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THE EFFECTS OF INCLUSIVE BUSINESS MODELS ON DEVELOPMENT OUTCOMES IN DEVELOPING COUNTRIES

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This study examines the dynamics of inclusive business model (IBM) implementation and these models' effects on inclusive growth in developing countries throughout the last three decades. Using balanced panel data for 23 developing countries during the period of 1990–2018, I assessed the relationship between IBMs, inclusive growth, poverty, and unemployment in developing countries suffering from extreme poverty and rising inequality. I employed a pooled mean group (PMG) panel cointegration model with autoregressive distributed lag (ARDL) to capture the dynamic impacts and robustness of IBMs on the realization of inclusive growth in developing countries. Empirical results reveal whether this approach to IBM implementation has enhanced inclusive growth and reduced poverty in developing countries. IBM implementation was found to be insignificant in the short run but became more sustainable in the long run, ultimately leading to lower rates of unemployment and poverty. However, the path towards long-term equilibrium appears long for developing countries.

Keywords: Inclusive business models, Inclusive growth, PMG/ARDL model, Developing countries.

JEL: F21; O4; F63; C33; L2

1. Introduction

Since the early 2000s and especially after the United Nations' launch of Business Call to Action (BCtA) in 2008, inclusive businesses have arisen as an innovative market-based means of overcoming poverty (Pineda-Escobar & Garzon-Cuervo 2016). The main objectives of BCtA are to accelerate progress towards sustainable development goals (SDGs) and to encourage companies to develop inclusive business models (IBMs) that reach individuals at the base of the economic pyramid (BoP)[1]. In addition, SDGs focus on environmental sustainability beyond simply inclusiveness. Within the past three decades, several companies - some of which belong to BCtA - have managed to earn a profit while

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[1] The base of the economic pyramid (BoP) represents people with less than US$10 per day in purchasing power in 2015 US dollars – as consumers, producers, suppliers, distributors of goods and services and as employees.

developing scalable models to reach poor population segments in developing countries and contributing to sustainable human development outcomes. Although IBMs predate the 2030 Agenda for Sustainable Development, this agenda brought more intensive attention to the notion of partnerships and the role of the private sector in supporting SDG realization. Government officials and policymakers have been concerned about reducing poverty and inequality for some time; however, they have not always considered the private sector a partner in this effort.

Although donors and development organizations in developing countries—and even countries themselves—have implemented different models, none has proven an optimal solution to alleviating poverty and inequality. Worldwide poverty declined from 36% in 1990 to 10% in 2015; even so, while countries in East Asia and the Pacific, Europe, and Central Asia have managed to reduce extreme poverty, those in areas such as sub-Saharan Africa have witnessed an increase (World Bank, 2019). Income inequality has also risen between and within countries. The challenges associated with poverty and inequality thus persist due to various factors including unrest, civil wars, slow growth, sluggish investment rates, and policies that are poorly suited to sustainable development.

On an international development level, the private sector is becoming increasingly active in development issues by shifting its role from that of a traditional business partner to a more proactive party by engaging with communities, governments, and other stakeholders to promote SDGs (Pineda-Escobar & Garzon-Cuervo 2016, UN, 2018). For instance, the UN Global Compact has helped businesses pursue SDGs by integrating these goals into firms' corporate strategies. Implementing and practicing principles for reasonable investment are essential to ensuring that investors can attend to the environmental, social, and governance issues necessary to achieve SDGs. According to Farinelli (2016), traditional businesses that solely seek profit offer few contributions; to truly realize SDGs, new stakeholder partnerships are needed across all sectors and at all levels.

The concept of IBMs has often been applied in the context of cooperation between companies and development organizations, namely to foster sustainable growth and address the development needs of developing countries (DCED, 2017; Kuloğlu, 2020). According to UNDP (2010), the vast effects of IBMs on developing countries arise from the private sector's engagement in growth acceleration and poverty reduction. Businesses in many countries provide employment opportunities, foster individual well-being, contribute to skills development, and promote the creation and dissemination of knowledge and technology (DCED, 2017). Further, businesses in developing countries, including those that hire employees with limited skills, can also generate income and improve well-being.

BCtA reported that more than 230 companies (across 70 countries) and hundreds of business models have reached developing nations (BCtA, 2019). Even so, the effects of these models in developing countries have yet to be examined thoroughly. A review of empirical studies and development organizations' reports reveals conflicting views around defining and measuring IBMs and these models' relationships with poverty, inequality, and inclusive growth. Tulder et al. (2010) suggested that most inclusive business and inclusive growth measurements lack descriptive depth and are challenging to examine on a comparative (i.e., multi-level) basis. The World Business Council for Sustainable Development (WBCSD; 2009) has also noted difficulty in assessing the impacts of IBMs.

One drawback of current IBMs is that they incorporate underserved populations into the supply chain only when a given business is viable (Kelly, Vergara, & Bammann, 2015). In other words, if a business is not financially viable, then the poor cannot benefit from it—even if the business would be worthwhile for the poor. Further, if a business is not funded by government and/or development partners, then it will not survive. Poor populations have largely been integrated in the supply chain either as customers, producers, employees, or owners (BCtA, 2019). UNDP (2010) pointed out that integrating smallholders and farmers with big business can benefit the poor by increasing productivity, generating income, and satisfying basic needs. Therefore, including underserved populations can strengthen a company's supply chain, such as when including new suppliers from the poor that have lower costs and good quality compared with other market suppliers (Farinelli, 2016). However, profit-based businesses consistently represent a small share of a country's economy.

In this study, we aim to evaluate the effects of IBMs on inclusive growth, poverty, unemployment, and human development outcomes. We also seek to address the knowledge gap in measuring the impacts of IBMs and their effects on main development outcomes. Specifically, we used a pooled mean group (PMG) panel cointegration model along with autoregressive distributed lag and equilibrium correction models to capture the dynamic robustness of IBMs in achieving inclusive growth in developing countries.

Using panel data from 1990 to 2018, we examined the relationship between IBMs, growth rates, poverty, and income inequality in developing countries that suffer from extreme poverty and increasing income inequality. Our empirical analysis assessed whether this approach to IBM implementation led to enhanced income equality and lower poverty during the study period. In line with the IBM framework discussed above, our study was guided by two key questions: (1) How do IBMs contribute to reducing poverty in developing countries? (2) To what extent do IBMs facilitate inclusive growth?

The remainder of this paper is organized as follows. Section 2 presents a literature review. Sections 3 and 4 provide a description of our data, methodological framework, and results. Section 5 concludes this paper.

2.Literature Review

2.1 Definition of inclusive business models

Inclusive business concepts and definitions have differed across domains. Most IBM-related concepts introduced in the literature have entailed the private sector; however, scholars have assumed diverse perspectives when discussing IBMs and the role of the private sector in development outcomes (UNDP, 2010; WBCSD, 2017). In particular, research has shown that development organizations, the private sector, and companies may conceptualize IBMs differently. At the development level, IBMs are intended to increase opportunities for the poor via businesses in developing countries. The G20 (2016) defined inclusive businesses as one way to "provide goods, services, and livelihoods on a commercially viable basis, either at scale or scalable, to people living in poverty and making them part of the value chain of companies as suppliers, distributors, retailers, or customers," thus contributing to SDGs.

