

A STUDY OF DETERMINANTS OF UNEMPLOYMENT

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ABSTRACT

Unemployment rate is one of the most pivotal indicators that act as a hindrance to achieving development. Rising unemployment rate, which has been a matter of concern, for most of the countries in the world, is expected to increase all the more post COVID 19, from 5.3 percent in 2019 to 5.7 percent in 2022. It has been estimated that there would be 205 million unemployed people around the world, which will be higher than the pre-COVID numbers of 187 million in 2019. The projected slow growth implies lesser employment generation and this will lead to higher unemployment levels. In such a situation, understanding what influences unemployment and an innovative approach to policy making is necessary. This paper focuses on the relationship between unemployment and growth rate. Okun's law which states that there exists a negative relationship between unemployment and growth is also discussed. Other factors like inflation, exports, Foreign Direct Investment, population growth, Labour Force Participation Rate, Gross Fixed Capital Formation, interest rate are identified as variables that have a significant impact on unemployment rate. It highlights the importance of policy formulation with respect to unemployment.

Keywords: *Unemployment, Okun's Law, Inflation, Labour Force, Policy Making.*

Introduction

Ensuring that people of a country enjoy well-being and social welfare is the duty of the government. Sustainable development is possible only when a country achieves low unemployment and poverty levels. For this an inclusive and well-functioning labour market is necessary (World Employment and Social Outlook: Trends 2019, May 2019). Unemployment is a social evil that hinders growth and development. International Labour Organisation published - World Employment and Social Outlook: Trends 2020 which gives an idea about the current unemployment-employment situation across the globe. According to the report, in 2019, the total working age population was around 5.7 billion people. Of this total, 2.3 billion were not part of the labour force, 3.3 billion were employed. An estimated 188 million were unemployed.

The COVID-19 pandemic that has affected almost all countries according to the International Labour Organisation, the global unemployment rate will be 5.7% in 2022. It has estimated that there would be 205 million unemployed people around the world, which will be higher than the pre-COVID numbers of 187 million in 2019. There is a "new normal" that will exist post the pandemic. The projected slow growth implies lesser employment generation and this will lead to higher unemployment levels. In such a situation, an innovative approach to policy making is necessary.

Acceleration of employment growth can be done by influencing the factors that impact employment growth. Determining the factors that affect unemployment has important implications. The type of effect and the nature of effect will help in formulating strategies and policies to combat unemployment.

Objectives of the Study

- To understand the causes of unemployment rate.
- To identify the determinants of unemployment.
- To examine policy formulation for reducing unemployment levels.

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Research Methodology

The study is based on literature review of the past research work done. Exploratory research design is followed. Focus has been given on finding the determinants of unemployment. The papers were primarily taken from SSRN, J-Stor, Google Scholar, Emerald etc. The first section describes the conceptual framework and causes of unemployment. In the next section, determinants of unemployment are identified and presented. In the last section, policy formulation and unemployment are explained.

Conceptual Framework

Unemployment can be defined as a state where people are not working but are willing to work and are seeking work during the period of reference (Prakash, 2002). In other words, it is "underutilisation of human capital"(Dr Aurangzeb & Asif, 2013). Unemployment is measured and quantified using unemployment rate. The unemployed people by the total labour force expressed as a percentage gives the unemployment rate(S, Victoria Kenny, 2019). The total labour force divided by the total population gives the Labour Force Participation Rate (LFPR). When the number of employed people is divided by the total population, we get Worker Population Ratio (WPR)(Paul, 1988).Unemployment can be of different types - cyclical, structural, frictional, seasonal and technological unemployment. Another form of unemployment which is not obvious is disguised unemployment or hidden unemployment. Here, a person looks like he/she is working but is not actually contributing to the productivity. The addition to the total output remains same with or without the person(Singh & Raj, 2018)(Mehra, 2018).

Why Unemployment is a Major Concern?

