

RESEARCH ARTICLE

Alleviating Poverty in the Philippines Through Entrepreneurship

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Abstract: Poverty is a global phenomenon characterized by the lack of access by households to their basic necessities—those earning US\$1.25 daily and possessing very low capital, thus trapping them in a cycle of poverty as capital diminishes from one generation to another. In line with the Sustainable Development Goals, the Philippine government has set as one of its overarching goals to significantly reduce poverty incidence. To address poverty, several interventions have been put in place such as the conditional cash transfer, foreign aid, and entrepreneurship. Using a repeated cross-section model, we look into entrepreneurship as an intervention to push economic growth that allows for poverty mobility. Results have shown that entrepreneurship increases the probability of moving out of poverty and remaining above the poverty threshold. These have implications on government creating investment, insurance, and income stabilization schemes to address poverty.

Keywords: entrepreneurship, poverty, repeated cross-section, sustainable development

JEL Classifications: C21, I32, L26

Poverty is a global social problem characterized by the lack of access by individuals and households to their basic necessities. The poor are those living in a dollar-a-day subsistence (i.e., those with US\$1.25 daily survival income). Sachs (2005) enumerated the following resources that the poor have inadequate access: human capital, enterprise, infrastructure,

natural, public institutions, and knowledge. Moreover, the poor start with very low capital and would eventually find themselves trapped in a vicious cycle of poverty as capital diminishes from generation to generation.

In addition, poverty is caused by the inequitable and unequal distribution of income and opportunities

(Son, 2013; Sulistyowati, 2013; Mirrlees, 2011; Todaro & Smith, 2011; Klasen, 2009; and Sachs, 2005). In fact, a minority of the world's population controls the resources of the world, with the poorest 20% of the world receiving a measly 1.5% of the total world income (Todaro & Smith, 2011). A review conducted by Baulch and Hoddinott (2000) on economic mobility and poverty dynamics found that an increase in returns of endowments (capital or labor) could yield an increase in income. A household's reaction to economic shocks either makes poor household save or smooth consumption.

The Sustainable Development Goals (SDGs) aim to eliminate poverty (Goal 1) and reduce inequalities (Goal 10) by 2030. In line with these, there is a need to allow households to move from low to high income and eventually overcoming the problem of absolute poverty. This view aims not just to increase income but to eliminate poverty, address inequality, and provide employment. To do such, several interventions have been put in place such as conditional cash transfer (Chaudury & Okamura, 2012), foreign aid (Sachs, 2005) and entrepreneurship. Entrepreneurship in literature has been mentioned as among the drivers of economic development (Desai, 2009; Wennekens & Thurik, 1999; Valliere & Peterson, 2009), and an intervention for poverty alleviation (Baumol, 2007, as cited in Naudé, 2009). It is an intervention that could push economic growth and yield different poverty mobility consequences.

Given this backdrop, we would like to estimate poverty dynamics with entrepreneurship as the intervention. Hence, we ask the question of how does entrepreneurship facilitate poverty mobility among Filipino households? That is, does entrepreneurship result in poverty alleviation or further poverty? To address these questions, we set the following research objectives:

- To pin down what is known in the literature about the impact of entrepreneurship on poverty incidence;
- To contribute to the literature on the use of pseudo panels in estimating probability scenarios of poverty mobility with entrepreneurship as an intervention. That is, to test whether entrepreneurship changes the poverty status of Filipino households (poor to non-poor; non-poor to poor; poor to poor; or non-poor to non-poor);

- To generate recommendations to address poverty through entrepreneurship.

Compared to many traditional pseudo panel studies that require many rounds of cross-section data, we only used two survey rounds of cross-section data on household characteristics and demographics from the Philippine Annual Poverty Indicator Survey (APIS) for 2008 and 2011. Hence, we suggest alternative statistical procedures to overcome the non-availability of balanced panel data. Our study also contributes to the literature by providing an additional conceptualization of the other effects of entrepreneurship on poverty mobility. We also add to the literature of entrepreneurship and poverty studies in the context of a developing country like the Philippines. Of equal importance, we also provide perspectives to policy-making bodies on how entrepreneurship can be promoted with a goal of poverty alleviation.