BCtA (2019) defined IBMs as commercially viable business models that engage people at the BoP as consumers, producers, suppliers, distributors of goods and services, or employees. For instance, the UNDP (2010) defined IBMs as models that incorporate the poor into companies' supply chains as employees, producers, and business owners or otherwise develop affordable goods and services needed by the poor. WBCSD (2017) referred to IBMs as a profitable business activity that is scalable and replicable, thereby enabling sustainable development in developing countries. For example, companies can modify their views to integrate business from a development standpoint and include poor segments in their supply chains. However, most businesses in developing countries are currently not responsive to the needs of the poor; instead, they are purely profit-driven. Yet some large companies consider corporate social responsibility as evidenced by inclusive businesses that contribute to society and strive to minimize the adverse effects of their operations (UNDP, 2010). According to ILO (2019), private-sector interventions are often difficult to scale or sustain because they do not generate profitable returns for market actors. Indeed, several business models have failed to scale and generate profit (Simanis, 2012; Blewett et al., 2016; World Bank, 2018).

While the World Bank (2018) considers businesses that integrate people at the BoP as part of its core business model on a commercially viable basis, it excludes BoP employment as a criterion for eligibility. Most studies defining IBMs refer to poverty, inequality, and profitability (UNDP, 2010; WBCSD, 2017; ILO, 2019; G20, 2019) but do not examine these concepts fully. Rather, they show case the success of IBMs that have been applied across several countries. An enabling environment and policy momentum are thus considered important for IBMs to scale and be replicated by others.

One obstacle inhibiting the spread of IBMs in developing countries is that development agencies operate separately and apart from the private sector (Rösler, 2013). Data quality and weaker development outcomes represent other risks related to IBMs. To strengthen the effects of IBMs for poor populations, all stakeholders must cooperate (Farinelli, 2016). More specifically, the government should facilitate business operations and direct investment into impoverished areas where private-sector investment opportunities are available. Development agencies should also function as intermediaries between the public and private sectors while offering assistance to the poor.

2.2 The link between inclusive business and inclusive growth

Although a key aspect of inclusive business and inclusive growth involves addressing poverty and inequality, inclusive growth is considered broader than inclusive business. More specifically, growth is deemed inclusive if poor households benefit from it and if these households' income grows faster than that of the greater population (Ravallion & Chen, 2003). Such growth should also lead to a decrease in inequality (Dollar & Kraay, 2002).

Ali and Zhuang (2007) defined inclusive growth as "growth with equal opportunities." Other researchers have incorporated income and multidimensional aspects of living standards, including health and employment, when defining inclusive growth (OECD, 2014). Several studies emphasized that inclusive growth must lead to sustainable growth (Ianchovichina & Lundstrom, 2009) and increased employee productivity (Bhalla, 2007). Conversely, as noted earlier, inclusive businesses may be more associated with achieving development goals by including the poor in companies' supply chains as employees, producers, and business owners or by developing affordable goods and services needed by the poor (UNDP, 2010; Pineda-Escobar, 2013). Still others have considered profitable businesses to be those that are scalable and replicable, which can in turn foster sustainable development in developing countries (WBCSD, 2017). According to Tulder et al. (2010), inclusive businesses must contribute clearly to poverty alleviation and exert direct and indirect effects of core business activities and partnerships with NGOs and governments. Under this framework, the magnitude of effects is limited to companies that contribute more directly to inclusive growth. Businesses' success in achieving development outcomes can also differ by business size and the sector of interest (Deloitte, 2018).

In general, applying IBMs in developing countries is tied to private-sector strategies that promote inclusive growth by establishing employment opportunities, offering affordable products to the poor, and maintaining sustainable growth. However, the similarities between inclusive growth and inclusive business are apparent in IBMs' aims to contribute to inclusive growth and development outcomes by reducing poverty, mitigating inequality, raising living standards, and boosting employment.

3. Conceptual Model and Hypotheses

Based on the preceding discussion and the conceptual model proposed in Figure 1, a gap remains in measuring the effects of IBM channels in developing countries and their contributions to development outcomes. According to FAO (2013), development organizations have adopted various approaches to operationalizing IBMs and how to measure them. In some cases, IBMs have no effects on target groups due to weaknesses in the supply chain, service providers, and enabling environment (FAO, 2013). Several sources (Prahalad, 2004; UNDP, 2010; Pineda-Escobar & Garzon-Cuervo, 2016) have stated that IBMs could reduce poverty rates by including the poor in businesses' supply chains. IBMs can also bridge the gap between the poor and businesses to mutually benefit both parties. Moreover, these models can assist in expanding the labor pool by engaging the poor in production activities. Nearly all businesses create jobs—it is the nature and quality of employment that matters for inclusive growth. Most IBM approaches have focused on achieving development impacts, including smallholders and farmers, fighting poverty, cultivating business relationships, and benefiting poor segments (OXFAM, 2010; UNDP, 2010; Gradl et al., 2012). Such research suggests that the more IBMs are implemented in developing countries, the more these countries' poverty rates will decline. We therefore hypothesize the following:

Inclusive business models have impacts on fighting poverty.

Several other studies (Gradl & Knobloch, 2010; BCtA, 2015; FAO, 2017) have shown that IBM implementation in developing countries can contribute to increasing employment among smallholders and poor segments, namely by treating these individuals as employees in the supply chain. Yet IBM adoption is voluntary, and its implementation remains challenging. Such adoption can be supported by regulatory measures and incentives; even so, some businesses will likely choose to adopt IBMs whereas others will not. According to Agencia Mexicana de Cooperación Internacional para el Desarrollo (2014), partnerships between development organization and businesses are vital to mitigating poverty. IBMs can connect employees in the supply chain, either as employees or as producers, via several channels. The following hypothesis is thus proposed:

Inclusive business models doesn't lead to an increase in employment.

Extensive research has indicated that IBMs can lead to enhance development outcomes in developing countries without providing sufficient evidence of this phenomenon (Gradl & Knobloch, 2010; Tulder et al., 2010; Likoko & Kini, 2017; ILO, 2018). Still others (UNDP, 2010; WBCSD, 2017; World Bank, 2018) have declared that IBMs contribute to human development outcomes by increasing poor people's incomes and improving their access to basic goods such as health and education. In this study, we presume that IBMs will enhance the Human Development Index (HDI) as reflected in a long and healthy life, quality education, and a satisfactory standard of living. We therefore posit that inclusive business contributes to better development outcomes, hence the following hypotheses:

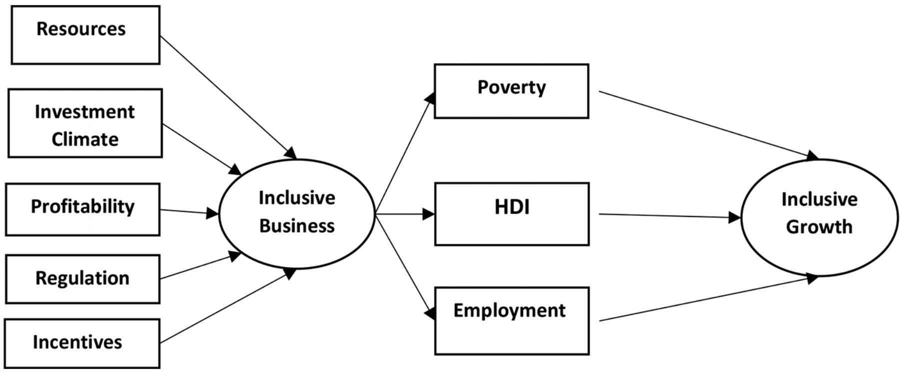
Inclusive business models have positive impacts on human development outcomes

