Pakistan Economic Review
5:1 (Summer 2022), PP. 54-90

Impact of Human Development and Employment on Poverty: An Analysis of Developing Countries

Warda Kainat, Hajra Ihsan and Misbah Aslam[1]

Abstract

This paper examines how employment and human development influence the prevalence of poverty in developing countries. This study also attempts to examine the variation in this relationship at various levels of development and across geographical regions by classifying developing economies into subgroups based on income (low-income countries, lower-middle-income countries, upper-middle-income countries), as well as at the regional level (Asia, Africa, Latin America, and the Caribbean).The GMM (Generalized Method of Moments) is used as the estimation technique for the empirical analysis, and unbalanced panel data from 61 developing countries is used from 1990 to 2019. The findings imply that, in case of the overall sample, employment and human development help to alleviate poverty in developing countries. Additionally, low income, lower-middle income, and upper-middle income countries show that human development has a negative impact on the incidence of poverty, while an increase in employment reduces poverty but the effect is not strong at the level of income subgroups. At the regional level, human development is essential for reducing poverty in Africa, Latin America, and the Caribbean, while its impact is less pronounced in Asia.This could be attributed to Asia's underdeveloped human population. In addition, employment at the regional level reduces poverty in Latin America and the Caribbean countries and Asia, with the exception of Africa. As policy implication the findings highlight the necessity of raising human development through investment in health, education, training and skills to increase the capability and efficiency of individualsand the provision of productive employmentopportunities to reduce poverty in developing countries.

JEL Classification:I31, I32, J36, O15

Keywords: Human Development, Employment, Poverty, Developing Countries

[1]Authors are respectively MS Scholar, Assistant Professor and Lecturerat School of Economics, IIIE, International Islamic University Islamabad, Pakistan(Email of corresponding author: warda.mseco638@iiu.edu.pk)

1. Introduction

In many developing countries, reducing poverty is a top priority for policy, yet little progress has been made in this area (Agenor, 2004). Over the past thirty years, poverty in less developed nations has more than doubled and is increasing rapidly (Binger, 2004). Furthermore, Binger(2004) also claimed that the level of poverty in these nations is an indication that a sizable segment of the populace is not participating in the process of growth. When a person lacks the income and other resources necessary to get the necessities of life, he/she is said to be living in poverty (Townsend, 2006).

This research examines the effects of two approaches, human development and employment, on the eradication of poverty. Todaro (1985) argued that the creation of employment opportunities that pay a respectable wage are a significant strategy for alleviating poverty in less developed nations. Consequently, employment must be a central component of any poverty focused development plan. In a later study, Todaro and Smith (2006) found that the inadequate quality of human resources, a fundamental aspect of human development, is one of the primary drivers of poverty. A second element that contributes to poverty is the lack of employment opportunities. A low employment rate indicates that a country's potential for growth is limited.

Accordingto Streen (1999), human development aims to provide individuals the tools theyneed to live healthier and more productive lives by increasing their earningsand other aspects of human development including life expectancy, health, andliteracy. As a result, poverty decreases. According to Fosu (2007), whopublished his findings in the World Health Organization Bulletin, nations withrelatively high levels of poverty tend to have low levels of human development,which lowers the mean values of the other development metrics because indeveloping nations with low per capita income, there is also low investment inboth education and health. Deaton and Dreze (2002) looked at the National SurveyData of India and found that while poverty rates slowed down, other measures ofhuman development, such as education and health also improved. In areas ofIndia with high human development indices, poverty is low, whereas in areaswith low human development indices, poverty rate is high, according to researchby Antony et al. (2007) using multivariate analysis. Goal 8 of the SDGs states, "Promote inclusive, sustained, and sustainable economic

growth and to encourage full and productive employment and decent work for all" (UNDR, 2015a). According to Bloom et al. (2018), low income or lower-middle income nations will need to create 82% of the jobs between 2010 and 2030. The empirical evidence on employment is conflicting; while some research indicated that employment is a critical factor in reducing poverty, other studies found that this association was weak due to a lack of potential/productive employment or minimal earnings. Low labor force participation rates and low wage rates in less developed nations, according to Gaude and Watzlawick (1992), suggest that the number of people living in poverty will continue to rise. However, Melamed et al. (2011) showed that in many Asian countries, investing in labor-intensive manufacturing is the only method to produce enough jobs, and that this strategy has dramatically reduced poverty. According to a number of studies [including Fields, 2005; Devereux, 2005; Maloney and Mendez (2007)], poverty can be decreased if labor's wages rise, but more laborers would lose access to employment opportunities.

Unemployment and underemployment are the fundamental causes of poverty. Labor is frequently the only asset that the poor may utilize to improve their well-being. In order to achieve poverty reduction and sustainable economic and social development, the establishment of employment opportunities is vital. Human progress is the expansion of people's options. Human poverty is the absence of options and opportunities fundamental to human growth, such as the ability to live a long, healthy, and creative life and to enjoy a fair quality of living. Human poverty is the lack of fundamental capabilities to operate and the absence of real opportunities to lead a meaningful and worthwhile life, as a result of both social restraints and personal circumstances. Low investments in human resource development exacerbate the problem of poverty (ADB, 1997)

Thisstudy's main goal is to investigate how employment and human development affectpoverty levels in 61 developing economies. Very few studies have conducted thisresearch for such a large panel of developing nations. Numerous studies mayhave examined the effects of either human development or poverty on individual countries, or on a limited sample of developing nations, and for a specific area.Additionally, this study examines whether this effect is the same across groups of countriesclassified according to income into three groups: low-income,lower-middle-income, and upper middle-income countries, as well as forgeographical groups (i.e., Asia, Africa and Latin America& the Caribbean).Giventhe significant prevalence of poverty in the world, this study would bebeneficial for both the government and policy

makers. Employment and humandevelopment are two crucial factors in formulating public policy. The firstgoal of Agenda 2030's Sustainable Development Goals (SDGs) is the eradicationof poverty. According to the SDG report (2021), 119–124 million people wereforced back into extreme poverty in 2020, marking a first time increase inextreme poverty in more than 20 years. The research also predicts that thecrises will have disastrous effects on the SDGs. According to the Poverty andShared Prosperity Report (PSPR) 2022 of the World Bank, however, worldwideprogress in eradicating poverty has practically come to a halt, and by 2030,roughly 600 million people will be living in extreme poverty.HumanDevelopment and Employment are related to the Sustainable Development Goals inaddition to reducing poverty (SDGs). HDI is related to some SDGs both directlyand indirectly. HDI is directly tied to SDGs including poverty, education,health, and employment. Others are indirectly related to HDI, such as worldpeace, hunger, etc. (UNDR, 2019). Therefore, we can easily accomplish several ofthe Sustainable Development Goals if we boost HDI and productive employment.

Organization of the study:

The topic of literature reviews is covered in section 2. The empirical findings and their interpretation are presented in Section 3. In section 4, data and methodology are presented. Final conclusion and policy suggestions are presented in Section 5.

2. Literature Review

The literature on the relationship among employment, poverty, and human development is discussed in this section. Employment and human development are important factors in reducing poverty.

The Human Capabilities Approach (theoretically underpinning human development) is an advanced method of evaluating poverty and its eradication that emphasize the well-being of individuals (Shaffer, 1996; Laderchi, 2003). In many ways, the worst kind of human deprivation is poverty. It may also involve the denial of opportunity in addition to the absence of necessities for material well-being (Anand and Sen, 1997). Baker (1997) looked through the available literature to determine the causes of poverty in 15 Caribbean nations. He emphasized that the key factors contributing to poverty in the Caribbean states were a lack of infrastructure, a lack of work possibilities, and a lack of human development. In addition, he asserted that boosting human resource development will lessen poverty.

The human development approach provides a broader perspective for identifying capability

gaps as well as gaps in income and consumption levels. Human development is an important strategy that is essential in alleviating poverty (Alkire, 2005; p.123). The relationship between human development and poverty is also highlighted by Banarjee et al. (2006), who claimed that by looking at additional indicators of poverty as well as just poverty, the human development paradigm has stimulated well-being.