Entrepreneurship and Poverty Mobility

Entrepreneurship as a Concept

Entrepreneurship is “an activity that involves the discovery, evaluation, and exploitation of opportunities to introduce new goods and services, ways of organizing, markets, processes, and raw materials through organizing efforts that previously had not existed” (Shane, 2004, p. 4). This comprised the following performance measures: survival; growth in employment, sales, and profit; and achievement of an initial public offering. Meanwhile, Hisrich, Peters, and Shepherd (2010) defined entrepreneurship as “the process of creating something new with value by devoting the necessary time and effort; assuming the accompanying financial, psychic, and social risks and uncertainties; and receiving rewards of monetary and personal satisfaction” (p. 6). This captured psychological endowments, promotion of innovation, and achievement of an entrepreneur's goals (profit, personal satisfaction; Wennekens & Thurik, 1999).

There are two types of entrepreneurship that determine the type of enterprise. *Necessity* entrepreneurship promotes an engagement to avoid unemployment (those that get into entrepreneurship to avoid unemployment), while *opportunity*

entrepreneurship emphasizes the need to capitalize on a profit (those who consciously choose to become an entrepreneur to take advantage of an unexploited or underexploited business opportunity; Desai, 2009; Acs, 2006). According to Acs (2006), necessity entrepreneurship does not affect economic growth, but opportunity entrepreneurship has a significant and positive effect. That is, economies whose opportunity entrepreneurship is higher than necessity entrepreneurship have higher levels of income.

On *formal* and *informal* entrepreneurship, these are distinguished by registration status in appropriate government agencies. Informal entrepreneurship would usually be “low-skill, small-scale, and subsistence activities” (p. 4) and undertaken by entrepreneurs to avoid unemployment (Temkin, 2009). Moreover, La Porta and Shleifer (2014) described informal firms as those producing low-quality products for low-income customers. Their ventures are less than three years in operations and are engaged in activities not declared with the government for tax and regulation purposes, off-the-books, or a spin-off of hobbies or interests (Williams & Nadin, 2012). Such kind of entrepreneurship is not a major driver of economic development. On the other hand, Bennett (2010) noted that in developing economies, entrepreneurs could start with an informal status, but once uncertainty is minimized and profits are earned, this becomes a necessary condition towards formality. Other entrepreneurs begin with a formal status, but when losses are incurred, this signals a movement towards informality. Similarly, Desai (2009) argued that opportunity entrepreneurs begin informally and formalize when they generate earnings.

On innovative and imitative entrepreneurship, Samuelsson and Davidsson (2009) explored the different processes involved in the creation of innovative (introduce important novelty) and imitative (replicate established products in the market) ventures. They found that critical human capital (i.e., education and industry experience) and social capital (i.e., social networks and social reinforcement) are required in the pursuit for both ventures. However, support for certain aspects of human capital such as education, social capital, and instrumental social capital were critical for innovative ventures. This may be true due to the greater need of innovative ventures for legitimacy.

Entrepreneurship on Poverty Mobility

Microfinancing and other forms of private intervention, with an overarching theme of poverty reduction, have funded most entrepreneurial activities. In fact, Polak (2009) proposed the development of entrepreneurs from among poor people because they are willing to invest resources to create wealth, if only they have access to opportunities that are affordable and profitable. Civic organizations assisting the poor can help them secure loans from micro-financing institutions to start with micro-businesses. This is why our study highlights entrepreneurship as an initiative against poverty.

Poverty mobility (poverty dynamics) was defined by Baulch and Hodinott (2000) as the movement to and from different economic tiers, defined in our study as movements from non-poor to poor (became poor); non-poor to non-poor (status quo); poor to non-poor (escape from poverty), and from poor to poor (stay in poverty).

Entrepreneurship contributes to macroeconomic growth but is not directly linked with poverty alleviation. However, we would like to establish this link because according to Sen (2014), for macroeconomic growth to have a significant impact, it has to be inclusive in order to reduce inequality and eventually alleviate poverty (Sen, 2014; Islam, Islam, & Abubakar, 2012; Koveos & Zhang, 2012). Such is the premise because growth is not a catchall phenomenon to guarantee poverty alleviation as claimed by Rahman, Matsui, and Ikemoto (2013) and Reyes, Tabuga, Mina, Asis, and Datu (2010) because it can bypass some groups due to inequitable income distribution.

