


THE IMPACT OF ENTREPRENEURSHIP ON POVERTY REDUCTION

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ARTICLE INFO	ABSTRACT
<p>Article history:</p> <p>Received 13 January 2023</p> <p>Accepted 07 March 2023</p>	<p>Purpose: The main purpose of this research is to analyze how entrepreneurship and entrepreneurship development incentives can influence the reduction of poverty and help to improve the entrepreneurship environment in world countries.</p> <p>Theoretical Framework: The study of the role of entrepreneurship in reducing poverty has become a major source of interest for scholars and policymakers around the world. A few studies have been conducted by scientists to study the impact of entrepreneurship on poverty reduction. Scholars in fields such as economics and management have tried to explore different approaches in this area and identify the relationships between entrepreneurship and poverty reduction.</p> <p>Design/Methodology/Approach: In this study, we use a deductive approach, in which the hypotheses are tested for application across countries. The quantitative method has been used for this approach. The Panel Fixed Effects model has been employed to assess the impact of entrepreneurship and entrepreneurship development incentives on poverty.</p> <p>Findings: Overall, the results showed that entrepreneurship in countries around the world has a positive and significant impact on poverty reduction. In addition, entrepreneurship development incentives increase the efficiency and capacity of entrepreneurial activities to reduce poverty.</p> <p>Research, Practical & Social implications: This study not only helps to fill the gap in the literature on this topic, but also serves as a model of economic and social development for developed, developing and less developed countries.</p> <p>Originality/value: This is a new study using changes in the HDI to measure poverty reduction, providing a broader and more comparative indicator that answers research questions. This research supports the claim that entrepreneurial activity has impact on poverty eradication and improving human development and people’s quality of life. Also, it demonstrates the strong relationship between entrepreneurship and poverty alleviation.</p>
<p>Keywords:</p> <p>Entrepreneurship; Poverty; Human Development Index; Economic Development; Entrepreneurial Activity.</p> <div data-bbox="172 1003 480 1249" style="text-align: center;">  </div>	<p>Doi: https://doi.org/10.26668/businessreview/2023.v8i3.1012</p>

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O IMPACTO DO EMPREENDEDORISMO NA REDUÇÃO DA POBREZA

RESUMO

Objetivo: O principal objetivo desta pesquisa é analisar como o empreendedorismo e os incentivos ao desenvolvimento do empreendedorismo podem influenciar na redução da pobreza e ajudar a melhorar o ambiente de empreendedorismo nos países do mundo.

Referencial teórico: O estudo do papel do empreendedorismo na redução da pobreza tornou-se uma importante fonte de interesse para acadêmicos e formuladores de políticas em todo o mundo. Alguns estudos foram conduzidos por cientistas para estudar o impacto do empreendedorismo na redução da pobreza. Estudiosos de áreas como economia e administração tentaram explorar diferentes abordagens nessa área e identificar as relações entre o empreendedorismo e a redução da pobreza.

Desenho/metodologia/abordagem: Neste estudo, usamos uma abordagem dedutiva, na qual as hipóteses são testadas para aplicação em vários países. O método quantitativo tem sido utilizado para esta abordagem. O modelo de Painel de Efeitos Fixos foi empregado para avaliar o impacto do empreendedorismo e dos incentivos ao desenvolvimento do empreendedorismo sobre a pobreza.

Resultados: No geral, os resultados mostraram que o empreendedorismo em países ao redor do mundo tem um impacto positivo e significativo na redução da pobreza. Além disso, os incentivos ao desenvolvimento do empreendedorismo aumentam a eficiência e a capacidade das atividades empreendedoras para reduzir a pobreza.

Pesquisa, implicações práticas e sociais: Este estudo não só ajuda a preencher a lacuna na literatura sobre este tema, mas também serve como um modelo de desenvolvimento econômico e social para países desenvolvidos, em desenvolvimento e menos desenvolvidos.

Originalidade/valor: Este é um novo estudo que usa mudanças no IDH para medir a redução da pobreza, fornecendo um indicador mais amplo e comparativo que responde a questões de pesquisa. Esta pesquisa corrobora a afirmação de que a atividade empreendedora tem impacto na erradicação da pobreza e na melhoria do desenvolvimento humano e da qualidade de vida das pessoas. Além disso, demonstra a forte relação entre empreendedorismo e redução da pobreza.

Palavras-chave: Empreendedorismo, Pobreza, Índice de Desenvolvimento Humano, Desenvolvimento Econômico, Atividade Empreendedora.

EL IMPACTO DEL ESPÍRITU EMPRESARIAL EN LA REDUCCIÓN DE LA POBREZA

RESUMEN

Propósito: El propósito principal de esta investigación es analizar cómo el espíritu empresarial y los incentivos para el desarrollo empresarial pueden influir en la reducción de la pobreza y ayudar a mejorar el entorno empresarial en los países del mundo.

Metodología: En este estudio, utilizamos un enfoque deductivo, en el que las hipótesis se prueban para su aplicación en todos los países. Para este enfoque se ha utilizado el método cuantitativo. El modelo de Panel de Efectos Fijos se ha empleado para evaluar el impacto de la iniciativa empresarial y los incentivos para el desarrollo empresarial en la pobreza.

