000) -0.677 (0.000)  0.386 (0.000) 3.168 (0.000) -0.003 (0.046) (0.001) (0.001) (0.001) (0.001)	0.000 (0.959) 0.008 (0.000) (0.959) 0.008 (0.084) 0.001 (0.400) (0.002) 0.0002 (0.198)	-2.772 (0.001) -0.220 (0.449) -0.612 (0.021) 2.720 (0.001)	Innovation	Initiation   O.028   O.028   O.028   O.028   O.0552   O.886   O.0000   O.546   O.0000   O.546   O.0000   O.3752   O.0000   O.00	0.053 (0.494) -0.020 (0.000) 0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001 (0.490)	Growth -5.291 (0.015) -0.574 (0.863) -1.298 (0.697) 4.273 (0.018)	10.069 (0.363) (0.363) (0.363) (0.363) (0.363) (0.363) (0.363) (0.363) (0.363) (0.363) (0.363) (0.364) (0.364) (0.364) (0.464) (0.464) (0.466)	3SLS, Initation -0.172 -0.470 -1.225 -0.0000 -0.828 -0.0000 -0.828 -0.0000 -0.139 -0.001 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003	with FE P-capital 0.922 (0.000)  0.006 (0.431) -0.001 (0.847) 0.000 (0.701) -0.001 (0.394) 0.000 (0.439)	Growth 4.521 (0.005) -0.606 (0.036) -0.231 (0.414) -4.894 (0.006)
Innovation, t (log) Innovation, t-1 (log) Imitation, t-1 (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance	0.468 (0.450) 0.455 (0.082) 0.604 (0.008) -0.278 (0.183) -0.366 (0.490) -0.005 (0.552) 0.003 (0.836) 0.000 (0.994) 0.013	System   Initiation   -0.329 (0.724) 0.673 (0.000) -0.298 (0.315)     0.447 (0.107) 0.056 (0.949) 0.024 (0.150) 0.015 (0.445) 0.019 (0.726) 0.013	-0.016 (0.479) 0.012 (0.216) 0.006 (0.16) -0.004 (0.708) 0.000 (0.16) -0.004 (0.708) 0.000 (0.16) -0.002 -0.002	Growth 0.866 (0.839) -1.096 (0.631) -1.180 (0.545) -2.165 (0.594)	0.539 (0.000) 0.764 (0.000) 0.764 (0.000) -0.291 (0.000) -2.401 (0.000) -0.010 (0.0051) -0.010 (0.000) -0.007 (0.575) 0.010	3SLS, Initation 3.334 (0.000) 1.260 (0.000) -0.677 (0.000)  0.386 (0.000) 3.168 (0.000) -0.003 (0.046) (0.001) (0.001) (0.001) (0.001)	0.000 (0.959) 0.084 (0.000) 0.000 (0.959) 0.008 (0.084) 0.001 (0.430) -0.005 (0.000) (0.1981)	-2.772 (0.001) -0.220 (0.449) -0.612 (0.021) 2.720 (0.001) 0.002 (0.565) 0.192	Innovation	Initiation   O.028   O.028   O.028   O.028   O.0552   O.886   O.0000   O.546   O.0000   O.546   O.0000   O.3752   O.0000   O.00	0.053 (0.404) 0.053 (0.404) (0.424) -0.020 (0.059) 0.001 (0.499) 0.001	Growth -5.291 (0.015) -0.574 (0.863) -1.298 (0.697) 4.273 (0.018)  0.098 (0.122) -0.052	10.069 (0.363) (0.363) (0.363) (0.363) (0.363) (0.363) (0.363) (0.363) (0.363) (0.363) (0.363) (0.364) (0.364) (0.364) (0.464) (0.464) (0.466)	3SLS, Initation -0.172 -0.470 -1.225 -0.0000 -0.828 -0.0000 -0.828 -0.0000 -0.139 -0.001 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003	Number   N	Growth 4.521 (0.005) -0.606 (0.036) -0.231 (0.414) -4.894 (0.006)
Innovation, t (log) Innovation, t-1 (log) Imitation, t-1 (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade	0.468 (0.450) 0.455 (0.082) 0.604 (0.008) -0.278 (0.183) -0.366 (0.490) -0.005 (0.552) 0.003 (0.836) 0.000 (0.994) 0.013	System   Initiation   -0.329 (0.724) 0.673 (0.000) -0.298 (0.315)     0.447 (0.107) 0.056 (0.949) 0.024 (0.150) 0.015 (0.445) 0.019 (0.726) 0.013	-0.016 (0.479) 0.012 (0.216) 0.006 (0.16) -0.004 (0.708) 0.000 (0.16) -0.004 (0.708) 0.000 (0.16) -0.002 -0.002	0.866 (0.839) -1.096 (0.631) -1.180 (0.545) -2.165 (0.594) 0.019 (0.569) 0.248 (0.240) -0.083	0.539 (0.000) 0.764 (0.000) 0.764 (0.000) -0.291 (0.000) -2.401 (0.000) -0.010 (0.0051) -0.010 (0.000) -0.007 (0.575) 0.010	3SLS, Initation 3.3354 (0.000) 1.260 (0.000) -0.677 (0.000) 0.386 (0.000) 3.168 (0.000) -0.003 (0.046) (0.000) 0.011 (0.0474)	0.000 (0.959) 0.084 (0.000) 0.000 (0.959) 0.008 (0.084) 0.001 (0.430) -0.005 (0.000) (0.1981)	-2.772 (0.001) -0.220 (0.449) -0.612 (0.021) 2.720 (0.001) 0.002 (0.565) 0.192 (0.000) -0.038	Innovation	Initiation   O.028   O.028   O.028   O.028   O.0552   O.886   O.0000   O.546   O.0000   O.546   O.0000   O.3752   O.0000   O.00	0.053 (0.404) 0.053 (0.404) (0.424) -0.020 (0.059) 0.001 (0.499) 0.001	Growth -5.291 (0.015) -0.574 (0.863) -1.298 (0.697) 4.273 (0.018)  0.098 (0.122) -0.052 (0.813)	10.069 (0.363) (0.363) (0.363) (0.363) (0.363) (0.363) (0.363) (0.363) (0.363) (0.363) (0.363) (0.364) (0.364) (0.364) (0.464) (0.464) (0.466)	3SLS, Initation -0.172 -0.470 -1.225 -0.0000 -0.828 -0.0000 -0.828 -0.0000 -0.139 -0.001 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003	Number   N	Growth 4.521 (0.005) -0.606 (0.036) -0.231 (0.414) -4.894 (0.006)
Innovation, t (log) Innovation, t-1 (log) Imitation, t-1 (log) Imitation, t-1 (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment	0.468 (0.450) 0.455 (0.082) 0.604 (0.008) -0.278 (0.183) -0.366 (0.490) -0.005 (0.552) 0.003 (0.836) 0.000 (0.994) 0.013	System   Initiation   -0.329 (0.724) 0.673 (0.000) -0.298 (0.315)     0.447 (0.107) 0.056 (0.949) 0.024 (0.150) 0.015 (0.445) 0.019 (0.726) 0.013	-0.016 (0.479) 0.012 (0.216) 0.006 (0.16) -0.004 (0.708) 0.000 (0.16) -0.004 (0.708) 0.000 (0.16) -0.002 -0.002	0.866 (0.839) -1.096 (0.631) -1.180 (0.545) -2.165 (0.594) -2.165 (0.594) -2.165 (0.594)	0.539 (0.000) 0.764 (0.000) 0.764 (0.000) -0.291 (0.000) -2.401 (0.000) -0.010 (0.0051) -0.010 (0.000) -0.007 (0.575) 0.010	3SLS, Initation 3.3354 (0.000) 1.260 (0.000) -0.677 (0.000) 0.386 (0.000) 3.168 (0.000) -0.003 (0.046) (0.000) 0.011 (0.0474)	0.000 (0.959) 0.084 (0.000) 0.000 (0.959) 0.008 (0.084) 0.001 (0.430) -0.005 (0.000) (0.1981)	-2.772 (0.001) -0.220 (0.449) -0.612 (0.021) 2.720 (0.001) 0.002 (0.565) 0.192 (0.000) -0.038 (0.056)	Innovation	Initiation   O.028   O.028   O.028   O.028   O.0552   O.886   O.0000   O.546   O.0000   O.546   O.0000   O.3752   O.0000   O.00	0.053 (0.404) 0.053 (0.404) (0.424) -0.020 (0.059) 0.001 (0.499) 0.001	0.098 (0.122) -0.052 (0.863) -1.298 (0.697) 4.273 (0.018) 0.098 (0.122) -0.052 (0.813) 0.023 (0.806) 2.940	10.069 (0.363) (0.363) (0.363) (0.363) (0.363) (0.363) (0.363) (0.363) (0.363) (0.363) (0.363) (0.364) (0.364) (0.364) (0.464) (0.464) (0.466)	3SLS, Initation -0.172 -0.470 -1.225 -0.0000 -0.828 -0.0000 -0.828 -0.0000 -0.139 -0.001 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003	Number   N	Growth 4.521 (0.005) -0.606 (0.036) -0.231 (0.414) -4.894 (0.006) -0.001 (0.892) 0.213 (0.000) -0.035 (0.009)
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation	0.468 (0.450) 0.455 (0.082) 0.604 (0.008) -0.278 (0.183) -0.366 (0.490) -0.005 (0.552) 0.003 (0.836) 0.000 (0.994) 0.013	System   Initiation   -0.329 (0.724) 0.673 (0.000) -0.298 (0.315)     0.447 (0.107) 0.056 (0.949) 0.024 (0.150) 0.015 (0.445) 0.019 (0.726) 0.013	-0.016 (0.479) 0.012 (0.216) 0.006 (0.16) -0.004 (0.708) 0.000 (0.16) -0.004 (0.708) 0.000 (0.16) -0.002 -0.002	0.866 (0.839) -1.096 (0.631) -1.180 (0.545) -2.165 (0.594) -0.019 (0.569) (0.240) -0.083 (0.384) (0.384)	0.539 (0.000) 0.764 (0.000) 0.764 (0.000) -0.291 (0.000) -2.401 (0.000) -0.010 (0.0051) -0.010 (0.000) -0.007 (0.575) 0.010	3SLS, Initation 3.3354 (0.000) 1.260 (0.000) -0.677 (0.000) 0.386 (0.000) 3.168 (0.000) -0.003 (0.046) (0.000) 0.011 (0.0474)	0.000 (0.959) 0.084 (0.000) 0.000 (0.959) 0.008 (0.084) 0.001 (0.430) -0.005 (0.000) (0.1981)	-2.772 (0.001) -0.220 (0.449) -0.612 (0.021) 2.720 (0.001) 0.002 (0.565) 0.192 (0.000) -0.038 (0.056) (0.056)	Innovation	Initiation   O.028   O.028   O.028   O.028   O.0552   O.886   O.0000   O.546   O.0000   O.546   O.0000   O.0545   O.0000   O.00	0.053 (0.404) 0.053 (0.404) (0.424) -0.020 (0.059) 0.001 (0.499) 0.001	0.098 (0.18) -0.273 (0.863) -1.298 (0.697) -1.298 (0.123) -1.298 (0.697)	10.069 (0.363) (0.363) (0.363) (0.363) (0.363) (0.363) (0.363) (0.363) (0.363) (0.363) (0.363) (0.364) (0.364) (0.364) (0.464) (0.464) (0.466) (0.466) (0.476)	3SLS, Initation -0.172 -0.470 -1.225 -0.0000 -0.828 -0.0000 -0.828 -0.0000 -0.139 -0.001 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.002 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003 -0.003	Number   N	Growth 4.521 (0.005) -0.606 (0.036) -0.231 (0.414) -4.894 (0.006) -0.001 (0.892) (0.213 (0.000) -0.035 (0.000) -0.035 (0.000)
Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation D.Innovation [t - t-1] D.Imitation [t - t-1]	0.468 (0.450) 0.455 (0.082) 0.604 (0.008) -0.278 (0.183) -0.366 (0.490) -0.005 (0.552) 0.003 (0.336) 0.000 (0.994) 0.013 (0.697)	System Initation -0.329 -0.329 (0.724) -0.673 (0.000) -0.298 (0.315)  0.447 (0.107) -0.056 (0.949) -0.024 (0.150) -0.015 (0.445) -0.015 (0.455) -0.019 (0.726) -0.013 (0.575)	-0.016 (0.479) 0.012 (0.216) 0.006 (0.000) (0.169) -0.002 (0.845)	0.866 (0.839) -1.096 (0.631) -1.180 (0.545) -2.165 (0.594) -2.165 (0.594) -2.165 (0.594) -2.165 (0.594)	Innovation 2.548 (0.000)  0.539 (0.000) 0,764 (0.000) -0.291 (0.000) -2.401 (0.000) -0.002 (0.051) -0.010 (0.000) (0.000) (0.000) (0.128)	381.S.  Initation 3.354 (0.000) 1.260 (0.000) -0.677 (0.000)  0.386 (0.000) -0.003 (0.0046) 0.013 (0.0046) 0.011 (0.4744) -0.014 (0.123)	0.000 (0.000) (0.959) 0.008 (0.084) 0.001 (0.430) -0.005 (0.002) 0.000 (0.198) -0.001 (0.674)	-2.772 (0.001) -0.220 (0.449) -0.612 (0.021) 2.720 (0.001) 0.002 (0.565) 0.192 (0.000) -0.038 (0.056) 1.714 (0.000) -0.500 (0.075)	Innovation	System   Imitation   0.028   (0.952)   0.886   (0.000)   -0.546   (0.000)   -0.546   (0.000)   -0.546   (0.000)   -0.352   (0.471)   0.019   (0.526)   -0.004   (0.881)   0.002   (0.976)   0.002   (0.976)   0.002   (0.976)   0.005   (0.769)   (0.769)	0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.001 (0.499) 0.002 (0.499) 0.002 (0.324)	0.098 (0.122) -0.052 (0.018) -1.298 (0.697) -1.298 (0.697) -1.298 (0.018)	Innovation -0.169 (0.363)  0.678 (0.000) 0.730 (0.000) -0.491 (0.000) 0.233 (0.247) -0.001 (0.446) 0.001 (0.420) -0.008 (0.410) -0.008 (0.1129)	3SLS, Initation -0.172 -0.172 -0.470) -1.225 -0.000) -0.828 -0.0000) -0.675 -0.0000 -0.589) -0.001 -0.589) -0.001 -0.325 -0.002 -0.494) -0.008 -0.486 -0.013 -0.049)	0.006 0.006 0.431 0.021 0.001 0.847) 0.000 0.701 0.000 0.304) 0.000 0.439) 0.001 0.000)	Growth 4.521 (0.005) -0.606 (0.036) -0.231 (0.414) -4.894 (0.006) -0.001 (0.892) 0.213 (0.000) -0.035 (0.091) 1.901 (0.000) -0.512 (0.120)
Innovation, t (log) Innovation, t-1 (log) Imitation, t-1 (log) Imitation, t-1 (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation D.Innovation [t - t-1] D.Imitation [t - t-1] Country Effect	0.468 (0.450)  0.455 (0.082) 0.604 (0.008) -0.278 (0.183) -0.366 (0.490) -0.005 (0.552) 0.003 (0.836) 0.000 (0.994) (0.697)	System   Initation   -0.329 (0.724)   -0.329 (0.724)   -0.673 (0.000)   -0.298 (0.315)   -0.447 (0.107)   -0.056 (0.949)   -0.056 (0.949)   -0.015 (0.445)   -0.013 (0.575)   -0.015 (0.445)   -0.013 (0.575)   -0.015 (0.445)   -0.013 (0.575)   -0.015 (0.445)   -0.013 (0.575)   -0.015 (0.445)	-0.016 (0.479) 0.012 (0.216) 0.006 (0.16) -0.004 (0.708) 0.000 (0.16) -0.002 (0.845)	0.866 (0.839) -1.096 (0.631) -1.180 (0.545) -2.165 (0.594) -0.19 (0.569) 0.248 (0.240) -0.083 (0.384) 3.264 (0.151) -0.932 (0.518) Yes	Innovation 2.548 (0.000) 0.539 (0.000) 0.764 (0.000) -0.291 (0.000) -0.2401 (0.000) -0.007 (0.575) 0.010 (0.128)	381.8,  Initation -3.354 (0.000) -1.260 (0.000) -0.677 (0.000)  0.386 (0.000) -0.003 3.168 (0.000) -0.003 (0.046) 0.013 (0.000) -0.013 (0.000) -0.013	0.000 (0.000) 0.000 (0.959) 0.008 (0.084) 0.001 (0.430) -0.005 (0.002) 0.000 (0.198) -0.001 (0.674)	-2.772 (0.001) -0.220 (0.449) -0.612 (0.021) 2.720 (0.001)  0.002 (0.565) 0.192 (0.000) -0.038 (0.056) 1.714 (0.000) -0.500 (0.075) Yes Yes	Innovation	Nystem   Imitation   0.028   0.028   (0.952)   0.886   (0.000)   -0.546   (0.089)   0.756   (0.000)   -0.546   (0.089)   0.756   (0.000)   (0.471)   0.019   (0.526)   -0.004   (0.881)   0.002   (0.976)   0.008   (0.769)   0.00	0.053 (0.000) 0.053 (0.404) -0.040 (0.424) -0.020 (0.059) 0.001 (0.490) 0.029 (0.324)	0.098 0.122 0.023 0.023 0.0574 0.663) 0.098 0.122) 0.052 0.813) 0.023 0.8060 2.940 0.353) 1.1077 9.759 9.759	Innovation	3SLS, Initation -0.172 -0.172 -0.470) -1.225 -0.0000) -0.828 -0.0000) -0.828 -0.0000 -0.675 -0.0002 -0.589) -0.001 -0.589) -0.001 -0.329 -0.002 -0.494) -0.008 -0.4860 -0.003 -0.0049	with FE   P.capital   0.922   (0.000)	Growth 4.521 (0.005) -0.606 (0.036) -0.231 (0.414) -4.894 (0.006) -0.001 (0.892) 0.213 (0.000) -0.035 (0.091) (0.000) -0.512 (0.120) Yes Yes
Innovation, t (log) Innovation, t-1 (log) Imitation, t-1 (log) Imitation, t-1 (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation D.Innovation [t - t-1] D.Imitation [t - t-1] Country Effect Time Effect Countries/Observations R <sup>2</sup>	0.468 (0.450)  0.455 (0.082) 0.604 (0.008) -0.278 (0.183) -0.366 (0.490) -0.005 (0.552) 0.003 (0.836) 0.000 (0.994) 0.013 (0.697)  Yes Yes Yes 73/256	Systen   Initation   -0.329   (0.724)   -0.329   (0.724)   -0.673   (0.000)   -0.298   (0.315)   -0.573   (0.107)   -0.056   (0.949)   -0.024   (0.150)   -0.024   (0.150)   -0.024   (0.150)   -0.024   (0.150)   -0.024   (0.150)   -0.024   (0.150)   -0.024   (0.150)   -0.024   (0.150)   -0.024   -0.025   -0.024   -0.025   -0	-0.016 (0.479) (0.166 (0.016) (0.006) (0.166) (0.006) (0.016) (0.006) (0.016) (0.006) (0.016) (0.004) (0.708) (0.006) (0.169) (0.006) (0.169) (0.4845)	0.866 (0.839) -1.096 (0.631) -1.180 (0.545) -2.165 (0.594) -2.165	1. Innovation 2.548 (0.000) 0.539 (0.000) 0.764 (0.000) 0.72401 (0.000) 0.22401 (0.000) 0.002 (0.051) 0.001 (0.000) (0.002) 0.002 (0.051) 0.010 (0.128)	3SLS,  Imitation -3.354 (0.000) -1.260 (0.000) -0.677 (0.000) -0.386 (0.000) -0.386 (0.000) -0.003 -0.003 (0.046) -0.013 (0.000) -0.011 (0.474) (0.123)	0.000 (0.000) (0.959) 0.008 (0.001) (0.430) -0.001 (0.430) -0.001 (0.674)	-2.772 (0.001) -0.220 (0.449) -0.612 (0.021) 2.720 (0.001)  2.720 (0.001)  0.002 (0.565) 0.192 (0.000) -0.038 (0.056) 1.714 (0.000) -0.500 (0.075) Yes	Innovation	System   Imitation   0.028   (0.952)   (0.952)   (0.952)   (0.952)   (0.900)   (0.526)   (0.000)   (0.352)   (0.471)   (0.191)   (0.191)   (0.526)   (0.000)   (0.976)   (0.97	0.053 (0.000) 0.053 (0.404) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001 (0.490) 0.029 (0.324)	0.098 (0.123 (0.863) (0.863) (0.018) (	Innovation -0.169 (0.363)  0.678 (0.000) 0.730 (0.000) 0.730 (0.000) 0.233 (0.247) -0.001 (0.446) 0.001 (0.420) -0.008 (0.410) -0.008 (0.129)	3SLS, Imitation -0.172 -0.172 -0.470) -1.225 -0.0000 -0.828 -0.0000 -0.828 -0.0000 -0.828 -0.0001 -0.675 -0.0002 -0.675 -0.002 -0.675 -0.002 -0.001 -0.325) -0.001 -0.325) -0.001 -0.325) -0.001 -0.325) -0.002 -0.494) -0.008 -0.486) -0.013 -0.049	with FE P.capital 0.922 (0.000)  0.006 (0.431) -0.001 (0.847) 0.000 (0.701) -0.001 (0.394) 0.000 (0.439) -0.014 (0.000)	Growth 4.521 (0.005) -0.606 (0.036) -0.231 (0.414) -4.894 (0.006) -0.001 (0.892) 0.213 (0.000) -0.035 (0.091) 1.901 (0.000) -0.512 (0.129)
Innovation, t (log) Innovation, t-1 (log) Imitation, t-1 (log) Imitation, t-1 (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation D.Innovation [t - t-1] D.Imitation [t - t-1] Countries/Observations	0.468 (0.450)  0.455 (0.082) 0.604 (0.008) -0.278 (0.183) -0.366 (0.490) -0.005 (0.552) 0.003 (0.836) 0.000 (0.994) (0.697)	System   Initation   -0.329 (0.724)   -0.329 (0.724)   -0.673 (0.000)   -0.298 (0.315)   -0.447 (0.107)   -0.056 (0.949)   -0.056 (0.949)   -0.015 (0.445)   -0.013 (0.575)   -0.015 (0.445)   -0.013 (0.575)   -0.015 (0.445)   -0.013 (0.575)   -0.015 (0.445)   -0.013 (0.575)   -0.015 (0.445)	-0.016 (0.479) 0.012 (0.216) 0.006 (0.16) -0.004 (0.708) 0.000 (0.16) -0.002 (0.845)	0.866 (0.839) -1.096 (0.631) -1.180 (0.545) -2.165 (0.594) -0.19 (0.569) 0.248 (0.240) -0.083 (0.384) 3.264 (0.151) -0.932 (0.518) Yes	Innovation 2.548 (0.000) 0.539 (0.000) 0.764 (0.000) -0.291 (0.000) -0.001 (0.000) -0.010 (0.000) -0.010 (0.001) (0.128)	381.S.  Initation 3.354 (0.000) 1.260 (0.000) -0.677 (0.000)  0.386 (0.000) -0.003 (0.0046) 0.013 (0.0046) 0.013 (0.0046) (0.0446) (0.123)	0.000 (0.000) 0.000 (0.959) 0.008 (0.084) 0.001 (0.430) -0.005 (0.002) (0.002) (0.674)	-2.772 (0.001) -0.220 (0.449) -0.612 (0.021) 2.720 (0.001)  0.002 (0.565) 0.192 (0.000) -0.038 (0.056) 1.714 (0.000) -0.500 (0.075) Yes Yes Yes	Innovation	Nystem   Imitation   0.028   0.028   (0.952)   0.886   (0.000)   -0.546   (0.089)   0.756   (0.000)   -0.546   (0.089)   0.756   (0.000)   (0.471)   0.019   (0.526)   -0.004   (0.881)   0.002   (0.976)   0.008   (0.769)   0.00	0.053 (0.000) 0.053 (0.404) -0.040 (0.424) -0.020 (0.059) 0.001 (0.490) 0.029 (0.324)	0.098 0.122 0.023 0.023 0.0574 0.663) 0.098 0.122) 0.052 0.813) 0.023 0.8060 2.940 0.353) 1.1077 9.759 9.759	Innovation -0.169 (0.363)  0.678 (0.000) 0.730 (0.000) -0.491 (0.000) 0.233 (0.247) -0.001 (0.446) 0.001 (0.420) -0.008 (0.410) -0.008 (0.129)	3SLS, Initation -0.172 -0.172 (0.470) 1.225 (0.000) -0.828 (0.000) -0.828 (0.000) 0.675 (0.000) 0.139 (0.589) 0.001 (0.325) -0.002 (0.494) 0.008 (0.486) 0.013 (0.049)	0.006	Growth 4,521 (0,005) -0,606 (0,036) -0,231 (0,414) -4,894 (0,006)  -0,001 (0,892) 0,213 (0,000) -0,035 (0,091) 1,901 (0,000) -0,512 (0,120) Yes Yes Yes

AR(2) test (p-value) 0.221 0.146 0.149 0.171 0.100 0.585 0.105 0.194

Parantheses denote p-values. For System-GMM, the test statistics are calculated based on the Windmeijer robust standard errors. The AR(2) test refers to the Arellano-Bond test for autocorrelations.