While Baumol (2007, as cited by Naudé, 2009) asserted that, in poor economies, entrepreneurship contributes to poverty alleviation of individuals. Such happens because entrepreneurship in the form of microfinance enterprises brought individuals to further poverty (Alvarez & Barney, 2013; Aslanbeigui, Oakes, & Uddin, 2010; Shetty, 2010; Milgram, 2001). To promote entrepreneurship, the following conditions have to exist: For individuals, there should be psychological endowments, culture, and institutions. At the firm level, there should be a business culture and incentives. At the macro level, there should be culture and institutions. Consequently, the availability of these conditions would yield the attitudes, skills, and actions (individual level) of entrepreneurs leading to startups (firm level), and variety (macro level). Hence, the

impact of entrepreneurship achieves self-actualization and personal wealth (individual level), performance (firm level), and competitiveness and economic growth (macro level). Valliere and Peterson (2009) summarized this link by describing entrepreneurship's contribution to growth as a diverse range of behaviors, a combination of resources, and increased competitive pressures. Likewise, for intermediate economies, entrepreneurial skills are developed through work-experience, in contrast to education, which contributes to "the development or adoption of economy side technology" (Iyigun & Owen, 1999, p. 215). With these skills, entrepreneurs could initiate inventions and innovations. Hence, human capital development is also necessary for growth and development, where a minimal supply of either could lead to a development trap.

As such, entrepreneurship could lead to economic development provided that the following are present—ventures minimize inequality; conditions at the individual, firm, and macro levels are met; and accompanied by human capital development. The succeeding discussion would link entrepreneurship and economic development, as well as connect the two to poverty alleviation.

We have seen that entrepreneurship has been challenged as a driver of economic growth and an engine for poverty alleviation. On the contrary, there were findings that entrepreneurship could also contribute to poverty. Specifically, Williams and Nadin (2012) asserted that entrepreneurs in the informal sector usually arise from the lower income groups, who have been excluded from the formal labor market. This is consistent with La Porta and Shleifer (2014), Williams and Nadin (2012), Bennett (2010), and Temkin (2009) that entrepreneurs in the informal sector are necessity entrepreneurs or those who engage in business due to a lack of other opportunities. Due to the illegitimacy of entrepreneurs in the formal sector, they would find it difficult to grow the business due to challenges in benefits enjoyed by entrepreneurs in the formal sector such as access to capital.

On the one hand, Alvarez and Barney (2013) showed how entrepreneurship led to entrepreneurs' further poverty. An entrepreneur without the technical skills to operate a business can be subjected to deeper debts from loans acquired from microfinancing. Without the capacity to scan the environment for opportunities, the possibility of bankruptcy is evident.

On the other hand, the studies of Sigalla and Carney (2012), Durrani, Usman, Malik, and Ahmad (2011), and Shetty (2009) have shown cases of poverty alleviation through entrepreneurship. These results can be ascribed as to how individuals conformed or deviated from informal entrepreneurship.

Furthermore, human capital (i.e., technical expertise, managerial skills, and knowledge of legalities in managing a business) is required in a developed economy (Serviere, 2010). Its inadequacy, accompanied by lack of access to financial capital (Chibba, 2009; Huddon, 2009, is a constraint for entrepreneurial ventures to take off. As such, microfinance is seen as an option for the poor to start an entrepreneurial venture.

From an institutional perspective, the solution suggested by La Porta and Shleifer (2014), Bennett (2010), and Desai (2009) is to elevate informality to formality. However, there are various barriers and challenges in doing such. Hence, Serviere (2010) recommended easing the process for the poor could be a solution to level the playing field. Moreover, Kefela (2011) and Shane (2004) argued that entrepreneurship serves as a driver of economic engine and social development and recommended at the country level that policy framework should encompass tools for innovation and bring about opportunities that entrepreneurs can discover and exploit.

That is, informal entrepreneurship can thrive and allow for poverty mobility if policies support an entrepreneurial culture coupled with assistance for human capital development and access to finance. Hence, with elevated skills, financial inclusion, and supportive policies, informal entrepreneurship could level up to formality.

Research Gap

We have seen that entrepreneurship has been widely linked with macroeconomic growth. We have yet to see sufficient empirical pieces of evidence generated by various methodologies being applied to country-specific data. There is a need to establish that entrepreneurship contributes to poverty alleviation by allowing individual entities to move from being poor to non-poor. On the corollary, there is also a need to verify whether there is sufficient empirical evidence that entrepreneurship is a cause of poverty when there is a movement from being non-poor to poor.