Inclusive business models have impacts on increasing living standards

As mentioned, the main objectives and outcomes of IBMs include creating employment opportunities, fighting poverty, reducing inequality, providing affordable products for the poor, and maintaining sustainable growth. Through these channels, IBMs can help to reduce poverty, increase living standards, and encourage employment to foster sustainable inclusive growth. Therefore, it is expected that successful IBM implementation in developing countries (with consideration for development outcomes) will promote sustainable inclusive growth:

IBMs have impacts on inclusive growth

Figure 1 illustrates the proposed model along with links and channels between inclusive business and inclusive growth through these factors. Developing countries may apply several factors to encourage IBM implementation, such as attracting foreign investors, offering incentives, and leveraging the profitability of a business model to solicit inclusive businesses (Michelini & Fiorentino, 2012; DCED, 2017). Additional characteristics may influence business operations in developing countries, namely the nature of the ecosystem (e.g., regulatory environment, tax system, investment climate, and available resources). By contrast, numerous factors may limit IBM implementation: a lack of market information, insufficient regulatory environment, poor infrastructure, low-skilled labor, and limited access to financing (UNDP, 2008).



Source: The authors based on literature review.

Figure 1 Proposed Conceptual Model

Factors not captured in this model may guide IBM implementation as well, including improved social policies, trade terms, and tax policies.

3.1 Measuring the effects of inclusive business models

Few scholars have sought to measure the impacts of IBMs; in most cases, the evaluation of inclusive growth and analyses of poverty, inequality, and economic growth have been conducted separately (Anand, Mishra, & Peiris, 2013). For instance, researchers have employed qualitative case study analyses and surveys of inclusive business investments to assess the effects of IBMs on development outcomes (Dorius, 2011). Empirical studies have revealed that case study approaches and surveys are the only methods adopted thus far; however, the robustness of findings uncovered using these designs is limited (IFC, 2018) and generally involves few sectors. A unified approach that leads to optimal outcomes should be applied when measuring inclusive growth; such a method should encompass growing investments and productive employment opportunities (Ianchovichina & Gable, 2012) along with declining inequality (IMF, 2011). In this regard, Ali and Sun (2007) and Anand, Mishra, and Peiris (2013) suggested adopting the utilitarian social welfare function from the consumer choice literature wherein inclusive growth depends on income growth and income distribution.

Current approaches based on country-specific cases and surveys have also been criticized for their lack of generalizability to other countries (e.g., in terms of the effects of IBMs). As an example, case study findings may not apply to all IBMs implemented in developing countries. BCtA and GlobeScan's (2018) recent survey on the State of Inclusive Business for 192 companies revealed that IBMs play significant roles in lifting people out of poverty and fighting inequality. These companies were largely in the Asia/ Pacific region, Africa, and Latin America / the Caribbean. However, countries host unique regulatory environments, and the associated value chains for businesses differ accordingly (APEC, 2009). In exploring the effects of IBMs on poverty, several studies (Deloitte, 2017; World Bank, 2018; ILO, 2019) included a small sample of case studies from different countries. ILO (2019) assessed business models based solely on commercial viability, whereas the World Bank (2018) excluded BoP employment. The World Bank (2018) also recommended using more solid methods when gathering and analyzing data to delineate IBMs effects' on BoP segments more comprehensively.

Our conceptual model (Figure 1) is mainly based on modeling the effects of IBMs on poverty, human development dimensions, employment, and inclusive growth. We took several variables published by the World Bank as proxies for these factors, such as by using the Gini coefficient index as a measure of income inequality. We also used the Gini index to demonstrate how inequality has evolved over time. We took the share of people living in extreme poverty, denoted by the international poverty line of $1.90 per day, as a measure of poverty. The HDI was used as a summary measure of a country's average achievements in terms of three basic dimensions of human development: a long and healthy life, quality education, and a decent standard of living. Further, we took real per capita income as a proxy for standard of living and considered unemployment data as well.

4. Methodology

4.1 Population and sample

Our sample consists of 23 countries in three main regions (sub-Saharan Africa, Latin America and the Caribbean, and South Asia) that have implemented IBMs in various economic sectors and target BoP segments. We selected these countries based on a literature review of case studies, surveys, and representative project samples related to IBM implementation. The chosen regions represent 61% of all people living in extreme poverty in 2013. Currently, sub-Saharan Africa and South Asian regions collectively account for more than half the world's extreme poor (World Bank, 2017). Based on the literature, IBMs were implemented in the health, energy, financial services, agriculture, food and beverage, and utilities sectors among others. From a supply chain perspective, the financial services and health sectors engage low-income populations as consumers, whereas the agriculture, food and beverage, and energy and utility sectors tend to engage these populations as employees and suppliers (GlobeScan, 2018).

4.2 Model construction

We encountered several constraints when using panel data to analyze the impacts of IBMs on inclusive growth. These challenges were associated with sources' varying approaches to measuring IBMs and inclusive growth; missing data for some years; and disparities among countries in terms of the policies, measures, and types of business models that have been adopted. Further, it was difficult to differentiate standard business models and IBMs in each country. We therefore assumed that most business models were inclusive. We employed the PMG/ARDL model in this study because it allows for heterogeneity in cross-country datasets and could distinguish between the short- and long-run effects of IBMs on growth. This approach was feasible given our expectations that long-term relationships between variables would be similar across countries, while short-run adjustment could be country-specific due to the diverse effects of IBMs on inclusive growth, poverty, unemployment, and human development outcomes.

Therefore, we referred to balanced panel data to construct our model and extend the ARDL model to include panel data. According to Pesaran, Shin, and Smith (1999), a single equation should be constructed for each individual country (*i*). We thus used Pesaran, Shin, and Smith's (1999) PMG/ARDL model to test cross-sectional effects. This model takes the cointegration form of the simple ARDL model and adapts it for a panel set by allowing intercepts, short-run coefficients, and cointegrating terms to differ across countries. In so doing, the model can capture cointegration and relationships between variables in the short and long run. This model has been deemed more appropriate than other models in dealing with panel datasets consisting of large observations ($T = 841$) and a large number of cross-sections ($N = 29$) (Pesaran, Shin, & Smith, 1999). The PMG/ARDL model can be written for each individual (*i*) as

$$\Delta Y_{it} = \varnothing_i Y_{it} - 1 + \beta_i X_{it} + \sum_{J=1}^{P-1} \lambda_{it} \Delta Y_{it} - j + \sum_{j=0}^{q-1} \delta_{ij} X_{it} - j + co_i + c1_{it} + \varepsilon_{it} \tag{1}$$

Per Eq. (1), several assumptions must be met: (1) the independence of residuals (εit) across individuals and from regressors X_{it}; (2) the long-run relationship for each individual must satisfy the condition that $Y_{it} = -(\beta i/\phi i)*X_{it} + \varepsilon_{it}$; and (3) the long-run coefficients $\theta_i = -(\beta_i/\phi_i)$ are the same for different individuals (i.e., homogeneous). This model allows short-run coefficients to be heterogeneous and long-run coefficients to be restricted and homogeneous across countries (Pesaran, Shin, & Smith, 1999). The PMG/ARDL model is also known for its applicability to non-stationary time-series variables and to time-series variables with mixed orders at the same time. Moreover, the model can separate long-run relationships from short-run dynamics. Other ARDL models using panel datasets can produce bias due to the correlation between mean-differenced regressors and the error term (Blackburne & Frank, 2007).