		Ir	Benchm mov1 & Imit			stock measu.	re			nov1 & Imit.	1, with public			xied by telepl	hone measure	?)
	Innovation	System	ı GMM	Growth	Innovation	3SLS,	with FE	Growth	Innovation	System	1 GMM	Growth	-	3SLS,	with FE	Growth
Initial GDP per capita (log)	0.277	0.468	P.capital 1.127	-4.581	-0.075	-1.313	P.capital 1.033	1.004	-0.306	0.493	P.capital 1.072	-3.954	-0.302	-0.120	P.capital 0.932	1.846
Innovation, t (log)	(0.538)	(0.440) 0.852 (0.000)	(0.000)	(0.335)	(0.710)	(0.000) 1.226 (0.000)	(0.000)	(0.184) -0.812 (0.000)	(0.453)	(0.362) 0.835 (0.983)	(0.000)	(0.005)	(0.211)	(0.658) 1.064 (0.000)	(0.000)	(0.232) -0.750 (0.000)
Innovation, t-1 (log)	0.568 (0.036)	-0.113 (0.619)		(0.013)	0.730 (0.000)	-0.906 (0.000)		(0.000)	0.403 (0.109)	-0.037 (0.917)		(0.262)	0.747 (0.000)	-0.798 (0.000)		(0.000)
Imitation, t (log)	0.696	(0.01)		2.276 (0.191)	0.872	(0.000)		0.438 (0.003)	0.773 (0.000)	(0.517)		1.233 (0.646)	0.831 (0.000)	(0.000)		0.396 (0.006)
Imitation, t-1 (log)	-0.327 (0.096)	0.026 (0.908)		(012, 2)	-0.628 (0.000)	0.753 (0.000)		()	-0.177 (0.351)	-0.006 (0.983)		(0.0.0)	-0.633	0.758 (0.000)		(01000)
Public capital (log)	-0.342 (0.444)	-0.079 (0.930)		3.067 (0.431)	-1.264 (0.595)	1.236 (0.530)		-0.419 (0.540)	0.339 (0.350	-0.504 (0.344)		4.305 (0.001)	0.357 (0.170)	0.107 (0.714)		-2.011 (0.226)
FDI	0.007 (0.464)	-0.006 (0.675)			0.000 (0.885)	0.000 (0.841)			0.003 (0.810)	0.000 (0.998)			0.000 (0.714)	0.001 (0.555)		
Skilled workforce	0.008 (0.539)	0.001 (0.959)			-0.002 (0.284)	0.003 (0.239)			-0.007 (0.715)	0.019 (0.618)			0.002 (0.418)	-0.001 (0.551)		
Gov. expenditure	0.046 (0.386)	-0.032 (0.710)	-0.016 (0.479)		(0.021	-0.029 (0.021)	-0.004 (0.642)		0.068 (0.281)	-0.068 (0.521)	0.053 (0.494)		(0.022	-0.023 (0.051)	-0.004 (0.548)	
Non-tax revenue	-0.006 (0.876)	-0.024 (0.781)	(0.216)		0.014 (0.039)	-0.014 (0.041)	0.007 (0.119)		0.033 (0.503)	-0.039 (0.539)	-0.040 (0.424)		0.002 (0.706)	-0.001 (0.850)	(0.701)	
Gov. debt Urban			0.006 (0.016) -0.004				0.003 (0.002) -0.001				-0.020 (0.059)				0.000 (0.978) 0.000	
Population density			(0.708) 0.000				(0.546) 0.000				0.000 (0.978) 0.001				(0.745) 0.000	
Current account balance			(0.169)				(0.203) 0.002				(0.490) 0.029				(0.199) -0.012	
Trade			(0.845)	0.029			(0.708)	0.002			(0.324)	0.108			(0.002)	0.003
Investment				(0.469)				(0.593) 0.227				(0.016) -0.116				(0.598) 0.218
Inflation				(0.039)				(0.000)				(0.410)				(0.000)
D.Innovation [t - t-1]				(0.509) 0.455				(0.498) 0.406				(0.893) 0.073				(0.339) 0.497
D.Imitation [t - t-1]				(0.569) 0.860				(0.114) 0.520				(0.954) 1.343				(0.078) 0.555
Country Effect	Yes	Yes	Yes	(0.464) Yes	Yes	Yes	Yes	(0.022) Yes	Yes	Yes	Yes	(0.298) Yes	Yes	Yes	Yes	(0.013) Yes
Time Effect Countries/Observations	Yes 67/230	Yes 67/230	Yes 94/403	Yes 79/302	Yes 68/231	Yes 68/231	Yes 68/231	Yes 68/231	Yes 65/216	Yes 65/216	Yes 88/369	Yes 73/276	Yes 66/217	Yes 66/217	Yes 66/217	Yes 66/217
R <sup>2</sup> Number of Instruments	37	37	46	42	0.800	0.752	0.940	0.399	32	32	39	34	0.892	0.848	0.942	0.129
Hansen J-statistics (p-value)	0.750	0.338	0.859	0.283					0.787	0.664	0.185	0.195				
AD(2) toot (m. violing)	0.102									0.220	0.105					
AR(2) test (p-value)	0.102	0.279	0.149	0.535	oublic capital	stock measu	re		0.116	0.328 2002 & Imit	0.105 2, with public	0.415	ıre stock (pro	xied by telepl	hone measure	?)
AR(2) test (p-value)		0.279 In System	0.149 mov2 & Imit2 n GMM	0.535 2, with IMF <sub>I</sub>		3SLS,	with FE	Cucurth	0.116 In	nnov2 & Imit. System	2, with public n GMM	0.415 infrastructu			with FE	
	0.102 Innovation 0.796	0.279 In System Imitation	0.149 mov2 & Imit2	0.535	Innovation 2.617	3SLS,		Growth -0.550	0.116	nnov2 & Imit. System Imitation	2, with public	0.415 infrastructu  Growth	Innovation	3SLS, Imitation		
Initial GDP per capita (log)	Innovation	0.279	0.149 mov2 & Imit2 1 GMM P.capital	0.535 2, with IMF p Growth -6.608 (0.226) -1.158	Innovation	3SLS, Imitation -1.663 (0.000) 0.647	with FE P.capital	-0.550 (0.482) -0.046	0.116 In Innovation	System System Imitation 0.265 (0.695) 0.579	2, with public n GMM P.capital	0.415 cinfrastructu Growth -4.197 (0.028) -0.134	Innovation	3SLS, Imitation -1.292 (0.000) 0.735	with FE P.capital	7.028 (0.000) -0.232
Initial GDP per capita (log) Innovation, t (log)	Innovation 0.796 (0.551) 0.722	0.279  In System  Imitation  0.244 (0.733) 0.424 (0.000) -0.329	0.149 mov2 & Imit2 1 GMM P.capital 1.127	0.535 2, with IMF p Growth -6.608 (0.226)	2.617 (0.000) 0.750	3SLS, 1 Imitation -1.663 (0.000) 0.647 (0.000) -0.482	P.capital 1.035	-0.550 (0.482)	0.116 Innovation -0.588 (0.570) 0.399	Name	2, with public n GMM P.capital 1.072	0.415 cinfrastructu Growth -4.197 (0.028)	1.379 (0.000)	3SLS, 1 Imitation -1.292 (0.000) 0.735 (0.000) -0.531	P.capital 0.918	Growth 7.028 (0.000)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log)	0.796 (0.551) 0.722 (0.214) 0.953	0.279  In System  Imitation  0.244 (0.733) 0.424 (0.000)	0.149 mov2 & Imit2 1 GMM P.capital 1.127	0.535 2, with IMF p Growth -6.608 (0.226) -1.158 (0.441) -0.595	2.617 (0.000) 0.750 (0.000) 1.397	3SLS, Imitation -1.663 (0.000) 0.647 (0.000)	P.capital 1.035	-0.550 (0.482) -0.046 (0.736)	0.116  Innovation -0.588 (0.570)  0.399 (0.461) 0.628	Name	2, with public n GMM P.capital 1.072	0.415 infrastructu Growth -4.197 (0.028) -0.134 (0.951) -1.861	1.379 (0.000) 0.729 (0.000) 1.253	3SLS, Imitation -1.292 (0.000) 0.735 (0.000)	P.capital 0.918	7.028 (0.000) -0.232 (0.154)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Imitation, t (log)	0.796 (0.551) 0.722 (0.214) 0.953 (0.001) -0.575	0.279  Note    System  Initation 0.244 (0.733) 0.424 (0.000) -0.329 (0.307)  0.443	0.149 mov2 & Imit2 1 GMM P.capital 1.127	0.535 2, with IMF p Growth -6.608 (0.226) -1.158 (0.441)	2.617 (0.000) 0.750 (0.000) 1.397 (0.000) -1.011	3SLS, Imitation -1.663 (0.000) 0.647 (0.000) -0.482 (0.000) 0.717	P.capital 1.035	-0.550 (0.482) -0.046 (0.736)	0.116 Innovation -0.588 (0.570) 0.399 (0.461) 0.628 (0.005) -0.301	nov2 & Imit.  System  Imitation  0.265 (0.695) 0.579 (0.000) -0.301 (0.605)	2, with public n GMM P.capital 1.072	0.415 infrastructu Growth -4.197 (0.028) -0.134 (0.951)	1.379 (0.000) 0.729 (0.000) 1.253 (0.000) -1.075	3SLS, 1 Imitation -1.292 (0.000) 0.735 (0.000) -0.531 (0.000) 0.849	P.capital 0.918	7.028 (0.000) -0.232 (0.154)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log)	0.796 (0.551) 0.722 (0.214) 0.953 (0.001) -0.575 (0.362) -0.611	0.279  In System  Initation 0.244 (0.733) 0.424 (0.000) -0.329 (0.307)  0.443 (0.115) -0.327	0.149 mov2 & Imit2 1 GMM P.capital 1.127	0.535 2, with IMF p Growth -6.608 (0.226) -1.158 (0.441) -0.595 (0.716) 4.663	2.617 (0.000) 0.750 (0.000) 1.397 (0.000) -1.011 (0.000) -2.496	3SLS, Imitation -1.663 (0.000) 0.647 (0.000) -0.482 (0.000) 0.717 (0.000) 1.593	P.capital 1.035	-0.550 (0.482) -0.046 (0.736) -0.349 (0.061)	0.116 Innovation -0.588 (0.570) 0.399 (0.461) 0.628 (0.005) -0.301 (0.641) 0.370	mov2 & Imit.  System  Imitation  0.265 (0.695) 0.579 (0.000) -0.301 (0.605)  0.374 (0.497) -0.164	2, with public n GMM P.capital 1.072	0.415 cinfrastructu Growth -4.197 (0.028) -0.134 (0.951) -1.861 (0.293) 4.046	1.379 (0.000) 0.729 (0.000) 1.253 (0.000) -1.075 (0.000) -1.438	3SLS, Imitation -1.292 (0.000) 0.735 (0.000) -0.531 (0.000) 0.849 (0.000) 1.365	P.capital 0.918	Growth 7.028 (0.000) -0.232 (0.154) -0.368 (0.079)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log)	Innovation 0.796 (0.551)  0.722 (0.214) 0.953 (0.001) -0.575 (0.362) -0.611 (0.585) 0.013	0.279  In System  Imitation 0.244 (0.733) 0.424 (0.000) -0.329 (0.307)  0.443 (0.115) -0.327 (0.621) -0.008	0.149 mov2 & Imit2 1 GMM P.capital 1.127	0.535 2, with IMF p Growth -6.608 (0.226) -1.158 (0.441) -0.595 (0.716)	0.750 (0.000) 0.750 (0.000) 1.397 (0.000) -1.011 (0.000) -2.496 (0.000) 0.001	3SLS, Initation -1.663 (0.000) 0.647 (0.000) -0.482 (0.000)  0.717 (0.000) 1.593 (0.000) -0.001	P.capital 1.035	-0.550 (0.482) -0.046 (0.736) -0.349 (0.061)	0.116  Innovation -0.588 (0.570)  0.399 (0.461) 0.628 (0.005) -0.301 (0.641) 0.370 (0.693) 0.013	mov2 & Imit.  System  Initation 0.265 (0.695) 0.579 (0.000) -0.301 (0.605)  0.374 (0.497) -0.164 (0.766) -0.017	2, with public n GMM P.capital 1.072	0.415 cinfrastructu Growth -4.197 (0.028) -0.134 (0.951) -1.861 (0.293)	1.379 (0.000) 0.729 (0.000) 1.253 (0.000) -1.075 (0.000) -1.438 (0.000) -0.001	3SLS, Imitation -1.292 (0.000) -0.531 (0.000) -0.531 (0.000) 0.849 (0.000) 1.365 (0.000) 0.001	P.capital 0.918	Growth 7.028 (0.000) -0.232 (0.154) -0.368 (0.079)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI	1nnovation 0.796 (0.551) 0.722 (0.214) 0.953 (0.001) -0.575 (0.362) -0.611 (0.585) 0.013 (0.804) -0.020	0.279  In System Imitation 0.244 (0.733) 0.424 (0.000) -0.329 (0.307)  0.443 (0.115) -0.327 (0.621) -0.008 (0.733) 0.020	0.149 mov2 & Imit2 1 GMM P.capital 1.127	0.535 2, with IMF p Growth -6.608 (0.226) -1.158 (0.441) -0.595 (0.716) 4.663	2.617 (0.000) 0.750 (0.000) 1.397 (0.000) -1.011 (0.000) -2.496 (0.000) 0.001 (0.589) -0.009	3SLS, 1 Imitation -1.663 (0.000) 0.647 (0.000) -0.482 (0.000) -0.17 (0.000) 1.593 (0.000) -0.001 (0.571) 0.007	P.capital 1.035	-0.550 (0.482) -0.046 (0.736) -0.349 (0.061)	0.116  Innovation -0.588 (0.570)  0.399 (0.461) 0.628 (0.005) -0.301 (0.641) 0.370 (0.693) 0.013 (0.697) 0.037	nov2 & Imit.  System  Imitation 0.265 (0.695) 0.579 (0.000) -0.301 (0.605)  0.374 (0.497) -0.164 (0.766) -0.017 (0.497) 0.019	2, with public n GMM P.capital 1.072	0.415 cinfrastructu Growth -4.197 (0.028) -0.134 (0.951) -1.861 (0.293) 4.046	1.379 (0.000) 0.729 (0.000) 1.253 (0.000) -1.075 (0.000) -1.438 (0.000) -0.001 (0.500)	3SLS, Initiation -1.292 (0.000) 0.735 (0.000) -0.531 (0.000) 0.849 (0.000) 1.365 (0.000) 0.001 (0.426) -0.001	P.capital 0.918	Growth 7.028 (0.000) -0.232 (0.154) -0.368 (0.079)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce	0.796 (0.551) 0.722 (0.214) 0.953 (0.001) -0.575 (0.362) -0.611 (0.585) 0.013 (0.804) -0.020 (0.588)	0.279  h  System  Imitation  0.244  (0.733)  0.424  (0.000)  -0.329  (0.307)  0.443  (0.115)  -0.032  (0.621)  -0.002  (0.373)  0.020  (0.343)  -0.212	0.149 and Market Inc. a GMM P.capital 1.127 (0.000)	0.535 2, with IMF p Growth -6.608 (0.226) -1.158 (0.441) -0.595 (0.716) 4.663	0.750 0.750 0.000) 1.397 (0.000) -1.011 (0.000) -2.496 (0.000) 0.001 (0.589) -0.009 (0.012)	3SLS.  Initation -1.663 (0.000) 0.647 (0.000) -0.482 (0.000)  0.717 (0.000) 1.593 (0.000) -0.001 (0.571) 0.007 (0.008) -0.011	with FE P.capital 1.035 (0.000)	-0.550 (0.482) -0.046 (0.736) -0.349 (0.061)	0.116  Innovation -0.588 (0.570)  0.399 (0.461) 0.628 (0.005) -0.301 (0.641) 0.370 (0.693) 0.013 (0.697) 0.037 (0.100) (0.401)	nov2 & Imit.  System  Imitation 0.265 (0.695) 0.579 (0.009) -0.301 (0.605)  0.374 (0.497) -0.164 (0.766) -0.017 (0.497) 0.019 (0.163) -0.176	2, with public  GMM  P.capital  1.072  (0.000)	0.415 cinfrastructu Growth -4.197 (0.028) -0.134 (0.951) -1.861 (0.293) 4.046	1.379 (0.000) 0.729 (0.000) 1.253 (0.000) -1.075 (0.000) -1.438 (0.000) -0.001 (0.500) 0.002 (0.426) 0.023	3SLS, Initation 1.1292 (0.000) 0.735 (0.000) -0.531 (0.000) 0.849 (0.000) 1.365 (0.000) 0.001 (0.426) -0.001 (0.426)	with FE P.capital 0.918 (0.000)	Growth 7.028 (0.000) -0.232 (0.154) -0.368 (0.079)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Imitation, t-1 (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure	0.796 (0.551) 0.722 (0.214) 0.953 (0.001) -0.575 (0.362) -0.611 (0.585) 0.013 (0.804) -0.020 (0.158) -0.150	0.279  System Imitation 0.244 (0.733) 0.424 (0.003) 0.424 (0.000) 0.329 (0.307)  0.443 (0.115) -0.327 (0.621) -0.008 (0.733) 0.020 (0.343) -0.212 (0.073) 0.116	0.149 auto 2 Mmt 1 GMM P.capital 1.127 (0.000)  -0.016 (0.479) 0.012	0.535 2, with IMF p Growth -6.608 (0.226) -1.158 (0.441) -0.595 (0.716) 4.663	0.750 (0.000) 0.750 (0.000) 1.397 (0.000) -1.011 (0.000) -2.496 (0.000) 0.001 (0.589) -0.009 (0.012) 0.019 (0.309)	3SLS.  Initation -1.663 (0.000) 0.647 (0.000) -0.482 (0.000)  0.717 (0.000) 1.593 (0.000) -0.001 (0.571) 0.007 (0.008) -0.011 (0.347)	with FE P.capital 1.035 (0.000)  -0.008 (0.346) 0.005	-0.550 (0.482) -0.046 (0.736) -0.349 (0.061)	0.116  Innovation -0.588 (0.570)  0.399 (0.461) 0.628 (0.005) -0.301 (0.641) 0.370 (0.693) 0.013 (0.697) 0.037 (0.162) -0.043 (0.719)	mov2 & Imit.  