Conclusiones: En general, los resultados mostraron que el espíritu empresarial en países de todo el mundo tiene un impacto positivo y significativo en la reducción de la pobreza. Además, los incentivos para el desarrollo empresarial aumentan la eficiencia y la capacidad de las actividades empresariales para reducir la pobreza.

Implicaciones de la Investigación: Este estudio no solo ayuda a llenar el vacío en la literatura sobre este tema, sino que también sirve como modelo de desarrollo económico y social para países desarrollados, en desarrollo y menos desarrollados.

Palabras clave: Emprendimiento, Pobreza, Índice de Desarrollo Humano, Desarrollo Económico, Actividad Emprendedora.

INTRODUCTION

Poverty reduction has become a key economic and political goal for many governments and international organizations of the world countries as it is important for the overall well-being of society. Although the absolute number of poor people has declined significantly over

the past thirty years, poverty reduction policies and programs remain one of the most relevant among the economic and social development programs of states and other international organizations. According to World Bank statistics, the poverty rate has declined from 1985 to 2020. But the global COVID-19 pandemic, which began in 2020, has had a negative impact on the economic and social life of countries around the world and has led to an increase in the number of poor people in countries (World Bank, 2020). Governments, international financial institutions, and NGOs have been working hard for many years to reduce the number of poor people in countries and improve the living standards of the population. A number of poverty reduction programs have been implemented by the World Bank, the United Nations, and other major organizations, and these programs have been contributing to poverty reduction for a long time. Despite these improvements, extreme poverty still exists in various parts of developed, developing, and underdeveloped countries. As reported by the Global Multidimensional Poverty Index GMPI (2021), across 107 developing and underdeveloped countries, 1.3 billion people live in multidimensional poverty.

These indicators have led to discussions about the need to analyze, investigate and develop effective mechanisms to combat and alleviate poverty, and therefore poverty alleviation is one of the current issues of the world countries. Besides, it is considered the first goal among the UN Sustainable Development Goals (Sachs, et al., 2021).

Each country strives to improve the financial well-being of its people and studies the effectiveness of a number of indicators to achieve this goal. This paper examines and discusses entrepreneurship and entrepreneurship development incentives and their impact on poverty reduction by comparing countries in terms of income levels: high-income, high-middle-income, middle-income, and low-income countries by the United Nations Development Program (2020). To achieve our goals, World Bank data for entrepreneurship (entrepreneurial activities, entrepreneurship development incentives, and other control factors) and Human Development Index (as a measurement of poverty) of the period of 2016 to 2020 have been used and analyzed for the different income level of countries of UNDP.

This research will be conducted to identify factors that are directly related to ease of doing business and creating a good business environment, which in turn helps a person become an entrepreneur.

In this context, we can see entrepreneurship as a tool to help reduce poverty. Because entrepreneurship helps to create new jobs in the country, increase the income of the population, introduce new innovations for enhancing production efficiency and improve the socio-economic development of the country. And as a result, it contributes to the reduction of the

number of poor people living in the country. Moreover, the role of entrepreneurship development incentives, which increases entrepreneurial opportunities, is very important in creating a favorable business environment for entrepreneurs. The main purpose of this research is to analyze how entrepreneurship and entrepreneurship development incentives can influence to reduce poverty and help to improve the entrepreneurship environment in the world countries.

LITERATURE REVIEW

The problem of poverty

Poverty is a major obstacle and problem facing people in the world. As reported by the Global Multidimensional Poverty Index GMPI (2021), across 107 developing and underdeveloped countries, 1.3 billion people live in multidimensional poverty.

The concept of poverty consists of material deprivation (i.e. food, shelter) and limited access to basic services (i.e. health, education). Now it tends to cover a number of intangible conditions such as lack of rights, insecurity, vulnerability, and discrimination. The combination of these two types of conditions serves to give us a fuller understanding of poverty. It can also make it difficult to measure and assess the effectiveness of poverty measurement and poverty reduction measures. Even a sufficient definition is difficult to find, and many policy statements prefer to describe the essence of poverty rather than a clear definition (Vandenberg, P., & Creation, J., 2006).

Many scientists have studied the influential factors on poverty. Arshed et al., (2017) have tried to explain that family size, level of education and job characteristics cause people to be poor.

According to Singer (2006), "Poverty means lack of money, goods and services". He says that the best way to alleviate poverty and help people is to give them access to basic human capital, namely education, health care and shelter. Also, he argues that this opportunity can be achieved through entrepreneurship, starting a new business.

Poverty is defined as the lack of a basic level of human needs such as shelter and sanitation, food, education, health facilities, clean drinking water, etc. (Sultan, D. F., Ahmad, J., Khan, A. S., & Rahman, R. U., 2018).

Based on the World Bank's statement on the concept of poverty: Poverty is hunger. Poverty is a lack of shelter. Poverty is a lack of access to basic services (health, education, water supply, sanitation). Poverty is not finding a job, fear for the future (World Bank, 2009).