Iqbal (2006) provided evidence that the Middle East and North Africa had significant reductions in poverty and advancements in human development. The study showed that in spite of this, the government ought to spend more money on health and education, and it should pay greater attention to the standards of both. More technical education should be offered in the school sector, more hospital inputs should be provided to fight diseases, and more emphasis governments should place on water sanitation to reduce poverty. According to Mackie (2012), the human development approach aids in the eradication of poverty. He discovered that the most common strategy for reducing poverty is human development.

Another factor that helps to reduce poverty is employment, which is highlighted by the capability approach. According to our review of the empirical literature, the bulk of research shows, at best, a mixed association between employment and poverty. The employer of last resort idea was introduced by Minsky in 1965. According to him, the government should pay greater attention to the unemployed. Government employees should receive education and training, and this approach would be more effective in eradicating poverty. According to Larson (1989), the idea behind employment generation to help with the poverty issue is that there aren't enough of them available. He provided evidence that a large majority of people have no potential to leave poverty via employment because the condition of being poor did not result because they had not worked hard but because they have low wage jobs.

According to Saget (2001), more job opportunities and job development decreased poverty in developing nations, but wages did not rise. Although a raise in the minimum wage would lead to more employment, the distribution of wages would not be equal.Further, Osmani's (2003) established a link between employment, economic growth, and poverty. It has been demonstrated that greater employment, both in terms of quality and quantity, increased productivity, decreased poverty, and boosted economic growth. The purpose of minimum wages is to bring the wages of poor workers up to or beyond the poverty line, yet this has led to underemployment. According to Kanbur (1991), Freeman (1991), Currie and Fallick (1993), Abowd et al. (1999), Fields, 2005, Devereux, 2005, and Maloney and Mendez

(2007), minimum wages above the competitive equilibrium wage push the workforce out of the labor market or offset the gain in the employment market. Participating in the labor force increases one's financial resources and may help one in escaping poverty. But an increase in the labor force may not always be necessary to lower poverty. Smith (2015) emphasized that even with full employment and the minimum wage, people may not always be able to live above the poverty line.

According to Gindling (2018), raising the minimum wage in developing nations decreased poverty, but it had an impact on employment because some individuals lost their jobs.According to Karnani (2011), Ray *et al.* (2014), Thompson and Dahling (2019) poverty can only be reduced if people have decent and productive jobs. Additionally, it is important to have both high-quality and quantity of productive employment, and it is preferable to increase people's skills and knowledge in order to reduce poverty.

According to the majority of empirical studies, including those by Arimah (2004), Antonay and Laxmaiah (2008), Singh (2012), Syera (2017), and Fahrika et al., human development has a significant impact on reducing poverty. Further, regarding empirical literature on employment authors used various estimation techniques, as well as various cross sections and time periods. The relationship between employment, growth, and poverty in Ethiopia was examined by Demeke et al. in 2003. Analysis of growth and employment structures reveals that productivity growth and employment expansions were historically insufficient to have a significant impact on poverty. In other words, because the rate of economic growth was too slow to make a difference in poverty, a sizable portion of the population was unable to afford even the most basic necessities, and widespread poverty persisted. they pointed out that a sustained and accelerated growth in employment and productivity could help in reduction of Ethiopia's poverty.

According to Islam (2004), employment seemed to be critical for achieving Ethiopia's goal of lowering poverty. The Ethiopian Rural and Urban Household Survey, conducted by the Addis Ababa University, Department of Economics in 1999/2000, provided the dataset used to estimate the model. A type of macro-micro simulation model served as the primary analytical tool. Author pointed out that productive employment is important in reducing poverty. Due to disparities in urban employment opportunities, poverty did not decline significantly in urban areas. Due to an increase in employment, poverty decreased in rural areas.

Krongkaew et al. (2006) used data from 1980 to 2002 to conduct macro and micro level analysis to examine the relationships between employment, economic growth, and poverty in Thailand. The study examined how raising productive employment raised the income of the poor and reduced poverty as a result. Further supporting research was done by Bruck (2006) and Gutierrez (2007). Hull (2009) noted that factors affecting poverty reduction included employment levels, job quality, and opportunities for decent earnings. Additionally, he mentioned that the majority of low income countries' development strategies aimed to increase employment in order to reduce poverty. Odhiambo conducted another conflicting study (2011). Using the ADRL technique, he looked at the relationship between economic growth, employment, and poverty. The findings showed that there is no direct or indirect causal link between employment, economic growth, and the alleviation of poverty. The findings hold true whether the infant mortality rate or the real per-capita consumption was used to determine the poverty level.

Dursun and Ogunleye (2016) examined the relationship between employment, economic growth, and poverty reduction in West Africa using country level cross sectional data collected between 1991 and 2010. He stated that a high proportion of the population of West Africa was exempted from the workforce; this posed a great threat to the development of the country. The empirical result of the study supported the positive but statistically insignificant relation between employment and poverty. He found that employment intensive growth appeared as a necessary but not sufficient requirement for poverty reduction because the laborforce did not possess sufficient skills.

This review of literature indicates most of empirical work relates to individual countries, mall cross sections of countries and small regions. There is a need for a detailed study on the analyzing the important role of human development and employment in the eradication of poverty in developing countries. This study tries to fill this gap.

3.2 Theoretical Framework

Many theories explain how poverty and human capital interact. According to Duncan (2008), the way people view development has evolved through time, starting with an early paradigm that valued capital investment and saving, then moving on to justifications for the human capital policy, technological advancement, and lastly taking into account the value of institutions and good governance. The framework outlined by the development thinking can

be used by development practitioners to rank and prioritize methods aimed at eradicating poverty.

3.2.1 Human Capital Theory

The Human Capital Theory was put forth by Becker (1958) and Mincer (1964). This theory contends that a key factor in increasing labour productivity and efficiency is human capital. According to the theory, education has a positive impact on a worker's capability and cognitive skills, which raises their level of productivity (Holden and Biddle; 2017). According to this theory, workers' productivity enhances when they are given the necessary knowledge and skills through education and training. Therefore, it increases workers' future earnings by raising their average lifetime earnings, giving them access to better-paying jobs, cutting down on the amount of time spent unemployed, and thereby reducing poverty. As an individual begins with low earnings, his earnings increase with age and trends to decline near retirement from average lifetime earnings. Investment in education and training or skills increases human capabilities of individuals. As investment in young age groups is generally higher, therefore, poverty is lower in younger age groups as compared to older age groups. The success of a nation in terms of human development is largely dependent upon physical and human capital. Further, development in the education sector by adapting wholesome policies improves the human capital. In short, the human capital theorists argue that a more educated population would be more productive.

3.2.2 Sen's Capability Approach.

The recent capability approach theory was presented by Amartya Sen in 1999 in his book, ''*The Concept of Development and Wellbeing''*. Amartya Sen theory sees the development as expansion of people's capabilities. This theory aims to enhance people's wellbeing by expanding people's capability which are linked to freedom of choice and capability to function. In capability's perspective, poverty is seen in terms of a shortfall of basic capabilities. It involves inability to achieve certain minimum levels of important functioning, such as being nourished, being clothed and being sheltered.

Sen has defined development as increasing people's freedom. The freedom of a person is understood as the ability to choose what one values. Thus, human development can be increased by freedom to choose and capability to function. Freedom to choose will increase

people's income and as well as education and health will increase quality of life and efficiency of individuals. In this way poverty will be reduced and unemployment as well.

3.3.3 Human Development Theory

In the development of the concept of human development, Haq (1995) was a pioneer. Globally, by giving a human face to economic development, and bringing poverty concerns to the center stage of the development agenda, Haq's legacy of humanizing economics will endure long. In 1995, in his book ''*Reflections on Human Development* '' he argues that development did not simply mean an increase in productivity but rather it is improvement in human development-the capability of people to live the life they want to. Haq suggested that economic development should necessarily benefit everybody by reevaluating the neoliberal reasoning. This theory is well-known in probing the effects of economic growth on human health and in the measurement of human welfare. It pursues welfare of humans in human capital formation.