The PMG/ARDL model has been adopted to investigate short- and long-run relationships between IBMs and inclusive growth. Following Anand, Mishra, and Peiris (2013), inclusive growth can be derived using a utilitarian social welfare function based on consumer choice. Eq. (2) shows that inclusive growth (LnIG_{it}) depends mainly on income growth measured by the percentage change in real per capita income (LnRGDP_{it}) and the percentage change in income inequality measured by the Gini coefficient ($\mathrm{LnGINI}_{\mathrm{it}}$):

$$LnIG_{it} = LnRGDP_{it} + LnGINI_{it} \tag{2}$$

Eq. (2) can thus be written as

$$LnIG_{it} = \alpha_0 + \alpha_1 LnRGDP_{it} + \alpha_2 LnGINI_{it} + \varepsilon_{it} \tag{3}$$

According to Klasen (2010) and McKinley (2010), measuring inclusive growth involves some limitations due to the lack of a unified definition, limited supporting data, and the numerous policies and programs implemented in developing countries. For instance, Grömling and Klös (2019) suggested that inclusive growth should focus on growth drivers more than on results. Further, few inclusive business measurements have appeared in the literature; however, most studies agree that for business models to be inclusive, they should be profitable, scalable, reduce poverty and inequality, increase employment, and be sustainable in the long run. In this case, business models are sustainable if they lead to increased investment and productive employment opportunities. An IBM is thus tied to reducing poverty (Pov_{it}) and unemployment ($UNEM_{it}$) and improving the Human Development Index (HDI_{it}). An IBM can be written in log form as

$$LnIBMs_{it} = LnPov_{it} + LnHDI_{it} + LnUNEM_{it} + LnSHP_{it} \tag{4}$$

The relationship between these factors can be rewritten as

$$LnIBMs_{it} = \alpha_3 LnPov_{it} + \alpha_4 LnHDI_{it} + \alpha_5 LnUNEM_{it} + \alpha_6 LnSHP_{it} + \varepsilon_{it} \tag{5}$$

To analyze the effects of IBMs on inclusive growth, the following model is constructed in log form:

$$LnIG_{it} = \alpha_7 + \alpha_8 LnIBMs_{it} + \varepsilon_{it} \tag{6}$$

where IG_{it} denotes inclusive growth for country i at time t, $IBMs_{it}$ denotes inclusive business models for country i at time t, and ε_{it} represents the residuals.

To estimate the long-run relationships among variables, we applied the panel ARDL model based on PMG. According to Pesaran, Shin, and Smith (1999), an ARDL dynamic panel regression (see Eq. [1]) can be written using the ARDL (p, q) method, where (p) denotes the lag of inclusive growth and (q) denotes the lag of an IBM:

$$LnIGit = \sum_{j=1}^{p} \delta ijLnIGit - j + \sum_{j=0}^{q} \partial ijLnIBM_{sit} - j + \mu i + \int it \tag{7}$$

where $i = 1,2,3\ldots N$ is the number of cross-sections ($N = 23$); T is the total time period ($T = 29$); μi is the cross-sectional effect; δij and ∂ij are the short-run parameters to be estimated; and ε_{it} represents the residuals.

The PMG/ARDL model can be written as shown in Eq. (8), where $LnIG_{it}$ denotes inclusive growth and $LnIBMs_{it}$ denotes the different regressors that capture IBMs (e.g., Pov_{it}, $Unem_{it}$, and HDI_{it}):

$$\begin{aligned}\Delta LnIG_{it} = {} & \varnothing i\left(LnIG_{it} - 1 - \theta_i LnIBM_{sit}\right) + \sum_{j=1}^{p-1} \gamma_{ij} \Delta LnIG_{it} - j + \\ & \sum_{j=0}^{q-1} \delta_{ij} \Delta LnIBM_{sit} - j + \mu_i + \varepsilon_{it}\end{aligned} \tag{8}$$

Here, γ_{ij} and δ_{ij} are the short-run parameters and ε_{it} represents the residuals.

4.3 Empirical results

Following the PMG/ARDL approach displayed in Eqs. (7) and (8), we ran two models: one to capture changes over time in the effects of IBMs on inclusive growth (Model 1) and another to capture the effects of poverty, the HDI, and unemployment on inclusive growth (Model 2).

Our empirical results are based on data spanning the period from 1990 to 2018 for 23 countries distributed among three regions obtained from the World Bank. To examine the stationarity of variables, we conducted a panel unit root test using Im, Pesaran, and Shin W-stat, ADF - Fisher Chi-square and PP - Fisher Chi-square to ascertain the order in which variables were integrated into the model. The results in Table 1 show that the null hypothesis could be rejected; all variables had unit roots and were not stationary at their levels but became stationary at their first difference. Therefore, we accepted the alternative hypothesis that the data were stationary.

Table 1 Panel Unit Root Test

Variable name	Levin, Lin, & Chu t*	Im, Pesaran, & Shin W-stat	ADF - Fisher Chi-square	PP - Fisher Chi-square	Order of integration
	Levels				
HDI	1.1915	6.8588	10.0187	10.3711	I(0)
GINI	–1.06557	0.37903	33.7626	37.873	I(0)
POV	–0.36505	2.60344	16.6104	18.166	I(0)
RGDP	30.0264	19.6106	3.57922	3.59476	I(0)
UNEM	0.22014	1.21024	32.1596	32.884	I(0)
IG	0.48485	4.0304	21.4292	23.8634	I(0)
IB	0.69209	2.93054	20.4634	22.9541	I(0)
	Differences				
Variable name	**Levin, Lin, & Chu t***	**Im, Pesaran, & Shin W-stat**	**ADF - Fisher Chi-square**	**PP - Fisher Chi-square**	**Order of integration**
LnHDI	–11.5322***	–13.1212***	232.326***	240.365***	I(1)
LnGINI	–20.2399***	–17.5756***	285.477***	311.185***	I(1)
LnPov	–18.2758***	–17.0161***	291.017***	299.517***	I(1)
LnRGDP	–2.85827***	–8.67146***	172.901***	172.545***	I(1)
LnUnem	–18.0672***	–16.5811***	296.488***	303.228***	I(1)
LnIG	–17.7491***	–16.5945***	297.552***	304.616***	I(1)
LnIBMs	–18.2272***	–16.5893***	316.295***	319.474***	I(1)

Note: Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality. Values reported as *t*-values. *** significant at 1%. lnHDI = Human Development Index; lnGINI = inequality; lnPov = poverty; lnRGDP = real GDP per capita; lnIG = inclusive growth; lnIB = inclusive business models.