System Imitation 0.265 (0.695) 0.579 (0.000) -0.301 (0.605)  0.374 (0.497) -0.164 (0.766) -0.017 (0.497) 0.019 (0.163) -0.176 (0.217)	2, with public GMM P.capital 1.072 (0.000)	0.415 cinfrastructu Growth -4.197 (0.028) -0.134 (0.951) -1.861 (0.293) 4.046	0.729 (0.000) 0.729 (0.000) 1.253 (0.000) -1.075 (0.000) -1.438 (0.000) -0.001 (0.500) 0.002 (0.426) 0.023 (0.077)	3SLS.  Initation 1.292 (0.000) 0.735 (0.000) -0.531 (0.000)  0.849 (0.000) 1.365 (0.000) (0.426) -0.001 (0.426) -0.019 (0.427) (0.002	with FE P-capital 0.918 (0.000)	Growth 7.028 (0.000) -0.232 (0.154) -0.368 (0.079)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Imitation, t-1 (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue	0.796 (0.551) 0.722 (0.214) 0.953 (0.001) -0.575 (0.362) -0.611 (0.585) 0.013 (0.804) -0.020 (0.588) 0.150 (0.158)	0.279 h  System Imitation 0.244 (0.733) 0.424 (0.000) -0.329 (0.307)  0.443 (0.115) -0.327 (0.621) -0.008 (0.733) 0.020 (0.343) -0.212 (0.073)	0.149 and 24 Imiti- 10 GMM P.capital 1.127 (0.000)  -0.016 (0.479) 0.012 (0.216) 0.006	0.535 2, with IMF p Growth -6.608 (0.226) -1.158 (0.441) -0.595 (0.716) 4.663	0.750 (0.000) 1.397 (0.000) 1.397 (0.000) -1.011 (0.000) -2.496 (0.000) 0.001 (0.589) -0.009 (0.012) 0.019	3SLS.  Initation -1.663 (0.000) 0.647 (0.000) -0.482 (0.000) -0.717 (0.000) 1.593 (0.000) -0.001 (0.571) (0.008) -0.001 (0.571) (0.008) -0.011 (0.347)	### P.eapital 1.035 (0.000)  -0.008 (0.346) 0.005 (0.290) 0.001	-0.550 (0.482) -0.046 (0.736) -0.349 (0.061)	0.116  Innovation -0.588 (0.570)  0.399 (0.461) 0.628 (0.005) -0.301 (0.641) 0.370 (0.693) 0.013 (0.697) 0.037 (0.162) -0.043 (0.719)	mov2 & Imit.  System  Initation  0.265 (0.695) 0.579 (0.000) -0.301 (0.605)  0.374 (0.497) -0.164 (0.766) -0.017 (0.497) 0.019 (0.163) -0.176 (0.217)	2, with public GMM P.capital 1.072 (0.000)  0.053 (0.494) -0.040 (0.424) -0.020	0.415 cinfrastructu Growth -4.197 (0.028) -0.134 (0.951) -1.861 (0.293) 4.046	1.379 (0.000) 0.729 (0.000) 1.253 (0.000) -1.075 (0.000) -1.438 (0.000) -0.001 (0.500) 0.002 (0.426) (0.023 (0.077)	3SLS, Initiation -1.292 -0.000) 0.735 (0.000) -0.531 (0.000) 0.849 (0.000) 1.365 (0.000) 0.001 (0.426) -0.001 (0.465) -0.001 (0.476)	with FE P.capital 0.918 (0.000)  0.002 (0.738) 0.001 (0.809) 0.000	7.028 (0.000) -0.232 (0.154) -0.368 (0.079)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Innivation, t (log) Imitation, t (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt	0.796 (0.551) 0.722 (0.214) 0.953 (0.001) -0.575 (0.362) -0.611 (0.585) 0.013 (0.804) -0.020 (0.158) -0.150	0.279  System Imitation 0.244 (0.733) 0.424 (0.003) 0.424 (0.000) 0.329 (0.307)  0.443 (0.115) -0.327 (0.621) -0.008 (0.733) 0.020 (0.343) -0.212 (0.073) 0.116	0.149  Martin 1 COM M  P.capital  1.127 (0.000)  -0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004	0.535 2, with IMF p Growth -6.608 (0.226) -1.158 (0.441) -0.595 (0.716) 4.663	0.750 (0.000) 0.750 (0.000) 1.397 (0.000) -1.011 (0.000) -2.496 (0.000) 0.001 (0.589) -0.009 (0.012) 0.019 (0.309)	3SLS.  Initation -1.663 (0.000) 0.647 (0.000) -0.482 (0.000)  0.717 (0.000) 1.593 (0.000) -0.001 (0.571) 0.007 (0.008) -0.011 (0.347)	-0.008 (0.346) (0.095) (0.095) (0.095) (0.095) (0.095) (0.095)	-0.550 (0.482) -0.046 (0.736) -0.349 (0.061)	0.116  Innovation -0.588 (0.570)  0.399 (0.461) 0.628 (0.005) -0.301 (0.641) 0.370 (0.693) 0.013 (0.697) 0.037 (0.162) -0.043 (0.719)	mov2 & Imit.  System Imitation 0.265 (0.695) 0.579 (0.000) -0.301 (0.605)  0.374 (0.497) -0.164 (0.766) -0.017 (0.497) 0.019 (0.163) -0.176 (0.217)	0.053 (0.494) -0.040 (0.020) (0.020) (0.059) (0.059) (0.059)	0.415 cinfrastructu Growth -4.197 (0.028) -0.134 (0.951) -1.861 (0.293) 4.046	0.729 (0.000) 0.729 (0.000) 1.253 (0.000) -1.075 (0.000) -1.438 (0.000) -0.001 (0.500) 0.002 (0.426) 0.023 (0.077)	3SLS.  Initation 1.292 (0.000) 0.735 (0.000) -0.531 (0.000)  0.849 (0.000) 1.365 (0.000) (0.426) -0.001 (0.426) -0.019 (0.427) (0.002	with FE P.capital 0.918 (0.000)  0.002 (0.738) 0.001 (0.809) 0.000 (0.867) 0.000	7.028 (0.000) -0.232 (0.154) -0.368 (0.079)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Innitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban	0.796 (0.551) 0.722 (0.214) 0.953 (0.001) -0.575 (0.362) -0.611 (0.585) 0.013 (0.804) -0.020 (0.158) -0.150	0.279  System Imitation 0.244 (0.733) 0.424 (0.003) 0.424 (0.000) 0.329 (0.307)  0.443 (0.115) -0.327 (0.621) -0.008 (0.733) 0.020 (0.343) -0.212 (0.073) 0.116	0.149  model of the control of the c	0.535 2, with IMF p Growth -6.608 (0.226) -1.158 (0.441) -0.595 (0.716) 4.663	0.750 (0.000) 0.750 (0.000) 1.397 (0.000) -1.011 (0.000) -2.496 (0.000) 0.001 (0.589) -0.009 (0.012) 0.019 (0.309)	3SLS.  Initation -1.663 (0.000) 0.647 (0.000) -0.482 (0.000)  0.717 (0.000) 1.593 (0.000) -0.001 (0.571) 0.007 (0.008) -0.011 (0.347)	-0.008 (0.346) (0.090) (0.090) (0.090) (0.000)	-0.550 (0.482) -0.046 (0.736) -0.349 (0.061)	0.116  Innovation -0.588 (0.570)  0.399 (0.461) 0.628 (0.005) -0.301 (0.641) 0.370 (0.693) 0.013 (0.697) 0.037 (0.162) -0.043 (0.719)	mov2 & Imit.  System Imitation 0.265 (0.695) 0.579 (0.000) -0.301 (0.605)  0.374 (0.497) -0.164 (0.766) -0.017 (0.497) 0.019 (0.163) -0.176 (0.217)	0.053 (0.494) 0.0424 (0.029) 0.053 (0.494) 0.0424 0.029 0.090 0.090 0.090	0.415 cinfrastructu Growth -4.197 (0.028) -0.134 (0.951) -1.861 (0.293) 4.046	0.729 (0.000) 0.729 (0.000) 1.253 (0.000) -1.075 (0.000) -1.438 (0.000) -0.001 (0.500) 0.002 (0.426) 0.023 (0.077)	3SLS.  Initation 1.292 (0.000) 0.735 (0.000) -0.531 (0.000)  0.849 (0.000) 1.365 (0.000) (0.426) -0.001 (0.426) -0.019 (0.427) (0.002	No.	7.028 (0.000) -0.232 (0.154) -0.368 (0.079)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density	0.796 (0.551) 0.722 (0.214) 0.953 (0.001) -0.575 (0.362) -0.611 (0.585) 0.013 (0.804) -0.020 (0.158) -0.150	0.279  System Imitation 0.244 (0.733) 0.424 (0.003) 0.424 (0.000) 0.329 (0.307)  0.443 (0.115) -0.327 (0.621) -0.008 (0.733) 0.020 (0.343) -0.212 (0.073) 0.116	0.149 and 2	0.535 2, with IMF p Growth -6.608 (0.226) -1.158 (0.441) -0.595 (0.716) 4.663	0.750 (0.000) 0.750 (0.000) 1.397 (0.000) -1.011 (0.000) -2.496 (0.000) 0.001 (0.589) -0.009 (0.012) 0.019 (0.309)	3SLS.  Initation -1.663 (0.000) 0.647 (0.000) -0.482 (0.000)  0.717 (0.000) 1.593 (0.000) -0.001 (0.571) 0.007 (0.008) -0.011 (0.347)	-0.008 (0.346) 0.005 (0.990) 0.001 (0.995) 0.001 (0.501) 0.000 (0.189) -0.002	-0.550 (0.482) -0.046 (0.736) -0.349 (0.061)	0.116  Innovation -0.588 (0.570)  0.399 (0.461) 0.628 (0.005) -0.301 (0.641) 0.370 (0.693) 0.013 (0.697) 0.037 (0.162) -0.043 (0.719)	mov2 & Imit.  System Imitation 0.265 (0.695) 0.579 (0.000) -0.301 (0.605)  0.374 (0.497) -0.164 (0.766) -0.017 (0.497) 0.019 (0.163) -0.176 (0.217)	2, with public 1 GMM P-capital 1.072 (0.000)  0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001 (0.490)	0.415 cinfrastructu Growth -4.197 (0.028) -0.134 (0.951) -1.861 (0.293) 4.046	0.729 (0.000) 0.729 (0.000) 1.253 (0.000) -1.075 (0.000) -1.438 (0.000) -0.001 (0.500) 0.002 (0.426) 0.023 (0.077)	3SLS.  Initation 1.292 (0.000) 0.735 (0.000) -0.531 (0.000)  0.849 (0.000) 1.365 (0.000) (0.426) -0.001 (0.426) -0.019 (0.476) -0.019 (0.007)	with FE P.capital 0.918 (0.000)  0.018 (0.000)  0.002 (0.738) 0.001 (0.809) 0.000 (0.867) 0.000 (0.891) 0.000 (0.401) 0.000 (0.4	7.028 (0.000) -0.232 (0.154) -0.368 (0.079)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Imitation, t-1 (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance	0.796 (0.551) 0.722 (0.214) 0.953 (0.001) -0.575 (0.362) -0.611 (0.585) 0.013 (0.804) -0.020 (0.158) -0.150	0.279  System Imitation 0.244 (0.733) 0.424 (0.003) 0.424 (0.000) 0.329 (0.307)  0.443 (0.115) -0.327 (0.621) -0.008 (0.733) 0.020 (0.343) -0.212 (0.073) 0.116	0.149 and 24 Imiti- 10 CMM P-capital 1.127 (0.000)  -0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169)	0.535 2, with IMF <sub>1</sub> Growth -6.608 (0.226) -1.158 (0.441) -0.595 (0.716) 4.663 (0.326)	0.750 (0.000) 0.750 (0.000) 1.397 (0.000) -1.011 (0.000) -2.496 (0.000) 0.001 (0.589) -0.009 (0.012) 0.019 (0.309)	3SLS.  Initation -1.663 (0.000) 0.647 (0.000) -0.482 (0.000)  0.717 (0.000) 1.593 (0.000) -0.001 (0.571) 0.007 (0.008) -0.011 (0.347)	-0.008 (0.346) (0.005) (0.501) (0.501) (0.501) (0.189)	-0.550 (0.482) -0.046 (0.736) -0.349 (0.061) 0.473 (0.528)	0.116  Innovation -0.588 (0.570)  0.399 (0.461) 0.628 (0.005) -0.301 (0.641) 0.370 (0.693) 0.013 (0.697) 0.037 (0.162) -0.043 (0.719)	mov2 & Imit.  System Imitation 0.265 (0.695) 0.579 (0.000) -0.301 (0.605)  0.374 (0.497) -0.164 (0.766) -0.017 (0.497) 0.019 (0.163) -0.176 (0.217)	0.053 (0.494) -0.040 (0.424) -0.040 (0.424) -0.020 (0.059) 0.001 (0.490)	0.415 infrastructu  Growth -4.197 (0.028) -0.134 (0.951) -1.861 (0.293) 4.046 (0.021)	0.729 (0.000) 0.729 (0.000) 1.253 (0.000) -1.075 (0.000) -1.438 (0.000) -0.001 (0.500) 0.002 (0.426) 0.023 (0.077)	3SLS.  Initation 1.292 (0.000) 0.735 (0.000) -0.531 (0.000)  0.849 (0.000) 1.365 (0.000) (0.426) -0.001 (0.426) -0.019 (0.476) -0.019 (0.007)	with FE P.capital 0.918 (0.000)  0.002 (0.738) 0.001 (0.809) 0.000 (0.851) 0.000 (0.420)	Growth 7.028 (0.000) -0.232 (0.154) -0.368 (0.079) -7.750 (0.000)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade	0.796 (0.551) 0.722 (0.214) 0.953 (0.001) -0.575 (0.362) -0.611 (0.585) 0.013 (0.804) -0.020 (0.158) -0.150	0.279  System Imitation 0.244 (0.733) 0.424 (0.003) 0.424 (0.000) 0.329 (0.307)  0.443 (0.115) -0.327 (0.621) -0.008 (0.733) 0.020 (0.343) -0.212 (0.073) 0.116	0.149 and 2	0.535 2, with IMF <sub>I</sub> Growth -6.608 (0.226) -1.158 (0.441) -0.595 (0.716) 4.663 (0.326)	0.750 (0.000) 0.750 (0.000) 1.397 (0.000) -1.011 (0.000) -2.496 (0.000) 0.001 (0.589) -0.009 (0.012) 0.019 (0.309)	3SLS.  Initation -1.663 (0.000) 0.647 (0.000) -0.482 (0.000)  0.717 (0.000) 1.593 (0.000) -0.001 (0.571) 0.007 (0.008) -0.011 (0.347)	-0.008 (0.346) 0.005 (0.990) 0.001 (0.995) 0.001 (0.501) 0.000 (0.189) -0.002	-0.550 (0.482) -0.046 (0.736) -0.349 (0.061) 0.473 (0.528) -0.001 (0.712) 0.194	0.116  Innovation -0.588 (0.570)  0.399 (0.461) 0.628 (0.005) -0.301 (0.641) 0.370 (0.693) 0.013 (0.697) 0.037 (0.162) -0.043 (0.719)	mov2 & Imit.  System Imitation 0.265 (0.695) 0.579 (0.000) -0.301 (0.605)  0.374 (0.497) -0.164 (0.766) -0.017 (0.497) 0.019 (0.163) -0.176 (0.217)	2, with public 1 GMM P-capital 1.072 (0.000)  0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001 (0.490)	0.415 infrastructu Growth -4.197 (0.028) -0.134 (0.951)  -1.861 (0.293)  4.046 (0.021)	0.729 (0.000) 0.729 (0.000) 1.253 (0.000) -1.075 (0.000) -1.438 (0.000) -0.001 (0.500) 0.002 (0.426) 0.023 (0.077)	3SLS.  Initation 1.292 (0.000) 0.735 (0.000) -0.531 (0.000)  0.849 (0.000) 1.365 (0.000) (0.426) -0.001 (0.426) -0.019 (0.476) -0.019 (0.007)	with FE P.capital 0.918 (0.000)  0.018 (0.000)  0.002 (0.738) 0.001 (0.809) 0.000 (0.867) 0.000 (0.891) 0.000 (0.401) 0.000 (0.4	Growth 7.028 (0.000) -0.232 (0.154) -0.368 (0.079) -7.750 (0.000)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Innivation, t-1 (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment	0.796 (0.551) 0.722 (0.214) 0.953 (0.001) -0.575 (0.362) -0.611 (0.585) 0.013 (0.804) -0.020 (0.158) -0.150	0.279  System Imitation 0.244 (0.733) 0.424 (0.003) 0.424 (0.000) 0.329 (0.307)  0.443 (0.115) -0.327 (0.621) -0.008 (0.733) 0.020 (0.343) -0.212 (0.073) 0.116	0.149 and 2	0.535 2, with IMF <sub>I</sub> Growth -6.608 (0.226) -1.158 (0.441) -0.595 (0.716) 4.663 (0.326) 0.326)	0.750 (0.000) 0.750 (0.000) 1.397 (0.000) -1.011 (0.000) -2.496 (0.000) 0.001 (0.589) -0.009 (0.012) 0.019 (0.309)	3SLS.  Initation -1.663 (0.000) 0.647 (0.000) -0.482 (0.000)  0.717 (0.000) 1.593 (0.000) -0.001 (0.571) 0.007 (0.008) -0.011 (0.349)	-0.008 (0.346) 0.005 (0.990) 0.001 (0.995) 0.001 (0.501) 0.000 (0.189) -0.002	-0.550 (0.482) -0.046 (0.736) -0.349 (0.061) 0.473 (0.528) -0.001 (0.712) 0.194 (0.000) -0.010	0.116  Innovation -0.588 (0.570)  0.399 (0.461) 0.628 (0.005) -0.301 (0.641) 0.370 (0.693) 0.013 (0.697) 0.037 (0.162) -0.043 (0.719)	mov2 & Imit.  System Imitation 0.265 (0.695) 0.579 (0.000) -0.301 (0.605)  0.374 (0.497) -0.164 (0.766) -0.017 (0.497) 0.019 (0.163) -0.176 (0.217)	2, with public 1 GMM P-capital 1.072 (0.000)  0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001 (0.490)	0.415 infrastructu Growth -4.197 (0.028) -0.134 (0.951) -1.861 (0.293) 4.046 (0.021)  0.079 (0.077) -0.001 (0.996) -0.005	0.729 (0.000) 0.729 (0.000) 1.253 (0.000) -1.075 (0.000) -1.438 (0.000) -0.001 (0.500) 0.002 (0.426) 0.023 (0.077)	3SLS.  Initation 1.292 (0.000) 0.735 (0.000) -0.531 (0.000)  0.849 (0.000) 1.365 (0.000) (0.426) -0.001 (0.426) -0.019 (0.476) -0.019 (0.007)	with FE P.capital 0.918 (0.000)  0.018 (0.000)  0.002 (0.738) 0.001 (0.809) 0.000 (0.867) 0.000 (0.891) 0.000 (0.401) 0.000 (0.4	-0.006 (0.198) 0.244 (0.000) -0.232 (0.154) -0.368 (0.079) -7.750 (0.000)