3.3.4 Employment and Poverty

In analyzing the role of employment and poverty reduction, Islam (2005) studies that focus must be preliminary on a faster rate of increase in labor demand which translates into higher rate of increase in employment and earning of the poor will increase which alleviates poverty.

4. Methodology

The problem of poverty is important because it entails more than lack of income and productive resources to ensure sustainable livelihoods. Its manifestations include hunger and malnutrition, limited resources to education and other basic services (United Nations, 2021). The question is can poverty be reduced if we increase human development or if we increase investment in education and health? If we increase employment opportunities, can the problem of poverty be resolved? The queries are of much importance and answers to these queries ought to be useful for public policies. Human capital development is anticipated to increase the productivity of labor and its future income as well as an increase in employment opportunities may result in poverty mitigation.

Our analysis is based on the following dynamic panel model. After thorough analysis of theoretical and empirical literature the control variables included in the study are per capita GDP, Adult dependency ratios, population growth rate, inflation rate, and lagged poverty. A number of the previous studies have also used these variables like Roemer and Gugerty (1997), Cantillon et al. (2003), Schofield et al. (2012), Vijayakumar (2013) and Faridi et al. (2016). We have considered lagged poverty for a number of reasons including unobserved heterogeneity,

initial conditions and poverty persistence. According to Wooldridge (2002), only one lag of the dependent variable can be used when controlling for initial conditions. The mode is given by the following regression model:

$$POV_{it} = \alpha_i + GRHDI_{it} + \beta_2 EMP_{it} + \beta_3 GRPGDP_{it} + \beta_4 INF_{it} + \beta_5 PGR_{it} + \beta_6 ADR_{1it} + \beta_7 ADR_{2it} + \beta_8 POV_{i(t-1)} + \varepsilon_{it}$$

Where,

$POV_{i(t-1)}$ = First lagged of poverty headcount ratio

$GRHDI_{it}$ = Growth of Human Development Index

$GRPGDP_{it}$= Growth of per capita gross domestic product

EMP_{it}= Employment rate

INF_{it} = Inflation Rate

PGR_{it} =Population Growth Rate

ADR_{1it}= Ratio of younger dependents; younger than 15 to the working population

ADR_{2it}= Ratio of older dependents, people older than 64 to the working age population

ε_{it} = stochastic disturbance term

In order to control the issue of endogeneity, presence of lagged dependent variables and its related problems in this dynamic panel model and make comparisons at developmental and regional level, we have used the first difference GMM technique. Difference GMM estimator is developed by Arellano & Bond (1991) which is a more advantageous and superior estimator which is used when there is a problem of endogeneity in the data and for the elimination of individual effects. The asymptotic standard errors from the two step GMM estimator (Blundell and Bond, 1998) have been found to have downward bias.

5. Data and Variables

Data are important part of any research work. For reliable estimate we need representative data. For this purpose, the study uses data collected by World Bank database of *worlddevelopment indicators* (WDI), International Labor Organization (ILO) and Human Development Report (HDR). The study is based on unbalanced panel data over the time-span of 1990- 2019. This is the most comprehensive data for the said topic. Further, it covers the annual data of 61 developing countries. We follow the World Bank's Classification of countries that fall in to category of low income, lower-middle income, and upper middle income groups according to

income classification. Present study also follows the regional classification of countries that are made by World Bank that is Asia, Africa and Latin America and Caribbean countries.

Table:1 Variable Description, Notations and Source

Variable	**Notation**	**Description**	**Source**
Poverty Headcount ratio	*POV*	Percentage of Population living below the poverty line. We are using poverty line of $1.90/per day	WDI
Human Development Index	*HDI*	Composite index of measuring average achievement in three basic dimensions of human development: a long and healthy life, knowledge and decent standard of living	*HDR*
Per Capita Gross Domestic Product	*Per Capita GDP*	Gross Domestic Product divided by midyear population. Sum of gross value added by all producers plus tax minus subsidy not included in the value of products	*WDI*

Employment	*Emp*	Contributing family members and workers on their own account as a percentage of total employment.	*ILO*
Population Growth rate	*PGR*	The exponential growth rate of the midyear population from year t to year t-1, stated as a percentage, is the annual population growth rate for year t.	*WDI*
Inflation rate	*INF*	Annual percentage change in the cost to the average consumer of acquiring goods and services that may be fixed or changes at specified intervals, such as yearly	*WDI*
Age Dependency Ratio	ADR_1	Ratio of younger dependents; younger than 15 to the working population	*WDI*
Age Dependency Ratio	ADR_2	Ratio of older dependents, people older than 64 to the working age population	*WDI*

5.1. Summary Statistics

Summary statistics of variables for developing countries are presented in Table 4.

Table 2: Summary Statistics

Variable	Mean	Std.Dev	Min	Max
POV	21.882	22.412	0.02	86.276
EMP	56.284	11.252	30.61	84.64
INF	8.980	11.238	-21.165	109.233
PGR	1.663	1.098	-2.443	5.614
ADR_1	60.949	20.484	19.460	106.528
ADR_2	8.391	3.963	3.537	33.175

We observed that the mean value of POV (Poverty Headcount ratio)is 21.882 and the value of standard deviation is 22.412. Variable population growth (PGR) shows least variability among all the variables used in our model with the minimum standard deviation of 1.098 and has the lowest mean value of 1.663. The mean value of INF is 8.980 with the standard deviation of INF 11.238. However, the highest value of inflation is quite high (109.233%) with negative least value (-21.165%)[2].

The mean values of variables ADR_1 and ADR_2 are 60.949 and 8.391 respectively, while the value of standard deviation is 20.484 and 3.963, respectively. This shows a high existence of younger dependents (younger than 15years of age)[3] with less variability and low existence of older dependents (people older than 64 years of age).[4]

5.2 Panel Unit Root Test

All variables are subjected to panel unit root tests to determine their stationarity as a preliminary step. We have employed Augmented Dickey Fuller (ADF) Test and Philips

[2] Congo, Rep. has this least value of inflation in the year 2019

[3] Niger has highest value of ADR_1 (young age dependency ratio) to working population in 2011 and 2012.

[4] Summary stats of HDI and PCGDP are not reported as these two variables turn out to be nonstationary(as shown in next section) hence their mean and variance become time dependent and reporting them is meaningless.

Perron (PP) Test. Evidently, the null hypothesis of a unit root is not rejected at conventional significance levels for all variables except HDI and GDP, while variables HDI and GDP stationary at 1st Difference when we employed Augmented Dickey Fuller (ADF) and Phillip Perron (PP) Test. I (0) denotes at level, while I (1) at first difference. The results are reported in the table 4.

Table 3: Panel Unit Root Test

(Unit Root Hypothesis)

(H_o: All Series are Stationary H_1: At least one Series is non stationary)

Variables	**Augmented Dickey-Fuller (ADF)**		**Phillips-Perron (PP)**	
	At Level I(0)	***1st difference I(1)***	***At Level I(0)***	***1st Difference I(1)***
POV	483.792 (0.000)***		857.735 (0.000)***	
HDI	117.027 (0.610)	596.349 (0.000)***	99.375 (0.933)***	405.438 (0.000)***
EMP	699.994 (0.000)***		174.078 (0.001)***	
INF	460.198 (0.000)***		514.881 (0.000)***	
GDP	68.2430 (1.000)	811.419 (0.000)***	60.7781 (1.000)	923.367 (0.000)***
PGR	325.28 (0.000)***		569.458 (0.000)***	
ADR_1	347.274 (0.000)***		3036.41 (0.000)***	
ADR_2	149.364 (0.046)**		219.479 (0.000)***	

Note ***, **, * represent 1%, 5% and 10 % significance level, respectively

6. Empirical Results

This section presents the study's empirical results of developing countries. We start with an analysis of overall developing countriesfollowed by analysis of subgroups and regional countries to examine the role of human development and employment on poverty incidence. Our model of interest consists of poverty headcount ratio *(POV)* which is dependent variable. We are using POV_{it}(Headcount Ratio at $1.90/per day) for Overall developing countries and as well as for subgroups and also at regional level..