After confirming that all variables were stationary at the first difference, we tested for long-run cointegration between variables. We conducted the Pedroni residual-based cointegration test and Kao residual cointegration test to establish the existence of a long-run relationship amongst variables in the model. Results in Table 2 confirm a long-run relationship between inclusive growth and IBMs and between the variables of poverty, unemployment, and the HDI.

Table 2 Pedroni Panel Cointegration Test Results

Test	Model 1		Model 2	
	Within-dimension	**Between-dimension**	**Within-dimension**	**Between-dimension**
Panel v-statistic	0.159738 (0.437)	–	1.259886 (0.104)	–

Test	Model 1		Model 2	
	Within-dimension	Between-dimension	Within-dimension	Between-dimension
Panel rho-statistic	3.128336 (0.999)	4.594 (0.999)	–1.556865 (0.060)*	0.946498 (0.828)
Panel PP-statistic	–1.517 (0.065)**	–2.988 (0.001)***	–2.162580 (0.015)**	–0.316032 (0.376)
Panel ADF-statistic	–2.613821 (0.005)***	–3.423 (0.000)***	–2.099615 (0.018)**	–1.791600 (0.037)**

Note: *** significant at 1%, ** significant at 5%,*significant at 10%.

Findings from the Kao residual cointegration test revealed a long-run relationship between the variables (Table 3).

Table 3 Kao Residual Cointegration Test

Model	ADF t-statistic	Prob.
Model 1	–3.267059	0.0005*
Model 2	2.042378	0.0206***

Note: Null hypothesis: no cointegration. *, *** significant at 1% and 5%, respectively.

Notably, the PMG/ARDL model was sensitive to the chosen lag length; therefore, we selected the ARDL model in Table 4 based on using the Akaike information criterion (AIC) to obtain the optimal lag length. Results showed that ARDL (1,1,1,1) was optimal for Model 1 and ARDL (2,2) was optimal for Model 2.

Table 4 Model Selection and Lag Length

Model	LR	AIC*	BIC	HQ	Specification
Model 1	1060.6	–3.6	–2.7	–3.2	ARDL (1, 1, 1, 1)
Model 2	2615.2	–8.1	–7.2	–7.7	ARDL (2,2)

Source: Model results.

Results of cross-sectional dependence test

To explore whether panel time-series data exhibited cross-sectional independence, we performed a cross-sectional dependence test. Table 5 shows that the null hypothesis was rejected because probability values of the variables were below the 5% significance level; the null hypothesis of cross-sectional independence was thus rejected. Cross-sectional dependence existed for all variables, implying that any change or shock in selected variables in any of the panel countries would influence other countries as well.

Table 5 Results of Cross-Sectional Dependence Tests

	Breusch-Pagan LM	Pesaran scaled LM	Bias-corrected scaled LM	Pesaran CD
LnHDI	5128.9 (0.000)	253.4 (0.000)	253.0 (0.000)	71.6 (0.000)
LnGINI	1602.8 (0.000)	72.5 (0.000)	72.1 (0.000)	3.5 (0.000)
LnPov	2813.2 (0.000)	134.6 (0.000)	134.2 (0.000)	31.0 (0.000)

(*Contd.*)

	Breusch-Pagan LM	Pesaran scaled LM	Bias-corrected scaled LM	Pesaran CD
LnRGDP	4921.4 (0.000)	242.7 (0.000)	242.4 (0.000)	70.1 (0.000)
LnUnem	1340.7 (0.000)	59.0 (0.000)	58.7 (0.000)	7.3 (0.000)
LnIG	3775.3 (0.000)	183.9 (0.000)	183.6 (0.000)	56.4 (0.000)
LnIBMs	2392.9 (0.000)	95.1 (0.000)	94.7 (0.000)	9.8 (0.000)

Note: p-values of corresponding statistics are in parentheses. ** and *** indicate statistical significance at the 5% and 1% levels, respectively. lnHDI = Human Development Index; lnGINI = inequality; lnPov = poverty; lnRGDP = real GDP per capita; lnIG = inclusive growth; lnIB = inclusive business models.

4.4 Model results

ARDL (1,1,1,1) and ARDL (2,2) (i.e., Models 1 and 2, respectively) were selected based on the AIC using Eviews 10. The PMG/ARDL model was chosen based on its ability to control the long-run coefficients to be similar for all cross-sections, while short-run coefficients could differ by country.

As indicated in Table 6, long-run estimates of Model 1 reflected the channels influencing poverty, unemployment, and human development outcomes through IBM implementation in developing countries. These results suggest that poverty, the HDI, and unemployment are key determinants of inclusive growth in developing countries. These findings also imply that increasing poverty and unemployment could hinder inclusive growth, such that increasing the poverty and unemployment rate by 1% in these countries would diminish inclusive growth by 0.32 and 0.38%, respectively, and deteriorate the standard of living among poor population segments. Furthermore, in this model, poverty demonstrated a negative relationship with IBMs; increasing IBM adoption reduced poverty in developing countries in the long run, providing support for *H1*. Similarly, unemployment displayed the correct negative sign in the short and long run, indicating that IBMs can increase employment and in turn enhance inclusive growth; this pattern provides support for *H2*. By contrast, the HDI (as a proxy for a long and healthy life, quality education, and a fair standard of living) showed the correct positive sign. Increasing the HDI by 1% boosted inclusive growth by 11.619%, affirming *H3* and *H4*. In the short run, poverty and the HDI each had an insignificant effect on inclusive growth, whereas unemployment had a significant and influential impact on inclusive growth; as such, lower unemployment spurred greater inclusive growth. The speed of adjustment toward long-run equilibrium was -0.03, implying that the divergence of inclusive growth from its long-run equilibrium in the previous year was corrected by 3% the next year. Reaching a long-term balance or equilibrium would therefore require a long period (roughly 33 years). The short-run adjustment toward long-run equilibrium would be relatively long for these countries unless additional measures were taken to shorten the period to achieve long-run equilibrium. It would also be necessary to maintain current investments, attract new investments to generate jobs, and enhance human development dimensions if countries wish to shift their path in hopes of realizing SDGs.

Table 6 PMG/ARDL Test Statistics Results for Model 1

Coefficient	Estimates	*t*-value	Prob.
Long-run estimates			
$Povi_{t-1}$	–0.032	–4.322	0.000***
$UNEMi_{t-1}$	–0.038	–2.523	0.012***
$HDIi_{t-1}$	11.619	4.275	0.000***
Short-run estimates			
COINTEQ01	–0.030	–4.017	0.000***
(Constant)	0.075	4.100	0.000***
$\Delta LnPovi_{t-1}$	–0.011	–0.719	0.472
$\Delta LnHDIi_{t-1}$	–0.049	–0.940	0.348
$\Delta LnUNEMit_{-1}$	–0.005	–3.385	0.001***

Note: ** significant at 5%, *** significant at 1%.

For Model 2, the long-run estimates of PMG/ARDL (Table 7) reveal that IBMs had positive effects on inclusive growth: increasing the share of IBMs by 1% in developing countries promoted inclusive growth by 11.6%. In the short run, the effects of IBMs were weak and insignificant; correspondingly, IBMs appeared to exert long-run impacts on inclusive growth in developing countries, thus supporting *H5*. The rate of adjustment toward long-run equilibrium was –0.041. Therefore, for developing countries to diverge towards equilibrium from their prior-year level, the rate must be corrected by 4.1% each successive year to reach equilibrium after 25 years.