The definition of poverty term in developed countries differs from that used in developing countries. For instance, poverty in developing countries means “no housing, no food, no medical and educational facilities” (Singer, 2006).

Lammam and MacIntyre (2016) attempted to define poverty in developed countries with two ways: “The level of resources needed to meet the basic needs of the family” and “A situation in which one person is in a worse position than other members of society”.

Moreover, in some literatures poverty is defined in a partially limited way, especially in developed and developing countries, poverty is as the lack of income or financial resources to meet people’s basic needs (Amorós, José Ernesto, and Oscar Cristi, 2011).

Different views and definitions of poverty mean that poverty is not only a multidimensional but also a dynamic situation in world countries.

The Concept of Entrepreneurship

Entrepreneurship is a specific type of economic activity that is understood as a targeted activity aimed at making a profit based on the idea of self-initiative, responsibility and innovative entrepreneurship. The economic activity of an entrepreneur is a form of his/her participation in socio-economic production and in this way to make a profit to meet their and family members’ interests and needs.

There is no generally accepted definition of entrepreneurship in the world today. One of the researchers Ahlin et al. (2014) argue that entrepreneurship is the process of creating something new that is worthwhile, and an entrepreneur who spends valuable time and effort on it, assumes all financial, psychological, and social risks, and thus receives money and satisfaction as a reward. In his article, Ahlin (2014) attempted to analyze entrepreneurship and entrepreneurship from economic, psychological, managerial, and other perspectives.

Renko et al. (2015) consider that an individual entrepreneur who is an independent decision-maker who runs the business at his own expense manages it and takes personal responsibility for providing it with the necessary funds. The success of this activity is the financial benefit received as a result of entrepreneurial activity and the feeling of satisfaction from doing business. At the same time, Renko et al. (2015) argues that an entrepreneur has to bear all the risk of loss in the event of bankruptcy.

Coulter (2001) described entrepreneurship as an activity of identifying opportunities, creating resources, creating innovations, and meeting the needs of those opportunities.

Similarly, according to Adenutsi (2009), “Entrepreneurship is the process of identifying an initiative or business opportunity and economic resources for profit”. This process helps the

entrepreneur to develop the business to make a profit using this situation and resources. In the business process, an entrepreneur needs to focus on innovation, initiative that help create a steady cash flow over the long term

Some sample definitions highlighted by Landstrom (2007) are given in Table 1.

Table 1. Definitions of Entrepreneurship

Author	Definition
Drucker (1985)	Entrepreneurship is an innovative act that involves empowering existing resources with new opportunities to create wealth.
Stevenson and Gumpert (1985)	Entrepreneurship is the process by which people seek and seize opportunities regardless of the resources they control currently.
Gartner (1988)	Entrepreneurship is the process of creating organizations, providing employment, and making profit.
Timmons (2004)	Entrepreneurship is an opportunity-based, holistic approach and leadership activity and a way to act for profit.
Shane, S., & Venkataraman, S. (2000).	Entrepreneurship is the process of finding, creating and exploiting opportunities to profit, how, by whom, and what consequences of future goods and services.

Source: Landstrom (2007)

Relationship between Entrepreneurial Activity and Poverty

A few studies have been conducted by scientists to study the impact of entrepreneurship on poverty reduction. Scholars in fields such as economics and management have tried to explore different approaches in this area and identify the relationships between entrepreneurship and poverty reduction.

Minniti (2013) has studied the relationship between entrepreneurship and poverty. According to Minniti, typically, low-income or poor people in developing countries are turning to small-scale businesses for self-employment that can improve their standard of living.

According to Cristi and Amoros (2011), entrepreneurship in developing countries has a positive impact on economic development and poverty reduction because when people cannot find a decent job, it encourages them to engage in entrepreneurial activity.

Audretsch and Keilbach (2004) emphasize in their study that entrepreneurship is one of the best ways to develop a country's economy. Their research shows that entrepreneurship is a factor that allows people to take advantage of opportunities to turn existing opportunities into financial benefits. They consider these financial benefits as the result of entrepreneurial activity.

Entrepreneurship encourages people to open their own businesses or expand existing ones, which allows them to create more jobs in the market.

Baron and Shane (2007) have noted that entrepreneurship can be seen as a mechanism for creating new jobs in countries, reducing poverty, attracting foreign investors, introducing new innovations to increase production efficiency, and providing competition between existing enterprises.

Naude (2010) argues that income inequality encourages entrepreneurship in developing countries.

According to Adenutsi's (2009) paper, entrepreneurship helps to change the country's business environment, which ultimately plays a positive role in the well-being of society, especially those living below the poverty line. The such entrepreneurial activity allows poor people to become economically independent and encourages them to increase their income.