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Innitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation	0.796 (0.551) 0.722 (0.214) 0.953 (0.001) -0.575 (0.362) -0.611 (0.585) 0.013 (0.804) -0.020 (0.158) -0.150	0.279  System Imitation 0.244 (0.733) 0.424 (0.003) 0.424 (0.000) 0.329 (0.307)  0.443 (0.115) -0.327 (0.621) -0.008 (0.733) 0.020 (0.343) -0.212 (0.073) 0.116	0.149 and 2	0.535 2, with IMF <sub>2</sub> Growth -6.6008 (0.226) -1.158 (0.241) -0.595 (0.716)  4.663 (0.326)  0.074 (0.210) 0.147 (0.496) -0.110 (0.211) 0.441	0.750 (0.000) 0.750 (0.000) 1.397 (0.000) -1.011 (0.000) -2.496 (0.000) 0.001 (0.589) -0.009 (0.012) 0.019 (0.309)	3SLS.  Initation -1.663 (0.000) 0.647 (0.000) -0.482 (0.000)  0.717 (0.000) 1.593 (0.000) -0.001 (0.571) 0.007 (0.008) -0.011 (0.349)	-0.008 (0.346) 0.005 (0.990) 0.001 (0.995) 0.001 (0.501) 0.000 (0.189) -0.002	-0.550 (0.482) -0.046 (0.736) -0.349 (0.061) 0.473 (0.528) -0.001 (0.712) 0.194 (0.000) -0.010 (0.549)	0.116  Innovation -0.588 (0.570)  0.399 (0.461) 0.628 (0.005) -0.301 (0.641) 0.370 (0.693) 0.013 (0.697) 0.037 (0.162) -0.043 (0.719)	mov2 & Imit.  System Imitation 0.265 (0.695) 0.579 (0.000) -0.301 (0.605)  0.374 (0.497) -0.164 (0.766) -0.017 (0.497) 0.019 (0.163) -0.176 (0.217)	2, with public 1 GMM P-capital 1.072 (0.000)  0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001 (0.490)	0.415 infrastructu Growth -4.197 (0.028) -0.134 (0.951) -1.861 (0.293) 4.046 (0.021)  0.079 (0.077) -0.001 (0.996) -0.005 (0.954) 0.294	0.729 (0.000) 0.729 (0.000) 1.253 (0.000) -1.075 (0.000) -1.438 (0.000) -0.001 (0.500) 0.002 (0.426) 0.023 (0.077)	3SLS.  Initation 1.292 (0.000) 0.735 (0.000) -0.531 (0.000)  0.849 (0.000) 1.365 (0.000) (0.426) -0.001 (0.426) -0.019 (0.476) -0.019 (0.007)	with FE P.capital 0.918 (0.000)  0.018 (0.000)  0.002 (0.738) 0.001 (0.809) 0.000 (0.867) 0.000 (0.891) 0.000 (0.401) 0.000 (0.4	-0.006 (0.198) 0.244 (0.000) -0.015 (0.469) -0.015
Innovation, t (log) Innovation, t (log) Innitation, t (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation D.Innovation [t - t-1]	0.796 (0.551) 0.722 (0.214) 0.953 (0.001) -0.575 (0.362) -0.611 (0.585) 0.013 (0.804) -0.020 (0.158) -0.150	0.279  System Imitation 0.244 (0.733) 0.424 (0.003) 0.424 (0.000) 0.329 (0.307)  0.443 (0.115) -0.327 (0.621) -0.008 (0.733) 0.020 (0.343) -0.212 (0.073) 0.116	0.149 and 2	0.535 2, with IMF <sub>1</sub> Growth -6.608 (0.226) -1.158 (0.441) -0.595 (0.716)  4.663 (0.326)  0.074 (0.210) 0.147 (0.496) -0.110 (0.491) 0.441 (0.662) 1.723	0.750 (0.000) 0.750 (0.000) 1.397 (0.000) -1.011 (0.000) -2.496 (0.000) 0.001 (0.589) -0.009 (0.012) 0.019 (0.309)	3SLS.  Initation -1.663 (0.000) 0.647 (0.000) -0.482 (0.000)  0.717 (0.000) 1.593 (0.000) -0.001 (0.571) 0.007 (0.008) -0.011 (0.349)	-0.008 (0.346) 0.005 (0.990) 0.001 (0.995) 0.001 (0.501) 0.000 (0.189) -0.002	-0.550 (0.482) -0.046 (0.736) -0.349 (0.061) 0.473 (0.528) -0.001 (0.712) 0.194 (0.000) -0.010 (0.549) -0.014 (0.0349)	0.116  Innovation -0.588 (0.570)  0.399 (0.461) 0.628 (0.005) -0.301 (0.641) 0.370 (0.693) 0.013 (0.697) 0.037 (0.162) -0.043 (0.719)	mov2 & Imit.  System Imitation 0.265 (0.695) 0.579 (0.000) -0.301 (0.605)  0.374 (0.497) -0.164 (0.766) -0.017 (0.497) 0.019 (0.163) -0.176 (0.217)	2, with public 1 GMM P-capital 1.072 (0.000)  0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001 (0.490)	0.415 infrastructus Growth -4.197 (0.028) -0.134 (0.951) -1.861 (0.293) -1.4046 (0.021) -1.861 (0.293) -1.861 (0.294) -1.861 (0.294) (0.876) -1.861 (0.294)	0.729 (0.000) 0.729 (0.000) 1.253 (0.000) -1.075 (0.000) -1.438 (0.000) -0.001 (0.500) 0.002 (0.426) 0.023 (0.077)	3SLS.  Initation 1.292 (0.000) 0.735 (0.000) -0.531 (0.000)  0.849 (0.000) 1.365 (0.000) (0.426) -0.001 (0.426) -0.019 (0.476) -0.019 (0.007)	with FE P.capital 0.918 (0.000)  0.018 (0.000)  0.002 (0.738) 0.001 (0.809) 0.000 (0.867) 0.000 (0.891) 0.000 (0.401) 0.000 (0.4	-0.006 (0.198) 0.244 (0.000) -0.015 (0.469) -0.884 (0.000) 2.513
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation D.Innovation [t-t-1] D.Imitation [t-t-1] Country Effect	Innovation 0.796 (0.551)  0.722 (0.214) 0.953 (0.001) -0.575 (0.362) -0.611 (0.585) 0.013 (0.804) -0.020 (0.588) 0.150 (0.158) -0.041 (0.660)	0.279  November 1  November 2   0.149  minute of Memory and Memor	0.535 2, with IMF <sub>1</sub> Growth -6.608 (0.226) -1.158 (0.441) -0.595 (0.716)  4.663 (0.326)  0.074 (0.210) 0.147 (0.496) -0.110 (0.211) 0.441 (0.662) 1.723 (0.182) Yes	Innovation   2.617 (0.000)	3SLS.  Imitation -1.663 (0.000) -0.647 (0.000) -0.482 (0.000) -1.717 (0.000) -1.593 (0.000) -1.593 (0.000) -0.001 (0.571) -0.001 (0.571) -0.001 (0.571) -0.007 (0.008) -0.011 (0.347) -0.009 (0.175)	-0.008 (0.3446) 0.005 (0.290) 0.001 (0.501) 0.001 (0.501) 0.002 (0.602)	-0.550 (0.482) -0.046 (0.736) -0.349 (0.061) 0.473 (0.528) -0.001 (0.712) 0.194 (0.000) -0.010 (0.549) -0.414 (0.038) 1.444 (0.009) Yes	0.116  Innovation -0.588 (0.570)  0.399 (0.461) 0.628 (0.005) -0.301 (0.641) 0.370 (0.693) 0.013 (0.697) 0.037 (0.162) -0.043 (0.719) 0.019 (0.818)	mov2 & Imit.  System Imitation 0.265 (0.695) 0.579 (0.000) -0.301 (0.605)  0.374 (0.497) -0.164 (0.766) -0.017 (0.497) (0.176 (0.176 (0.217) 0.055 (0.493)	2, with public 1 GMM P. Capital 1.072 (0.000)  0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001 (0.499) 0.029 (0.324)	0.415 infrastructu Growth -4.197 (0.028) -0.134 (0.951)  -1.861 (0.293)  4.046 (0.021)  0.079 (0.077) -0.001 (0.996) -0.005 (0.954) 0.294 (0.876) 2.291 (0.233) Yes	Innovation 1.379 (0.000)  0.729 (0.000) 1.253 (0.000) -1.475 (0.000) -1.438 (0.000) -0.001 (0.500) 0.002 (0.426) 0.023 (0.077) -0.002 (0.788)	3SLS.  Imitation -1.292 (0.000) -1.395 (0.000) -0.531 (0.000) -1.365 (0.000) 1.365 (0.000) 1.365 -0.001 (0.426) -0.001 (0.426) -0.001 (0.465) -0.019 (0.077) 0.002 (0.694)	with FE P.capital 0.918 (0.000)  0.002 (0.738) 0.001 (0.809) 0.000 (0.867) 0.000 (0.420) -0.010 (0.004)	-0.006 (0.198) 0.244 (0.000) 2.513 (0.000) Yes	
Initial GDP per capita (log) Innovation, t (log) Innovation, t-1 (log) Imitation, t-1 (log) Imitation, t-1 (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation D.Innovation [t - t-1]	Innovation   0.796 (0.551)   0.722 (0.214) (0.555) (0.2014) (0.575 (0.362) (0.611) (0.585) (0.013 (0.804) (0.588) (0.150 (0.158) (0.158) (0.168) (0.660)   0.660)	0.279  Note     0.149  model of the control of the c	0.535 2, with IMF <sub>I</sub> Growth -6.608 (0.226) -1.158 (0.441) -0.595 (0.716)  4.663 (0.326)  0.074 (0.210) 0.147 (0.496) -0.110 (0.211) 0.441 (0.662) 1.723 (0.182)	Innovation   2.617 (0.000)	3SLS.  Imitation -1.663 (0.000) -0.647 (0.000) -0.482 (0.000) -1.593 (0.000) -1.593 (0.000) -0.001 (0.571) 0.007 (0.008) -0.011 (0.371) -0.007 (0.008) -0.011 (0.371) -0.015	-0.008 (0.346) (0.000)	-0.550 (0.482) -0.046 (0.736) -0.349 (0.061) 0.473 (0.528) -0.001 (0.712) 0.194 (0.000) -0.010 (0.549) -0.114 (0.038) 1.444 (0.000)	0.116  Innovation -0.588 (0.570) 0.399 (0.461) 0.628 (0.005) -0.301 (0.641) 0.370 (0.693) 0.013 (0.697) 0.037 (0.162) -0.043 (0.719) (0.019 (0.818)	mov2 & Imit.  System Imitation  0.265 (0.695) 0.579 (0.000) -0.301 (0.605)  0.374 (0.497) -0.164 (0.766) -0.017 (0.497) 0.019 (0.163) -0.176 (0.217) 0.055 (0.493)	0.053 0.053 0.053 0.494 0.040 0.059 0.000 0.978 0.001 0.424 0.020 0.059 0.001 0.494 0.020 0.059 0.000 0.978 0.001 0.492 0.324	0.415 infrastructus Growth -4.197 (0.028) -0.134 (0.951) -1.861 (0.293) 4.046 (0.021)  0.079 (0.077) -0.001 (0.996) -0.005 (0.954) 0.294 (0.876) 2.291 (0.233)	Innovation 1.379 (0.000)  0.729 (0.000) 1.253 (0.000) -1.075 (0.000) -1.438 (0.000) -0.001 (0.500) 0.002 (0.426) 0.023 (0.077) -0.002 (0.788)	3SLS.  Initation 1.292 (0.000) 0.735 (0.000) -0.531 (0.000) 0.849 (0.000) 1.365 (0.000) 0.001 (0.426) -0.001 (0.426) -0.001 (0.426) -0.001 (0.426) -0.001 (0.426)	0.002 (0.738) (0.879) (0.809) (0.809) (0.809) (0.809) (0.807) (0.809) (0.801) (0.809) (0.801) (0.801) (0.801) (0.801) (0.801) (0.801)	-0.006 (0.198) 0.244 (0.000) -0.015 (0.469) -0.884 (0.000) 2.513 (0.000)	

Table 8: Benchmark Results.	whom volve added non or	unlarias aus usad as nus	dust variety maggings (sont	
i abie 8: Benchmark Results.	. wnere value-aageg ber et	nbiovee are used as bro	auct variety measures (coni	Ĺ

	Tab	ole 8: Bei	nnov3 & Imit					iipioyee	li li	nnov3 & Imit.	3, with public	infrastructi	ire stock (pro.	xied by telepl	hone measure	?)
	Innevetion	Systen	n GMM	Growth		3SLS,	with FE	Growth		System	1 GMM	Growth			with FE	Growth
Initial GDP per capita (log)	0.822	-0.355	P.capital 1.127	0.765	1.684	Imitation -1.710	P.capital 1.034	-0.814	-0.355	1mitation 0.151	P.capital 1.072	-3.543	-0.589	0.013	0.925	4.151
Innovation, t (log)	(0.440)	(0.200) 0.443	(0.000)	(0.902) -3.117	(0.000)	(0.000) 0.913	(0.000)	(0.335) -0.329	(0.302)	(0.781) 0.439	(0.000)	(0.134) -1.763	(0.039)	(0.963) 0.907	(0.000)	(0.029) -0.241
Innovation, t-1 (log)	0.432	(0.002) -0.295		(0.205)	0.773	(0.000) -0.727		(0.037)	0.607	(0.087) -0.316		(0.342)	0.762	(0.000) -0.710		(0.146)
Imitation, t (log)	(0.067) 0.485	(0.117)		0.068	(0.000) 0.871	(0.000)		-0.063	(0.003) 0.658	(0.201)		-0.742	(0.000) 0.838	(0.000)		-0.052
Imitation, t-1 (log)	(0.005)	0.722		(0.978)	(0.000)	0.806		(0.624)	(0.000) -0.578	0.798		(0.760)	(0.000) -0.674	0.812		(0.736)
	(0.302)	(0.001)		1 220	(0.000)	(0.000)		0.575	(0.001)	(0.001)		4.012	(0.000)	(0.000)		
Public capital (log)	-0.715 (0.543)	0.174 (0.590)		-1.339 (0.763)	-1.566 (0.000)	1.611 (0.000)		0.675 (0.405)	0.672 (0.062)	-0.593 (0.069)		4.013 (0.046)	0.675 (0.026)	-0.028 (0.927)		-4.666 (0.024)
FDI	0.004 (0.812)	0.022 (0.404)			0.000 (0.785)	0.000 (0.798)			-0.005 (0.773)	0.024 (0.417)			0.000 (0.842)	0.001 (0.584)		
Skilled workforce	(0.088)	-0.008 (0.620)			-0.002 (0.516)	0.003 (0.390)			0.006 (0.672)	0.020 (0.363)			0.003 (0.188)	-0.002 (0.357)		
Gov. expenditure	-0.122 (0.230)	0.044 (0.517)	-0.016 (0.479)		0.006 (0.669)	-0.001 (0.916)	-0.004 (0.667)		-0.029 (0.725)	-0.065 (0.343)	0.053 (0.494)		-0.004 (0.764)	-0.001 (0.939)	0.002 (0.699)	
Non-tax revenue	-0.044 (0.425)	-0.028 (0.575)	0.012 (0.216)		-0.005 (0.547)	0.005 (0.532)	0.005 (0.317)		-0.026 (0.617)	0.007 (0.895)	-0.040 (0.424)		-0.017 (0.014)	0.018 (0.009)	0.003 (0.333)	
Gov. debt	(0.423)	(0.575)	0.006		(0.547)	(0.552)	0.002 (0.008)		(0.017)	(0.075)	-0.020 (0.059)		(0.014)	(0.00)	0.000 (0.763)	
Urban			-0.004				-0.002				0.000				-0.001	
Population density			(0.708) 0.000				(0.213) 0.000				(0.978) 0.001				(0.562) 0.000	
Current account balance			(0.169) -0.002				(0.330) 0.002				(0.490) 0.029				(0.196) -0.013	
Trade			(0.845)	0.034			(0.699)	-0.002			(0.324)	0.100			(0.000)	-0.002
Investment				(0.462) 0.185				(0.512) 0.208				(0.080) -0.145				(0.691) 0.215
Inflation				(0.475) -0.068				(0.000) -0.007				(0.493) -0.029				(0.000) 0.004
D.Innovation [t - t-1]				(0.499)				(0.674) 1.002				(0.717) 0.732				(0.837) 1.305
D.Imitation [t - t-1]				(0.113)				(0.000)				(0.561) 1.988				(0.000)
	V	V	V	(0.386)	V	V	V	(0.651)	V	V	V	(0.282)		V	V	(0.540)
Country Effect Time Effect	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes	Yes Yes
Countries/Observations R <sup>2</sup>	72/245	72/245	94/403	87/332	73/246 0.628	73/246 0.727	73/246 0.941	73/246 0.272	68/227	68/227	88/369	79/297	69/228 0.795	69/228 0.868	69/228 0.940	69/228 0.493
Number of Instruments Hansen J-statistics (p-value)	38 0.298	38 0.686	46 0.859	44 0.520					32 0.142	32 0.227	39 0.185	34 0.107				
AR(2) test (p-value)	0.296	0.386	0.149	0.192					0.242	0.134	0.105	0.772				
			nnov4 & Imita n GMM	4, with IMF	public capita		re with FE		li		4, with public n GMM	: infrastructi	ıre stock (pro.		hone measure with FE	?)