6.1 Regression Results of Overall Developing Countries

Table 4 presents the resultsfor the overall developing countries to measure the impact of human development and employment on poverty of 61 developing countries using difference GMM technique for the estimation of empirical model.

Table 4: Impact of Human Development and Employment on Poverty (Overall Sample)

[Dependent Variable: Poverty Headcount Ratio (POV)]

Variables	Coefficients	Std. Error	P-value	
$\mathbf{GRHDI}_{it}$	-0.698***	0.237	0.000	
$\mathbf{EMP}_{it}$	-0.070*	0.038	0.066	
$\mathbf{GRPGDP}_{it}$	-0.493***	0.072	0.000	
$\mathbf{PGR}_{it}$	-0.158**	0.074	0.034	
$\mathbf{INF}_{it}$	0.026***	0.001	0.000	
$\mathbf{ADR}_{1it}$	0.080***	0.004	0.000	
$\mathbf{ADR}_{2it}$	-0.02	0.087	0.754	
$\mathbf{POV}_{i(t-1)}$	0.926***	0.004	0.000	
Hansen Test	54.398		0.459	
AR1	-3.383		0.000	
AR2	-0.287		0.773	

Table 4 declares the GMM results for the effects of Human Development and employment on Poverty. Poverty Headcount Ratio (POV) which denotes the national poverty lines of $1.90/per day is the dependent variable. In the parenthesis, standard error, J-test is the

Hansen (1982) over identification restrictions is reported. The serial correlation in residuals is tested using AR (1) and AR (2), the Arellano and Bond (1991) test. P-value indicates level of significance.

Note; ***, **, * denotes significance at 1%, 5% and 10% level, respectively

The estimated coefficient of Human development is -0.698 which shows that it has significant and negative impact on poverty at 1% level of significance. With the 1 percentage point improvement in the growth rate of human development index, poverty will decrease in absolute term by -0.698 % in developing countries. Finding is consistent with the findings of Ranis *et al*. (2000), Sen and Himanshu (2004), Siggel (2010). Improvement in human development reduces poverty because it enhances capabilities and efficiency of people which in turns increases financial resources and results in acceleration of economic growth. The estimated coefficient of employment is -0.070 which shows a significant impact of employment in reducing poverty in developing countries. Rao *et al*. (2005) Marx (2007), Hull (2009)Lavopa and Szirmi (2010) also analyzed a negative relation between employment and poverty.

The observed coefficient of per capita GDP growth rate is significantly negative at 1 percent level of significance. This negative sign shows that poverty declines in the overall sample of developing countries with increase in growth of per capita GDPindicating that income of the poor and income distribution are relatively stable. If income distributions are relatively stable over time, economic growth tends to raise incomes for all members of society, including the poor.The coefficient of inflation rate is 0.026 which shows that poverty and inflation are significantly and positively related. Our results indicate that the problem of poverty is further aggravated when the general price level increases. Inflation may be considered as 'cruelest tax' [Cardoso(1992)]. Cardoso (1992) argued that inflation increases poverty in two ways because inflation tax reduces disposable real income and secondly, when prices of goods that wage earners consume rise more than the increase in nominal wages of the workers then worker's real wages decline automatically.

The population growth rate exhibits a significant negative effect on poverty. The negative sign shows that poverty will lessen in developing countries as the population growth rate

increases. Population growth and poverty seemed to have an inverse relationship, according to Ogunleye et al. (2018), since a large part of the population contributes to economic growth and production or is employed, and the majority of the population is efficient and capable of utilizing resources. Consequently, poverty will decrease despite population growth.

Estimated coefficients of adult dependency ratios, ADR_1 (younger age dependencyratio)is positive and highlysignificant while ADR_2,for the older dependency ratio is negative and insignificant. These indicators help us to understand relative economic burden of the labor force.Younger age dependency ratio is significantly positively associated to poverty, as indicated by the ADR1 coefficient. Additionally, the findings of Lanjouw and Paternostro (1998) and Ingham et al. (2009) complement this study's conclusion. This demographic statistic gives information regarding the ratio between the number of people of non-working age and those of working age.In developing countries, the increase in dependency ratios can lead to lower labor productivity due to inadequate nutritional food, health and education which in turn leads to higher poverty.Coefficient of ADR_2 indicates the nonexistence of significant incidence of poverty among old people. The reason may be high labor force participation rate of old people and the second reason may be high pension rates as compared to allowance among old aged people.Andriopoulou and Tsakloglou (2011) analyzed that old age dependency ratio has negative impact on poverty because of government provisions of allowances and pensions to old aged people which results in less severe poverty among old age group.

We also introduce the lag values of dependent variable of poverty. Poverty is significantly and positively related to its lag value indicating that past poverty experience is a significant determinant of current poverty status of individuals. Poverty leads to insufficient food & health services and less or inadequate education to attain good skills and jobs. Low earning jobs in turn leads to more poverty.

6.2 Results of Subgroups

Table 5 represents the estimation results of subgroups of countries (Low Income, Lower Middle Income and Upper Middle Income groups of countries)estimated by using first difference-GMM estimator which takes into account the effect of the human development and employment on poverty. POVindicates poverty headcount ratio (US$1.90/per day).

Table 5: Impact of Human Development and Employment on Poverty (Subgroups of Countries)

[Dependent Variable: Poverty Headcount Ratio (POV)]

Variables	LICs	LMICs	UMICs	
$GRHDI_{it}$	- 0.149*** (0.115)	-0.500*** (0.920)	-0.423** (0.937)	
EMP_{it}	-0.518 (1.006)	-0.020 (0.218)	-0.020* (0.012)	
$GRPGDP_{it}$	-0.042*** (1.642)	-0.441*** (0.036)	-0.273*** (0.081)	
PGR_{it}	0.078 (1.006)	-0.444 (0.484)	-0.389*** (0.062)	
INF_{it}	-0.005 (0.015)	0.004*** (0.010)	0.005*** (0.002)	
ADR_{1it}	0.974* (0.5804)	0.179*** (0.065)	-0.027* (0.014)	
ADR_{2it}	0.038 (0.087)	0.289 (0.277)	-0.031*** (0.010)	
$POV_{i(t-1)}$	0.993*** (0.027)	0.842*** (0.023)	0.936*** (0.015)	
Hansen Test (p-value)	0.387	0.638	0.007	
AR(1)	0.035	0.054	-	
AR(2)	0.615	0.085	-	

Table 5presents the first differenced-GMM results to measure the impact of human development and employment on the magnitude of Poverty Headcount Ratio (POV)is used for LICs, LMICs and UMICs, respectively. Values of the standard error; J-test is the Hansen (1982) test of post estimation restrictions are computed in table. The serial correlation in residuals is tested using AR (1) and AR (2), the Arellano and Bond (1991) test.

Note; ***, **, * denotes significance at 1%, 5% and 10% level, respectively

Table 5 explains the results of low income, lower middle income and upper middle income group of countries. The coefficient of HDI is -0.149, -0.500 and -0.423 in LICs, LMICs and UMICs[5] respectively. Estimated sign highlights the negative relation between human development and poverty in LIC, LMICs and UMICs. Deaton and Derez (2002), Gentilini and Webb (2008) and Singh (2012) also finds negative and significant relation between poverty and HDI. The impact of human development at regional level is consistent with the results obtained for the overall sample of developing countries.

Impact of employment on poverty is negative in all three subgroups but significant in UMICs and insignificant in LICs and LMICs. This finding indicates that considering overall results, employment rate has significant result for the only one subgroup i.e., UMIC. The insignificance in other two groups may be attributed to the existence of nonproductive employment. The productive employment is defined by ILO (2012) as "employment yielding sufficient returns to labor to permit a worker and his/her dependents a level of consumption above the poverty line". In developing countries, the less paid jobs lead to generate more working poor.