Acs (2006) assessed and analyzed the role of entrepreneurship in both developed countries (Sweden, Germany and Japan) and developing countries (Ecuador, Uganda, and Peru). For measuring entrepreneurial activity, Acs (2006) has collected data on opportunity entrepreneurship and necessity entrepreneurship required by the Global Entrepreneurship Monitoring (GEM). All the results have shown that in developing countries, people are more prone to opportunity entrepreneurship, and there is a positive correlation between opportunity entrepreneurship and economic growth. According to results for developed countries, there is a positive link between necessity entrepreneurship and economic growth. This shows that people living in developing countries are doing opportunity entrepreneurship, while those living in developed countries are doing necessity entrepreneurship to strengthen entrepreneurship. Entrepreneurship development helps people benefit from economic activity and overcome poverty.

Entrepreneurship helps to reduce poverty not only in developing and less developed countries but also in developed countries. Some research shows the role of entrepreneurship in eradicating poverty in developed countries. We can see one such study in Slivinski's (2015) scientific work. Slivinski (2015) calculated the level of entrepreneurship among the poor in each state of the United States. The results show that the highest level of entrepreneurship has served to reduce poverty in 6 years, while in areas with low levels of entrepreneurship there has been an increase in poverty level. Overall, the research showed that for every 1% increase in the entrepreneurship rate, the poverty rate decreased by 2%.

Entrepreneurship development incentives and their impact on poverty reduction

Good financial institutions, government policies, incubators and can serve as a catalyst for a person to become a successful entrepreneur. In addition, they can increase employment, which can improve living standards, ease the economic cycle, and reduce poverty.

Entrepreneurial development incentives help to create new jobs in the country and provide employment to the population by developing processes for overcoming barriers to starting a new business or existing entrepreneurship activities. This can be self-employment for those living in poverty or creating jobs for others. In addition, entrepreneurship can create more jobs and in this way, more people can overcome poverty. This means that as the number of entrepreneurs increases, the country's poverty rate decreases. (Bruton et al., 2013). Some authors emphasize that a viable way to develop a theory about entrepreneurial opportunities is to identify the factors that can affect a person in the process of becoming an entrepreneur. Such factors as financial, human capital, regulatory quality, and access to property rights can play a supporting role in facilitating and encouraging doing business. (M. V. Jons, Coviello, & Tang, 2011).

According to some scholars, one of the key roles of entities such as financial institutions and government institutions is to help people living in poverty to acquire new knowledge and adapt to new skills to create new goods and services (Mitra et al., 2011). It also allows them to attract key factors such as advanced technology, labor and capital that will enable the country's economy to grow.

Bruton et al., (2013) state that entrepreneurship development incentives include government, incubators, and financial institutions that help an individual become an entrepreneur and create jobs for others. The authors also discussed the role of entrepreneurship development incentives as an institution responsible for finding solutions to poverty and promoting economic development. Entrepreneurship development incentives have a great impact on entrepreneurship activity and can play an important role in creating the right environment for a person to become an entrepreneur.

Some scholars studied the role of state regulation in the development of entrepreneurial activity. They concluded that government regulators could play an important role in business development. The quality of bureaucracy and its impact on corruption are crucial in determining the proportionality of the number of registered enterprises in a country. According to them, if the bureaucratic barriers are minimal, the level of corruption will be low, and it makes easier for a person to start or register a new business. In addition, good governance allows people to improve health and education facilities (Nistotskaya and Cingolani, 2016).

Corruption is regarded as a major factor influencing entrepreneurship activity. Due to mismanagement and high levels of corruption, many people do not run their businesses or operate illegally in a way that does not pay taxes or follow the necessary procedures for registering their businesses. Low levels of corruption and good government regulations encourage people to start or register a business, easy access to finance, political stability and good economic policies (Avnimelech, Zelexha, & Sharabi, (2014).

Urbanization, Entrepreneurship activity and Poverty reduction

Urbanization affects many aspects of human life, and businesses, especially new ventures, are seeing its most beneficial effects. The incomes of people in urban areas are often much higher than those of those living in rural areas. Also, people living in urban areas have greater opportunities and conditions to engage in entrepreneurial activities than people living in rural areas. This, in turn, has a significant influence on the income of the population and improves people's living conditions and contributes to the reduction of the poor (Bosma, N., & Sternberg, R., 2014).

Urbanization also offers a large and stratified consumer market, providing great access to specialized data and services and skilled workers, and greatly enhancing the opportunities to create a new firm. In addition, the risk of starting a new firm in a large city is considered relatively low, as cities provide rich job opportunities that can work as a guarantee in the event of a new firm failing. Moreover, if the trend of entrepreneurship activities increases in urban areas, it can help to create more jobs than rural entrepreneurial activities and will lead to a decrease in the number of poor people. (Bosma, N., & Sternberg, R. (2014).

Trade, Entrepreneurship activity and Poverty reduction

According to Ravallion (2006), trade openness in a country can improve the business environment of the country and reduce poverty. In his scientific research on the example of China, China has overcome widespread poverty step by step. This was made possible by the extensive growth of trade opportunities that began in the early 1980s. Although China's poverty rate is slightly lower than the world average poverty rate, this was the opposite scenario by the 1980s, when China had the highest poverty rate in the world. Many historians have declared that Deng Xiaoping's "Open Doors Policy" of the early 1980s has been one of the biggest factors in improving the entrepreneurship environment and reducing poverty in the country.