Unemployment has both social and economic consequences. They are listed below:

- **Social Implications**
 - Wastage of Human Capital skills (Prakash, 2002)
 - Human Capital Erosion (Nagel, 2015)
 - Brain Drain (Maqbool, Mahmood, Sattar, & Bhalli, 2013)
 - Poverty (Atta & Cheema, 2014)(Dr Aurangzeb & Asif, 2013)
 - Youth unemployment causes social disharmony because unemployment among youth leads to issues like drug use and increasing crime rates among them. (Rubee Singh, 2018)(McQuaid, 2017)
 - Psychological and health issues (Nagel, 2015)(McQuaid, 2017)
- **Economic Implications**
 - Results in a Vicious Cycle- absence of stable income forces the families to cut down expenses resulting in a compromise on the future of the children in the family(Atta & Cheema, 2014)
 - Hampers Growth and Development (Mehra, 2018)
 - Burden on Government through increased unemployment benefits and decreased tax collection (Eriksson, 1997)(C. R. Frank, 1968)

Determinants of Unemployment

Unemployment rate is one of the World Development Indicators which depends on several variables. Past research holds a vast reservoir of knowledge related to what influences unemployment rate.

- **Okun's Law**

In 1962, Arthur Okun put forward the Okun's Law. It states that cyclical unemployment and GDP (Gross Domestic Product) growth has an inverse relation. The study was conducted in United States and found the Okun's Coefficient to be 3 percent (Mehra, 2018)(Kreishan, 2011).

The standard version of the Okun's law was given as.

$$y_t = \alpha_0 + \alpha_1 u + e_t \quad (1)$$

where, y_t was the real output; u was the level of unemployment and e was the error term. α_0 was the intercept. α_1 was the Okun's coefficient (Kreishan, 2011).

When empirically tested, Okun's Law showed mixed results. In a study conducted in Turkey, it was found that Okun's Law existed however, the effect of a change in the GDP growth was reflected on unemployment rate with a lag of four periods. But, once the effect on unemployment rate was seen, it stayed for ten periods (Akkemik & Ali, 2007).A two- way causality with a coefficient of -1.75 was found between the unemployment rate and GDP growth rate in Malaysian economy. The Phillips-Perron Unit Root Test, regression and the Granger Causality test were applied (Noor, Norb, & Ghanic, 2007).

The study done in Nigeria covering a period of 1981 to 2016 used VAR causality test. The tests showed the causal relationship between the dependant variable and the independent variables. It was observed that a unidirectional causality that flows from unemployment to real GDP existed (S, Victoria Kenny, 2019). Okun's coefficient was found for eight East Asian countries. The analysis showed that in these economies', the strength of relation between the variables varies (Hanusch, 2013).

A strong correlation was observed between GDP and unemployment in India. Around 48% of the change in unemployment was because of GDP. Thus, the observations were found to be in line with Okun's law (Chand, Tiwari, & Phuyal, 2017). Another study was conducted in India using Granger causality test for the period from 1991 to 2017 revealed a unidirectional flow from real GDP to unemployment. (Sahoo & Sahoo, 2019). Negative and significant relation was observed in Pakistan for both short run and long run (Maqbool, Mahmood, Sattar, & Bhalli, 2013). A similar relationship was observed in Ghana with a coefficient of -0.294 (Lewis, Veronica, Francis, & Isaac, 2019). In Bahrain an insignificant negative relationship was seen between the variables (Alrayes & Abu Wadi, 2018). Analysing the quarterly data of Romania from the 2000 to 2018 confirmed the existence of inverse relationship between GDP growth and unemployment with coefficient of -0.217 and low R square of 0.03 (Daniel, Gabriela, & Corina, 2018). Results of multiple regression analysis run on quarterly data of United States from 1967 to 2016 with Industrial Production Index, Personal Income and Consumer Price Index (CPI) as control variables indicated strong negative correlation between the variables GDP and unemployment (Mandel & Liebens, 2019).

On the other hand, in countries like Jordan, which had structural unemployment, Okun's Law did not exist. Even when the strong GDP growth created new jobs, it was seen that these opportunities were taken by foreign workers. The nationals had high expectations regarding wages and also preferred public sector jobs. Hence, they were not willing to take the new jobs that were created. Co-integrating Regression Durbin-Watson (CRDW) and regression were applied. Results couldn't confirm the strong relation between the variables (Kreishan, 2011). Low and Lower Middle-Income Countries (LLMICs) like Bolivia, Egypt, Georgia, Indonesia, Pakistan, Ukraine, Vietnam etc. were analysed using two models- Gap version and Change version. The relationship between unemployment and output was studied for 18 countries and the average coefficient was -0.14 and -0.12 for gap version and change version respectively. Thus, on an average Okun's law didn't fit for low and lower middle-income economies (An, Ghazi, & Prieto, 2016). In the long run, there existed a relationship between output gap and unemployment gap in the developing countries Pakistan, Bangladesh, India, Sri Lanka and China. However, Okun's law was not supported in these developing economies. This was due to problems of asymmetry. The data for the period 1980 to 2006 was tested using Engle Granger Co-integration Technique and Fully Modified Ordinary Least Square (FMOLS) (Lal, Sulaiman D, Jalil, & Hussain, 2010).