Coefficients of growth rate of per capita GDP are -0.042, -0.441 and -0.273 in LICs, LIMCs and UMICs, respectively. Adams (2004) and Bulte *et.al* (2004) also observed negative relation between per capita GDP (GRPGDP) and poverty incidence. Coefficient of PGR (Population growth rate) in LICs is 0.078 which shows that when population growth increases by i%, poverty increases 0.078 %. De Santis (1999) also found apositive nexus between population growth rate and poverty in developing countries. Thecoefficients in LMICs and UMICs are -0.444 and -0.389, respectively which indicate negative relation between population growth and poverty but only coefficient of UMICs is significant indicating that when population growth

[5] LICs, LMICs and UMPCs denotes Low Income Countries, Lower-Middle Income Countries and Upper Middle Income Countries

increases, poverty decreases. The reason may be that a large proportion of population is working or in employment and majority of the population is efficient and capable in utilizing resources. Sen (1999) and Orji *et al*. (2020) also disclosed the same relation between population growth and poverty.

Observed coefficient of inflation rate (INF) in LICs is negative (-.005) but statistically insignificant while the value of coefficients in LMICs and UMICs are respectively 0.004 and 0.005and statistically significant at 1% level of significanceindicating that when inflation increases, poverty increases in both LMICs and UMICs. Findings of Cardoso (1992) are also coherent with these results.

Coefficients of ADR_1 (young age dependency ratio) in LICs, LMICs and UMICs are 0.974, 0.179 and -0.027 respectively. Coefficients in LICs and UMICs are only significant at 10 % level of significance and in LMICs at 1% level of significance. In LICs and LMICs, the positive sign of ADR1 shows that when young age dependency rises, so does poverty. Brooks and Duncan (1997) and Bloom et al. (2001) similarly determined that an increase in the young age dependency ratio leads to an increase in the incidence of poverty. In UMICs, it has a negative effect on poverty.The reason may be that children whose parents are rich are less vulnerable to poverty. The coefficients of ADR_2(old age dependency ratio) show insignificant relation in case of LICs and LMICs and highly significant negative relation in case of UMICs.Findings of Eastwood and Lipton (1999) and Bloom *et.al* (2001) also show negative relation of old age dependency ratio and poverty.

6.3 Results at Regional Level

In this section, we present the results of regional groups classified by World Bank as Asia, Africa and Latin America Caribbean countries. POV is dependent variable which represents a typical poverty line of US$1.90/per day. The results at regional level (Asia, Africa and Latin America) are reported in Table 6

Table 6: Impact of Human Development and Employment on Poverty (Regional Level) [Dependent Variable: Poverty Headcount Ratio (POV)]				
Variables	**Asia**	**Africa**	**Latin America & Caribbean**	
$\mathbf{GRHDI}_{it}$	-0.572 (0.510)	-0.451*** (0.403)	-0.371* (0.251)	
$\mathbf{EMP}_{it}$	-0.053 (0.126)	0.286 (0.206)	-0.389** (0.187)	
$\mathbf{GRPGDP}_{it}$	-0.782*** (0.142)	-0.523*** (0.029)	-0.212*** (0.076)	
$\mathbf{PGR}_{it}$	0.312 (1.030)	-0.142 (0.405)	-0.542*** (0.162)	
$\mathbf{INF}_{it}$	0.099*** (0.025)	0.017 (0.015)	-0.020 (0.026)	
$\mathbf{ADR}_{1it}$	0.359 (0.725)	-0.440 (0.322)	0.387** (0.174)	
$\mathbf{ADR}_{2it}$	0.124*** (0.046)	-0.164** (0.076)	-0.106** (0.054)	
$\mathbf{POV}_{i(t-1)}$	0.860*** (0.013)	0.901*** (0.034)	0.933*** (0.014)	
Hansen Test (p-value) **AR(1)** **AR(2)**	0.338 0.028 0.135	0.917 0.026 0.209	0.476 0.027 0.215	

Table6 presents the firstdifferenced GMM results for the impact of Human Development and employment on poverty. Poverty Headcount Ratio (POV) is used for Asia, Africa and Latin America and Caribbean, respectively. Standard error; J-test is the Hansen (1982) test

of over identification restrictions are disclosed in the parenthesis.Serial correlation AMONG residuals is tested using AR (1) and AR (2), the Arellano and Bond (1991) test. P-value indicates level of significance.

Note; ***, **, * denotes significance at 1%, 5% and 10% level, respectively

Table 6 declares the estimated findings in Asia, Africa and the Latin America & the Caribbean regions. Observed coefficient of HDI in Asia, Africa and the Latin America & the Caribbean countries are -0.572, -0.451 and -0.37, respectively indicating negative relation between human development and poverty. With the increase in growth of Human Development Index, poverty reduces. Sen and Anand (1994), Bhalla(2002), Arimah (2004) and Antony *et al.* (2007, 2008) also explored the same findings. This result is consistent with the results obtained from overall sample and for the subgroupings indicating development level.

At regional level the effect of employment is negative in Asia and Latin America and Caribbean countries while in Africa it is positive. The inverse relationship indicates that when employment increases, poverty reduces in Asia and Latin American and Caribbean countries. Messkoub (2008) also analyzed the negative relation between poverty and employment. This relationship is positive but insignificant in Africa. This relationship is also explored by Purnomo and Istisqomah (2019). The reason may be the wage rigidity with increase in employment as wages does not increase and other reason maybe lack of productive employment [ILO (2012)].The findings of Lustig and McLeod (1996), Gilbert (1997) and Bhorat (2000) Deverux and Fields (2005), Karnani (2011) Ray *et al.* (2014), Gindling (2018) also support this finding as these studies reported positive relation between poverty and employment.

Coefficients of growth rate of per capita GDP indicate the statistically significant and negative relation between growth of per capita GDP and poverty headcount ratio. Increase in growth of per capita GDP reduces poverty in Asia, Africa and Latin America. Findings of Adams (2004) and Bulte *et al.* (2004) Beck *et al.* (2005), Biggs *et al.* (2010) are consistent with these findings.

The only region in which negative PGR coefficients are statistically significant is Latin America. Van de Walle (1985) and Ogunleye et al. (2018) found that population growth and poverty are negatively correlated. Only in Asia does inflation have a major positive effect, whereas in the other two regions its influence is insignificant. These findings are supported by the research of Easterly and Fischer (2000), Gillani et al. (2009), Sugema et al. (2010), and Omar and Inaba (2020).

Poverty incidence of ADR_1 (young age dependency ratio) is positive in general but significant in Latin American region only indicating that when young age dependency increases poverty increases. Ingham *et al*. (2009) and Dao (2012) examined the same relation.Coefficients of ADR_2 (old age dependency ratio) are 0.124, -0.164 and -0.106 respectively. These findings are consistent with the overall results in case of LMICs and UMICs. In Asian region relationship between ADR_2 and poverty is positive and statistically significant at 1% level which may be the result of low old age benefits in Asian region. Brooks and Duncan (1997), Dao (2012), Cruz and Ahmed (2018) examined the same relation between dependency ratio (young and old age) and poverty.

7. Conclusion and Policy Implications

A number of studies attempted to evaluate the role of human development and/or employment in poverty elimination at country level and small groups of developing countries. We have attempted to give a comprehensive examination of the relationship among human development, employment and poverty by examining a large sample of 61 developing countries from 1990 to 2019. In accordance with the analytical classification of the World Bank during the study period, these 61 nations are classified into three income-based groups: 18 countries in the low-income group, 32 countries in the lower-middle income group, and 11 countries in the upper-middle income group.Besides this, counties are also divided into three regions with 18 countries in Asia, 26 countries in Africa and 17 countries in Latin American region. Arellano-Bond (1991) first step difference GMM estimator is used for empirical analysis of dynamic panel model.

The results of this study repeatedly show that employment and human development have a considerable negative impact on poverty in the sample of developing countries as a whole. With the exception of Asia, where the relationship is insignificant and may be due to the slow growth of human development as health, education, and social capital are typically neglected in Asian countries like Pakistan, the effect of human development on poverty is

significantly negative and significant. When taking into account the impact of employment on reducing poverty, it turns out that this impact is relatively less strong as a number of cases show that employment plays a relatively insignificant part in reducing poverty, even though in the case of the aggregate sample, employment has a significant declining impact on poverty. The possibility of low wages and lack of productive employment in these groups may be the cause of such findings.