Table 7 PMG/ARDL Test Statistics Results for Model 2

Coefficient	Estimates	t-value	Prob.
Long-run estimates			
IBMit–1	0.116436	3.571143	0.000***
Short-run estimates			
COINTEQ02	–0.041	–2.631	0.009***
Constant	0.095	2.698	0.007***
$\Delta LnIBMit_{-1}$	–0.001	–0.079	0.937

Note: ** significant at 5%, *** significant at 1%.

Overall, these results suggest that IBMs implemented in developing countries must concentrate on generating employment for poor people in the short run. However, the picture becomes muddier when capturing the effects of IBMs on inclusive growth among individual countries in the short run; Annexes 1 and 2 indicate that the cross-sectional short-run coefficient for individual countries and the rate of adjustment toward long-run equilibrium is mixed. Many countries (e.g., Colombia, Costa Rica, Ghana, India, Mexico, Mozambique, Malawi, Nigeria, Nicaragua, Pakistan, Rwanda, Tanzania, Uganda, Uruguay, Zambia, Zimbabwe, Kenya, and Liberia) need longer to reach equilibrium, implying that their poverty and unemployment measures and policies are unsupportive and should be changed in the short run. Others, such as Angola, Bangladesh, Brazil, Chile, and Ecuador, demonstrated a non-negative coefficient of adjustment rate; these countries therefore showed no convergence toward equilibrium in the long-run. This disparity may be attributable to differences in countries' economic structure, the scale of businesses adopting IBMs, and the types of IBMs implemented in these countries.

5. Conclusions

In this study, we measured the dynamics of IBM implementation in developing countries throughout the last three decades. We also evaluated relationships between IBMs, inclusive growth, poverty, and unemployment in developing countries suffering from extreme poverty and rising inequality. Our empirical results show whether applicable IBM implementation approaches have led to more inclusive growth, increased employment, and reduced poverty within the chosen countries. Results of the PMG/ARDL panel model estimates unveiled the effects of IBMs on inclusive growth in 23 developing countries, indicating that the dynamic impacts and robustness of IBMs on achieving inclusive growth were more influential in the long run than in the short run. Reducing poverty and unemployment while enhancing human development outcomes (i.e., a long and healthy life, quality education, and a decent standard of living) should positively influence people's well-being in the long term and not in the short term only. Our findings corroborate many development organizations' claims that IBMs can enhance development outcomes and lead to sustainable inclusive growth in the long run. This study also substantiates the strong association between IBM implementation and inclusive growth. Accordingly, development organization should look into the sources of inclusive growth in developing countries to achieve long term development outcomes. Also, it is not sufficient to implement IBMs in developing countries while other policies operate against attracting investors.

Contributions to literature, limitations, and future research

A major contribution of this study involves the elements we adopted to measure the effects of IBMs on inclusive growth. Furthermore, we sought to address the gap in measuring the effects of IBMs by proposing a novel approach to estimating IBMs' impacts on inclusive growth, poverty, unemployment, and human development outcomes. Our work fills a lacuna in the literature by presenting a method to measure the effects of IBMs in developing countries. We also provide empirical evidence for development organizations and policymakers regarding the key characteristics, sectors, and types of IBMs that are especially influential for poor segments of developing countries. Further, this study answers the call for empirical analysis and measurement of IBMs' effects on inclusive growth and development outcomes in developing countries.

This study's main limitations concern the lack of disaggregated data on IBM implementation in developing countries as well as limited and missing data for some years for some countries. However, we attempted to compensate for missing data by taking the sample average between the two available periods. Some factors did not perform well and were excluded from our analysis. The sample size and limited number of countries may also limit our findings and temper their generalizability. Future research should include a larger number of factors and countries to improve these results. Incorporating other factors into the model would also enhance the robustness of findings related to IBM implementation in developing countries. One topic that warrants further exploration is potential inter-country variation. Studies could also investigate the enabling environment for IBMs in developing countries. Furthermore, scholars should consider how many businesses, or what percentage of the private sector, would need to align with IBMs for a country to shift towards a more inclusive growth trajectory. It would be similarly interesting to examine the proportion of businesses that would need to implement IBMs to have a significant impact on human development outcomes.

Overall, our analysis has implications for policymakers and development organizations in terms of clarifying the effects of IBMs in developing countries. Findings suggest that more proactive measures and policies are needed in developing countries, namely by increasing IBM-related investment and by targeting sectors that generate employment to accelerate countries' adjustment to long-run inclusive growth. Although the speed of adjustment toward long-run equilibrium appears relatively long for the chosen countries, they still need to maintain their current investments, attract new investments to generate employment, rectify weaknesses in the local business environment, and enhance human development dimensions to become more responsive to people's needs. Stakeholders should also emphasize public–private partnerships as a key to successful IBM implementation. In particular, such partnerships (e.g., between policymakers and the private sector) can be strengthened by creating resilient, sustainable IBMs through enhancing the local business environment and ecosystem.

References

Agencia Mexicana de Cooperación Internacional para el Desarrollo . 2014. Memoire of the first high level meeting of the global partnership for effective development co-operation: 150: Mexico D.F.

Ali, I., Son, H. H. 2007. Defining and Measuring Inclusive Growth: Application to the Philippines. Asian Development Review, ERD Working Paper No. 98, 24(1): 11–31.

Anand, R. Tulin, V. & Kumar, N. 2014. India: Defining and Explaining Inclusive Growth and Poverty Reduction. *IMF Working Papers No. 14(63):* IMF, Washington DC.

Anand, R. Mishra S. & Peiris S. 2013. Inclusive Growth: Measurement and Determinants. IMF Working Paper WP/13/135.

APEC, 2009. Successful Business Models for New and Renewable Energy Technology Implementation in APEC. APEC Publication Number: APEC#209-RE-01.5.

Bhalla, S. 2007. Inclusive growth? Focus on employment. Social Scientist, 35(7/8): 1–19.

Blackburne E., & Frank M. W. 2007. Estimation of nonstationary heterogeneous panels. The Stata Journal 7, (2): 197-208.

Blalock, G. & Gertler, P. 2008. Welfare Gains from Foreign Direct Investment through Technology Transfer to Local Suppliers. Journal of International Economics. 74(2): 402–421.

Blewett, J. Keddie, J. & Van Hummelen, S. 2016. Pre-intervention investment toolkit: The challenge of achieving impact at scale in MSD (M4P) interventions. The BEAM Exchange. Available from: https://beamexchange.org/uploads/filer_public/00/ff/00ffc11a-45c9-4ee1-bcb3-2851455bf76d/pre-intervention_investment_toolkit.pdf. [23 February 2020].

Business Call to Action (BCtA). 2015. Implementing Inclusive Business Models. Available from: https://d306pr3pise04h.cloudfront.net/docs/issues_doc%2Fhuman_rights%2FInclusiveBusinessPrimer.pdf. [24 March 2020].

Business Call to Action (BCtA). 2019. Inclusive Business and the SDGs. Available from: https://www.businesscalltoaction.org/business-call-action#inclusive-business. [5 February 2020].

Calderon, C. & Chong A. (2001). External sector and income inequality in interdependent economies using a dynamic panel data approach. Economics Letters (71): 225-231.