Both in short run and long run, study conducted in Pakistan suggested that there was a positive relation between output gap and unemployment. In long run a 1% increase in output gap resulted in a 1.5% increase in unemployment. The results were found using Autoregressive Distributed Lag Bound Approach (Atta & Cheema, 2014). Another research says that, Okun's law under predicted the decline in the unemployment levels in U.S. economy and European economy post the 1990-92 and 2001 recessions (Levine, 2012). Thus, while Okun's law fitted in majority of the countries, there exceptions also. Short lived deviations from this rule occurred in small magnitudes. (Ball, Leigh, & Loungan, 2013) (An, Ghazi, & Prieto, 2016).

Limitations of Okun's Law

- The problem of symmetry: Okun's law assumed a symmetric relationship. That is, "it considered that expansions and contractions in real output had the same absolute effect on unemployment". However, this assumption might not always be correct. Sometimes when symmetry was forcefully assumed during boom, unemployment rate was overestimated. Similarly, unemployment estimates were underestimated during recession (Harris & Silverstone, 2001) (Hasan, Funda, & Topkaya, 2013).
- Okun's law is also criticised stating that the law ignored variables that might influence changes in the output and unemployment (Noor, Norb, & Ghanic, 2007).
- Reverse Okun's Law: In agricultural sector, a counter cyclical relationship was noticed between growth and employment. Farmers moved to other jobs for higher wages. When a crisis happens, they would be laid-off from commercial jobs. This forced people to move back to rural areas for livelihood. So, a negative shock in growth resulted in creation of more jobs in agriculture because being a non-commercial sector agriculture responded to economic downturn differently. This was documented as 'reverse Okun's law' (Hanusch, 2013).

- **Inflation and Unemployment**

Inflation is a significant variable that affected unemployment. A.W. Philips in 1958 postulated that when an economy experiences growth, inflation comes along with it. This would lead to creation of more jobs and result in a decline in unemployment rate. This trade off theory is called Philip's curve (Kaur, 2014)(Dholakia & Sapre, 2011).

Existence of Philip's curve was recognised in short run and long run in the study conducted in Pakistan. It was found that when inflation increased by one unit, unemployment declined by 0.34 units (Maqbool, Mahmood, Sattar, & Bhalli, 2013). A similar inverse relationship was observed between the variables in G10 countries (Ozcebebi & Ozkan, 2017). Data from 1977 to 2011 of Nigeria was analysed. Autoregressive Distributed Lag Model and Error Correction Adjustment were applied. Results showed that both in long run and short run, significant negative correlation was there. (Buba & Aljadi, 2017). In another study conducted in Nigeria, a similar relationship was observed (Oluwabunmi, 2017). In India, Philip's curve existed in the short run. The time period for the study was 1950-51 to 2008-09 (Dholakia & Sapre, 2011). Study conducted on the data from 117 countries for the period between 2005 to 2013 used Fixed Effects Model for the analysis. A significant negative relationship was found (Mehrajardi & Monsef, 2017).

A significant positive effect was seen between inflation and unemployment in Bangladesh. This result was found during the period 2000 to 2011 using simple regression (Chowdhury & Hossain, 2014). In Ghana, higher inflation meant higher unemployment. A percent increase in inflation resulted in unemployment rate to increase by 0.075 in value (Lewis, Veronica, Francis, & Isaac, 2019). Inflation did not have a significant influence on unemployment rate in Pakistan (Mahmood, Bokhari, & Aslam, 2013). In Bahrain, inflation had a coefficient of 0.02 but it was insignificant. Thus, due to stagflation Philip's curve did not exist in the economy. With an R squared of 76%, the model with independent variables GDP, inflation, government expenditure and GFCF could explain 76% of the variation in the unemployment rate (Alrayes & Abu Wadi, 2018). Empirical research proved the inverse relation in majority of the countries. But the existence of Philip's curve is debatable due to the difference of the time period under study - short run or long run. Sometimes it was because of the stage of development of the economy which was under consideration.