Due to the high levels of poverty, low levels of human development, and presence of non-productive jobs, developing nations face real challenges. Developed nations often score much higher in terms of human development than developing nations, which plays a big part in their ability to grow and develop economically. We can infer the following policy implications and suggestions from our findings.

- Government must concentrate on the quality of education as well as health to increase the capability and efficiency of individuals.
- The emphasis should be on generating better and more productive occupations, especially those that can absorb the high concentrations of the working poor. Investing in labor-intensive industries, particularly agriculture, promoting a shift in the structure of employment to higher productivity occupations and sectors, and improving the quality of work in the informal economy are all required components for the creation of such jobs. In addition, there should be an emphasis on equipping the poor with the skills and assets they need to take full advantage of any increase in work opportunities.

Productive employment will enhance the economic resources and would be helpful in increasing the minimum wages and lowering the poverty rate as well. This would also help in attainment of some of the SDGs. This study may be further extended by analyzing the impact of productive employment (rather than employment) and minimum wages on poverty.

References

Abowd, J. M., Kramarz, F., & Margolis, D. N. (1999). Minimum wages and employment in France and the United States. *NBER work*

Adams, Jr., &Richard, H. (2004). Economic growth, inequality and poverty: estimating the growth elasticity of poverty. *World Development, 32(12)*, 1989-2014.

Agénor, P. R. (2004). Unemployment-Poverty Trade-offs. *The World Bank, Washington DC 20433*.

Alkire,S.(2005). Why the capabilities approach? *Journal of human development, 6*(1), 115-135.

Anand, S., &Sen, A. (1997). Concepts or human development and poverty! A multidimensional perspective. *United Nations Development Programme, Poverty and human development: Human development papers*, 1-20.

Andriopoulou, E., &Tsakloglou, P. (2011). The determinants of poverty transitions in Europe and the role of duration dependence. No. 5692. Institute of Labor Economics (IZA).

Antony, G. M., &Rao,K. V. (2007). A composite index to explain variations in poverty, health, nutritional status and standard of living: Use of multivariate statistical methods. *Public Health*, 121(8), 578-587.

Antony, G. M., & Laxmaiah, A. (2008). Human development, poverty, health & nutrition situation in India. *Indian Journal of Medical Research, 128*(2), 198.

Asian Development Bank, 1997, Social Sector Issues in Pakistan: An Overview, Manila (September).

Arellano, M., & Bond, S. (1991). Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations. *Review of Economic Studies,* 58(2), 277-297.

Arimah, B. (2004). Poverty Reduction and Human Development in Africa. *Journal of Human Development, 5*(3), 399-415. *doi:10.1080/1464988042000277260*

Asian Development Bank, 1997, Social Sector Issues in Pakistan: An Overview, Manila (September).

Baker, J. L. (1997). Poverty reduction and human development in the Caribbean: a cross-country study(Vol. 366): *World Bank Publications.*

Banerjee, A. V., Benabou, R., & Mookherjee, D. (2006). Understanding poverty:*Oxford University Press.*

Becker, Gary. (1958). Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education. New York, Columbia University Press.

Bhalla, S. S. (2002). *Imagine there's no country: Poverty, inequality, and growth in the era of globalization*: *Peterson Institute.*

Bhorat, H. (2000). Are wage adjustments an effective mechanism for poverty alleviation? Some simulations for domestic and farm workers. *University of Cape Town, Development Policy Research Unit.*

Biggs, B., King, L., Basu, S., &Stuckler, D. (2010). Is wealthier always healthier? The impact of national income level, inequality, and poverty on public health in Latin America. *Social science & medicine*, 71(2), 266-273.

Binger, A. (2004). The poverty reduction challenge in LDCs. *United Nations, Department of Economic & Social Affairs, CDP Background Paper No.3* *https://www.un.org/development/desa/dpad/document_cdp/cdp-background-paper-series/*

Bloom, D. E., Canning, D., & Sevilla, J. (2001). Economic growth and the demographic transition.*National Bureau of Economic Research Cambridge, Mass., USA.*

Bloom, D. E., McKenna, J. M., & Prettner, K. (2018). Demography, Unemployment, Automation, and Digitalization: Implications for the Creation of (Decent) Jobs, 2010–2030. *National Bureau of Economic Research, also available at IZA DP No. 11739*.

Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics*, 87(1), 115-143.

Brooks-Gunn, J.,&Duncan, G. J. (1997). The effects of poverty on children. *The future of children*, 55-71.

Brück, T., & Van den Broeck, K. (2006). Growth, employment and poverty in Mozambique. *Issues in Employment and Poverty Discussion Paper(21).*

Bulte, E. H., Damania, R., & Deacon, R. T. (2004). *Resource abundance, poverty and development*. *No. 854-2016-56192. 2004*.

Cantillon, B., Marx, I.,& Van den Bosch, K. (2003). The puzzle of egalitarianism. The relationship between employment, wage inequality, social expenditure and poverty. *European Journal of Social Security*, 5(2), 108-127.

Cardoso, E. (1992). Inflation and poverty. *In: National Bureau of Economic Research Cambridge, Mass., USA.*

Chen, S., Datt, G., &Ravallion, M. (1994). Is poverty increasing in the developing world? *Review of Income and Wealth*, 40(4), 359-376.

Cruz, M., &Ahmed, S. A. (2018). On the impact of demographic change on economic growth and poverty. *World Development*, 105, 95-106.

Currie, J., & Fallick, B. (1993). The minimum wage and the employment of youth: *The Journal of Human Resources*, 31(2), 404-428

Dao, M. Q. (2012). Population and economic growth in developing countries. *International Journal of Academic Research in Business and Social Sciences*, 2(1), 6.

Deaton, A., &Dreze, J. (2002). Poverty and inequality in India: a re-examination. *Economic and Political Weekly*, 3729-3748.

Demeke, M., Guta, F., & Ferede, T. (2003). Growth, employment, poverty and policies in Ethiopia: an empirical investigation. *Issues in Employment and Poverty Discussion Paper*, 12, 86.

De Santis, Massimo. L. B. G., & De, S. G. (1999). Population and Poverty in the Developing World: *Oxford University Press.*

Devereux, S. (2005). Can minimum wages contribute to poverty reduction in poor countries? *Journal of International Development*, 17(7), 899-912.

Duncan, R. (2008). Framework for Establishing Priorities in a Country Poverty Reduction Strategy. *DIANE Publishing.*

Dursun, G., &Ogunleye, B. (2016). Economic growth, employment and poverty reduction: The case of West African countries. *American Journal of Economics*, 6(1), 50-60.

Easterly, W., & Fischer, S. (2000). Inflation and the Poor. *Policy Research Working Paper Series*, *2335*.

Eastwood, R., &Lipton, M. (1999). The impact of changes in human fertility on poverty. *The Journal of Development Studies*, 36(1), 1-30.

Fahrika, A. I., & Salam, H.,& Buhasyim, M. A. (2020). Effect of Human Development Index (HDI), Unemployment, and Investment Realization toward Poverty in South Sulawesi-Indonesia. *The International Journal of Social Sciences World*, Vol. 2 No. 02, October 2020, pages: 110~116.

Faridi, M, Z., Chaudhry., Farooq, Faima, Arif, R. (2016). Labor Force Participation and Poverty Alleviation in Pakistan: An Epirical Analysis. *Pakistan Journal of Social Sciences (PJSS)*, Vol. 36, No. 2 (2016), pp. 1251-1263.