Bhagwati & Srinivasan (2002) concluded that poverty can be reduced due to trade openness in less developed countries. Their research suggests that promoting free trade should

be seen as a specific part of the strategic plan for macroeconomic stability. This can lead to rapid economic development in the country, create more opportunities for entrepreneurship and reduce poverty by this way.

MATERIAL AND METHODOLOGY

In this study, we use a deductive approach, in which the hypotheses are tested for application across countries. The quantitative method has been used for this approach.

Research Hypotheses

The aim of the current study is to investigate the impact of entrepreneurship and entrepreneurship development incentives in the reduction of poverty in countries.

Specifically, to find the influence of entrepreneurship and entrepreneurship development incentives on poverty reduction, the current study tests the following hypotheses.

H1o: There is no significant correlation between entrepreneurial activity and poverty as measured by the HDI.

H1a: There is a significant correlation between measured entrepreneurial activity and poverty as measured by the HDI.

H2o: Entrepreneurship development incentives and have no significant effect on the correlation between entrepreneurial activity and poverty as measured by the HDI.

H2a: Entrepreneurship development incentives and control factors have a significant effect on the correlation between entrepreneurial activity and poverty as measured by the HDI.

Human Development Index as a measurement of Poverty

As Todaro and Smith (2003) point out in their articles, it is necessary to create an appropriate variable to measure poverty and study its relationship to entrepreneurship in order to determine its impact on poverty. One of the indicators that has the potential to measure poverty is the Human Development Index (HDI). The Human Development Index includes education, health and living standards (GDP per capita), making it the best option for measuring poverty. The Human Development Index takes values from 0 to 1, where 1 represents the highest score.

According to Sameti, M., & Mojahednia, M. (2011), the concept of human development encompasses the efforts of public officials to enhance health services, education, social security, and living standards. Such actions can help people maximize their potential and provide with high and innovative lives. Additionally, human development is not only about increasing the

nation's economy. It is about giving people the opportunity to gain knowledge, learn new skills, improve their lifestyle, and get the resources they need to enjoy a healthy life. Good health allows people to increase their chances of achieving their goals and improving their quality of life, while education helps them learn new skills and knowledge and take advantage of opportunities.

Sen (2000) states that a person with both good income and talent can enhance their standard of living. Hence, there is a relationship between a person's ability and income level. Also, Sen (2000) emphasized how improved education and health can help people overcome poverty and improve their quality of life.

Based on the above discussions and literature review part, the Human Development Index (HDI) was selected as a dependent variable to measure poverty. In addition, entrepreneurial development incentives engaged in entrepreneurial activities were used as moderators among the Human Development Index. Moreover, other factors were used as a control variable.

The functional form of this study is:

Poverty_{it} = function (entrepreneurial activity_{it}, entrepreneurship development incentives_{it}, control variables_{it}).

- ✓ Here, i = is countries, t = is years between 2016 to 2020
- ✓ Poverty is measured using the Human Development Index (HDI).
- ✓ Entrepreneurial activity = *New Business Density (Registration per 1000 people ages 15-64)*
- ✓ Entrepreneurship development incentives = Number of procedures required for a start-up (SP), Cost of new business (CNB), Days required to start a business (DRTB), Control of Corruption (CC).
- ✓ Control variables = Urbanization (% of total population), Trade (% of GDP)

The following variables are suggested based on the functional form. Also, control variables (Trade and Urbanization) have been used to fit the model and minimize the bias of the missing variable while maintaining the relevance of the entrepreneurial activity under consideration. Table 2 provides a list of variables, definitions and their sources.

Table 2. Variables, types and their sources

Variables	Types	Definitions	Sources
HDI	Dependent Variable	Measurement of development (Index)	Human Development Reports (UNDP)
New Business Density (NBD)	Independent variable (entrepreneurial activity)	Registration per 1000 people ages 15-64	World Bank Database
Cost of new business (CNB)	Independent variable (entrepreneurial development incentives)	% of GNI per capita	Doing Business Reports
Number of procedures required for a start-up (SP)	Independent variable (entrepreneurial development incentives)	Number of procedures required	Doing Business Reports
Days required starting a business (DRSB)	Independent variable (entrepreneurial development incentives)	Number of days required to start a business	Doing Business Reports
Control of Corruption (CC)	Independent variable (entrepreneurial development incentives, government factor)	Index of perceptions of the extent to which public power is exercised for private gain (-2.5 to 2.5)	Worldwide governance indicators
Trade	Control variable	Total trade (% of GDP)	World Development Indicators
Urbanization (UP)	Control variable	(% of total population)	World Development Indicators

In this study, the data for the dependent variable, HDI index, have been collected for the period from 2016 to 2020 from the annual Human Development Reports of United Nations Development Program (UNDP) to measure poverty in the countries.

The annual data for independent variables for the period from 2016 to 2020 including entrepreneurial activity, entrepreneurship development incentives and control variables have been collected from a variety of sources (Doing Business Reports, World Bank Databank, World Development Indicators, and other sources). For this study, data from a total of 73 countries have been analyzed where data are available for our variables.