Chang, C. 2014. What is Inclusive Growth? CAFOD Discussion Paper. CAFOD. London.

DCED, 2017. Current Debates on Inclusive Business Models. Available from: https://www.enterprise-development.org/wp-content/uploads/DCED_IB_SynthesisNote.pdf. [15 December 2019].

Deloitte, 2017. Reaching deep in low-income markets. Available from: https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Process-and-Operations/gx-deloitte-us-cons-executive-summary.pdf. [15 December 2019].

Deloitte, 2018. The business case for inclusive growth. Deloitte Global inclusive growth survey. Available from: https://www2.deloitte.com/content/dam/Deloitte/global/Documents/About-Deloitte/gx-abt-wef-business-case-inclusive-growth-global%20report.pdf. [11 February 2020].

Dorius, N. 2011. Measuring Community Development Outcomes: In Search of an Analytical Framework. Economic Development Quarterly, 25(3) 267–276.

FAO, 2013. Inclusive Business Models Expert Workshop Report. Available from: http://www.fao.org/fileadmin/user_upload/ivc/PDF/IBMworkshop_Oct2013_Proceedings.pdf. [5 March 2020].

FAO, 2017. Inclusive Business Models. Training Modules. Available from: http://www.fao.org/3/a-i7968e.pdf. [15 February 2020].

Farinelli, F. 2016. Promoting inclusive business models. GREAT Insights Magazine. 5(2).

Hansen, H. & Rand, J. 2006. On the Causal Links between FDI and Growth in Developing Countries. The World Economy, *29*: 21–41.

Hoekman, B. M. Maskus, K. E. & Saggi, K. 2005. Transfer of technology to developing countries: Unilateral and multilateral policy options. World Development, 33(10): 1587–1602.

Ianchovichina, E. & Lundstrom, S. 2009. Inclusive Growth Analytics: Framework and Application. Policy Research Working Paper, No. 4851. Washington, DC, World Bank.

ILO, 2018. New business models for inclusive growth. Available from: https://www.ilo.org/wcmsp5/groups/public/---dgreports/---cabinet/documents/publication/wcms_618172.pdf. [15 March 2020].

ILO, 2019. Business Model for Decent Work. Available from: https://www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/publication/wcms_716905.pdf. [10 January 2020].

GlobeScan. 2018. State of Inclusive Business Survey. Available from:
https://globescan.com/report-inclusive-business-survey/. [20 January 2020].

Gradl C., & Knobloch C. 2010. Inclusive Business Models Guide. Available from: https://endeva.org/wp-content/uploads/2014/11/IBG_final.pdf. [11 February 2020]. Endeva.

Gradl, C. Kukenshoner, C. Schmidt, J. and Ströh de Martinez, C. 2012. Growing Business with Smallholders: A Guide to inclusive Agribusiness. GIZ. Available from:
https://endeva.org/publication/growing-business-with-smallholders-a-guide-to-inclusive-agribusiness. [10 December 2019].

G20, 2016. Inclusive Business Report. Available from: http://www.g20.utoronto.ca/2016/inclusive-business-report.pdf. [28 January 2020]

Kelly, S., Vergara, N. & Bammann, H. FAO. 2015. Inclusive business models – Guidelines for improving linkages between producer groups and buyers of agricultural produce.

Klasen, S. 2010. Measuring and Monitoring Inclusive Growth: Multiple Definitions, Open Questions, and some Constructive Proposals. Mandaluyong City, Philippines: Asian Development Bank.

Kuloğlu, A. 2020. Determinants of High-Quality Growth: An Empirical Investigation. International Journal of Development and Conflict, 10: 74-87.

Likoko, E. & Kini J. 2017. Inclusive business—a business approach to development. Current Opinion in Environmental Sustainability. (24): 84–88.

McKinley, T. 2010. Inclusive Growth Criteria and Indicators: An Inclusive Growth Index for Diagnosis of Country Progress. ADB Sustainable Development Working Paper Series. (14).

Michelini, L. Fiorentino D., 2012. New business models for creating shared value. Social Responsibility Journal. 8(4): 561-577.

OECD, 2017. Bridging the Gap: Inclusive Growth 2017 update report. Available from: http://www.oecd.org/inclusive-growth/Bridging_the_Gap.pdf. [10 March 2020].

Oxfam and SFL. 2010. Think Big Go Small. Adapting business models to incorporate smallholders into supply chains. Available from: https://www-cdn.oxfam.org/s3fs-public/file_attachments/b4b-think-big-go-small_3.pdf. [8 December 2019].

Pesaran M.H. Shin, Y. Smith, R.P. 1999. Pooled Mean Group Estimation of Dynamic Heterogeneous Panels. Journal of the American Statistical Association. (94).

Pineda-Escobar, M. A. 2013. Business, sustainability and base of the pyramid. In L. Leonard & M. A. Gonzalez-Perez (Eds.), Principles and strategies to balance ethical social and environmental concerns with corporate requirements. Advances in Sustainability and Environmental Justice. (12): 67–91.

Pineda-Escobar, M.A. and Garzon-Cuervo, F. 2016. Improving Post-2015 Development Cooperation through Donor Support for Inclusive Business. Lessons from the Great Recession: At the Crossroads of Sustainability and Recovery (Advances in Sustainability and Environmental Justice. (18): (141-163).

Prahalad, C. K. 2004. The Fortune at the Bottom of the Pyramid: Eradicating Poverty through Profits. Wharton School Publishing Upper Saddle River, New Jersey.

Ramos, R.A. Ranieri, R. & Lammens, J.W. 2013. Mapping Inclusive Growth in Developing Countries. International Policy Centre for Inclusive Growth Working Paper. (105). United Nations Development Programme, Brazil.

Ranieri, R., & Ramos, R. A. 2013. Inclusive growth: Building up a concept. International Policy Centre for Inclusive Growth Working Paper. (104). United Nations Development Programme, Brazil.

Rauniyar, G. & Kanbur, R. 2010. Inclusive Development: Two Papers on Conceptualization, Application, and the ADB Perspective. Asian Development Bank. Cornell University.

Rösler U. Hollmann D. Naguib J. Oppermann A. & Rosendahl C. 2013. Inclusive business models Options for support through PSD programmes. GIZ.

Samans, R. Blanke J. & Corrigan G. 2017. The Inclusive Growth and Development Report. World Economic Forum, Geneva.

San Andres, E. 2016. Trade, Inclusive Growth, and the Role of Policy. Aid for Trade Seminar, Singapore.

Simanis E. 2012. Reality Check at the Bottom of the Pyramid. The Harvard Business Review.

Tulder, R. Fortanier F. Rosa A. 2010. Linking Inclusive Business Models and Inclusive Growth. The Partnerships Resource Centre: Working Paper Series: 004.

UN, 2018. The Private Sector and its Contribution to the SDGs: A Journey to Data Gathering Through Corporate Sustainability Reporting in Colombia. Available from: https://www.globalreporting.org/standards/. [18 January 2020].

UNDP, 2008. Creating Value for All: Strategies for Doing Business with the Poor. Available from: https://business.un.org/en/documents/12. [11 march 2020].

UNDP, 2010. Brokering Inclusive Business Models –Private Sector Division, Partnerships Bureau.