Fields, G., & Kanbur, R. (2005). Minimum Wages and Poverty (No. 127086). *Cornell University, Department of Applied Economics and Management*

Fosu, A. K. (2007). Poverty and development. *Bulletin of the World Health Organization*, 85(10), 734. *doi:10.2471/blt.07.045955*

Freeman, R. B., &Castellio-Freeman, A. (1991). Minimum wages in Puerto Rico: Textbook case of a wage floor? *NBER working paper*(*w3759*)

Gaude, J., & Watzlawick, H. (1992). Employment creation and poverty alleviation through labour-intensive public works in least developed countries. *Int'l Lab. Rev.*, 131,3.

Gentilini, U., & Webb, P. (2008). How are we doing on poverty and hunger reduction? A new measure of country performance. *Food Policy*, 33(6), 521-532.

Gilbert, A. (1997). Employment and poverty during economic restructuring: the case of Bogota, Colombia. *Urban Studies*, 34(7), 1047-1070.

Gillani, S. Y. M., Rehman, H. U., & Gill, A. R. (2009). Unemployment, poverty, inflation and crime nexus: Co integration and causality analysis of Pakistan. *Pakistan Economic and Social Review*, 79-98.

Gindling, T. (2018). Does increasing the minimum wage reduce poverty in developing countries? *IZA World of Labor*.

Gutierrez,C. (2007). Does employment generation really matter for poverty reduction? (Vol. 4432)*: World Bank Publications.*

Haq, M. ul. (1995). Reflections on Human Development. *Oxford University Press, New York, Oxford.*

Holden., L and Biddle, J. (2017). The Introduction of Human Capital Theory into Education Policy in the United States.*History of Political Economy*, 4[49], 537-574.

Hull, K. (2009). Understanding the relationship between economic growth, employment and poverty reduction. *Unclassified DCD/DAC* (2009)16/ADD, 30.

Ingham, B.,Chirijevskis, A., & Carmichael, F. (2009). Implications of an increasing old-age dependency ratio: The UK and Latvian experiences compared. *Pensions: An International Journal*, 14(4), 221-230.

International Labor Organization. (2012). Global wage report 2012/13: Wages and equitable growth:*ILO Publications.*

Iqbal,F. (2006). Sustaining Gains in Poverty Reduction and Human Development in the Middle East and North Africa. *World Bank Group, doi:978-0-8213-6527-4 https://doi.org/10.1596/978-0-8213-6527-4*.

Islam, R. (2004). *The nexus of economic growth, employment and poverty reduction: An empirical analysis* (Vol. 14): Recovery and Reconstruction Department, *International Labor Office Geneva.*

Khan, A. R. (2005). An Analysis of the vital Nexus based on some Recent UNDP and ILO/SIDA Studies. *United Nation Development Programme New York andInternational Labor Office Geneva. ISBN 92-2117834-X*

Kanbur, S.R. (1991). Poverty and development: *The human development report and the world development report, 1990*(Vol. 103): *World Bank Publications.*

Karnani, A. (2011). Reducing poverty through employment. *Innovations: Technology, Governance, Globalization*, 6(2), 73-97.

Krongkaew, M.,Chamnivickorn, S., & Nitithanprapas, I. (2006). Economic growth, employment, and poverty reduction linkages: The case of Thailand: *Recovery and Reconstruction Department, International Labour Office.*

Laderchi, C. R., Saith, R., & Stewart, F. (2003). Does it matter that we do not agree on the definition of poverty? A comparison of four approaches. *Oxford development studies*, 31(3), 243-274.

Lanjouw, P., &Paternostro, S. (1998). Poverty and the economic transition: how do changes in economies of scale affect poverty rates for different households? : *World Bank Publications.*

Larson, D. K. (1989). Transitions of poverty amidst employment growth: two nonmetro case studies. *Growth and change*, 20(2), 19-34

Lavopa, A., & Szirmai, A. (2012). *Industrialization, employment and poverty* (No. 2012-081). *United Nations University-Maastricht Economic and Social Research Institute on Innovation and Technology (MERIT).*

Lustig, N., & McLeod, D. (1996). *Minimum wages and poverty in developing countries: some empirical evidence*: *Citeseer*.

Mackie, E. (2012). Understanding poverty: The human development approach. International relation students. *Retrieved from: http://www.e-ir. info/2012/04/17*.

Maloney, W. F., & Mendez, J. N. (2007). Measuring the Impact of Minimum Wages: Evidence from Latin America: *University of Chicago Press*.

Marx,I.(2007). The Dutch 'miracle'revisited: the impact of employment growth on poverty. *Journal of Social Policy*, 36(3), 383-397.

Melamed, C., Hartwig, R., & Grant, U. (2011). Jobs, growth and poverty: what do we know, what don't we know, what should we know. *Growth*,18(6),10.

Messkoub, M. (2008). Economic growth, employment and poverty in the Middle East and North Africa. *ISSN Working Paper Series/General Series*, 460, 1-34.

Mincer, Jacob. (1964). Investment in Human Capital and Personal Income Distribution. Journal of Political Economy, Vol. 66, No. 4, pp. 281-302

Minsky,H. P. (1965). Employment, growth and price levels: *a review article. In: JSTOR*1-12.

Odhiambo, N. M. (2011). Growth, employment and poverty in South Africa: in search of a trickle-down effect. *Journal of Income Distribution*, 20(1), 49-62

Ogunleye, O. O., Owolabi, O. A., & Mubarak, M. (2018). Population growth and economic growth in Nigeria: An appraisal. *International Journal of Management, Accounting and Economics*, 5(5), 282-299.

Omar, M. A., & Inaba, K. (2020). Does financial inclusion reduce poverty and income inequality in developing countries? A panel data analysis. *Journal of Economic Structures*, 9(1), 1-25.

Orji, A., Ogbuabor, J. E., Iwuagwu, C., & Anthony-Orji, O. I. (2020). Empirical analysis of the impact of population increase on the economic growth of Africa's most populous country. *Вісник соціально-економічних досліджень*(2 (73)), 27-45.

Osmani, S. R. (2003). Exploring The Employment Nexus: Topics In Employment and Poverty. *UNDP New York*.

Purnomo, S. D., & Istiqomah, I. (2019). Economic Growth and Poverty: The Mediating Effect of Employment. *JEJAK: Jurnal Ekonomi dan Kebijakan*, *12*(1), 238-252.

Rahman, R. I., & Islam, K. N. (2003). Employment poverty linkages: Bangladesh. *Issues in Employment and Poverty Discussion Paper*, *10*.

Ranis, G.,Frances. S and Ramirez, A. (2000). Economic Growth and Human Development. *World Bank*, Vol. 28, No. 2, pp. 197-219, 2000

Rao, D. P., Coelli, T. J., & Alauddin, M. (2005). Agricultural productivity growth, employment and poverty in developing countries, 1970-2000: *International Labour Office Geneva*

Ray,K., Sissons, P., Jones, K., & Vegeris, S. (2014). Employment, pay and poverty. *Evidence and policy review. York, Joseph Rowntree Foundation*.

Roemer, M., & Gugerty, M. K. (1997). Does economic growth reduce poverty?*Cambridge, MA.Harvard Institute for International Development.*

Saget, C. (2001). Poverty reduction and decent work in developing countries: Do minimum wages help. *Int'l Lab. Rev.*, 140, 237.

Schofield, D. J., Callander, E. J., Shrestha, R. N., Percival, R., Kelly, S. J., & Passey, M. E. (2012). Labor force participation and the influence of having back problems on income poverty in Australia. *Spine*, 37(13), 1156-1163

Sen, A., & Anand, S. (1994). Human Development Index: Methodology and Measurement. (No. HDOCPA-1994-02). *Human Development Report Office (HDRO), United Nations Development Programme (UNDP).*

Sen, A. (1999). Commodities and capabilities. *OUP Catalogue*.

Sen, A. (1999). Development as freedom. *The globalization and development reader: Perspectives on development and global change*, 525.

Sen, A., & Himanshu. (2004). Poverty and inequality in India: I. *Economic and Political Weekly*, 4247-4263.

Shaffer,P. (1996). Beneath the poverty debate: some issues. *IDS bulletin*, 27(1), 23-35.

Singh,R. (2012). Human development index and poverty linkages. *International Journals of Marketing and Technology*, 2(5), 219-230.