Estimation Equation and Estimation Approach

To achieve the research objectives, the linear regression model has been conducted using the Panel Data estimation technique. And this study estimates the following model, where Entrepreneurial activity (EA), Entrepreneurial development incentives (EDI) as moderators between Entrepreneurship activity and Poverty, and Control factors (CF).

$$HDI_{it} = b_0 + b_1 * EA_{it} + b_2 * EDI_{it} + b_3 * CF_{it} + u_{it}$$

In order to find an appropriate model for our regression among Panel estimation models (Pooled OLS, Fixed effects, and Random effects models), the Hausman test and Breusch and Lagrange Multiplier test have been used (Amini, S., Delgado, M. S., Henderson, D. J., & Parmeter, C. F., 2012). These tests served us to find the right model. After conducting these tests, we found that the Panel Fixed effects model was the most appropriate model and used this model for the regression analysis.

The Human Development Index and the Corruption are in the form of an index, and natural logs have been obtained to convert them to the index form for all other variables. This analysis has used natural logs in order to linearize the model by minimizing the effect of heteroskedasticity. (Arshed, N., Anwar, A., Kousar, N., & Bukhari, S., 2018).

RESULTS AND DISCUSSION

As mentioned above, in order to find an appropriate model for our regression among Panel estimation models (Pooled OLS, Fixed effects, and Random effects models), the Hausman test and Breusch and Lagrange Multiplier test have been used (Amini, S., Delgado, M. S., Henderson, D. J., & Parmeter, C. F., 2012). These tests served us to find the right model. After conducting these tests, we found that the Panel Fixed effects model was the most appropriate model and used this model for the regression analysis.

The Human Development Index and the Corruption are in the form of an index, and therefore natural logs have been obtained to convert them to the index form for all other variables. This analysis has used natural logs in order to linearize the model by minimizing the effect of heteroscedasticity (Anwar, Arshed, Kousar, & Bukhari, 2017).

The estimated statistical results of all countries are based on a general sample of observations of 365 using 73 countries, as shown in Table 3.

Table 3. Estimated statistical results for countries

HDI	Coef.	Robust St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
LNBD	.062	.002	3.89	.000	.004	.012	***
c.LNBD#c.LCNB	-.016	.005	-1.25	.019	-.015	.003	**
c.LNBD#c.LSP	-.004	.001	-3.15	.002	-.007	-.002	***
c.LNBD#c.LDRSB	-.001	.002	-1.22	.001	-.005	.001	***
c.LNBD#c.CC	-.003	.005	-0.61	.000	-.007	.014	***
LUP	.027	.044	6.08	.000	.182	.356	***
LTrade	.013	.004	2.18	.029	.001	.018	**
Constant	-.341	.185	-1.84	.006	-.705	.022	***

Mean dependent var	0.791	SD dependent var	0.149
Overall r-squared	0.628	Number of obs	365
Chi-square	282.726	Prob > chi2	0.000
R-squared within	0.614	R-squared between	0.628
*** $p < .01$, ** $p < .05$			

Here: LNBD=entrepreneurial activity, LSP= Number of procedures required for a startup, LCNB=Cost of new business, LDRSB=Days required starting a business, CC=Control of corruption, LUP=Urbanization, LTrade=Trade.

DISCUSSION OF RESULTS

Entrepreneurial Activity

New Business Density. The analysis of individual effects shows that a one percent increase in new business density (LNBD) is associated with a 0.069 percent increase in HDI index, where the probability value confirmed that there is a direct and significant relationship between new business density and HDI in case of countries. This direct impact takes place where there is good economic growth, a high number of entrepreneurial activities, a high level of registered business and effective government management.

Entrepreneurial Development Incentives

The number of procedures required for a startup. The coefficient cross product of a number of procedures required and new business density for a startup is negative. This suggests that each percentage increase in the number of procedures required for a startup is associated with a reduction of the capacity of new businesses to increase HDI by 0.004%. Also, as a result, it is statistically significant because the probability value of this coefficient is less than 0.01. The increase in procedures required for a startup and the rise of bureaucracy in the process of starting business affect negatively human development. If there are fewer procedures and bureaucracy in the country, it will give more motivation for people who want to become entrepreneurs.

Cost of new business. This negative coefficient cross product of the cost of new business and new business density indicates that a one percent increase in the cost of a new business is associated with a reduction of the capacity to increase the HDI by 0.016%. Since the p-value of this coefficient is 0.019, which is statistically significant. It means that it creates barriers to the ability of new entrepreneurs to start a business, to create jobs and in turn, it has a negative impact on human development and poverty reduction. According to scientific research by some economists, less cost of business and more registered businesses boost

entrepreneurial activity, which help to human development and reduces poverty (Cohen and Soto, 2007).

Days required starting a business. On the other hand, the predicted results show that the coefficient cross product of days required starting a business and new business density has a direct and significant influence on HDI. It indicates that one unit increase in days required to start a business will decrease the capacity of new business to increase HDI by 0.001 percent and also it has a significant effect (p-value of 0.001). In general, the increase in the number of days needed to start a new business in all countries in some way hinders the start of this business and can serve as a demotivation for people to start their own businesses.