Methodology

To examine poverty mobility through entrepreneurship, we implemented the repeated cross-section model by Dang, Lanjouw, Luoto, and McKenzie (2011), as adapted by Rivera (2015) and Rivera, Aliping, and Pizarro (2016) using Philippine data. Subjecting the APIS compiled by the Philippine Statistical Authority (PSA) for 2008 and 2011 to the repeated cross-section model, we can estimate the likelihood of a household moving out of poverty through entrepreneurship.

The APIS is poverty and policy-impact monitoring system using a database of household information (Conchada & Rivera, 2013, 2016). It is an appropriate dataset for this study because it can capture the entire Philippine behavior, with ample representatives from Luzon, Visayas, and Mindanao (with 236,136 and 50,137 households for 2008 and 2011, respectively).

Meanwhile, the repeated cross-section model is also a suitable methodology for this study for two reasons. First, as per Dang et al. (2011), a number of studies starting with Deaton (1985) developed pseudo-panels out of multiple rounds of cross-sectional data to overcome the unavailability of panel data. Second, pseudo-panels constructed on the basis of age cohorts followed across multiple surveys, and hence is used in the studies of investigating the dynamics of income and consumption over time (e.g., Pencavel, 2007; Banks, Blundell, & Brugiavini, 2001; Deaton & Paxson, 1994, as cited by Dang et al., 2011). These methods that use *cohort-means* require many rounds of repeated cross-sections (e.g., Bourguignon, Goh & Kim, 2004, as cited by Dang et al., 2011), and could not be used in studies with income or consumption mobility at a level that is more disaggregated than that of the cohort.

Hence, Dang et al. (2011) explored an alternative methodology for analyzing poverty mobility based on two or more rounds of cross-sectional data. Relative to traditional pseudo-panel studies, this is less data demanding but allows for investigation of income mobility within and between cohorts. This procedure estimates a model of income or consumption in the first round of cross-section data using a specification and applies the parameter estimates to the same variables in the second survey round, which provides an estimate of the unobserved first period's income for the individuals surveyed in that second round. Hence, poverty mobility is estimated by the use of the actual

income of households in the second round and estimate from the first round. Dang et al. (2011) demonstrated that upper and lower bounds indicating entry into and exit from poverty could be derived.

Using repeated cross-section approach by Dang et al. (2011); Rivera (2015); and Rivera et al. (2016), two rounds of cross-sectional surveys were considered and denoted as round 1 (i.e., APIS 2008) and round 2 (i.e., APIS 2011). Both survey rounds are assumed to be random samples of the underlying population of interest, and each consists of a sample of n_1 and n_2 households respectively. Let x_{i1} be a vector of characteristics of household i in round 1, which are observed (for different households) in both the round 1 and round 2 surveys. For instance, variables such as whether or not the household head is employed in round 1, and his or her occupation, as well as their place of residence in round 1 could be included in x_{i1} if asked in round 2. Then, the linear projection of round 1 income, y_{i1} onto x_{i1} or the population as a whole is given by Equation 1.

$$y_{i1} = \beta_1' x_{i1} + \varepsilon_{i1} \quad (1)$$

Likewise, letting x_{i2} denote the set of household characteristics in round 2 that are observed in both round 1 and round 2 surveys, the linear projection of round 2 income, y_{i2} onto x_{i2} is given by Equation 2:

$$y_{i2} = \beta_2' x_{i2} + \varepsilon_{i2} \quad (2)$$

Let z_1 and z_2 denote the poverty line for periods 1 and 2 respectively. Then, the degree of poverty mobility be estimated. Specifically, to estimate the fraction of households in the population who are non-poor in round 2 after being poor in round 1, the estimation is expressed in Equation 3, which represents the degree of mobility out of poverty for households over the two periods.

$$P(y_{i1} < z_1 \text{ and } y_{i2} > z_2) \quad (3)$$

The constraint of a repeated cross-section is the unknown values of y_{i1} and y_{i2} ; hence, the probability represented by Equation 3 cannot be point estimated. However, it can be obtained by deriving bounds of mobility. Hence, Equation 3 can be written as Equation 4.

$$P(\varepsilon_{i1} < z_1 - \beta_1'x_{i1} \text{ and } \varepsilon_{i2} > z_2 - \beta_2'x_{i2}) \quad (4)$$

Note that Equation 4 depends on the joint distribution of the two error terms, ε_{i1} and ε_{i2} , that capture the correlation of income in the two periods, which are unexplained by the household characteristics x_{i1} and x_{i2} .