- **Exports, Foreign Direct Investment and Unemployment**

Globalisation and liberalisation have been increasing over the past years. Increased openness of the economy meant that the economy engaged in more trade and capital market transactions. Thus, variables like exchange rate, foreign direct investment (FDI) and export-import have a larger impact on growth and unemployment.

Growth in exports led to higher inflow of foreign currency which increased the capacity of the economy to import capital goods. This further led to higher potential of production and economies of scale. Thus, increase in export would eventually increase growth of GDP and reduction of unemployment. Analysis of data of Sri Lanka from 1970 to 2010 confirmed these prepositions (T & S, 2013). In ten Asian countries- Pakistan, India, China, Japan, Bangladesh, Argentina, Algeria, Brazil, Colombia and Sri Lanka Multiple Regression is used to study the impact of net exports and exchange rate on unemployment rate. Net exports were negatively related to unemployment. GDP per capita and labour productivity were also taken as independent variables (Chimnani, Bhutto, Butt, Shaikh, & Devi, 2012). On the other hand, some researchers found that increased openness to trade resulted in increased unemployment (Chimnani, Bhutto, Butt, Shaikh, & Devi, 2012). An insignificant positive relationship was found between export and unemployment in Turkey using Variance decomposition analysis. In other words, export led economic growth was not reducing unemployment problem (Aktar, Demirci, & Ozturk, 2009).

Bi-directional causality was observed between FDI and unemployment in the analysis done on the quarterly data from Russian Federation during the period 1992 to 2015 (Sadikovaa, Faisala, & Resa, 2017). In Turkey, FDI did not create new job opportunities during 2000 to 2007 period. In other words, there was no relation between unemployment and FDI (Aktar, Demirci, & Ozturk, 2009). Data for 1996 to 2009 (quarterly) was empirically tested using VAR methodology in Poland. In short run, FDI inflows effected unemployment negatively (Balcerzak & urek, 2011). Developing (including India) and developed countries in Asia were studied for the period 2006 to 2015 using Fixed effects model. For the developing countries positive relationship and for developed countries negative relationship were found. Therefore, in developing countries, it was important that the entry mode of FDI created labour intensive jobs (Hilom-Polinon & Hakim, 2019).

Impact of independent variables like openness of trade, economic uncertainty (equilibrium exchange rate/ actual exchange rate) and Gross Fixed Investment on unemployment in Pakistan was found. There was a negative relationship between openness of trade and unemployment and between GFI and unemployment. (Atta & Cheema, 2014). In G10 countries, openness to trade and FDI have negative impact on unemployment with significant p values (Ozcebe & Ozkan, 2017). Thus, past research shows that openness of the economy impacts unemployment significantly. Countries are becoming more and more dependent on each other by opening their economy. So, these factors have a great influence on unemployment.

- **Interest Rates, Gross Fixed Capital Formation and Unemployment**

Lending interest rates influences savings and consumption decisions of an individual. High interest rates increase the difficulty in taking for loans. This discourages them from starting businesses and increasing production of existing businesses. Thus, hike in interest rate burden can cause rise in unemployment. Quarterly data of Pakistan from 1991 to 2011 showed that approximately 10% of variation in unemployment was explained by interest rates (Mahmood, Bokhari, & Aslam, 2013).

In Turkey, Granger Causality test showed that real interest rates granger causes unemployment in the long run. The Treasury Bill rate was taken as proxy for interest rate. Monthly data from 2005 to 2009 was analysed (H. Günsel Dogrul & Ugur Soytaş, 2010). Panel data analysis— OLS model was used to examine impact of real interest rate on unemployment in Asian countries- Pakistan, India, China, Japan, Bangladesh, Argentina, Algeria, Brazil, Colombia and Sri Lanka for the period 1995 to 2005. When there was hike in real interest rate, ongoing projects for expansion were halted or winded up by the industries and companies. Then unemployment increased. The analysis revealed a significant positive relationship between real interest rate and unemployment. Other independent variables exchange rate, GDP, net exports and labour productivity were also taken in the study (Chimnani, Bhutto, Butt, Shaikh, & Devi, 2012).