Control of corruption. The results provide information that the coefficient cross product of control of corruption and new business density has a direct and statistically significant (p-value is 0.000) relationship with the Human Development Index. However, it indicates that a one-unit increase in Control of Corruption will decrease the capacity of new businesses to increase HDI by 0.003 percent. If there is good governance in the country and corruption is low, more businesses will be registered and people will benefit from the opportunity to do more entrepreneurship. This, in turn, has an impact on improving the living standards of the population and reducing poverty.

Control Factors

Urbanization. Similarly, there is a high correlation between the urban population and the Human Development Index. The results of the urban population show that one percent increase in population in urban areas will affect Human Development to increase by 0.027 percent. The p-value is 0.000 which is statistically significant. This means that people living in urban areas have greater opportunities and conditions to engage in entrepreneurial activities than people living in rural areas. This, in turn, has a significant influence on the income of the population and improves people's living conditions and contributes to the reduction of the poor (Bosma, N., & Sternberg, R., 2014).

Trade. These results also show that trade has a positive and significant impact on HDI, with a p-value of 0.029. The overall outcome suggests that a one percent increase in trade will affect a 0.013 percent increase in Human Development. As Ravallion (2006), stated in his research that trade openness in a country can improve the business environment in the country and reduce poverty.

CONCLUSION

As discussed in the previous chapters, the purpose of this thesis is to analyze the impact of entrepreneurship on poverty reduction. In particular, it provides an opportunity to analyze how entrepreneurship development incentives can stimulate entrepreneurship and improve the business environment and increase the efficiency of entrepreneurial activity as well in the world countries.

To examine the impact of entrepreneurship and entrepreneurship development incentives on poverty, this study used a deductive approach, in which the hypotheses were tested for application across countries where data were available of those countries. In order to find an appropriate model for our regression among Panel estimation models (Pooled OLS, Fixed effects, and Random effects models), the Hausman test and Breusch and Lagrange Multiplier test have been used. These tests served us to find the right model. After conducting these tests, we found that the Panel Fixed effects model was the most appropriate model and used this model for all regressions. Additionally, the research used annual data of the variables collected for the period of 2016 to 2020.

Overall, the results showed that entrepreneurship in countries around the world has a positive and significant impact on poverty reduction (the Human Development Index). In addition, entrepreneurship development incentives increase the efficiency and capacity of entrepreneurial activities to reduce poverty. Improving government regulations and control of corruption will also help entrepreneurs make it easier to start their own businesses, which also helps to boost entrepreneurship activity and improve human development. In addition, trade openness and urbanization have a significant impact on poverty. Also, results suggest that governments need to improve the quality of their regulations and reduce business registration procedures. Because if they reduce the level of corruption, then it allows entrepreneurs to fulfill document requirements. Moreover, the government can encourage people to become entrepreneurs by investing in education and improving the quality of legislation, which would be the right step in alleviating extreme poverty in the country.

This is a new study using changes in the HDI to measure poverty reduction, providing a broader and more comparative indicator that answers research questions. This research supports the claim that entrepreneurial activity has an impact on poverty eradication and improving human development and people's quality of life. Also, it demonstrates the strong relationship between entrepreneurship and poverty alleviation. In addition, proposing entrepreneurship as a potential model for poverty reduction demonstrates the uniqueness of the study. Therefore, this research will contribute not only to filling the gap in the literature

devoted to this topic but also as a model of economic and social development for developed, developing and underdeveloped countries

REFERENCES

Acs, Z. (2006). How is entrepreneurship good for economic growth? *Innovations: technology, governance, globalization*, 1(1), 97-107.

Adenutsi, D. E. (2009). Entrepreneurship, job creation, income empowerment and poverty reduction in low-income economies.

Ahlin, B., Drnovšek, M., & Hisrich, R. D. (2014). Entrepreneurs' creativity and firm innovation: the moderating role of entrepreneurial self-efficacy. *Small Business Economics*, 43(1), 101-117.

Amini, S., Delgado, M. S., Henderson, D. J., & Parmeter, C. F. (2012). Fixed vs random: The Hausman test four decades later. In *Essays in honor of Jerry Hausman*. Emerald Group Publishing Limited.

Amorós, José Ernesto, and Oscar Cristi (2011). "Poverty and entrepreneurship in developing countries." *The dynamics of entrepreneurship: Evidence from global entrepreneurship monitor data* (2011): 209-230.

Arshed, N., Anwar, A., Kousar, N., & Bukhari, S. (2018). Education enrollment level and income inequality: *Social Indicators Research*, 140(3), 1211-1224.

Arshed, N., Anwar, A., Kousar, N., & Bukhari, S. (2018). Education enrollment level and income inequality: A case of SAARC economies. *Social Indicators Research*, 140(3), 1211-1224.

Audretsch, D. B., & Keilbach, M. (2004). An entrepreneurship and its impact on regional growth: an evolutionary interpretation. *Journal of Evolutionary Economics*, 14(5), 605-616.