Initial GDP per capita (log)	Innovation	Imitation	P.capital	Growth		Imitation	P.capital	Growth	Innovation		P.capital	Growth		Imitation	P.capital	Growth
	0.853	-0.059	1 127	1.202	0.410	-0 384	1 014	0.030	-0.336	-0.164	1.072	-4 025	-0.681	0.273	0.937	2 252
Townselfor ( doc)	0.853 (0.561)	-0.059 (0.973)	1.127 (0.000)	(0.744)	0.410 (0.132)	-0.384 (0.139)	1.014 (0.000)	0.030 (0.972)	-0.336 (0.336)	-0.164 (0.798)	1.072 (0.000)	-4.025 (0.118)	-0.681 (0.011)	(0.273)	0.937 (0.000)	2.252 (0.174)
Innovation, t (log)	(0.561)	(0.973) 0.570 (0.001)			(0.132)	(0.139) 0.886 (0.000)			(0.336)	(0.798) 0.507 (0.032)			(0.011)	(0.275) 0.887 (0.000)		
Innovation, t (log) Innovation, t-1 (log)		(0.973) 0.570		(0.744) -0.916		(0.139) 0.886 (0.000) -0.676		(0.972) -0.314		(0.798) 0.507 (0.032) -0.281		(0.118) -1.349		(0.275) 0.887		(0.174) -0.276
	(0.561) 0.524 (0.054) 0.672	(0.973) 0.570 (0.001) -0.160		(0.744) -0.916 (0.651) -1.691	0.750 (0.000) 0.971	(0.139) 0.886 (0.000)		(0.972) -0.314 (0.061) -0.171	(0.336) 0.515 (0.016) 0.802	(0.798) 0.507 (0.032)		(0.118) -1.349 (0.579) -1.721	(0.011) 0.784 (0.000) 0.973	(0.275) 0.887 (0.000) -0.708		(0.174) -0.276 (0.087) -0.116
Innovation, t-1 (log)	0.524 (0.054) 0.672 (0.000) -0.288	(0.973) 0.570 (0.001) -0.160 (0.681)		(0.744) -0.916 (0.651)	0.750 (0.000) 0.971 (0.000) -0.708	(0.139) 0.886 (0.000) -0.676 (0.000)		(0.972) -0.314 (0.061)	0.515 (0.016) 0.802 (0.000) -0.359	(0.798) 0.507 (0.032) -0.281 (0.375)		(0.118) -1.349 (0.579)	0.784 (0.000) 0.973 (0.000) -0.713	(0.275) 0.887 (0.000) -0.708 (0.000) 0.735		(0.174) -0.276 (0.087)
Innovation, t-1 (log) Imitation, t (log)	0.524 (0.054) 0.672 (0.000)	(0.973) 0.570 (0.001) -0.160 (0.681)		(0.744) -0.916 (0.651) -1.691	0.750 (0.000) 0.971 (0.000)	(0.139) 0.886 (0.000) -0.676 (0.000)		(0.972) -0.314 (0.061) -0.171	0.515 (0.016) 0.802 (0.000)	(0.798) 0.507 (0.032) -0.281 (0.375)		(0.118) -1.349 (0.579) -1.721	0.784 (0.000) 0.973 (0.000)	(0.275) 0.887 (0.000) -0.708 (0.000)		(0.174) -0.276 (0.087) -0.116
Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log)	(0.561) 0.524 (0.054) 0.672 (0.000) -0.288 (0.326) -0.828 (0.616)	(0.973) 0.570 (0.001) -0.160 (0.681) 0.342 (0.289) -0.139 (0.926)		(0.744) -0.916 (0.651) -1.691 (0.288)	0.750 (0.000) 0.971 (0.000) -0.708 (0.000) -0.354 (0.181)	(0.139) 0.886 (0.000) -0.676 (0.000) 0.730 (0.000) 0.345 (0.171)		(0.972) -0.314 (0.061) -0.171 (0.250)	(0.336) 0.515 (0.016) 0.802 (0.000) -0.359 (0.282) 0.382 (0.283)	(0.798) 0.507 (0.032) -0.281 (0.375) 0.444 (0.010) 0.115 (0.822)		(0.118) -1.349 (0.579) -1.721 (0.531)	0.011) 0.784 (0.000) 0.973 (0.000) -0.713 (0.000) 0.756 (0.008)	(0.275) 0.887 (0.000) -0.708 (0.000) 0.735 (0.000) -0.303 (0.259)		(0.174) -0.276 (0.087) -0.116 (0.510)
Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI	0.561)  0.524 (0.054) 0.672 (0.000) -0.288 (0.326) -0.828 (0.616) 0.016 (0.685)	(0.973) 0.570 (0.001) -0.160 (0.681) 0.342 (0.289) -0.139 (0.926) 0.022 (0.535)		(0.744) -0.916 (0.651) -1.691 (0.288)	0.132) 0.750 (0.000) 0.971 (0.000) -0.708 (0.000) -0.354 (0.181) 0.000 (0.825)	(0.139) 0.886 (0.000) -0.676 (0.000) 0.730 (0.000) 0.345 (0.171) 0.000 (0.818)		(0.972) -0.314 (0.061) -0.171 (0.250)	0.336)  0.515 (0.016) 0.802 (0.000) -0.359 (0.282) 0.382 (0.283) -0.001 (0.960)	(0.798) 0.507 (0.032) -0.281 (0.375) 0.444 (0.010) 0.115 (0.822) 0.007 (0.796)		(0.118) -1.349 (0.579) -1.721 (0.531) 4.241	0.011) 0.784 (0.000) 0.973 (0.000) -0.713 (0.000) 0.756 (0.008) 0.000 (0.922)	(0.275) 0.887 (0.000) -0.708 (0.000) 0.735 (0.000) -0.303 (0.259) 0.000 (0.763)		(0.174) -0.276 (0.087) -0.116 (0.510)
Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce	(0.561) 0.524 (0.054) 0.672 (0.000) -0.288 (0.326) -0.828 (0.616) 0.016 (0.685) 0.035 (0.153)	(0.973) 0.570 (0.001) -0.160 (0.681) 0.342 (0.289) -0.139 (0.926) 0.022 (0.535) -0.009 (0.610)	(0.000)	(0.744) -0.916 (0.651) -1.691 (0.288)	(0.132) 0.750 (0.000) 0.971 (0.000) -0.708 (0.000) -0.354 (0.181) 0.000 (0.825) 0.000 (0.974)	(0.139) 0.886 (0.000) -0.676 (0.000) 0.730 (0.000) 0.345 (0.171) 0.000 (0.818) 0.001 (0.804)	(0.000)	(0.972) -0.314 (0.061) -0.171 (0.250)	(0.336) 0.515 (0.016) 0.802 (0.000) -0.359 (0.282) 0.382 (0.283) -0.001 (0.960) 0.016 (0.290)	(0.798) 0.507 (0.032) -0.281 (0.375) 0.444 (0.010) 0.115 (0.822) 0.007 (0.796) -0.006 (0.628)	(0.000)	(0.118) -1.349 (0.579) -1.721 (0.531) 4.241	(0.011) 0.784 (0.000) 0.973 (0.000) -0.713 (0.000) 0.756 (0.008) 0.000 (0.922) -0.001 (0.728)	(0.275) 0.887 (0.000) -0.708 (0.000) 0.735 (0.000) -0.303 (0.259) 0.000 (0.763) 0.001 (0.505)	(0.000)	(0.174) -0.276 (0.087) -0.116 (0.510)
Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI	(0.561) 0.524 (0.054) 0.672 (0.000) -0.288 (0.326) -0.828 (0.616) 0.016 (0.685) 0.035	(0.973) 0.570 (0.001) -0.160 (0.681) 0.342 (0.289) -0.139 (0.926) 0.022 (0.535) -0.009		(0.744) -0.916 (0.651) -1.691 (0.288)	(0.132) 0.750 (0.000) 0.971 (0.000) -0.708 (0.000) -0.354 (0.181) 0.000 (0.825) 0.000	(0.139) 0.886 (0.000) -0.676 (0.000) 0.730 (0.000) 0.345 (0.171) 0.000 (0.818) 0.001		(0.972) -0.314 (0.061) -0.171 (0.250)	(0.336) 0.515 (0.016) 0.802 (0.000) -0.359 (0.282) 0.382 (0.283) -0.001 (0.960) 0.016	(0.798) 0.507 (0.032) -0.281 (0.375) 0.444 (0.010) 0.115 (0.822) 0.007 (0.796) -0.006		(0.118) -1.349 (0.579) -1.721 (0.531) 4.241	(0.011) 0.784 (0.000) 0.973 (0.000) -0.713 (0.000) 0.756 (0.008) 0.000 (0.922) -0.001	(0.275) 0.887 (0.000) -0.708 (0.000) 0.735 (0.000) -0.303 (0.259) 0.000 (0.763) 0.001		(0.174) -0.276 (0.087) -0.116 (0.510)
Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce	0.524 (0.054) 0.672 (0.000) -0.288 (0.326) -0.828 (0.616) 0.016 (0.685) 0.035 (0.153) -0.117 (0.341)	(0.973) 0.570 (0.001) -0.160 (0.681) 0.342 (0.289) -0.139 (0.926) 0.022 (0.535) -0.009 (0.610) 0.042 (0.628)	-0.016 (0.479) 0.012	(0.744) -0.916 (0.651) -1.691 (0.288)	0.750 (0.000) 0.971 (0.000) -0.708 (0.000) -0.354 (0.181) 0.000 (0.825) 0.000 (0.974) -0.017 (0.150)	(0.139) 0.886 (0.000) -0.676 (0.000) 0.730 (0.000) 0.345 (0.171) 0.000 (0.818) 0.001 (0.804) 0.019 (0.085) 0.004	-0.002 (0.851) 0.005	(0.972) -0.314 (0.061) -0.171 (0.250)	0.515 (0.016) 0.802 (0.000) -0.359 (0.282) 0.382 (0.283) -0.001 (0.960) 0.016 (0.290) -0.124 (0.333)	(0.798) 0.507 (0.032) -0.281 (0.375) 0.444 (0.010) 0.115 (0.822) 0.007 (0.796) -0.006 (0.628) -0.014 (0.844) 0.012	0.053 (0.494) -0.040	(0.118) -1.349 (0.579) -1.721 (0.531) 4.241	0.784 (0.000) 0.973 (0.000) -0.713 (0.000) 0.756 (0.008) 0.000 (0.922) -0.001 (0.728) -0.019 (0.135)	(0.275) 0.887 (0.000) -0.708 (0.000) 0.735 (0.000) -0.303 (0.259) 0.000 (0.763) 0.001 (0.505) 0.017 (0.131) 0.006	-0.002 (0.776) 0.002	(0.174) -0.276 (0.087) -0.116 (0.510)
Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure	(0.561) 0.524 (0.054) 0.672 (0.000) -0.288 (0.326) -0.828 (0.616) 0.016 (0.685) 0.035 (0.153) -0.117 (0.341)	(0.973) 0.570 (0.001) -0.160 (0.681) 0.342 (0.289) -0.139 (0.926) 0.022 (0.535) -0.009 (0.610) 0.042 (0.628)	-0.016 (0.479) 0.012 (0.216) 0.006	(0.744) -0.916 (0.651) -1.691 (0.288)	0.132) 0.750 (0.000) 0.971 (0.000) -0.708 (0.000) -0.354 (0.181) 0.000 (0.825) 0.000 (0.974) -0.017 (0.150)	(0.139) 0.886 (0.000) -0.676 (0.000) 0.730 (0.000) 0.345 (0.171) 0.000 (0.818) 0.001 (0.804) 0.019 (0.085)	-0.002 (0.851) 0.005 (0.273) 0.004	(0.972) -0.314 (0.061) -0.171 (0.250)	(0.336) 0.515 (0.016) 0.802 (0.000) -0.359 (0.282) 0.382 (0.283) -0.001 (0.960) 0.016 (0.290) -0.124 (0.333)	(0.798) 0.507 (0.032) -0.281 (0.375) 0.444 (0.010) 0.115 (0.822) 0.007 (0.796) -0.006 (0.628) -0.014 (0.844)	0.053 (0.494) -0.040 (0.424) -0.020	(0.118) -1.349 (0.579) -1.721 (0.531) 4.241	(0.011) 0.784 (0.000) 0.973 (0.000) -0.713 (0.000) 0.756 (0.008) 0.000 (0.922) -0.001 (0.728) -0.019 (0.135)	(0.275) 0.887 (0.000) -0.708 (0.000) 0.735 (0.000) -0.303 (0.259) 0.000 (0.763) 0.001 (0.505) 0.01 (0.131)	-0.002 (0.776) 0.002 (0.515) 0.000	(0.174) -0.276 (0.087) -0.116 (0.510)
Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue	0.524 (0.054) 0.672 (0.000) -0.288 (0.326) -0.828 (0.616) 0.016 (0.685) 0.035 (0.153) -0.117 (0.341)	(0.973) 0.570 (0.001) -0.160 (0.681) 0.342 (0.289) -0.139 (0.926) 0.022 (0.535) -0.009 (0.610) 0.042 (0.628)	-0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004	(0.744) -0.916 (0.651) -1.691 (0.288)	0.750 (0.000) 0.971 (0.000) -0.708 (0.000) -0.354 (0.181) 0.000 (0.825) 0.000 (0.974) -0.017 (0.150)	(0.139) 0.886 (0.000) -0.676 (0.000) 0.730 (0.000) 0.345 (0.171) 0.000 (0.818) 0.001 (0.804) 0.019 (0.085) 0.004	-0.002 (0.851) 0.005 (0.273) 0.004 (0.000) -0.003	(0.972) -0.314 (0.061) -0.171 (0.250)	0.515 (0.016) 0.802 (0.000) -0.359 (0.282) 0.382 (0.283) -0.001 (0.960) 0.016 (0.290) -0.124 (0.333)	(0.798) 0.507 (0.032) -0.281 (0.375) 0.444 (0.010) 0.115 (0.822) 0.007 (0.796) -0.006 (0.628) -0.014 (0.844) 0.012	0.053 (0.494) -0.040 (0.424) -0.020 (0.059)	(0.118) -1.349 (0.579) -1.721 (0.531) 4.241	0.784 (0.000) 0.973 (0.000) -0.713 (0.000) 0.756 (0.008) 0.000 (0.922) -0.001 (0.728) -0.019 (0.135)	(0.275) 0.887 (0.000) -0.708 (0.000) 0.735 (0.000) -0.303 (0.259) 0.000 (0.763) 0.001 (0.505) 0.017 (0.131) 0.006	-0.002 (0.776) 0.002 (0.515) 0.000 (0.987) -0.001	(0.174) -0.276 (0.087) -0.116 (0.510)
Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt	0.524 (0.054) 0.672 (0.000) -0.288 (0.326) -0.828 (0.616) 0.016 (0.685) 0.035 (0.153) -0.117 (0.341)	(0.973) 0.570 (0.001) -0.160 (0.681) 0.342 (0.289) -0.139 (0.926) 0.022 (0.535) -0.009 (0.610) 0.042 (0.628)	-0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708)	(0.744) -0.916 (0.651) -1.691 (0.288)	0.750 (0.000) 0.971 (0.000) -0.708 (0.000) -0.354 (0.181) 0.000 (0.825) 0.000 (0.974) -0.017 (0.150)	(0.139) 0.886 (0.000) -0.676 (0.000) 0.730 (0.000) 0.345 (0.171) 0.000 (0.818) 0.001 (0.804) 0.019 (0.085) 0.004	-0.002 (0.851) 0.005 (0.273) 0.004 (0.000) -0.003 (0.160)	(0.972) -0.314 (0.061) -0.171 (0.250)	0.515 (0.016) 0.802 (0.000) -0.359 (0.282) 0.382 (0.283) -0.001 (0.960) 0.016 (0.290) -0.124 (0.333)	(0.798) 0.507 (0.032) -0.281 (0.375) 0.444 (0.010) 0.115 (0.822) 0.007 (0.796) -0.006 (0.628) -0.014 (0.844) 0.012	0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978)	(0.118) -1.349 (0.579) -1.721 (0.531) 4.241	0.784 (0.000) 0.973 (0.000) -0.713 (0.000) 0.756 (0.008) 0.000 (0.922) -0.001 (0.728) -0.019 (0.135)	(0.275) 0.887 (0.000) -0.708 (0.000) 0.735 (0.000) -0.303 (0.259) 0.000 (0.763) 0.001 (0.505) 0.017 (0.131) 0.006	-0.002 (0.776) 0.002 (0.515) 0.000 (0.987) -0.001 (0.718)	(0.174) -0.276 (0.087) -0.116 (0.510)
Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban	0.524 (0.054) 0.672 (0.000) -0.288 (0.326) -0.828 (0.616) 0.016 (0.685) 0.035 (0.153) -0.117 (0.341)	(0.973) 0.570 (0.001) -0.160 (0.681) 0.342 (0.289) -0.139 (0.926) 0.022 (0.535) -0.009 (0.610) 0.042 (0.628)	-0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169) -0.002	(0.744) -0.916 (0.651) -1.691 (0.288)	0.750 (0.000) 0.971 (0.000) -0.708 (0.000) -0.354 (0.181) 0.000 (0.825) 0.000 (0.974) -0.017 (0.150)	(0.139) 0.886 (0.000) -0.676 (0.000) 0.730 (0.000) 0.345 (0.171) 0.000 (0.818) 0.001 (0.804) 0.019 (0.085) 0.004	-0.002 (0.851) 0.005 (0.273) 0.004 (0.000) -0.003 (0.160) 0.000 (0.175)	(0.972) -0.314 (0.061) -0.171 (0.250)	0.515 (0.016) 0.802 (0.000) -0.359 (0.282) 0.382 (0.283) -0.001 (0.960) 0.016 (0.290) -0.124 (0.333)	(0.798) 0.507 (0.032) -0.281 (0.375) 0.444 (0.010) 0.115 (0.822) 0.007 (0.796) -0.006 (0.628) -0.014 (0.844) 0.012	0.053 (0.494) -0.040 (0.424) -0.029 (0.059) 0.000 (0.478) 0.001 (0.490) 0.029	(0.118) -1.349 (0.579) -1.721 (0.531) 4.241	0.784 (0.000) 0.973 (0.000) -0.713 (0.000) 0.756 (0.008) 0.000 (0.922) -0.001 (0.728) -0.019 (0.135)	(0.275) 0.887 (0.000) -0.708 (0.000) 0.735 (0.000) -0.303 (0.259) 0.000 (0.763) 0.001 (0.505) 0.017 (0.131) 0.006	-0.002 (0.776) 0.002 (0.515) 0.000 (0.587) -0.001 (0.718) 0.000 (0.111) -0.013	(0.174) -0.276 (0.087) -0.116 (0.510)
Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density	0.524 (0.054) 0.672 (0.000) -0.288 (0.326) -0.828 (0.616) 0.016 (0.685) 0.035 (0.153) -0.117 (0.341)	(0.973) 0.570 (0.001) -0.160 (0.681) 0.342 (0.289) -0.139 (0.926) 0.022 (0.535) -0.009 (0.610) 0.042 (0.628)	-0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169)	(0.744) -0.916 (0.651) -1.691 (0.288) -1.705 (0.603)	0.750 (0.000) 0.971 (0.000) -0.708 (0.000) -0.354 (0.181) 0.000 (0.825) 0.000 (0.974) -0.017 (0.150)	(0.139) 0.886 (0.000) -0.676 (0.000) 0.730 (0.000) 0.345 (0.171) 0.000 (0.818) 0.001 (0.804) 0.019 (0.085) 0.004	-0.002 (0.851) 0.005 (0.273) 0.004 (0.000) -0.003 (0.160) 0.000 (0.175)	(0.972) -0.314 (0.061) -0.171 (0.250) -0.113 (0.886)	0.515 (0.016) 0.802 (0.000) -0.359 (0.282) 0.382 (0.283) -0.001 (0.960) 0.016 (0.290) -0.124 (0.333)	(0.798) 0.507 (0.032) -0.281 (0.375) 0.444 (0.010) 0.115 (0.822) 0.007 (0.796) -0.006 (0.628) -0.014 (0.844) 0.012	0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001 (0.490)	(0.118) -1.349 (0.579) -1.721 (0.531) 4.241 (0.055)	0.784 (0.000) 0.973 (0.000) -0.713 (0.000) 0.756 (0.008) 0.000 (0.922) -0.001 (0.728) -0.019 (0.135)	(0.275) 0.887 (0.000) -0.708 (0.000) 0.735 (0.000) -0.303 (0.259) 0.000 (0.763) 0.001 (0.505) 0.017 (0.131) 0.006	-0.002 (0.776) 0.002 (0.515) 0.000 (0.987) -0.001 (0.718) 0.000 (0.111)	(0.174) -0.276 (0.087) -0.116 (0.510) -2.512 (0.169)
Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance	0.524 (0.054) 0.672 (0.000) -0.288 (0.326) -0.828 (0.616) 0.016 (0.685) 0.035 (0.153) -0.117 (0.341)	(0.973) 0.570 (0.001) -0.160 (0.681) 0.342 (0.289) -0.139 (0.926) 0.022 (0.535) -0.009 (0.610) 0.042 (0.628)	-0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169) -0.002	(0.744) -0.916 (0.651) -1.691 (0.288) -1.705 (0.603) 0.040 (0.276) 0.128	0.750 (0.000) 0.971 (0.000) -0.708 (0.000) -0.354 (0.181) 0.000 (0.825) 0.000 (0.974) -0.017 (0.150)	(0.139) 0.886 (0.000) -0.676 (0.000) 0.730 (0.000) 0.345 (0.171) 0.000 (0.818) 0.001 (0.804) 0.019 (0.085) 0.004	-0.002 (0.851) 0.005 (0.273) 0.004 (0.000) -0.003 (0.160) 0.000 (0.175)	(0.972) -0.314 (0.061) -0.171 (0.250) -0.113 (0.886)	0.515 (0.016) 0.802 (0.000) -0.359 (0.282) 0.382 (0.283) -0.001 (0.960) 0.016 (0.290) -0.124 (0.333)	(0.798) 0.507 (0.032) -0.281 (0.375) 0.444 (0.010) 0.115 (0.822) 0.007 (0.796) -0.006 (0.628) -0.014 (0.844) 0.012	0.053 (0.494) -0.040 (0.424) -0.029 (0.059) 0.000 (0.478) 0.001 (0.490) 0.029	(0.118) -1.349 (0.579) -1.721 (0.531) 4.241 (0.055)	0.784 (0.000) 0.973 (0.000) -0.713 (0.000) 0.756 (0.008) 0.000 (0.922) -0.001 (0.728) -0.019 (0.135)	(0.275) 0.887 (0.000) -0.708 (0.000) 0.735 (0.000) -0.303 (0.259) 0.000 (0.763) 0.001 (0.505) 0.017 (0.131) 0.006	-0.002 (0.776) 0.002 (0.515) 0.000 (0.587) -0.001 (0.718) 0.000 (0.111) -0.013	0.174) -0.276 (0.087) -0.116 (0.510) -2.512 (0.169) 0.000 (0.993) 0.199
Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade	0.524 (0.054) 0.672 (0.000) -0.288 (0.326) -0.828 (0.616) 0.016 (0.685) 0.035 (0.153) -0.117 (0.341)	(0.973) 0.570 (0.001) -0.160 (0.681) 0.342 (0.289) -0.139 (0.926) 0.022 (0.535) -0.009 (0.610) 0.042 (0.628)	-0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169) -0.002	(0.744) -0.916 (0.651) -1.691 (0.288) -1.705 (0.603)	0.750 (0.000) 0.971 (0.000) -0.708 (0.000) -0.354 (0.181) 0.000 (0.825) 0.000 (0.974) -0.017 (0.150)	(0.139) 0.886 (0.000) -0.676 (0.000) 0.730 (0.000) 0.345 (0.171) 0.000 (0.818) 0.001 (0.804) 0.019 (0.085) 0.004	-0.002 (0.851) 0.005 (0.273) 0.004 (0.000) -0.003 (0.160) 0.000 (0.175)	(0.972) -0.314 (0.061) -0.171 (0.250) -0.113 (0.886)	0.515 (0.016) 0.802 (0.000) -0.359 (0.282) 0.382 (0.283) -0.001 (0.960) 0.016 (0.290) -0.124 (0.333)	(0.798) 0.507 (0.032) -0.281 (0.375) 0.444 (0.010) 0.115 (0.822) 0.007 (0.796) -0.006 (0.628) -0.014 (0.844) 0.012	0.053 (0.494) -0.040 (0.424) -0.029 (0.059) 0.000 (0.478) 0.001 (0.490) 0.029	(0.118) -1.349 (0.579) -1.721 (0.531) 4.241 (0.055)	0.784 (0.000) 0.973 (0.000) -0.713 (0.000) 0.756 (0.008) 0.000 (0.922) -0.001 (0.728) -0.019 (0.135)	(0.275) 0.887 (0.000) -0.708 (0.000) 0.735 (0.000) -0.303 (0.259) 0.000 (0.763) 0.001 (0.505) 0.017 (0.131) 0.006	-0.002 (0.776) 0.002 (0.515) 0.000 (0.587) -0.001 (0.718) 0.000 (0.111) -0.013	(0.174) -0.276 (0.087) -0.116 (0.510) -2.512 (0.169) 0.000 (0.993)
Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation	0.524 (0.054) 0.672 (0.000) -0.288 (0.326) -0.828 (0.616) 0.016 (0.685) 0.035 (0.153) -0.117 (0.341)	(0.973) 0.570 (0.001) -0.160 (0.681) 0.342 (0.289) -0.139 (0.926) 0.022 (0.535) -0.009 (0.610) 0.042 (0.628)	-0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169) -0.002	0.744) -0.916 (0.651) -1.691 (0.288) -1.705 (0.603) 0.040 (0.276) 0.128 (0.386) -0.090 (0.285)	0.750 (0.000) 0.971 (0.000) -0.708 (0.000) -0.354 (0.181) 0.000 (0.825) 0.000 (0.974) -0.017 (0.150)	(0.139) 0.886 (0.000) -0.676 (0.000) 0.730 (0.000) 0.345 (0.171) 0.000 (0.818) 0.001 (0.804) 0.019 (0.085) 0.004	-0.002 (0.851) 0.005 (0.273) 0.004 (0.000) -0.003 (0.160) 0.000 (0.175)	-0.001 -0.753 (0.753) -0.173 (0.886)	0.515 (0.016) 0.802 (0.000) -0.359 (0.282) 0.382 (0.283) -0.001 (0.960) 0.016 (0.290) -0.124 (0.333)	(0.798) 0.507 (0.032) -0.281 (0.375) 0.444 (0.010) 0.115 (0.822) 0.007 (0.796) -0.006 (0.628) -0.014 (0.844) 0.012	0.053 (0.494) -0.040 (0.424) -0.029 (0.059) 0.001 (0.490) 0.029	0.118) -1.349 (0.579) -1.721 (0.531) 4.241 (0.055) 0.088 (0.055) -0.109 (0.588) -0.053 (0.542)	0.784 (0.000) 0.973 (0.000) -0.713 (0.000) 0.756 (0.008) 0.000 (0.922) -0.001 (0.728) -0.019 (0.135)	(0.275) 0.887 (0.000) -0.708 (0.000) 0.735 (0.000) -0.303 (0.259) 0.000 (0.763) 0.001 (0.505) 0.017 (0.131) 0.006	-0.002 (0.776) 0.002 (0.515) 0.000 (0.587) -0.001 (0.718) 0.000 (0.111) -0.013	0.174) -0.276 (0.087) -0.116 (0.510) -2.512 (0.169) 0.000 (0.993) 0.199 (0.000) 0.000 (0.000)
Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation D.Innovation [t-t-1]	0.524 (0.054) 0.672 (0.000) -0.288 (0.326) -0.828 (0.616) 0.016 (0.685) 0.035 (0.153) -0.117 (0.341)	(0.973) 0.570 (0.001) -0.160 (0.681) 0.342 (0.289) -0.139 (0.926) 0.022 (0.535) -0.009 (0.610) 0.042 (0.628)	-0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169) -0.002	0.744) -0.916 (0.651) -1.691 (0.288) -1.705 (0.603) 0.040 (0.276) 0.128 (0.386) -0.090 (0.285) 1.165 (0.348)	0.750 (0.000) 0.971 (0.000) -0.708 (0.000) -0.354 (0.181) 0.000 (0.825) 0.000 (0.974) -0.017 (0.150)	(0.139) 0.886 (0.000) -0.676 (0.000) 0.730 (0.000) 0.345 (0.171) 0.000 (0.818) 0.001 (0.804) 0.019 (0.085) 0.004	-0.002 (0.851) 0.005 (0.273) 0.004 (0.000) -0.003 (0.160) 0.000 (0.175)	(0.972) -0.314 (0.061) -0.171 (0.250) -0.113 (0.886) -0.001 (0.753) 0.206 (0.000) -0.010 (0.557) 1.043 (0.000)	0.515 (0.016) 0.802 (0.000) -0.359 (0.282) 0.382 (0.283) -0.001 (0.960) 0.016 (0.290) -0.124 (0.333)	(0.798) 0.507 (0.032) -0.281 (0.375) 0.444 (0.010) 0.115 (0.822) 0.007 (0.796) -0.006 (0.628) -0.014 (0.844) 0.012	0.053 (0.494) -0.040 (0.424) -0.029 (0.059) 0.001 (0.490) 0.029	0.118) -1.349 (0.579) -1.721 (0.531) 4.241 (0.055) -0.109 (0.588) -0.053 (0.542) 0.966 (0.538)	0.784 (0.000) 0.973 (0.000) -0.713 (0.000) 0.756 (0.008) 0.000 (0.922) -0.001 (0.728) -0.019 (0.135)	(0.275) 0.887 (0.000) -0.708 (0.000) 0.735 (0.000) -0.303 (0.259) 0.000 (0.763) 0.001 (0.505) 0.017 (0.131) 0.006	-0.002 (0.776) 0.002 (0.515) 0.000 (0.587) -0.001 (0.718) 0.000 (0.111) -0.013	0.174) -0.276 (0.087) -0.116 (0.510) -2.512 (0.169)  0.000 (0.993) 0.199 (0.000) (0.730) 1.411 (0.000)
Innovation, t-1 (log) Imitation, t (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation D.Innovation [t - t-1] D.Imitation [t - t-1]	(0.561) 0.524 (0.054) 0.672 (0.000) -0.288 (0.326) -0.828 (0.616) 0.016 (0.685) 0.035 (0.153) -0.117 (0.341) -0.007 (0.929)	(0.973) 0.570 (0.001) -0.160 (0.681) 0.342 (0.289) -0.139 (0.926) -0.022 (0.535) -0.099 (0.610) 0.042 (0.628) 0.008 (0.916)	-0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169) -0.002 (0.845)	0.744) -0.916 (0.651) -1.691 (0.288) -1.705 (0.603) 0.040 (0.276) 0.128 (0.389) (0.285) 1.165 (0.348) 1.648 (0.089)	(0.132) 0.750 (0.000) 0.971 (0.000) -0.708 (0.000) -0.354 (0.181) 0.000 (0.825) 0.000 (0.974) -0.017 (0.150) -0.004 (0.507)	(0.139) 0.886 (0.000) -0.676 (0.000)  0.730 (0.000) 0.345 (0.171) 0.000 (0.818) 0.001 (0.804) 0.019 (0.085) 0.004 (0.536)	-0.002 (0.851) 0.005 (0.273) 0.004 (0.000) -0.003 (0.175) 0.006 (0.177)	-0.001 (0.573) (0.886) -0.001 (0.557) (0.000) -0.001 (0.557) (0.000) -0.009 (0.833)	(0.336)  0.515 (0.016) 0.802 (0.000) -0.359 (0.282) 0.382 (0.283) -0.001 (0.960) 0.016 (0.290) -0.124 (0.333) 0.041 (0.600)	(0.798) 0.507 (0.032) -0.281 (0.375) 0.444 (0.010) 0.115 (0.822) 0.007 (0.796) -0.006 (0.628) -0.014 (0.844) 0.012 (0.909)	0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.490) 0.002 (0.324)	0.118) -1.349 (0.579) -1.721 (0.531) 4.241 (0.055) -0.109 (0.583) (0.542) 0.966 (0.538) 2.244 (0.225)	(0.011)  0.784 (0.000) 0.973 (0.000) -0.713 (0.000) 0.756 (0.008) 0.000 (0.922) -0.001 (0.728) -0.019 (0.135) -0.006 (0.383)	(0.275) 0.887 (0.000) -0.708 (0.000)  0.735 (0.000) -0.303 (0.259) 0.000 (0.763) 0.001 (0.505) 0.017 (0.131) 0.006 (0.310)	-0.002 (0.776) 0.002 (0.515) 0.000 (0.987) -0.001 (0.718) 0.000 (0.111) -0.013 (0.000)	0.174) -0.276 (0.087) -0.116 (0.510) -2.512 (0.169)  0.000 (0.993) 0.199 (0.000) (0.730) 1.411 (0.000) -0.281 (0.224)
Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation D.Innovation [t - t-1] D.Imitation [t - t-1] Country Effect	(0.561)  0.524 (0.054) 0.672 (0.000) -0.288 (0.326) -0.828 (0.616) 0.016 (0.685) -0.35 (0.153) -0.117 (0.341) -0.007 (0.929)	(0.973) 0.570 (0.001) -0.160 (0.681) 0.342 (0.289) -0.139 (0.926) 0.022 (0.535) -0.009 (0.610) 0.042 (0.628) 0.008 (0.916)	-0.016 (0.479) (0.216) 0.006 (0.016) -0.002 (0.169) -0.002 (0.845)	0.744) -0.916 (0.651) -1.691 (0.288) -1.705 (0.603) 0.040 (0.276) 0.128 (0.386) -0.090 (0.285) 1.165 (0.348) 1.165 (0.348) 1.164 (0.899) Yes	0.750 (0.000) 0.971 (0.000) 0.971 (0.000) -0.354 (0.181) 0.000 (0.825) 0.000 (0.974) -0.017 (0.150) -0.004 (0.507)	(0.139) 0.886 (0.000) -0.676 (0.000)  0.730 (0.000) 0.345 (0.171) 0.000 (0.818) 0.001 (0.885) 0.004 (0.536)	-0.002 (0.851) 0.005 (0.273) 0.004 (0.000) -0.003 (0.160) 0.000 (0.175)	-0.001 (0.753) -0.101 (0.250) -0.113 (0.886) -0.001 (0.753) 0.206 (0.000) -0.517 (0.000) -0.419 (0.833) Yes	(0.336)  0.515 (0.016) 0.802 (0.000) -0.359 (0.282) 0.382 (0.283) -0.001 (0.960) -0.124 (0.333) 0.041 (0.600)	(0.798) 0.507 (0.032) -0.281 (0.375) 0.444 (0.010) 0.115 (0.822) 0.007 (0.796) -0.006 (0.628) -0.014 (0.844) 0.0112 (0.999)	0.053 (0.494) (0.424) -0.020 (0.059) 0.001 (0.490) 0.029 (0.324)	0.118) -1.349 (0.579) -1.721 (0.531)  4.241 (0.055)  0.088 (0.055) -0.109 (0.538) -0.053 (0.542) 0.966 (0.538) 2.244 (0.225) Yes Yes	(0.011)  0.784 (0.000) 0.973 (0.000) -0.713 (0.000) 0.756 (0.008) 0.000 (0.922) -0.001 (0.729) -0.019 (0.135) -0.006 (0.383)	(0.275) 0.887 (0.000) -0.708 (0.000) -0.735 (0.000) -0.303 (0.259) 0.000 (0.763) 0.001 (0.505) 0.017 (0.131) 0.0006 (0.310)	-0.002 (0.776) 0.002 (0.515) 0.000 (0.987) -0.001 (0.718) 0.000 (0.111) -0.013 (0.000)	0.174) -0.276 (0.087) -0.116 (0.510) -2.512 (0.169)  0.000 (0.993) 0.199 (0.000) 1.411 (0.000) -0.281 (0.224) Yes Yes
Innovation, t-1 (log) Imitation, t (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation D.Innovation [t - t-1] D.Imitation [t - t-1] Country Effect	(0.561)  0.524 (0.054) 0.672 (0.000) -0.288 (0.326) -0.828 (0.616) 0.016 (0.685) -0.117 (0.341) -0.007 (0.929)	(0.973) 0.570 (0.001) -0.160 (0.681) 0.342 (0.289) -0.139 (0.926) 0.022 (0.535) -0.009 (0.612) 0.042 (0.628) 0.008 (0.916)	-0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169) -0.002 (0.845)	0.744) -0.916 (0.651) -1.691 (0.288) -1.705 (0.603) 0.040 (0.276) 0.128 (0.386) -0.090 (0.285) 1.165 (0.348) 1.648 (0.089) Yes	0.750 (0.000) 0.971 (0.000) -0.708 (0.000) -0.354 (0.181) 0.000 (0.825) 0.000 (0.974) -0.017 (0.150) -0.004 (0.507)	(0.139) 0.886 (0.000) -0.676 (0.000)  0.730 (0.000) 0.345 (0.171) 0.000 (0.818) 0.001 (0.8804) 0.019 (0.085) 0.004 (0.536)	-0.002 (0.851) 0.005 (0.273) 0.004 (0.000) -0.003 (0.160) 0.000 (0.175) 0.006 (0.177)	-0.001 -0.113 (0.886) -0.171 (0.250) -0.113 (0.886) -0.001 (0.753) 0.206 (0.000) -0.010 (0.557) 1.043 (0.000) -0.049 (0.833) Yes	(0.336)  0.515 (0.016) 0.802 (0.000) -0.359 (0.282) 0.382 (0.283) -0.001 (0.960) 0.016 (0.290) -0.124 (0.333) 0.041 (0.600)	(0.798) 0.507 (0.032) -0.281 (0.375) 0.444 (0.010) 0.115 (0.822) 0.007 (0.796) -0.006 (0.628) -0.014 (0.844) 0.012 (0.909)	0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001 (0.490) 0.029 (0.324)	0.118) -1.349 (0.579) -1.721 (0.531) -1.721 (0.531) -1.721 (0.55) -1.721 (0.55) -1.721 (0.55) -1.721 (0.55) -1.721 (0.55) -1.721 (0.55) -1.721 (0.55) -1.721 (0.55) -1.721 (0.55) -1.721 (0.531) -1.721 (0.55) -1.72	(0.011)  0.784 (0.000) 0.973 (0.000) -0.713 (0.000) 0.756 (0.008) 0.000 (0.922) -0.001 (0.728) -0.006 (0.383)	(0.275) 0.887 (0.000) -0.708 (0.000) 0.735 (0.000) -0.303 (0.259) 0.000 (0.763) 0.001 (0.505) 0.017 (0.131) 0.006 (0.310)	-0.002 (0.776) 0.002 (0.515) 0.000 (0.987) -0.001 (0.718) 0.000 (0.111) -0.013 (0.000)	0.000 (0.993) (0.000) (0.993) (0.730) (0.730) (0.24) Yes
Innovation, t-1 (log) Imitation, t (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation D.Innovation [t - t-1] D.Imitation [t - t-1] Country Effect Time Effect Countries/Observations	(0.561)  0.524 (0.054) 0.672 (0.000) -0.288 (0.326) -0.828 (0.616) 0.016 (0.685) -0.35 (0.153) -0.117 (0.341) -0.007 (0.929)	(0.973) 0.570 (0.001) -0.160 (0.681) 0.342 (0.289) -0.139 (0.926) 0.022 (0.535) -0.009 (0.610) 0.042 (0.628) 0.008 (0.916)	-0.016 (0.479) (0.216) 0.006 (0.016) -0.002 (0.169) -0.002 (0.845)	0.744) -0.916 (0.651) -1.691 (0.288) -1.705 (0.603) 0.040 (0.276) 0.128 (0.386) -0.090 (0.285) 1.165 (0.348) 1.165 (0.348) 1.164 (0.899) Yes	0.750 (0.000) 0.971 (0.000) -0.708 (0.000) -0.354 (0.181) 0.000 (0.825) 0.000 (0.974) -0.017 (0.150) -0.004 (0.507)	(0.139) 0.886 (0.000) -0.676 (0.000)  0.730 (0.000) 0.345 (0.171) 0.000 (0.818) 0.001 (0.885) 0.004 (0.536)	-0.002 (0.851) 0.005 (0.273) 0.004 (0.000) 0.000 (0.175) 0.006 (0.177)	(0.972) -0.314 (0.061) -0.171 (0.250) -0.113 (0.886) -0.001 (0.753) 0.206 (0.000) -0.010 (0.557) 1.043 (0.000) -0.049 (0.833) Yes	(0.336)  0.515 (0.016) 0.802 (0.000) -0.359 (0.282) 0.382 (0.283) -0.001 (0.960) -0.124 (0.333) 0.041 (0.600)	(0.798) 0.507 (0.032) -0.281 (0.375) 0.444 (0.010) 0.115 (0.822) 0.007 (0.796) -0.006 (0.628) -0.014 (0.844) 0.0112 (0.999)	0.053 (0.494) (0.424) -0.020 (0.059) 0.001 (0.490) 0.029 (0.324)	0.118) -1.349 (0.579) -1.721 (0.531)  4.241 (0.055)  0.088 (0.055) -0.109 (0.538) -0.053 (0.542) 0.966 (0.538) 2.244 (0.225) Yes Yes	(0.011)  0.784 (0.000) 0.973 (0.000) -0.713 (0.000) 0.756 (0.008) 0.000 (0.922) -0.001 (0.728) -0.009 (0.323) -0.006 (0.383)	(0.275) 0.887 (0.000) -0.708 (0.000)  0.735 (0.000) -0.303 (0.259) 0.000 (0.763) 0.001 (0.505) 0.017 (0.131) 0.006 (0.310)	-0.002 (0.776) 0.002 (0.515) 0.000 (0.987) -0.001 (0.718) 0.000 (0.111) -0.013 (0.000)	0.174) -0.276 (0.087)  -0.116 (0.510)  -2.512 (0.169)  0.000 (0.993) 0.199 (0.000) -0.281 (0.224) Yes Yes

Hansen J-statistics (p-value) 0.431 0.683 0.859 0.431 0.685 0.85

Table 9: Benchmark Results, where value-added per employee are used as product variety measures (cont.)