Fixed capital formation is defined as “the rate at which the capital stock of an economy changes”. The kind of fixed capital investment and stage of production the firm is in, influenced whether the effect is positive or negative. A significant negative relationship existed between GFCF and unemployment in Bahrain with a coefficient of -5.45. As investment in fixed capital increased the demand for labour (Alrayes & Abu Wadi, 2018). GLS method was applied on 117 countries using Gross Capital Formation as an independent variable. The result showed that an insignificant inverse relationship existed (Mehrijardi & Monsef, 2017). Fixed Effects Model was used for Asian countries by dividing it into three groups- all Asian countries, developing Asian countries, developed Asian countries were studied. Gross capital formation had a negative coefficient for all groups (Hilom-Polinon & Hakim, 2019).

On the other hand, during the study period 1991 to 2017, in India, GFCF had a positive coefficient for short run and long run (Sahoo & Sahoo, 2019). In G10 countries positive coefficient for GFCF showed that the fixed capital investments brought about technological upgradation which resulted in lesser requirement of labour (Ozcebe & Ozkan, 2017). Relatively fewer previous studies have looked into the relationship between interest rate and GFCF with unemployment. When the relationship was empirically tested, it was found that the direction and magnitude of impact of these variables cannot be generalised to all countries.

- **Population, Labour Force Participation Rate and Unemployment**

The way we perceive population growth has significantly changed over time. There was a time when population growth was considered a curse to the development of the economy. However today it is viewed as valuable human resources. An increase in population did not necessarily mean an increase in labour force. One reason is because not all people might be willing to work. Also, the proportion of people in different age groups determined the growth in labour force (T. N. Krishnan, 1992). In countries with high growth, the income of people also increases. This created a situation where people were not required to join the labour force to earn a living (Abraham, 2009). Higher educational enrolment could also be the reason for population not joining labour force (World Employment and Social Outlook: Trends 2019, May 2019).

Studies showed that when population growth increased by 1%, unemployment levels increased by 52.3% in Russia (Sadikovaa, Faisala, & Resa, 2017). In the long run, population growth has a positive impact on unemployment which was confirmed in a research done in Pakistan (Maqbool, Mahmood, Sattar, & Bhalli, 2013). In India, China and Pakistan, a positive relationship between the variables was observed. Co-integration, Granger Causality and Regression analysis were applied. Further, only in China, Granger Causality revealed a unidirectional relationship that flows from population to unemployment (Dr Aurangzeb & Asif, 2013).

Study compared the relationship of LFPR and unemployment between group of 22 OECD countries (1993-2008) and a selected group of 13 developing countries (1995-2006) was analysed using Generalized Method of Moments Estimation. An increase in LFPR resulted in an increase in unemployment in both cases. However, the increase in unemployment rate in developing countries was higher than developed countries (Lee & Parasnis, 2014). In Turkey, labour force participation rate was taken as an independent variable in the study conducted. Data from quarter 3 of 1988 to quarter 4 of 2013 for two age groups (>5 and 15 to 24) was analysed. Vector Error Correction model showed that in the long run, unemployment was independent of LFPR (Tansel, Ozdemir, & Aksoy, 2015). Labour force had a negative coefficient in a study conducted in India. Granger Causality test revealed a bi-directional causality between the variables (Sahoo & Sahoo, 2019).

Theoretically, when population increased in the economy unemployment also increased. However, in reality there were exceptions. The reason being that creation of jobs for the increasing population depends on factors like the resources of the economy, rate of innovation happening etc. Also, as seen in past research when population increases labour force may or may not increase. Although, relationship between population growth and unemployment is widely studied, the number of studies exploring labour participation rate and unemployment is relatively less.