Avnimelech G., Zelekha, Y., & Sharabi, E. (2014). The impact of corruption on entrepreneurship on developed vs non-developed countries. *International Journal of Entrepreneurial Behavior & Research*.

Baron, R., & Shane, S. (2007). *Entrepreneurship: A process perspective*. Nelson Education.

Bhagwati, J., & Srinivasan, T. N. (2002). Trade and poverty in the poor countries. *American Economic Review*, 92(2), 180-183.

Bosma, N., & Sternberg, R. (2014). Entrepreneurship as an urban event? Empirical evidence from European cities. *Regional studies*, 48(6), 1016-1033.

Bruton, G. D., Ketchen Jr, D. J., & Ireland, R. D. (2013). Entrepreneurship as a solution to poverty. *Journal of Business Venturing*, 28(6), 683-689.

Cohen, D., & Soto, M. (2007). Growth and human capital: good data, good results. *Journal of economic growth*, 12(1), 51-76.

- Coulter, M. K., & Coulter, M. K. (2008). Strategic management in action.
- Drucker, P. F. (1985). Entrepreneurial strategies. *California Management Review* (pre-1986), 27(000002), 9.
- Gartner, W. B. (1988). "Who is an entrepreneur?" is the wrong question. *American journal of small business*, 12(4), 11-32.
- Human Development Report 2020. *Environment: Science and Policy for Sustainable Development*, 63(3), 34-40.
- Jones, M. V., Coviello, N., & Tang, Y. K. (2011). International entrepreneurship research (1989–2009): a domain ontology and thematic analysis. *Journal of business venturing*, 26(6), 632-659.
- Lammam, C., & MacIntyre, H. (2016). *An introduction to the state of poverty in Canada* (pp. 978-0). Fraser Institute.
- Landstrom, H. (2007). *Pioneers in entrepreneurship and small business research* (Vol. 8). Springer Science & Business Media.
- Minniti, M. (2013). *The dynamics of entrepreneurship: Evidence from global entrepreneurship monitor data*. OUP Oxford.
- Nabi, G., Liñán, F., Mitra, J., Abubakar, Y. A., & Sagagi, M. (2011). Knowledge creation and human capital for development: the role of graduate entrepreneurship. *Education+ Training*.
- Naudé, W. (2010). Entrepreneurship, developing countries, and development economics: new approaches and insights. *Small business economics*, 34(1), 1.
- Nistotskaya, M., & Cingolani, L. (2016). Bureaucratic structure, regulatory quality, and entrepreneurship in a comparative perspective: Cross-sectional and panel data evidence. *Journal of Public Administration Research and Theory*, 26(3), 519-534.
- Poverty, O., & Human Development Initiative. (2020). Global MPI 2020–Charting pathways out of multidimensional poverty: Achieving the SDGs.
- Ravallion, M. (2007). Looking beyond averages in the trade and poverty debate. In *The Impact of Globalization on the World's Poor* (pp. 118-144). Palgrave Macmillan, London.
- Renko, M., El Tarabishy, A., Carsrud, A. L., & Brännback, M. (2015). Understanding and measuring entrepreneurial leadership style. *Journal of small business Management*, 53(1), 54-74.
- Sachs, J., Kroll, C., Lafortune, G., Fuller, G., & Woelm, F. (2021). *Sustainable Development Report 2021*. Cambridge University Press.
- Sameti, M., & Mojahednia, M. (2011). The Effect of Intellectual Property Rights and Information and Communication Technology on Human Development Index in Developing Countries During 2005-2010. *Australian Journal of Business and Management Research* Vol, 1(9), 105-112.

- Sen, A. (2000). The income component of the human development index. *Journal of human development*, 1(1), 83-106.
- Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of management review*, 25(1), 217-226.
- Singer, A. E. (2006). Business strategy and poverty alleviation. *Journal of Business Ethics*, 66(2), 225-231
- Slivinski, S. (2015). Bootstraps tangled in red tape: How state occupational licensing hinders low-income entrepreneurship. *Policy Report*, (272), 23.
- Stevenson, H., & Gumpert, D. (1985). The heart of entrepreneurship.
- SULTAN, D. F., AHMAD, J., KHAN, A. S., & RAHMAN, R. U. (2018). The Role of Social Entrepreneurship in Poverty Reduction.
- Timmons, J. A., Spinelli, S., & Tan, Y. (2004). *New venture creation: Entrepreneurship for the 21st century* (Vol. 6). New York: McGraw-Hill/Irwin.
- Todaro, M., & Smith, S. (2003). Development economics. UK: Pearson education.
- Vandenberg, P., & Creation, J. (2006). Poverty reduction through small enterprises. *SEED Working paper*, 75, 1-60.
- World Bank. (2009). *Handbook on Poverty and Inequality*. The World Bank.
- World Bank. (2017). Poverty and shared prosperity 2018: piecing together the poverty puzzle
- World Bank. (2020). *Poverty and Shared Prosperity 2020: Reversals of Fortune*. The World Bank.