The procedural steps conducted in the repeated cross-section for prediction is documented in Cudia (2015). We would like to emphasize that a specification model of income was estimated for the 2008 data. After which, parameter estimates were applied to the same regressors for the 2011 data. This provided an estimate of the unobserved 2008 income for the households surveyed in 2011. Thus, based on 2011 actual income and 2008 estimates, we can now generate an analysis of poverty mobility by deriving upper and lower bounds of poverty mobility through entrepreneurship.

Results and Discussion

We present in this section the distribution of households who are engaged in entrepreneurship, the breakdown of entrepreneurial activities the households are engaged in, the estimated bounds of mobility, and the marginal effects.

Table 1 shows the distribution of households engaged in entrepreneurial activities for the 2008 and 2011 APIS. It can be that there were more poor households that are engaged in entrepreneurship in 2008 (74.56%) and 2011 (61.92%). It is also important to note that there was a decline in the proportion of poor households engaged in entrepreneurship from 2008 to 2011; and an increase in the proportion of

Table 1. *Distribution of Households Engaged in Entrepreneurial Activities*

	2008 APIS				2011 APIS			
	Poor		Non-Poor		Poor		Non-poor	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Engaged in entrepreneurship	125,156	74.56	42,695	25.44	20,351	61.92	12,515	38.08
Not engaged in entrepreneurship	40,382	59.14	27,903	40.86	7,834	45.36	9,437	54.64
TOTAL	165,538	70.10	70,598	29.90	28,185	56.22	21,952	43.78

Table 2. *Distribution of Households According to Entrepreneurial Activities*

Activity	2008 APIS			2011 APIS		
	Poor	Non-poor	Total	Poor	Non-poor	Total
Crop farming	49,333	8,357	57,690	8,360	2,759	11,119
Livestock and poultry raising	14,187	3,206	17,393	1,997	846	2,843
Fishing	11,027	1,082	12,109	1,786	385	2,171
Livestock forestry and hunting	3,228	238	3,466	710	107	817
Wholesale and retail	24,264	15,145	39,409	3,701	4,372	8,073
Manufacturing	5,081	1,855	6,936	928	542	1,470
Social, recreational, personal services	6,551	4,970	11,521	927	1,415	2,342
Transportation, storage services	8,851	5,662	14,513	1,467	1,561	3,028
Mining and quarrying	744	194	938	149	56	205
Construction	749	459	1,208	93	105	198
Entrepreneurial activities NEC	1,141	1,527	2,668	233	367	600
TOTAL	125,156	42,695	167,851	20,351	12,515	32,866

non-poor households engaged in entrepreneurship from 2008 to 2011.

Meanwhile, Table 2 shows the distribution of households according to entrepreneurial activity. It can be seen that entrepreneurship related to crop farming is the most popular among poor households while wholesale and retail activities for non-poor households. This is evident for both the 2008 and 2011 data.

Using repeated cross-section analysis of proposed by Dang et al. (2011) in estimating poverty mobility, we estimated the bounds of mobility as shown in Table 3—the movement into and out of poverty. These bounds of mobility indicate the extent of movements in and out of poverty based on the household characteristics enumerated by Cudia (2015).

The probabilities shown in Table 3 estimating the degree of mobility into and out of poverty for households in 2008 and 2011 are particularly discussed as follows:

Poor to non-poor. Results show that the proportion of Filipino households in 2011 that is within the lower and upper bound estimates of 3.99% and 4.29% were above the poverty line in 2011 after being under the poverty line in 2008.

Non-poor to non-poor. Estimates show that 41.22% to 41.52% of Filipino households in 2008 and 2011 were above the poverty threshold. That is, no mobility occurred.

Non-poor to poor. Results indicated that 49.18% to 49.5% of Filipino households were below the poverty threshold in 2011 after being above the poverty threshold in 2008.

Poor to poor. Estimates show that 4.99% to 5.31% of Filipino households had no mobility between 2008 and 2011.

Meanwhile, the marginal effects shown in Table 4 were estimated using logistic regression. The details of the logistic regression can be found in Cudia (2015).

The results from Table 4 suggest that entrepreneurship has induced poverty mobility in the Philippines, which highlight the importance of entrepreneurship to reduce poverty as specifically discussed below.