- **Education, Health and Unemployment**

The effective utilisation of human capital depends on their education level and health status. As economy develops, the access to health and educational facilities becomes easier. Basic health and education impact the performance of a worker. (Dixit & Ghosh, 2013) Educational status influences a country's ability to reduce unemployment rate. Short run significant causality between literacy rate and unemployment was observed in India. In the long run literacy rate had a negative coefficient. Here literacy rate was taken as a proxy for gross secondary school enrolment ratio (Sahoo & Sahoo, 2019). Relationship existed between education and unemployment in Israel followed an inverted U-shaped. Multivariate Regression Analysis showed that as years of education increased unemployment increased. However, the proportion of population with least and the greatest number of years of schooling had higher unemployment. Those who had 9 to 12 years of schooling couldn't find employment easily (Weisberg & Meltz, 1999). In Turkey, the study examined the relationship between higher education and unemployment. Proxy for higher education was taken as the total number of people who completed higher education. In the long run, there was a significant relationship between the variables where higher education increased unemployment. In short run too, a significant positive relationship existed. DL causality test revealed a bi-directional causality between the variables (Ekrem & Tugcu, 2012). A significant negative relationship prevailed in G10 countries between expenditure on education by the government and unemployment for the data period 1995 to 2014. Expenditure on education was taken as a percentage of GNI (Ozcelebi & Ozkan, 2017).

A study was conducted in Latvia - a small European country. Results showed that whether a person was employed was dependant on the level of education. The different levels of education were taken as primary education, secondary education and higher education. It was seen that there was impact of education on the status of labour market (Lavrinovicha, Lavrinenko, & Teivans-Treinovskis, 2015). In Nigeria, Auto Regressive Distributed Lag approach was applied. The secondary school enrolment was used as proxy for educational status. Contrary to the theories, results of the study showed that in the study period educational enrolment and unemployment had positive relationship. This implied that there were other factors like lack of skills in the labour force, mismatch between training and job's requirement etc. that prevailed in the economy. This was a common feature of most developing countries. In such a scenario, educational attainment may not necessarily reduce unemployment (Oluwabunmi, 2017).

Health status of a person determines the income, wealth and consumption of future (Alrayes & Abu Wadi, 2018). The health status can be measured using different proxies (Monsef & Mehrjardi, 2015). It is said that "a healthy nation can develop into a wealthy nation" (Oluwabunmi, 2017). During 1990 to 2010, the variables- life expectancy and unemployment exhibited an inverse relationship in Unites States (Singh & Siahpush, 2015). The relationship between life expectancy and unemployment in 117 countries for the period 2005 to 2013 was analysed using GLS method. One unit increase in life expectancy decreased unemployment by 0.12 (Mehrjardi & Monsef, 2017).

In Nigeria, life expectancy was taken as the proxy for health status. The results showed that life expectancy played a pivotal role in determining the employment status of people in the country. In the short run and long run, an inverse relationship and positive relationship was observed respectively. That is, health care improvement would result in acceleration of employment opportunities only when the

economy was able to create jobs. For this it is important that the economy is highly productive and continuous innovations happen in the economy. In many developing countries like Nigeria this is not the case. In such countries higher life expectancy was a burden to the economy (Oluwabunmi, 2017). Previously the influence of education status and health status on unemployment has been looked into. Several proxies are used to measure education and health care in the literature review. However, it is relatively less explored area.

Policy Formulation and Unemployment

The key takeaways from the past research for policy making are discussed here.

Influencing growth can affect unemployment indirectly. So, boosting economic growth will reduce unemployment (Chand, Tiwari, & Phuyal, 2017). On the contrary, there were other studies that claimed that policies affecting growth was dependent on government spending and policies affecting unemployment was dependent on encouraging investment in order to create jobs. So, combining these policies may not work (Al-Habees & Rumman, 2012). It is quite possible that policies that increase growth may or may not automatically create new jobs and visa-versa. This means that while making policies for countries, the relation between growth and unemployment must not be taken for granted (Lars & Bertil, 2000). Studies suggest that policies which aim to improve real output levels and productivity would result in quicker decline in unemployment (Hasan, Funda, & Topkaya, 2013). Improvement of educational sector and health sector can increase the employment growth (Mehrijardi & Monsef, 2017).