Siggel, E. (2010). Poverty alleviation and economic reforms in India. *Progress in Development Studies*, 10(3), 247-259.

Smith, L. (2015). Reforming the minimum wage: Toward a psychological perspective. *American Psychologist*, 70(6), 557.

Streeten, P. (1994). Human development: means and ends. *The American Economic review*, *84*(2), *232-237.*

Streeten, P. (1999) 'Ten years of human development: special contribution'.Human Development Report,*Oxford University Press, New York*

Sugema,I.,Irawan, T.,Adipurwanto, D., Holis, A., & Bakhtiar, T. (2010). The impact of inflation on rural poverty in Indonesia: An econometrics approach. *International Research Journal of Finance and Economics*, 58(1), 50-57.

Sustainable Development Goals Report (2021). United Nations.New York, NY, USA (2021).*https://unstats.un.org/sdgs/report/2021/*

Syera, I.A. (2017). The Effect of Unemployment Rate, Human Development Index, Gross Domestic Product against Level of Poverty in Indonesia. *Proceedings of The 7th Annual*

International Conference (AIC) Syiah Kuala University and The 6th International Conference on Multidisciplinary Research (ICMR) in conjunction with the International Conference on Electrical Engineering and Informatics (ICELTICs),7, 62-68.

Thompson, M. N., & Dahling, J. J. (2019). Employment and Poverty: Why Work Matters in Understanding Poverty.*American Psychologist*, 74(6), 673

Todaro,M.P. (1985). Economic Development in the Third World. *Longman, London*

Todaro, M. P., & Smith, S. C. (2006). Pengangunan Ekonomi. *Edisi ke 9.Jakarta: Erlangg.Alih Bahasa Drs. Haris Munandar*.

Townsend, P. (2006). Introduction, Compendiumof best practices in poverty measurement; Expert Group on Poverty Statistics (Rio Group), Rio de Janeiro. *London School of Economics*.

UNPR. (2019) Human Development Report (2019). *www.undp.org*

UNPR. (2015a). Sustainable Development Goals. New York, NY, USA. (2015). *https://www.un.org*

United Nations. (2021). Global Issues-Poverty Eradication. New York, NY, USA. *https://www.un.org*

Van de Walle, D. (1985). Population growth and poverty: Another look at the Indian time series data. *The Journal of Development Studies*, 21(3), 429-439.

Vjayakumar, S. (2013). An Empirical Study on the Nexus of Poverty, GDP Growth, Dependency Ratio and Employment in Developing Countries. *Journal of Competitiveness*, 5(2), 67- 85

Wooldridge, J.M. (2002) Econometric Analysis of Cross Section and Panel Data. *The MIT Press, Cambridge.*

World Bank. (2020). Poverty and Shared Prosperity Report (2020): Corecting Course.*Washington, DC: World Bank, doi:*10.1596/978-1-4648-1893-6.

Appendices

Appendix A

List of Developing Countries

NO	Country		Country
1	Albania	32	Kenya
2	Algeria	33	Lesotho
3	Armenia	34	Malawi
4	Bangladesh	35	Mali
5	Benin	36	Mauritania
6	Bolivia	37	Mauritius
7	Botswana	38	Mexico
8	Brazil	39	Moldova
9	Bulgaria	40	Mongolia
10	Cameroon	41	Morocco
11	Chile	42	Nepal
12	China	43	Niger
13	Colombia	44	Pakistan
14	Congo, Rep.	45	Panama
15	Costa Rica	46	Papua New Guinea
16	Dominican Republic	47	Paraguay
17	Ecuador	48	Peru
18	Eswatini	49	Philippines
19	Fiji	50	Senegal
20	Gabon	51	South Africa
21	Gambia, The	52	Sri Lanka
22	Ghana	53	Sudan
23	Guatemala	54	Thailand
24	Guyana	55	Togo
25	Haiti	56	Tonga

26	**Honduras**	**57**	**Tunisia**
27	**India**	**58**	**Turkey**
28	**Indonesia**	**59**	**Uganda**
29	**Iran, Islamic Rep.**	**60**	**Uruguay**
30	**Jamaica**	**61**	**Zambia**
31	**Jordan**		

Appendix B

Lists of Low Income, Lower-Middle Income and Upper Middle Income Countries

List of Low Income Countries (LICs)

No	Country	No	Country
1	**Bangladesh**	**10**	**Mauritania**
2	**Benin**	**11**	**Nepal**
3	**Gambia, The**	**12**	**Niger**
4	**Ghana**	**13**	**Pakistan**
5	**Haiti**	**14**	**Senegal**
6	**India**	**15**	**Sudan**
7	**Kenya**	**16**	**Togo**
8	**Malawi**	**17**	**Uganda**
9	**Mali**	**18**	**Zambia**

Source: World Bank Group

List of Lower-Middle Income Countries (LMICs)

No	Country	No	Country
1	***Albania***	**17**	**Indonesia**
2	**Algeria**	**18**	**Iran, Islamic Rep.**
3	**Armenia**	**19**	**Jamaica**

4	**Bolivia**	**20**	**Jordan**
5	**Bulgaria**	**21**	**Lesotho**
6	**Cameroon**	**22**	**Moldova**
7	**China**	**23**	**Mongolia**
8	**Colombia**	**24**	**Morocco**
9	**Congo, Rep.**	**25**	**Papua New Guinea**
10	**Dominican Republic**	**26**	**Paraguay**
11	**Ecuador**	**27**	**Peru**
12	**Eswatini**	**28**	**Philippines**
13	**Fiji**	**29**	**Sri Lanka**
14	**Guatemala**	**30**	**Thailand**
15	**Guyana**	**31**	**Tonga**
16	**Honduras**	**32**	**Tunisia**

Source: World Bank Group

List of Upper Middle Income Countries (UMICs)

No	Country	No	Country
1	***Botswana***	**7**	***Mexico***
2	**Brazil**	**8**	**Panama**
3	**Chile**	**9**	**South Africa**
4	**Costa Rica**	**10**	**Turkey**
5	**Gabon**	**11**	**Uruguay**
6	**Mauritius**		

*Source:*World Bank Group

Appendix C

List of Countries in Asia, Africa and Latin America and Caribbean

Countries List of Asia

No	Country	No	Country
1	***Albania***	**10**	**Mongolia**
2	***Armenia***	**11**	**Nepal**
3	**Bangladesh**	**12**	**Pakistan**
4	**Bulgaria**	**13**	**Papua New Guinea**
5	**China**	**14**	**Philippines**
6	**Fiji**	**15**	**Sri Lanka**
7	***India***	**16**	**Thailand**
8	**Indonesia**	**17**	**Tonga**
9	**Moldova**	**18**	**Turkey**

*Source:*World Bank Group

Countries List of Africa

No	Country	No	Country
1	***Algeria***	**14**	**Malawi**
2	***Benin***	**15**	**Mali**
3	**Botswana**	**16**	**Mauritania**
4	**Cameroon**	**17**	**Mauritius**
5	**Congo, Rep.**	**18**	**Morocco**
6	**Eswatini**	**19**	**Niger**
7	***Gabon***	**20**	**Senegal**
8	**Gambia, The**	**21**	**South Africa**
9	**Ghana**	**22**	**Sudan**
10	**Iran, Islamic Rep.**	**23**	**Togo**
11	**Jordan**	**24**	**Tunisia**
12	**Kenya**	**25**	**Uganda**
13	**Lesotho**	**26**	**Zambia**

*Source:*World Bank Groups

Countries list of Latin America and the Caribbean

No	Country	No	Country
1	***Bolivia***	**10**	**Haiti**
2	***Brazil***	**11**	Honduras
3	**Chile**	**12**	**Jamaica**
4	**Colombia**	**13**	**Mexico**
5	**Costa Rica**	**14**	**Panama**
6	**Dominican Republic**	**15**	**Paraguay**
7	***Ecuador***	**16**	**Peru**
8	**Guatemala**	**17**	**Uruguay**
9	***Guyana***	**18**	

*Source:*World Bank Group.