Poor to non-poor. From Table 4, we can see that entrepreneurship has a positive and statistically significant in increasing the 0.09% initial probability that a Filipino household can move out of poverty in 2011 after being below the poverty line in 2008. This upward mobility can be ascribed to diversified income sources.

Table 3. *Bounds of Mobility*

State of the World	Lower Bound	Upper Bound
Poor in 2008; Non-poor in 2011	0.0399	0.0429
Non-poor in 2008; Non-poor in 2011	0.4122	0.4152
Non-poor in 2008; Poor in 2011	0.4918	0.4950
Poor in 2008; Poor in 2011	0.0499	0.0532
TOTAL	1.0000	1.000

Table 4. *Marginal Effects Based on Logistic Estimates*

State of the World	Poor in 2008; Non-Poor in 2011	Non-Poor in 2008; Non-Poor in 2011	Non-Poor in 2008; Poor in 2011	Poor in 2008; Poor in 2011
Bounds of Mobility	Lower Bound 0.0009	Upper Bound 0.4024	Lower Bound 0.4389	Upper Bound 0.0384
Entrepreneurship	0.0003	0.1226	-0.1608	-0.0093

Note: Refer to Cudia (2015) for the complete marginal effects after logistic regression. Other factors included education as suggested in Serviere (2010); Chibba (2009); and Huddon (2009). All values are statistically significant at 5%.

Non-poor to non-poor. Entrepreneurship can increase the initial 40% probability that Filipino households will remain non-poor for both 2008 and 2011.

Non-poor to poor. Entrepreneurship can reduce the initial 44% probability that a Filipino household will enter poverty in 2011 from 2008.

Poor to poor. Entrepreneurship can reduce the initial likelihood of 3.8% that a Filipino household will remain poor in 2008 and 2011.

Such findings reinforce our hypothesis that entrepreneurship can reduce poverty incidence by allowing a greater likelihood for households to move out of poverty. Likewise, this validates the study of Baumol (2007, as cited by Naudé, 2009) stating that entrepreneurship, in developing economies, aids in poverty alleviation. Such is plausible because entrepreneurship creates jobs and income for both the entrepreneur and those working for the entrepreneur. Furthermore, entrepreneurship with access to finance has demonstrated to ease poverty situation (Sigalla & Carney, 2012; Aslanbeigui et al., 2010; Shetty, 2010, Milgram, 2001). Micro-entrepreneurs were able to increase their household income, improved their living conditions, and gain the credibility to avail of commercial banking services (Moreno, 2011).

Conclusions

We have established, through our literature review, that entrepreneurship is indeed an economic factor that drives economic growth and a creator of income-generating opportunities. Developing economies have a significant number of entrepreneurs warranting them the need to put economic and legal structures to support the generation of entrepreneurial activities. In the Philippines, given the challenges of the formal labor market and the limits to the effectiveness of the government's poverty alleviation policies, the private sector initiatives that provide entrepreneurial opportunities help in poverty alleviation.

To address our second objective of estimating probability scenarios of poverty mobility with entrepreneurship as intervention, we utilized a repeated cross-section analysis to obtain the lower and upper bound estimates of poverty mobility. We found empirical evidence that entrepreneurship can increase the likelihood that a household will move from being

poor to non-poor. Likewise, entrepreneurship also increases the probability that a household will remain being non-poor. Of equal importance, entrepreneurship reduces the likelihood that a household will become poor. These results confirm our hypothesis that entrepreneurship can be an avenue in reducing poverty incidence in the country. This highlights the role of entrepreneurship in policy formulation.

Given our findings, we recommend policies geared towards informal entrepreneurship with assistance to access financing and support human capital development that will elevate management skills, thereby leading to decisions to evolve from informal to formal entrepreneurship. Likewise, capacity-building programs on establishing, running, and maintaining an enterprise can be developed. This can be complemented by extended services from financial institutions that offer training on capital budgeting, savings, financial management, and accessing finance (i.e., secured loans, microfinancing). All of which can be viable or profitable, allowing entrepreneurial households to improve their standards of living.

Of equal importance, the government can also look into interventions giving emphasis on the benefits of entrepreneurship. The government, through the Department of Trade and Industry (DTI), can make a practical case for the establishment of MSMEs. Moreover, MSMEs can also take advantage of the capacity-building programs of the government regarding technology transfer, skills training, and management workshops in order to eventually participate in the global value chain. DTI can also establish and maintain good trading relationships with the international market (especially neighboring economies) by establishing and participating in initiatives that will facilitate global integration. In this way, we are able to create an ecosystem that is conducive for the establishment and operations of enterprises.