Wach, E. 2012. Measuring the 'Inclusivity' of Inclusive Business, Institute of Development Studies, IDS Practice Paper 9.

World Bank, 2017. The 2017 Atlas of Sustainable Development Goals: a new visual guide to data and development. Available from: https://blogs.worldbank.org/opendata/2017-atlas-sustainable-development-goals-new-visual-guide-data-and-development. [3 March 2020].

World Bank, 2018. IFC's Experience with Inclusive Business An assessment of IFC's role, outcomes, and potential scenarios, World Bank Publications. Available from: http://ieg.worldbankgroup.org/sites/default/files/Data/reports/meso_ifcinclusivebusiness.pdf. [21 December 2020].

World Bank, 2019. The decline of Global Extreme Poverty Continues but Has Slowed. Available from: https://www.worldbank.org/en/news/press-release/2018/09/19/decline-of-global-extreme-poverty-continues-but-has-slowed-world-bank. [10 January 2020].

World Business Council for Sustainable Development (WBCSD). 2009. Inclusive Business insight. Available from: https://www.wbcsd.org/Overview/News-Insights/Inclusive-Business-Insights. [10 February 2020].

World Business Council for Sustainable Development (WBCSD). 2017. Inclusive Business. Available from: https://www.wbcsd.org/content/search?searchText=inclusive+business. [5 February 2020].

ANNEXES

Annex 1 Cross-Sectional Short-Run Coefficients of Individual Countries in Model 1

Country	Angola		Bangladesh		Brazil		Chile		Colombia	
Variable	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***
COINTEQ01	0.006	0.000	0.003	0.001	0.004	0.001	0.004	0.000	–0.032	0.000
DLOG(POV)	–0.015	0.000	–0.010	0.000	0.004	0.000	0.003	0.000	0.003	0.000
DLOG(UNEM)	0.003	0.000	0.010	0.000	–0.016	0.000	–0.007	0.000	–0.011	0.000
D(HDI,2)	0.026	0.547	0.014	0.605	0.190	0.003	0.057	0.000	–0.091	0.001
C	–0.013	0.003	–0.003	0.107	–0.010	0.016	–0.008	0.000	0.086	0.000

Country	Costa Rica		Ecuador		Ghana		India		Mexico	
Variable	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***
COINTEQ01	–0.024	0.000	0.000	0.021	–0.013	0.000	–0.012	0.000	–0.044	0.000
DLOG(POV)	0.000	0.000	0.002	0.000	–0.001	0.000	–0.002	0.000	0.005	0.000
DLOG(UNEM)	–0.004	0.000	0.001	0.000	–0.002	0.000	–0.004	0.000	–0.008	0.000
D(HDI,2)	–0.142	0.003	0.013	0.161	0.099	0.011	0.090	0.182	–0.098	0.002
C	0.065	0.000	0.002	0.085	0.037	0.000	0.035	0.000	0.119	0.000

Country	Mozambique		Malawi		Nigeria		Nicaragua		Pakistan	
Variable	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***
COINTEQ01	–0.038	0.000	–0.043	0.000	–0.001	0.000	–0.061	0.000	–0.090	0.000
DLOG(POV)	–0.033	0.000	–0.280	0.000	0.107	0.000	0.008	0.000	0.008	0.000
DLOG(UNEM)	–0.004	0.001	–0.013	0.000	–0.014	0.000	–0.004	0.000	–0.001	0.001
D(HDI,2)	0.106	0.057	–0.151	0.000	–0.010	0.000	0.327	0.002	–0.524	0.006
C	0.096	0.000	0.109	0.000	0.004	0.000	0.159	0.000	0.232	0.000

Country	Rwanda		Tanzania		Uganda		Uruguay		Zambia	
Variable	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***
COINTEQ01	–0.033	0.000	–0.053	0.000	–0.020	0.000	–0.011	0.000	–0.108	0.000
DLOG(POV)	–0.020	0.012	–0.011	0.000	0.013	0.000	0.000	0.000	–0.003	0.001
DLOG(UNEM)	–0.001	0.030	–0.014	0.000	0.000	0.000	–0.012	0.000	–0.001	0.010
D(HDI,2)	0.228	0.014	–0.328	0.000	–0.122	0.005	–0.029	0.134	–0.639	0.011
C	0.079	0.000	0.136	0.000	0.053	0.000	0.031	0.000	0.284	0.000

Country	Zimbabwe		Kenya		Liberia	
Variable	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***
COINTEQ01	–0.030	0.000	–0.053	0.000	–0.026	0.000
DLOG(POV)	0.002	0.001	0.016	0.000	–0.001	0.008
DLOG(UNEM)	0.023	0.000	0.024	0.002	–0.011	0.001
D(HDI,2)	0.040	0.083	–0.267	0.073	–0.037	0.040
C	0.076	0.000	0.138	0.000	0.063	0.000

Source: Model 1 results.

Annex 2 Cross-Sectional Short-Run Coefficients of Individual Countries in Model 2

Country	**Angola**		**Bangladesh**		**Brazil**		**Chile**		**Colombia**	
Variable	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***
COINTEQ01	–0.059	0.000	0.005	0.001	–0.019	0.000	–0.017	0.000	0.004	0.016
DLOG(IB)	–0.010	0.000	–0.001	0.206	–0.021	0.000	–0.002	0.000	–0.015	0.000
C	0.141	0.000	–0.006	0.037	0.045	0.004	0.044	0.000	–0.007	0.186
Country	**Costa Rica**		**Ecuador**		**Ghana**		**India**		**Mexico**	
Variable	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***
COINTEQ01	–0.009	0.000	–0.015	0.000	0.012	0.000	0.007	0.000	–0.302	0.000
DLOG(IB)	–0.009	0.000	0.002	0.000	–0.010	0.000	–0.006	0.001	0.025	0.001
C	0.025	0.000	0.037	0.000	–0.025	0.000	–0.012	0.000	0.700	0.001
Country	**Mozambique**		**Malawi**		**Nigeria**		**Nicaragua**		**Pakistan**	
Variable	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***
COINTEQ01	–0.032	0.009	–0.036	0.000	–0.019	0.003	–0.161	0.001	–0.048	0.001
DLOG(IB)	0.007	0.001	–0.012	0.000	0.026	0.003	–0.237	0.001	0.127	0.000
C	0.074	0.076	0.087	0.000	0.044	0.023	0.353	0.006	0.113	0.006
Country	**Rwanda**		**Tanzania**		**Uganda**		**Uruguay**		**Zambia**	
Variable	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***
COINTEQ01	–0.006	0.001	0.015	0.000	–0.164	0.000	0.008	0.000	–0.028	0.000
DLOG(IB)	0.001	0.012	0.021	0.000	0.031	0.000	–0.041	0.000	0.010	0.000
C	0.015	0.013	–0.032	0.003	0.375	0.002	–0.015	0.003	0.066	0.003

Country	**Zimbabwe**		**Kenya**		**Liberia**	
Variable	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***	**Coefficient**	**Prob.***
COINTEQ01	–0.005	0.000	–0.003	0.474	–0.063	0.000
DLOG(IB)	–0.003	0.000	0.043	0.002	0.051	0.000
C	0.013	0.000	0.007	0.700	0.147	0.001

Source: Model 2 results.