Country Specific Policies

In developed countries like United States and Europe, the unemployment situation indicates that the problem could be structural rather than cyclical. That is polices should focus on encouraging investment flow into the economy (Noor, Norb, & Ghanic, 2007). In G10 countries policies that liberalise trade and financial flows are effective. Taxation policy had a direct impact on demand and supply in the economy. This eventually influenced unemployment rate. Policies on wage levels and productivity will also lower unemployment rate. Improving social security benefits will also help in reducing unemployment levels (Ozcelebi & Ozkan, 2017). The government of Russian Federation should focus on encouraging foreign investors to the country. This will help in creating more jobs. Also, this will help in improving GDP growth which will eventually boost production and create more jobs (Sadikovaa, Faisala, & Resa, 2017).

In developing countries like Pakistan, policies should focus on improving law and order, controlling corruption and population growth (Maqbool, Mahmood, Sattar, & Bhalli, 2013). Focus on growth of the country was essential. Policies should aim at reducing the imports (majorly consisting of non-consumer goods used for further production) and increasing exports (Atta & Cheema, 2014). Policies that improve distribution of income, policies that encourage production to be labour intensive and policies that channelize foreign investment towards reduction of unemployment were required in Bangladesh (Chowdhury & Hossain, 2014). The government should focus on creating jobs in developing countries like In Ghana, government should ensure that job creation is not be limited to cities especially near places that provide raw materials. This will reduce transportation cost and also reduce migration of people to cities in search of jobs (Lewis, Veronica, Francis, & Isaac, 2019).

In Bahrain, it was recommended that encouragement of capital movements across borders was beneficial. Promotion of private sector and relaxation of trade barriers is a good policy (Alrayes & Abu Wadi, 2018). Nigeria requires formulating policies that improve infrastructure and promote of research and development. Reallocation of available resources to more productive areas like agricultural sector, exports, science and technology and manufacturing sector would also help in creation of more employment opportunities (Oluwabunmi, 2017). The impact of any policy implemented by the country must be carefully studied and continuous implementation of innovative ideas is required.

Conclusion

High unemployment levels prevailing in an economy is not good. Studies show that it has both social and economic consequences. According to theories, bringing down unemployment rate to zero is not possible. However, most economies strive to maintain low unemployment levels. For this, interventions by government through policy making are required. Hence, studying about the factors that have a major influence on unemployment rate becomes necessary. Through exploratory research independent variables - Gross Domestic Product, Inflation, Population, Foreign Direct Investment, Trade openness, Labour Force Participation Rate, Gross Fixed Capital Formation, Life expectancy, Secondary School Enrolment and Interest Rates were being identified.

An inverse relationship existed between GDP and cyclical unemployment in several economies which is called Okun's Law. The applicability of the law depended upon whether the economy had cyclical type of unemployment. The inverse relationship between inflation and unemployment is called

Philp's curve. The existence of these theories depended primarily upon the type of economy and time period considered. FDI and trade openness had negative relationship with unemployment. These variables have significant impact on the unemployment rate prevailing in a country. The relationship between GFCF and unemployment depends largely on the type and nature of fixed capital formation. Interest rates were positively related to unemployment. However, the number of studies exploring the impact of fixed capital formation and interest rates on unemployment was limited. Population was positively related to unemployment in most of the studies. Researchers agree that LFPR was also an important determinant of unemployment. But the number of studies using labour participation rate as a variable was relatively lesser. Past studies show that health and education are important to determine the quality of human resources. However, different studies use different proxies to measure health status and educational attainment. The proxies like life expectancy and secondary school enrolment were used in some studies. Using the outcome of past studies, it cannot be generalised if these variables have a negative or positive relationship with unemployment.

The nature and kind of relationship that exists between unemployment and these variables determines the kind of policy making that should be followed. In general, policies that aim at high growth results in employment generation. However, as seen in the past studies, the kind of unemployment that exists in the economy influences whether GDP growth results in decline in unemployment rate. Encouraging FDI inflows, capital investments, exports etc. was seen beneficial. On the other hand, controlling population growth, inflation, interest rate etc. is important for controlling unemployment level. Improvement in health sector and educational sector is necessary for qualitative workforce. More focus on rural areas for job creation was seen necessary in several economies. Economies should give priority for creating a favourable environment for foreign companies to operate.

Innovative and planned approach of policy making is required for reducing unemployment rate. The policies implemented should be carefully monitored. The policies should be flexible enough to accommodate unforeseen crisis like COVID-19 pandemic. Such an approach will ensure that unemployment does not hinder growth and development.

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