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References

- Acs, Z. J. (2006). How is entrepreneurship good for economic growth? *Innovations*, 1(1), 97–107.
- Alvarez, S. A., & Barney, J. B. (2013). Entrepreneurial opportunities and poverty alleviation. *Entrepreneurship Theory and Practice*, 38(1), 159–184.
- Aslanbeigui, N., Oakes, G., & Uddin, N. (2010). Assessing microcredit in Bangladesh: A critique of the concept of empowerment. *Review of Political Economy*, 22(2), 181–204.
- Banks, J., Bllundell, R., & Brugiavini, A. (2001). Risk pooling, precautionary saving and consumption growth. *The Review of Economic Studies*, 68(4), 757–779.
- Baulch, B., & Hoddinott, J. (2000). Economic mobility and poverty dynamics in developing countries. *The Journal of Development Studies*, 36(6), 1–24.
- Bennett, J. (2010). Informal firms in developing countries: Entrepreneurial stepping stone or consolation prize? *Small Business Economics*, 34, 53–63.
- Chibba, M. (2009). Financial inclusion, poverty reduction and the Millennium Development Goals. *European Journal of Development Research*, 21, 213–230.
- Chaudhury, N., & Okamura, Y. (2012). *Conditional cash transfers and school enrollment: Impact of the conditional cash transfer program in the Philippines* (World Bank Working Paper 71904). Washington, DC: Place of publication: The World Bank.
- Conchada, M. I. P., & Rivera, J. P. R. (2013). Assessing the impacts of the food and non-food grant on poverty alleviation in the Philippines: The case of Pasay city. *Malaysian Journal of Economic Studies*, 50(1), 53–78.
- Conchada, M. I. P., & Rivera, J. P. R. (2016). Poverty alleviation in the Philippines: Comparing the effects of food and non-food grants in Eastern Samar and Agusan del Sur. In M. Tiongco (Ed.), *Pathways out of poverty* (pp. 66–90). Manila, Philippines: DLSU Publishing House.
- Cudia, C. P. (2015, April). *Role of entrepreneurship in poverty mobility in the Philippines* (Unpublished Doctoral Dissertation). De La Salle University, Manila, Philippines.
- Dang, H., Lanjouw, P., Luoto, J., & McKenzie, D. (2011). *Using repeated cross-sections to explore movements in and out of poverty* (Working Paper No. 5550). Washington DC, USA: The World Bank.
- Deaton, A. (1985). Panel data from time series of cross-sections. *Journal of Econometrics*, 30, 109–126.
- Desai, S. (2009). *Measuring entrepreneurship in developing countries* (Research Paper No. 2009/10). Helsinki, Finland: United Nations University-World Institute for Development Economics Research (UNU-WIDER).
- Durrani, M. K. K., Usman, A., Malik, M. I., & Ahmad, S. (2011). Role of microfinance in reducing poverty: A look at social and economic factors. *International Journal of Business and Social Science*, 2(21), 138–144.
- Hisrich, R. D., Peters, M. P., & Shepherd, D. A. (2010). *Entrepreneurship* (8th ed.). New York, NY: McGraw-Hill International.
- Huddon, M. (2009). Should access to credit be a right? *Journal of Business Ethics*, 84(1), 17–28.
- Islam, M. S., Islam, M. M., & Abubakar, H. (2012). Economic growth, employment and poverty reduction nexus: Evidence from Bangladesh. *Journal of International Economics*, 9(1), 4–18.
- Iyigun, M. F., & Owen A. L. (1999). Entrepreneurs, professionals, and growth. *Journal of Economic Growth*, 4, 213–232.
- Kefela, G. T. (2011). Entrepreneurship has emerged as the economic engine and social development throughout the world. *Journal of Asian Business Strategy*, 1(4), 45–53.
- Klasen, S. (2009). Inequality in emerging countries: Trends, interpretation, and implications for development and poverty reduction. *Intereconomics*, 44(4), 360–363.
- Koveos, P., & Zhang, Y. (2012). Regional inequality and poverty in pre- and postreform China: Can entrepreneurship make a difference? *Thunderbird International Business Review*, 54(1), 59–72.
- La Porta, R., & Shleifer, A. (2014). Informality and development. *The Journal of Economic Perspectives*, 28(3), 109–126.
- Milgram, B. L. (2001). Operationalizing microfinance: Women and craftwork in Ifugao, upland Philippines. *Human Organization*, 60(3), 212–224.
- Mirrlees, J. (2011). Poverty and redistribution in emerging economies. *Asian Development Review*, 28(2), 1–10.
- Moreno, F. (2011). *Governance of microcredit as a strategy for poverty reduction in the Philippines*. <http://dx.doi.org/10.2139/ssrn.1991494>
- Naudé, W. (2009). *Entrepreneurship is not a binding constraint on growth and development in the poorest countries* (Research Paper No. 2009/45). Helsinki, Finland: United Nations University-World Institute for Development Economics Research.
- Pencavel, J. (2007). Earnings inequality, labour supply and schooling in husband-wife families. *Bulletin of Economic Research*, 59(2), 83–124.
- Polak, P. (2009). *Out of poverty: What works when traditional approaches fail*. San Francisco, CA: Berrett-Koehler Publishers.
- Rahman, P. M. M., Matsui, N., & Ikemoto, Y. (2013). *Dynamics of poverty in rural Bangladesh*. Tokyo, Japan: Springer.
- Reyes, C. M., Tabuga, A. D., Mina, C. D., Asis, R. D., & Datu, M. B. G. (2010). *Chronic and transient poverty* (Discussion Paper Series No. 2010-30). Makati City, Philippines: Philippine Institute for Development Studies.