		In	nchmark			stock measu	re			nnov5 & Imit	5, with public		re stock (pro.	xied by telepl		)
	Innovation		P.capital	Growth	Innovation		with FE P.capital	Growth	Innovation	System Imitation	GMM P.capital	Growth	Innovation		with FE P.capital	Growth
Initial GDP per capita (log)	-0.090 (0.946)	-0.166 (0.922)	1.127 (0.000)	0.811 (0.808)	1.004 (0.001)	-1.024 (0.000)	1.022 (0.000)	-0.507 (0.557)	-0.427 (0.302)	-0.065 (0.887)	1.072 (0.000)	-4.131 (0.158)	-0.524 (0.055)	0.062 (0.806)	0.936 (0.000)	2.350 (0.169)
Innovation, t (log)	(013.10)	0.536	(01000)	-0.904 (0.658)	(01002)	0.875	(,	-0.274 (0.101)	(0.0.02)	0.536 (0.003)	()	-1.279 (0.584)	(=====)	0.864	(,	-0.249 (0.121)
Innovation, t-1 (log)	0.441 (0.114)	-0.208 (0.405)		(0.050)	0.739 (0.000)	-0.656 (0.000)		(0.101)	0.516 (0.014)	-0.307 (0.219)		(0.501)	0.767 (0.000)	-0.673 (0.000)		(0.121)
Imitation, t (log)	0.544 (0.000)	(0.403)		-2.158 (0.186)	0.978 (0.000)	(0.000)		-0.219 (0.151)	0.645	(0.219)		-2.208 (0.407)	0.980	(0.000)		-0.144 (0.425)
Imitation, t-1 (log)	-0.196 (0.493)	0.510 (0.008)		(0.180)	-0.722 (0.000)	0.738		(0.131)	-0.430 (0.100)	0.628 (0.001)		(0.407)	-0.737 (0.000)	0.753 (0.000)		(0.423)
Public capital (log)	0.120 (0.935)	-0.023 (0.988)		-1.148 (0.701)	-0.916 (0.001)	0.951 (0.001)		0.400	0.606	-0.229 (0.640)		4.509 (0.066)	0.598 (0.041)	-0.085 (0.752)		-2.621 (0.163)
FDI	0.022 (0.234)	0.021		(0.701)	0.000	0.000 (0.939)		(0.625)	0.003	0.019		(0.000)	0.000	0.001		(0.103)
Skilled workforce	0.038	(0.496) -0.010			(0.977) -0.001	0.002			0.015	0.473)			0.000	(0.711)		
Gov. expenditure	(0.272) -0.091	(0.633)	-0.016		(0.615) -0.016	(0.440)	-0.001		(0.399)	(0.981) -0.003	0.053		(0.999)	0.748)	-0.002	
Non-tax revenue	(0.405) -0.014	(0.332) -0.024	(0.479)		(0.187) -0.001	0.000	(0.869)		(0.374) 0.024	(0.957)	(0.494) -0.040		-0.007	0.144)	(0.780)	
Gov. debt	(0.857)	(0.694)	(0.216) 0.006		(0.913)	(0.980)	(0.246) 0.003		(0.727)	(0.761)	(0.424) -0.020		(0.290)	(0.223)	(0.509) 0.000	
Urban			(0.016) -0.004				(0.000) -0.003				(0.059) 0.000				(0.933) 0.000	
Population density			(0.708) 0.000				(0.067) 0.000				(0.978) 0.001				(0.753) 0.000	
Current account balance			(0.169) -0.002				(0.214) 0.003				(0.490) 0.029				(0.113) -0.013	
Trade			(0.845)	0.047			(0.479)	-0.001			(0.324)	0.101			(0.000)	0.000
Investment				(0.196) 0.124				(0.752) 0.207				(0.052) -0.141				(0.971) 0.201
Inflation				(0.436) -0.095				(0.000) -0.012				(0.558) -0.040				(0.000)
D.Innovation [t - t-1]				(0.258) 1.059				(0.504) 1.150				(0.627) 0.738				(0.758) 1.432
D.Imitation [t - t-1]				(0.427)				(0.000)				(0.638)				(0.000) 1.432
Country Effect	Yes	Yes	Yes	(0.098) Yes	Yes	Yes	Yes	(0.402) Yes	Yes	Yes	Yes	(0.132) Yes	Yes	Yes	Yes	(0.148) Yes
Time Effect Countries/Observations	Yes 71/241	Yes 71/241	Yes 94/403	Yes 85/325	Yes 72/242	Yes 72/242	Yes 72/242	Yes 72/242	Yes 67/224	Yes 67/224	Yes 88/369	Yes 77/293	Yes 68/225	Yes 68/225	Yes 68/225	Yes 68/225
R <sup>2</sup>					0.758	0.796	0.940	0.300					0.793	0.859	0.943	0.196
Number of Instruments Hansen J-statistics (p-value)	38 0.297	38 0.880	46 0.859	44 0.462					32 0.363	32 0.620	39 0.185	34 0.274				
AR(2) test (p-value)	0.627	0.301	0.149 nnov6 & Imit	0.527 with IMF	nublic canital	stock measu	re		0.244	0.843	0.105 with public	0.977	ıre stock (pro.	vied by telenl	hone measure	)
	Innovation		n GMM P.capital	Growth	Innovation	3SLS,	with FE P.capital	Growth	Innovation	System		Growth	Innovation	3SLS,	with FE P.capital	Growth
Initial GDP per capita (log)	2.098	-0.935	1.127				1.051	-1.136	0.283	-0.183	1.072	-5.338				4.846
	(0.00.4)			-0.336	2.261	-3.035							-0.085	-0.287	0.924	
Innovation, t (log)	(0.034)	(0.326) 0.673	(0.000)	(0.955) -2.130	(0.000)	(0.000) 1.096	(0.000)	(0.136) 0.574	(0.522)	(0.699) 0.752	(0.000)	(0.014) -2.636	(0.736)	(0.339) 1.087	(0.000)	(0.013) 0.572
Innovation, t (log) Innovation, t-1 (log)	-0.583	(0.326)		(0.955)	(0.000)	(0.000) 1.096 (0.000) -0.638		(0.136)	-0.335	(0.699)		(0.014)	(0.736)	(0.339) 1.087 (0.000) -0.727		(0.013)
· -		(0.326) 0.673 (0.002)		(0.955) -2.130	(0.000)	(0.000) 1.096 (0.000)		(0.136) 0.574	(0.522)	(0.699) 0.752 (0.008)		(0.014) -2.636	(0.736)	(0.339) 1.087 (0.000)		(0.013) 0.572
Innovation, t-1 (log) Imitation, t (log)	-0.583 (0.397) 0.873 (0.035)	(0.326) 0.673 (0.002) 0.219 (0.668)		(0.955) -2.130 (0.211)	(0.000) 0.595 (0.000) 0.794 (0.000)	(0.000) 1.096 (0.000) -0.638 (0.000)		(0.136) 0.574 (0.001)	-0.335 (0.370) 0.997 (0.000)	(0.699) 0.752 (0.008) 0.264 (0.544)		(0.014) -2.636 (0.212)	0.678 (0.000) 0.761 (0.000)	(0.339) 1.087 (0.000) -0.727 (0.000)		(0.013) 0.572 (0.001)
Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log)	-0.583 (0.397) 0.873 (0.035) 0.361 (0.603)	(0.326) 0.673 (0.002) 0.219 (0.668) 0.102 (0.786)		(0.955) -2.130 (0.211) 0.261 (0.873)	(0.000) 0.595 (0.000) 0.794 (0.000) -0.406 (0.000)	(0.000) 1.096 (0.000) -0.638 (0.000) 0.518 (0.000)		(0.136) 0.574 (0.001) -0.938 (0.000)	(0.522) -0.335 (0.370) 0.997 (0.000) 0.204 (0.537)	(0.699) 0.752 (0.008) 0.264 (0.544) 0.008 (0.981)		(0.014) -2.636 (0.212) 1.402 (0.424)	0.736) 0.678 (0.000) 0.761 (0.000) -0.534 (0.000)	(0.339) 1.087 (0.000) -0.727 (0.000) 0.704 (0.000)		(0.013) 0.572 (0.001) -0.941 (0.001)
Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log)	-0.583 (0.397) 0.873 (0.035) 0.361 (0.603) -1.122 (0.413)	(0.326) 0.673 (0.002) 0.219 (0.668) 0.102 (0.786) 0.337 (0.671)		(0.955) -2.130 (0.211) 0.261	(0.000) 0.595 (0.000) 0.794 (0.000) -0.406 (0.000) -2.154 (0.000)	(0.000) 1.096 (0.000) -0.638 (0.000) 0.518 (0.000) 2.902 (0.000)		(0.136) 0.574 (0.001) -0.938	(0.522) -0.335 (0.370) 0.997 (0.000) 0.204 (0.537) 0.586 (0.329)	(0.699) 0.752 (0.008) 0.264 (0.544) 0.008 (0.981) -0.657 (0.077)		(0.014) -2.636 (0.212)	0.736)  0.678 (0.000) 0.761 (0.000) -0.534 (0.000) 0.117 (0.662)	(0.339) 1.087 (0.000) -0.727 (0.000) 0.704 (0.000) 0.295 (0.354)		(0.013) 0.572 (0.001) -0.941
Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI	-0.583 (0.397) 0.873 (0.035) 0.361 (0.603) -1.122 (0.413) -0.057 (0.266)	(0.326) 0.673 (0.002) 0.219 (0.668) 0.102 (0.786) 0.337 (0.671) 0.040 (0.216)		(0.955) -2.130 (0.211) 0.261 (0.873)	(0.000) 0.595 (0.000) 0.794 (0.000) -0.406 (0.000) -2.154 (0.000) 0.002 (0.262)	(0.000) 1.096 (0.000) -0.638 (0.000) 0.518 (0.000) 2.902 (0.000) -0.002 (0.270)		(0.136) 0.574 (0.001) -0.938 (0.000)	(0.522) -0.335 (0.370) 0.997 (0.000) 0.204 (0.537) 0.586 (0.329) -0.075 (0.231)	(0.699) 0.752 (0.008) 0.264 (0.544) 0.008 (0.981) -0.657 (0.077) 0.071 (0.069)		(0.014) -2.636 (0.212) 1.402 (0.424) 4.430	(0.736) 0.678 (0.000) 0.761 (0.000) -0.534 (0.000) 0.117 (0.662) 0.000 (0.990)	(0.339) 1.087 (0.000) -0.727 (0.000) 0.704 (0.000) 0.295 (0.354) 0.001 (0.727)		(0.013) 0.572 (0.001) -0.941 (0.001)
Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce	-0.583 (0.397) 0.873 (0.035) 0.361 (0.603) -1.122 (0.413) -0.057 (0.266) 0.007 (0.878)	(0.326) 0.673 (0.002) 0.219 (0.668) 0.102 (0.786) 0.337 (0.671) 0.040 (0.216) 0.009 (0.639)	(0.000)	(0.955) -2.130 (0.211) 0.261 (0.873)	(0.000) 0.595 (0.000) 0.794 (0.000) -0.406 (0.000) -2.154 (0.000) 0.002 (0.262) -0.010 (0.001)	(0.000) 1.096 (0.000) -0.638 (0.000) 0.518 (0.000) 2.902 (0.000) -0.002 (0.270) 0.013 (0.000)	(0.000)	(0.136) 0.574 (0.001) -0.938 (0.000)	(0.522) -0.335 (0.370) 0.997 (0.000) 0.204 (0.537) 0.586 (0.329) -0.075 (0.231) 0.001 (0.962)	(0.699) 0.752 (0.008) 0.264 (0.544) 0.008 (0.981) -0.657 (0.077) 0.071 (0.069) 0.012 (0.657)	(0.000)	(0.014) -2.636 (0.212) 1.402 (0.424) 4.430	(0.736) 0.678 (0.000) 0.761 (0.000) -0.534 (0.000) 0.117 (0.662) 0.000 (0.990) 0.001 (0.683)	(0.339) 1.087 (0.000) -0.727 (0.000) 0.704 (0.000) 0.295 (0.354) 0.001 (0.727) -0.001 (0.829)	(0.000)	(0.013) 0.572 (0.001) -0.941 (0.001)
Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure	-0.583 (0.397) 0.873 (0.035) 0.361 (0.603) -1.122 (0.413) -0.057 (0.266) 0.007 (0.878) -0.148 (0.343)	(0.326) 0.673 (0.002) 0.219 (0.668) 0.102 (0.786) 0.337 (0.671) 0.040 (0.216) 0.009 (0.638) (0.375)	-0.016 (0.479)	(0.955) -2.130 (0.211) 0.261 (0.873)	(0.000) 0.595 (0.000) 0.794 (0.000) -0.406 (0.000) -2.154 (0.000) 0.002 (0.262) -0.010 (0.001) -0.015 (0.299)	(0.000) 1.096 (0.000) -0.638 (0.000) 0.518 (0.000) 2.902 (0.000) -0.002 (0.270) 0.013 (0.000) 0.024 (0.181)	-0.005 (0.550)	(0.136) 0.574 (0.001) -0.938 (0.000)	(0.522)  -0.335 (0.370) 0.997 (0.000) 0.204 (0.537) 0.586 (0.329) -0.075 (0.231) 0.001 (0.962) -0.083 (0.466)	(0.699) 0.752 (0.008) 0.264 (0.544) 0.008 (0.981) -0.657 (0.077) 0.071 (0.069) 0.012 (0.657) 0.075 (0.468)	(0.000) 0.053 (0.494)	(0.014) -2.636 (0.212) 1.402 (0.424) 4.430	(0.736) 0.678 (0.000) 0.761 (0.000) -0.534 (0.000) 0.117 (0.662) 0.000 (0.990) 0.001 (0.683) -0.014 (0.231)	(0.339) 1.087 (0.000) -0.727 (0.000) 0.704 (0.000) 0.295 (0.354) 0.001 (0.727) -0.001 (0.829) 0.016 (0.260)	(0.000) 0.002 (0.795)	(0.013) 0.572 (0.001) -0.941 (0.001)
Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue	-0.583 (0.397) 0.873 (0.035) 0.361 (0.603) -1.122 (0.413) -0.057 (0.266) 0.007 (0.878) -0.148	(0.326) 0.673 (0.002) 0.219 (0.668) 0.102 (0.786) 0.337 (0.671) 0.040 (0.216) 0.009 (0.639) 0.078	-0.016	(0.955) -2.130 (0.211) 0.261 (0.873)	(0.000) 0.595 (0.000) 0.794 (0.000) -0.406 (0.000) -2.154 (0.000) 0.002 (0.262) -0.010 (0.001) -0.015	(0.000) 1.096 (0.000) -0.638 (0.000) 0.518 (0.000) 2.902 (0.000) -0.002 (0.270) 0.013 (0.000) 0.024	-0.005	(0.136) 0.574 (0.001) -0.938 (0.000)	(0.522)  -0.335 (0.370) 0.997 (0.000) 0.204 (0.537) 0.586 (0.329) -0.075 (0.231) 0.001 (0.962) -0.083	(0.699) 0.752 (0.008) 0.264 (0.544) 0.008 (0.981) -0.657 (0.077) 0.071 (0.069) 0.012 (0.657) 0.075	0.053 (0.494) -0.040 (0.424)	(0.014) -2.636 (0.212) 1.402 (0.424) 4.430	(0.736) 0.678 (0.000) 0.761 (0.000) -0.534 (0.000) 0.117 (0.662) 0.000 (0.990) 0.001 (0.683) -0.014	(0.339) 1.087 (0.000) -0.727 (0.000) 0.704 (0.000) 0.295 (0.354) 0.001 (0.727) -0.001 (0.829) 0.016	0.002 (0.795) 0.001 (0.820)	(0.013) 0.572 (0.001) -0.941 (0.001)
Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure	-0.583 (0.397) 0.873 (0.035) 0.361 (0.603) -1.122 (0.413) -0.057 (0.266) 0.007 (0.878) -0.148 (0.343) -0.088	(0.326) 0.673 (0.002) 0.219 (0.668) 0.102 (0.786) 0.337 (0.671) 0.040 (0.216) 0.009 (0.639) 0.078 (0.375) -0.008	-0.016 (0.479) 0.012	(0.955) -2.130 (0.211) 0.261 (0.873)	0.000)  0.595 (0.000) 0.794 (0.000) -0.406 (0.000) -0.2.154 (0.000) 0.002 (0.262) -0.010 (0.001) -0.015 (0.299) 0.018	(0.000) 1.096 (0.000) -0.638 (0.000) 0.518 (0.000) 2.902 (0.000) -0.002 (0.270) 0.013 (0.000) 0.024 (0.181)	-0.005 (0.550) 0.009	(0.136) 0.574 (0.001) -0.938 (0.000)	(0.522) -0.335 (0.370) 0.997 (0.000) 0.204 (0.537) 0.586 (0.329) -0.075 (0.231) 0.001 (0.962) -0.083 (0.466) -0.071	(0.699) 0.752 (0.008) 0.264 (0.544) 0.008 (0.981) -0.657 (0.077) 0.071 (0.657) 0.012 (0.468) 0.027	0.053 (0.494) -0.040	(0.014) -2.636 (0.212) 1.402 (0.424) 4.430	0.678 (0.000) 0.761 (0.000) -0.534 (0.000) 0.117 (0.662) 0.000 (0.990) 0.001 (0.683) -0.014 (0.231)	(0.339) 1.087 (0.000) -0.727 (0.000) 0.704 (0.000) 0.295 (0.354) 0.001 (0.727) -0.001 (0.829) 0.016 (0.260)	0.002 (0.795) 0.001	(0.013) 0.572 (0.001) -0.941 (0.001)
Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue	-0.583 (0.397) 0.873 (0.035) 0.361 (0.603) -1.122 (0.413) -0.057 (0.266) 0.007 (0.878) -0.148 (0.343) -0.088	(0.326) 0.673 (0.002) 0.219 (0.668) 0.102 (0.786) 0.337 (0.671) 0.040 (0.216) 0.009 (0.639) 0.078 (0.375) -0.008	-0.016 (0.479) 0.012 (0.216) 0.006 (0.016)	(0.955) -2.130 (0.211) 0.261 (0.873)	0.000)  0.595 (0.000) 0.794 (0.000) -0.406 (0.000) -0.2.154 (0.000) 0.002 (0.262) -0.010 (0.001) -0.015 (0.299) 0.018	(0.000) 1.096 (0.000) -0.638 (0.000) 0.518 (0.000) 2.902 (0.000) -0.002 (0.270) 0.013 (0.000) 0.024 (0.181)	-0.005 (0.550) (0.051) (0.051) (0.001) (0.100)	(0.136) 0.574 (0.001) -0.938 (0.000)	(0.522) -0.335 (0.370) 0.997 (0.000) 0.204 (0.537) 0.586 (0.329) -0.075 (0.231) 0.001 (0.962) -0.083 (0.466) -0.071	(0.699) 0.752 (0.008) 0.264 (0.544) 0.008 (0.981) -0.657 (0.077) 0.071 (0.657) 0.012 (0.468) 0.027	0.053 (0.494) -0.040 (0.424) -0.020 (0.059)	(0.014) -2.636 (0.212) 1.402 (0.424) 4.430	0.678 (0.000) 0.761 (0.000) -0.534 (0.000) 0.117 (0.662) 0.000 (0.990) 0.001 (0.683) -0.014 (0.231)	(0.339) 1.087 (0.000) -0.727 (0.000) 0.704 (0.000) 0.295 (0.354) 0.001 (0.727) -0.001 (0.829) 0.016 (0.260)	0.002 (0.795) 0.001 (0.820) 0.001 (0.814)	(0.013) 0.572 (0.001) -0.941 (0.001)
Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt	-0.583 (0.397) 0.873 (0.035) 0.361 (0.603) -1.122 (0.413) -0.057 (0.266) 0.007 (0.878) -0.148 (0.343) -0.088	(0.326) 0.673 (0.002) 0.219 (0.668) 0.102 (0.786) 0.337 (0.671) 0.040 (0.216) 0.009 (0.639) 0.078 (0.375) -0.008	-0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708)	(0.955) -2.130 (0.211) 0.261 (0.873)	0.000)  0.595 (0.000) 0.794 (0.000) -0.406 (0.000) -0.2.154 (0.000) 0.002 (0.262) -0.010 (0.001) -0.015 (0.299) 0.018	(0.000) 1.096 (0.000) -0.638 (0.000) 0.518 (0.000) 2.902 (0.000) -0.002 (0.270) 0.013 (0.000) 0.024 (0.181)	-0.005 (0.509) (0.051) (0.015) -0.003 (0.037)	(0.136) 0.574 (0.001) -0.938 (0.000)	(0.522) -0.335 (0.370) 0.997 (0.000) 0.204 (0.537) 0.586 (0.329) -0.075 (0.231) 0.001 (0.962) -0.083 (0.466) -0.071	(0.699) 0.752 (0.008) 0.264 (0.544) 0.008 (0.981) -0.657 (0.077) 0.071 (0.657) 0.012 (0.468) 0.027	0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978)	(0.014) -2.636 (0.212) 1.402 (0.424) 4.430	0.678 (0.000) 0.761 (0.000) -0.534 (0.000) 0.117 (0.662) 0.000 (0.990) 0.001 (0.683) -0.014 (0.231)	(0.339) 1.087 (0.000) -0.727 (0.000) 0.704 (0.000) 0.295 (0.354) 0.001 (0.727) -0.001 (0.829) 0.016 (0.260)	0.002 (0.795) 0.001 (0.820) 0.001 (0.814) 0.000 (0.737)	(0.013) 0.572 (0.001) -0.941 (0.001)
Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) PDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban	-0.583 (0.397) 0.873 (0.035) 0.361 (0.603) -1.122 (0.413) -0.057 (0.266) 0.007 (0.878) -0.148 (0.343) -0.088	(0.326) 0.673 (0.002) 0.219 (0.668) 0.102 (0.786) 0.337 (0.671) 0.040 (0.216) 0.009 (0.639) 0.078 (0.375) -0.008	-0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169) -0.002	(0.955) -2.130 (0.211) 0.261 (0.873)	0.000)  0.595 (0.000) 0.794 (0.000) -0.406 (0.000) -0.2.154 (0.000) 0.002 (0.262) -0.010 (0.001) -0.015 (0.299) 0.018	(0.000) 1.096 (0.000) -0.638 (0.000) 0.518 (0.000) 2.902 (0.000) -0.002 (0.270) 0.013 (0.000) 0.024 (0.181)	-0.005 (0.550) 0.009 (0.051) -0.003 (0.037) 0.000 (0.760)	(0.136) 0.574 (0.001) -0.938 (0.000)	(0.522) -0.335 (0.370) 0.997 (0.000) 0.204 (0.537) 0.586 (0.329) -0.075 (0.231) 0.001 (0.962) -0.083 (0.466) -0.071	(0.699) 0.752 (0.008) 0.264 (0.544) 0.008 (0.981) -0.657 (0.077) 0.071 (0.657) 0.012 (0.468) 0.027	0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.499) 0.001 (0.4990)	(0.014) -2.636 (0.212) 1.402 (0.424) 4.430	0.678 (0.000) 0.761 (0.000) -0.534 (0.000) 0.117 (0.662) 0.000 (0.990) 0.001 (0.683) -0.014 (0.231)	(0.339) 1.087 (0.000) -0.727 (0.000) 0.704 (0.000) 0.295 (0.354) 0.001 (0.727) -0.001 (0.829) 0.016 (0.260)	0.002 (0.795) 0.001 (0.820) 0.001 (0.814) 0.000 (0.737) 0.000 (0.399) -0.014	(0.013) 0.572 (0.001) -0.941 (0.001)
Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density	-0.583 (0.397) 0.873 (0.035) 0.361 (0.603) -1.122 (0.413) -0.057 (0.266) 0.007 (0.878) -0.148 (0.343) -0.088	(0.326) 0.673 (0.002) 0.219 (0.668) 0.102 (0.786) 0.337 (0.671) 0.040 (0.216) 0.009 (0.639) 0.078 (0.375) -0.008	-0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169)	(0.955) -2.130 (0.211) 0.261 (0.873) -1.282 (0.800)	0.000)  0.595 (0.000) 0.794 (0.000) -0.406 (0.000) -0.2.154 (0.000) 0.002 (0.262) -0.010 (0.001) -0.015 (0.299) 0.018	(0.000) 1.096 (0.000) -0.638 (0.000) 0.518 (0.000) 2.902 (0.000) -0.002 (0.270) 0.013 (0.000) 0.024 (0.181)	-0.005 (0.550) 0.009 (0.051) 0.001 (0.1037) 0.003 (0.037)	(0.136) 0.574 (0.001) -0.938 (0.000) 0.998 (0.173)	(0.522) -0.335 (0.370) 0.997 (0.000) 0.204 (0.537) 0.586 (0.329) -0.075 (0.231) 0.001 (0.962) -0.083 (0.466) -0.071	(0.699) 0.752 (0.008) 0.264 (0.544) 0.008 (0.981) -0.657 (0.077) 0.071 (0.657) 0.012 (0.468) 0.027	0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001	(0.014) -2.636 (0.212) 1.402 (0.424) 4.430 (0.038)	0.678 (0.000) 0.761 (0.000) -0.534 (0.000) 0.117 (0.662) 0.000 (0.990) 0.001 (0.683) -0.014 (0.231)	(0.339) 1.087 (0.000) -0.727 (0.000) 0.704 (0.000) 0.295 (0.354) 0.001 (0.727) -0.001 (0.829) 0.016 (0.260)	0.002 (0.795) 0.001 (0.820) 0.001 (0.377) 0.000 (0.737)	(0.013) 0.572 (0.001) -0.941 (0.001) -5.411 (0.010)
Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance	-0.583 (0.397) 0.873 (0.035) 0.361 (0.603) -1.122 (0.413) -0.057 (0.266) 0.007 (0.878) -0.148 (0.343) -0.088	(0.326) 0.673 (0.002) 0.219 (0.668) 0.102 (0.786) 0.337 (0.671) 0.040 (0.216) 0.009 (0.639) 0.078 (0.375) -0.008	-0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169) -0.002	(0.955) -2.130 (0.211) 0.261 (0.873) -1.282 (0.800)	0.000)  0.595 (0.000) 0.794 (0.000) -0.406 (0.000) -0.2.154 (0.000) 0.002 (0.262) -0.010 (0.001) -0.015 (0.299) 0.018	(0.000) 1.096 (0.000) -0.638 (0.000) 0.518 (0.000) 2.902 (0.000) -0.002 (0.270) 0.013 (0.000) 0.024 (0.181)	-0.005 (0.550) 0.009 (0.051) -0.003 (0.037) 0.000 (0.760)	(0.136) 0.574 (0.001) -0.938 (0.000) 0.998 (0.173) -0.001 (0.730) 0.242	(0.522) -0.335 (0.370) 0.997 (0.000) 0.204 (0.537) 0.586 (0.329) -0.075 (0.231) 0.001 (0.962) -0.083 (0.466) -0.071	(0.699) 0.752 (0.008) 0.264 (0.544) 0.008 (0.981) -0.657 (0.077) 0.071 (0.657) 0.012 (0.468) 0.027	0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.499) 0.001 (0.4990)	(0.014) -2.636 (0.212) 1.402 (0.424) 4.430 (0.038) 0.090 (0.172) -0.022	0.678 (0.000) 0.761 (0.000) -0.534 (0.000) 0.117 (0.662) 0.000 (0.990) 0.001 (0.683) -0.014 (0.231)	(0.339) 1.087 (0.000) -0.727 (0.000) 0.704 (0.000) 0.295 (0.354) 0.001 (0.727) -0.001 (0.829) 0.016 (0.260)	0.002 (0.795) 0.001 (0.820) 0.001 (0.814) 0.000 (0.737) 0.000 (0.399) -0.014	(0.013) 0.572 (0.001) -0.941 (0.001) -5.411 (0.010) -0.003 (0.546) 0.261
Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade	-0.583 (0.397) 0.873 (0.035) 0.361 (0.603) -1.122 (0.413) -0.057 (0.266) 0.007 (0.878) -0.148 (0.343) -0.088	(0.326) 0.673 (0.002) 0.219 (0.668) 0.102 (0.786) 0.337 (0.671) 0.040 (0.216) 0.009 (0.639) 0.078 (0.375) -0.008	-0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169) -0.002	(0.955) -2.130 (0.211) 0.261 (0.873) -1.282 (0.800) 0.042 (0.566) 0.121 (0.600) -0.120	0.000)  0.595 (0.000) 0.794 (0.000) -0.406 (0.000) -0.2.154 (0.000) 0.002 (0.262) -0.010 (0.001) -0.015 (0.299) 0.018	(0.000) 1.096 (0.000) -0.638 (0.000) 0.518 (0.000) 2.902 (0.000) -0.002 (0.270) 0.013 (0.000) 0.024 (0.181)	-0.005 (0.550) 0.009 (0.051) -0.003 (0.037) 0.000 (0.760)	(0.136) 0.574 (0.001) -0.938 (0.000) 0.998 (0.173) -0.001 (0.730) 0.242 (0.000)	(0.522) -0.335 (0.370) 0.997 (0.000) 0.204 (0.537) 0.586 (0.329) -0.075 (0.231) 0.001 (0.962) -0.083 (0.466) -0.071	(0.699) 0.752 (0.008) 0.264 (0.544) 0.008 (0.981) -0.657 (0.077) 0.071 (0.657) 0.012 (0.468) 0.027	0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.499) 0.001 (0.4990)	0.014) -2.636 (0.212) 1.402 (0.424) 4.430 (0.038) 0.090 (0.172) -0.022 (0.919) -0.022	0.678 (0.000) 0.761 (0.000) -0.534 (0.000) 0.117 (0.662) 0.000 (0.990) 0.001 (0.683) -0.014 (0.231)	(0.339) 1.087 (0.000) -0.727 (0.000) 0.704 (0.000) 0.295 (0.354) 0.001 (0.727) -0.001 (0.829) 0.016 (0.260)	0.002 (0.795) 0.001 (0.820) 0.001 (0.814) 0.000 (0.737) 0.000 (0.399) -0.014	(0.013) 0.572 (0.001) -0.941 (0.001) -5.411 (0.010) -0.003 (0.546) 0.261 (0.000)
Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment	-0.583 (0.397) 0.873 (0.035) 0.361 (0.603) -1.122 (0.413) -0.057 (0.266) 0.007 (0.878) -0.148 (0.343) -0.088	(0.326) 0.673 (0.002) 0.219 (0.668) 0.102 (0.786) 0.337 (0.671) 0.040 (0.216) 0.009 (0.639) 0.078 (0.375) -0.008	-0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169) -0.002	0.955) -2.130 (0.211)  0.261 (0.873)  -1.282 (0.800)  0.042 (0.566) 0.121 (0.120 (0.149) 3.806	0.000)  0.595 (0.000) 0.794 (0.000) -0.406 (0.000) -0.2.154 (0.000) 0.002 (0.262) -0.010 (0.001) -0.015 (0.299) 0.018	(0.000) 1.096 (0.000) -0.638 (0.000) 0.518 (0.000) 2.902 (0.000) -0.002 (0.270) 0.013 (0.000) 0.024 (0.181)	-0.005 (0.550) 0.009 (0.051) -0.003 (0.037) 0.000 (0.760)	(0.136) 0.574 (0.001) -0.938 (0.000) 0.998 (0.173) -0.001 (0.730) 0.242 (0.000) -0.014 (0.445) 0.671	(0.522) -0.335 (0.370) 0.997 (0.000) 0.204 (0.537) 0.586 (0.329) -0.075 (0.231) 0.001 (0.962) -0.083 (0.466) -0.071	(0.699) 0.752 (0.008) 0.264 (0.544) 0.008 (0.981) -0.657 (0.077) 0.071 (0.657) 0.012 (0.468) 0.027	0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.499) 0.001 (0.4990)	0.090 (0.172) 1.402 (0.424) 4.430 (0.038) 0.090 (0.172) -0.022 (0.919) -0.028 (0.702) 3.909	0.678 (0.000) 0.761 (0.000) -0.534 (0.000) 0.117 (0.662) 0.000 (0.990) 0.001 (0.683) -0.014 (0.231)	(0.339) 1.087 (0.000) -0.727 (0.000) 0.704 (0.000) 0.295 (0.354) 0.001 (0.727) -0.001 (0.829) 0.016 (0.260)	0.002 (0.795) 0.001 (0.820) 0.001 (0.814) 0.000 (0.737) 0.000 (0.399) -0.014	-0.003 (0.546) 0.261 (0.000) -0.016 (0.479) 0.804
Innovation, t-1 (log) Imitation, t (log) Imitation, t (log) Public capital (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation	-0.583 (0.397) 0.873 (0.035) 0.361 (0.603) -1.122 (0.413) -0.057 (0.266) 0.007 (0.878) -0.148 (0.343) -0.088	(0.326) 0.673 (0.002) 0.219 (0.668) 0.102 (0.786) 0.337 (0.671) 0.040 (0.216) 0.009 (0.639) 0.078 (0.375) -0.008	-0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169) -0.002	0.955) -2.130 (0.211)  0.261 (0.873) -1.282 (0.800)  0.042 (0.560) -1.121 (0.600) -0.120 (0.149)	0.000)  0.595 (0.000) 0.794 (0.000) -0.406 (0.000) -0.2.154 (0.000) 0.002 (0.262) -0.010 (0.001) -0.015 (0.299) 0.018	(0.000) 1.096 (0.000) -0.638 (0.000) 0.518 (0.000) 2.902 (0.000) -0.002 (0.270) 0.013 (0.000) 0.024 (0.181)	-0.005 (0.550) 0.009 (0.051) -0.003 (0.037) 0.000 (0.760)	(0.136) 0.574 (0.001) -0.938 (0.000) 0.998 (0.173) -0.001 (0.730) 0.242 (0.000) -0.014 (0.444)	(0.522) -0.335 (0.370) 0.997 (0.000) 0.204 (0.537) 0.586 (0.329) -0.075 (0.231) 0.001 (0.962) -0.083 (0.466) -0.071	(0.699) 0.752 (0.008) 0.264 (0.544) 0.008 (0.981) -0.657 (0.077) 0.071 (0.657) 0.012 (0.468) 0.027	0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.499) 0.001 (0.4990)	0.014) -2.636 (0.212) 1.402 (0.424) 4.430 (0.038) 0.090 (0.172) -0.022 (0.919) -0.028 (0.702)	0.678 (0.000) 0.761 (0.000) -0.534 (0.000) 0.117 (0.662) 0.000 (0.990) 0.001 (0.683) -0.014 (0.231)	(0.339) 1.087 (0.000) -0.727 (0.000) 0.704 (0.000) 0.295 (0.354) 0.001 (0.727) -0.001 (0.829) 0.016 (0.260)	0.002 (0.795) 0.001 (0.820) 0.001 (0.814) 0.000 (0.737) 0.000 (0.399) -0.014	(0.013) 0.572 (0.001) -0.941 (0.001) -5.411 (0.010) -0.003 (0.546) 0.261 (0.000) -0.016 (0.479)
Innovation, t-1 (log) Imitation, t (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation D.Innovation [t - t-1]	-0.583 (0.397) 0.873 (0.035) 0.361 (0.603) -1.122 (0.413) -0.057 (0.266) 0.007 (0.878) -0.148 (0.343) -0.088	(0.326) 0.673 (0.002) 0.219 (0.668) 0.102 (0.786) 0.337 (0.671) 0.040 (0.216) 0.009 (0.639) 0.078 (0.375) -0.008	-0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169) -0.002	(0.955) -2.130 (0.211) 0.261 (0.873) -1.282 (0.800) 0.042 (0.566) 0.121 (0.600) -0.120 (0.149) 3.806 (0.001)	0.000)  0.595 (0.000) 0.794 (0.000) -0.406 (0.000) -0.2.154 (0.000) 0.002 (0.262) -0.010 (0.001) -0.015 (0.299) 0.018	(0.000) 1.096 (0.000) -0.638 (0.000) 0.518 (0.000) 2.902 (0.000) -0.002 (0.270) 0.013 (0.000) 0.024 (0.181)	-0.005 (0.550) 0.009 (0.051) -0.003 (0.037) 0.000 (0.760)	(0.136) 0.574 (0.001) -0.938 (0.000) 0.998 (0.173) -0.001 (0.730) 0.242 (0.000) -0.014 (0.445) 0.671 (0.002)	(0.522) -0.335 (0.370) 0.997 (0.000) 0.204 (0.537) 0.586 (0.329) -0.075 (0.231) 0.001 (0.962) -0.083 (0.466) -0.071	(0.699) 0.752 (0.008) 0.264 (0.544) 0.008 (0.981) -0.657 (0.077) 0.071 (0.657) 0.012 (0.468) 0.027	0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.499) 0.001 (0.4990)	0.014) -2.636 (0.212) 1.402 (0.424) 4.430 (0.038) 0.090 (0.172) -0.022 (0.702) 3.909 (0.702)	0.678 (0.000) 0.761 (0.000) -0.534 (0.000) 0.117 (0.662) 0.000 (0.990) 0.001 (0.683) -0.014 (0.231)	(0.339) 1.087 (0.000) -0.727 (0.000) 0.704 (0.000) 0.295 (0.354) 0.001 (0.727) -0.001 (0.829) 0.016 (0.260)	0.002 (0.795) 0.001 (0.820) 0.001 (0.814) 0.000 (0.737) 0.000 (0.399) -0.014	(0.013) 0.572 (0.001) -0.941 (0.001) -5.411 (0.010) -0.003 (0.546) 0.261 (0.000) -0.016 (0.479) 0.804 (0.001)
Innovation, t-1 (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation D.Innovation [t - t-1] D.Imitation [t - t-1]	-0.583 (0.397) 0.873 (0.035) 0.361 (0.603) -1.122 (0.413) -0.057 (0.266) 0.007 (0.878) -0.148 (0.343) -0.098 (0.947)	(0.326) (0.673) (0.002) (0.219) (0.668) 0.102 (0.786) (0.337) (0.671) (0.406) (0.216) (0.216) (0.216) (0.216) (0.218) (0.21	-0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169) -0.002 (0.845)	0.955) -2.130 (0.211)  0.261 (0.873)  -1.282 (0.800)  0.042 (0.566) 0.121 (0.600) -0.120 (0.149) 3.806 (0.001) -1.652 (0.216)	(0.000)  0.595 (0.000) 0.794 (0.000) -0.406 (0.000) -2.154 (0.000) -0.010 (0.262) -0.010 (0.001) -0.015 (0.299) 0.018 (0.031)	(0.000) 1.096 (0.000) -0.638 (0.000) 0.518 (0.000) 2.902 (0.000) -0.002 (0.270) 0.024 (0.181) -0.025 (0.024)	-0.005 (0.550) (0.551) (0.001) (0.0115) -0.003 (0.037) 0.000 (0.760) -0.002 (0.681)	-0.001 (0.730) -0.242 (0.000) -0.001 (0.730) 0.242 (0.000) -0.014 (0.445) 0.671 (0.002) 0.175	(0.522) -0.335 (0.370) 0.997 (0.000) 0.204 (0.537) 0.586 (0.329) -0.075 (0.231) 0.001 (0.962) -0.083 (0.466) -0.071 (0.391)	(0.699) 0.752 (0.008) 0.264 (0.544) 0.008 (0.981) -0.657 (0.077) 0.071 (0.069) 0.012 (0.648) 0.027 (0.646)	0.053 (0.494) -0.020 (0.059) 0.000 (0.978) 0.001 (0.490) 0.024	0.014) -2.636 (0.212) 1.402 (0.424) 4.430 (0.038) 0.090 (0.172) -0.022 (0.919) (0.702) 3.909 (0.028) -2.312 (0.312)	(0.736)  0.678 (0.000) 0.761 (0.000) -0.534 (0.000) 0.117 (0.662) 0.000 (0.990) 0.001 (0.683) -0.014 (0.231) -0.006 (0.401)	(0.339) 1.087 (0.000) -0.727 (0.000) 0.704 (0.000) 0.295 (0.354) 0.001 (0.727) -0.001 (0.260) 0.016 (0.260) 0.009 (0.260)	0.002 (0.795) 0.001 (0.820) 0.001 (0.814) 0.000 (0.399) -0.014 (0.000)	-0.003 (0.546) (0.001) -0.941 (0.001) -5.411 (0.010) -0.003 (0.546) (0.261 (0.000) -0.016 (0.479) 0.804 (0.001) 0.309
Innovation, t-1 (log) Imitation, t (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation D.Innovation [t - t-1] D.Imitation [t - t-1] Country Effect Time Effect Countries/Observations R <sup>2</sup>	-0.583 (0.397) 0.873 (0.035) 0.361 (0.603) -1.122 (0.413) -0.057 (0.266) 0.007 (0.878) -0.108 (0.343) -0.008 (0.947)	(0.326) (0.673) (0.002) (0.219) (0.668) (0.786) (0.377) (0.671) (0.40) (0.216) (0.009) (0.639) (0.375) (0.375) (0.889) (0.889)	-0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) 0.000 (0.169) -0.002 (0.845)	0.955) -2.130 (0.211)  0.261 (0.873)  -1.282 (0.800)  0.042 (0.566) 0.121 (0.600) -0.120 (0.149) 3.806 (0.001) -1.652 (0.216) Yes Yes 83/316	(0.000)  0.595 (0.000) 0.794 (0.000) -0.406 (0.000) -2.154 (0.000) -0.015 (0.209) -0.015 (0.299) 0.015 (0.291) 0.015	(0.000) 1.096 (0.000) -0.638 (0.000) 0.518 (0.000) 2.902 (0.000) -0.002 (0.270) 0.013 (0.000) 0.024 (0.181) -0.025 (0.024)	-0.005 (0.550) 0.009 (0.051) 0.001 (0.115) -0.003 (0.037) 0.000 (0.760) -0.002 (0.681)	(0.136) 0.574 (0.001) -0.938 (0.000) 0.998 (0.173) -0.001 (0.730) 0.242 (0.000) -0.014 (0.425) Yes Yes	(0.522) -0.335 (0.370) 0.997 (0.000) 0.204 (0.537) 0.586 (0.329) -0.075 (0.231) 0.001 (0.962) -0.083 (0.466) -0.071 (0.391)	(0.699) 0.752 (0.008) 0.264 (0.544) 0.008 (0.981) -0.657 (0.077) 0.012 (0.659) 0.027 (0.468) 0.027 (0.646)	0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.000 (0.978) 0.001 (0.490) 0.029 (0.324)	0.014) -2.636 (0.212) 1.402 (0.424) 4.430 (0.038) 0.038) 0.090 (0.172) -0.022 (0.702) 3.090 (0.2312 (0.312) Yes Yes	0.678 (0.000) 0.761 (0.000) 0.761 (0.000) 0.761 (0.000) 0.117 (0.662) 0.000 (0.990) 0.001 (0.683) -0.014 (0.231) -0.006 (0.401)	(0.339) 1.087 (0.000) -0.727 (0.000)  0.704 (0.000) 0.295 (0.354) 0.001 (0.727) -0.001 (0.260) 0.016 (0.260) 0.009 (0.260)	0.002 (0.795) 0.001 (0.820) 0.001 (0.814) 0.000 (0.737) 0.000 (0.399) -0.014 (0.000)	-0.003 (0.546) 0.261 (0.001) -5.411 (0.010) -0.003 (0.546) 0.261 (0.000) -0.016 (0.479) 0.804 (0.001) 0.300 (0.319) Yes
Innovation, t-1 (log) Imitation, t (log) Imitation, t (log) Imitation, t-1 (log) Public capital (log) Public capital (log) FDI Skilled workforce Gov. expenditure Non-tax revenue Gov. debt Urban Population density Current account balance Trade Investment Inflation D.Innovation [t - t-1] D.Imitation [t - t-1] Country Effect Time Effect Countries/Observations	-0.583 (0.397) 0.873 (0.035) 0.361 (0.603) -1.122 (0.413) -0.057 (0.266) 0.007 (0.878) -0.148 (0.343) -0.008 (0.947)	(0.326) (0.673 (0.002) (0.219 (0.668) 0.102 (0.786) (0.337 (0.671) (0.406) (0.216) (0.099 (0.375) -0.008 (0.889)	-0.016 (0.479) 0.012 (0.216) 0.006 (0.016) -0.004 (0.708) -0.002 (0.845)	0.955) -2.130 (0.211)  0.261 (0.873)  -1.282 (0.800)  0.042 (0.566) 0.121 (0.600) -0.120 (0.149) 3.806 (0.001) -1.652 (0.216) Yes Yes	(0.000)  0.595 (0.000) 0.794 (0.000) -0.406 (0.000) -2.154 (0.000) -0.015 (0.299) 0.018 (0.031)	(0.000) 1.096 (0.000) -0.638 (0.000) 0.518 (0.000) 2.902 (0.000) -0.002 (0.270) 0.013 (0.000) 0.024 (0.181) -0.025 (0.024)	-0.005 (0.550) (0.051) (0.015) -0.003 (0.037) 0.000 (0.760) -0.002 (0.681)	(0.136) 0.574 (0.001) -0.938 (0.000) 0.998 (0.173) -0.001 (0.730) 0.242 (0.000) -0.014 (0.445) 0.671 (0.002) 0.177 (0.425) Yes Yes	(0.522)  -0.335 (0.370) 0.997 (0.000) 0.204 (0.537) 0.586 (0.329) -0.075 (0.231) 0.001 (0.962) -0.083 (0.466) -0.071 (0.391)	(0.699) 0.752 (0.008) 0.264 (0.544) 0.008 (0.981) -0.657 (0.077) 0.012 (0.657) 0.075 (0.468) 0.027 (0.646)	0.053 (0.494) -0.040 (0.424) -0.020 (0.059) 0.001 (0.490) 0.029 (0.324)	0.014) -2.636 (0.212)  1.402 (0.424)  4.430 (0.038)  0.090 (0.172) -0.022 (0.919) -0.022 (0.919) (0.028) -2.312 (0.312) Yes Yes	0.678 (0.000) 0.761 (0.000) 0.761 (0.000) 0.7534 (0.000) 0.117 (0.662) 0.000 (0.990) 0.001 (0.683) -0.014 (0.231) -0.006 (0.401)	(0.339) 1.087 (0.000) -0.727 (0.000)  0.704 (0.000) 0.295 (0.354) 0.001 (0.727) -0.001 (0.829) 0.016 (0.260) 0.009 (0.260)	0.002 (0.795) 0.001 (0.820) 0.001 (0.814) 0.000 (0.3737) 0.000 (0.399) -0.014 (0.000)	(0.013) (0.572) (0.001)  -0.941 (0.001)  -5.411 (0.010)  -0.003 (0.546) (0.261 (0.001) (0.479) (0.804 (0.001) (0.319) Yes Yes Yes

AR(2) test (p-value) 0.215 0.235 0.149 0.791 0.237 0.109 0.105 0.797

Parantheses denote p-values. For System-GMM, the test statistics are calculated based on the Windmeijer robust standard errors. The AR(2) test refers to the Arellano-Bond test for autocorrelations.

Table 10: Annual Regressions - Estimated elasticities, by stage of development/income grouping (averages, using total value added as product variety measures)

Country groups (observations)	Standing-or effe			Creative- imitation effect
	Innovation	Imitation		
Low-and-lower-middle-income economies	0.542	0.513	-0.924	-0.464
n= 67				
Upper-middle-income economies	0.798	0.845	0.158	0.093
n=217				
High-income economies	0.858	0.861	0.054	0.100
<u>n</u> =334				

The averages are calculated based on the 12 sets of estimates for the respective groups.

Given only regressions with annual intervals are implemented, the dynamic multipliers for the *stepping-stone* and *creative-imitation* effects are not calculated.