- Rivera, J. P. R. (2015). A repeated cross-section and pseudo panel analysis of alleviating poverty in developing economies: The Philippine case. *Journal of Economics and Economic Education Research*, 16(1), 235–257.
- Rivera, J. P. R., Aliping, N. B., & Pizarro, M. G. (2016). A repeated cross-section analysis of poverty mobility through education in the Philippines. In M. Tiongco (Ed.). *Pathways out of poverty* (pp. 113–137). Manila, Philippines: DLSU Publishing House.
- Sachs, D. (2005). *The end of poverty: Economic possibilities for our time*. New York, NY: The Penguin Press.
- Samuelsson, M., & Davidsson, P. (2009). Does venture opportunity variation matter? Investigating systematic process differences between innovative and imitative new ventures. *Small Business Economics*, 33, 229–255.
- Sen, K. (2014). Inclusive growth: When may we expect it? When may we not? *Asian Development Review*, 31(1), 136–162.
- Shane, S. (2004). *A general theory of entrepreneurship: The individual-opportunity nexus*. Cheltenham, UK: Edward Elgar Publishing.
- Shetty, S. (2010). Microcredit, poverty, and empowerment: Exploring the connections. *Perspectives on Global Development and Technology*, 9, 356–391.
- Serviere, L. (2010). Forced to entrepreneurship: Modelling the factors behind necessity entrepreneurship. *Journal of Business and Entrepreneurship*, 22(1), 37–53.
- Sigalla, R. J., & Carney, S. (2012). Poverty reduction through entrepreneurship: Microcredit, learning and ambivalence amongst women in urban Tanzania. *International Journal of Educational Development*, 32, 546–554.
- Son, H. H. (2013). Inequality of human opportunities in developing Asia. *Asian Development Review*, 30(2), 110–130.
- Sulistiyowati, N. (2013). The effect of educational, health, infrastructure expenses on the workforce employment and poverty. *Bisnis & Birokrasi, Jurnal Ilmu Administrasi dan Organisasi*, 20(3), 121–128.
- Temkin, B. (2009). Informal self-employment in developing countries: Entrepreneurship or survivalist strategy? Some implications for public policy. *Analyses of Social Issues and Public Policy*, 9(1), 135–156.
- Todaro, M. P., & Smith, S. C. (2011). *Economic development* (11th ed.). Essex, England: Pearson Education.
- Valliere, D., & Peterson, R. (2009). Entrepreneurship and economic growth: Evidence from emerging and developed countries. *Entrepreneurship & Regional Development*, 21(5-6), 459–480.
- Wennekers, S., & Thurik, W. (1999). Linking entrepreneurship and economic growth. *Small Business Economics*, 13, 27–55.
- Williams, C. C., & Nadin, S. J. (2012). Tackling entrepreneurship in the informal economy: Evaluating the policy options. *Journal of Entrepreneurship and Public Policy*, 1(2), 111–124.