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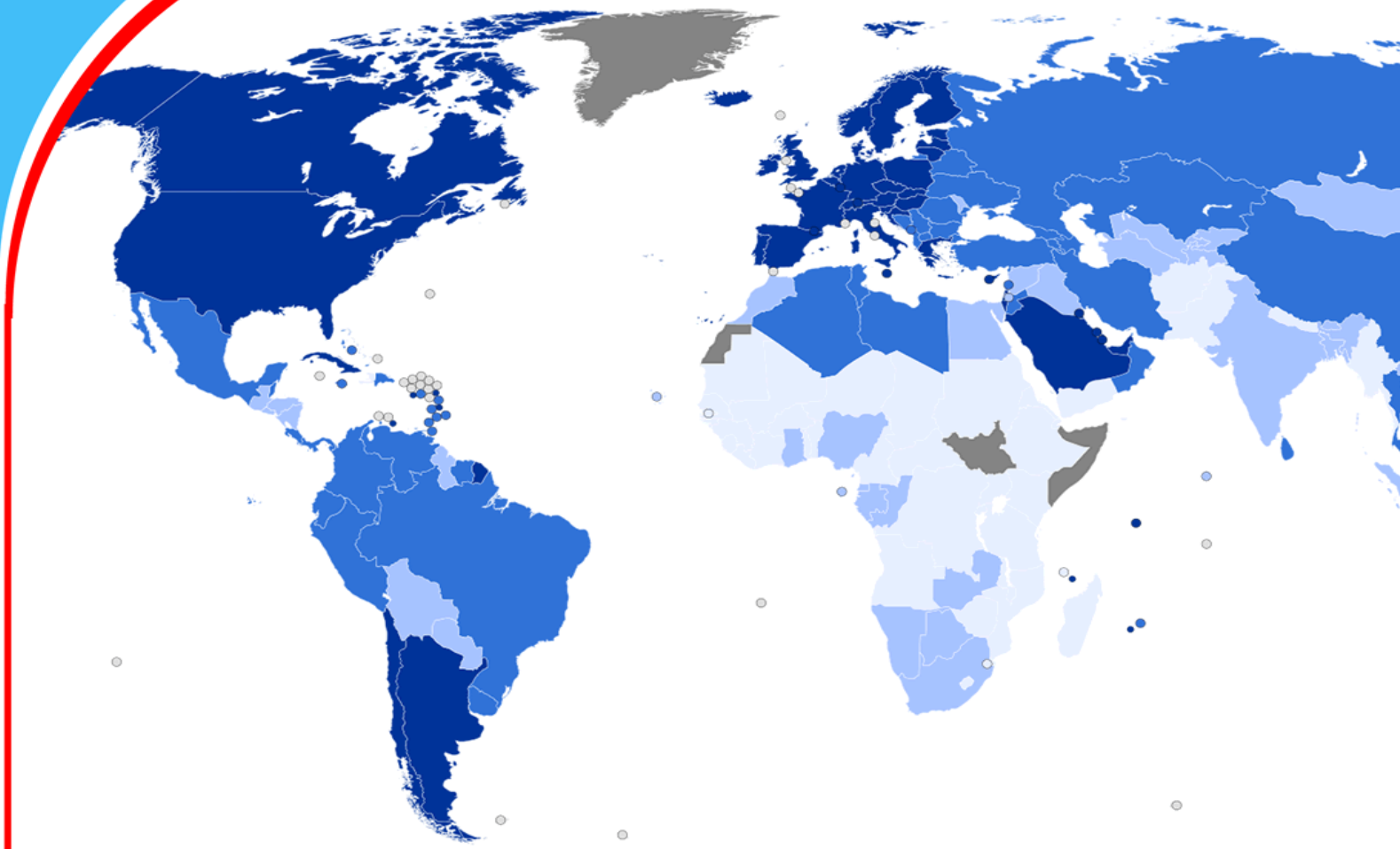

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Abstract

Purpose: The purpose of this study was to examine the determinants of labor demand in Somalia.

Methodology: The ordinary least square method (regression analysis) was utilized in the analysis of the data. Regression analysis is a tool commonly utilized in the determining of the existence of a relationship between variables; using historical data. The simple regression function employed consisted of one dependent variable and three independent variables. The dependent variable was employment, and the independent variables were gross domestic product, export and investment. In addition, descriptive statistics were utilized in the analysis of the data. Graphs were also used in the study to represent the data. The study used secondary data from the World Bank, IMF, and SESRIC in the rage of 45 years from 1970 to 2015. The study used the efficiency wage model to develop the determinants of labor demand.

Findings: The study found that there is a positive relationship between gross domestic product and employment of Somalia. That means, if gross domestic product increase employment will also increase. The study also found that there was a positive and statically significant between investment and employment in Somalia, and that there was a positive and statically insignificant between export and and employment in Somalia.

Recommendation: This study recommends that the policy should make policies that attract foreigners and Somali people living in other countries to invest Somalia, because investment plays an important role in determining the level of employment. To achieve these policies, first, the government should focus on the ensuring the security of the country because the main challenge affecting foreigners is insecurity.

Keywords: *Employment, Gross Domestic Product, Investment, Import, Export.*

1.0 INTRODUCTION

The structural adjustment development programs have dominated the global debate on economic policy surrounding the high unemployment rates in a number of developing countries in sub-Saharan Africa with Somalia inclusive over the past two decades. Within these programs, freedom of association in the workplace and internationalization have been the two primary policy tools of Promoting sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all. Regarding the rate of employment growth in developing countries. On the one hand, it is generally accepted that the primary factor that determines production is the cost of labor the theory of labor t states that the relative price or economic value of a good or service is determined by the amount of labor required to produce it, which means majorly labor is a major tool in production. On the other hand, rules governing the labor market produce rigidities and artificially high labor prices the formal sector utilizes capital, unskilled labor and skilled labor in production, and produces a traded good which is both an investment and a consumption good. The informal sector uses capital and unskilled labor in production, and produces a non-traded consumption good (Edwards, Cox-Edwards, & Edwards, 1994).

It is generally accepted that labor markets in developing nations are divided into two separate sectors or segments: a formal sector that is regulated and protected, and an informal sector that is unregulated and not protected. The formal sector utilizes capital, unskilled labor and skilled labor in production and produces a traded good which is both an investment and a consumption good. The informal sector uses capital and unskilled labor in production, and produces a non-traded consumption good there is another set of issues related to the determinants of migration between rural and urban areas and the links between the two parts of the economy. Finally, all the factors affecting the rate of population growth are important for the analysis of labor markets, largely because it is rapid population growth that underlies concern about the “employment problem” in most developing countries The changing age structure of the population has potentially significant implications for economic development, labor markets and well-being in different developing countries like Somalia (Pradhan & Van Soest, 1995).

Governments in developing countries, such as Somalia's, face a number of formidable issues, one of the most pressing being the identification of development methods that might produce new work and income opportunities, thereby lowering underemployment and unemployment. This is a really difficult task (UNDP, 2012).

Few employment opportunities and a weak enabling environment for starting new business ventures have resulted in high levels of unemployment; compared to developed economies like in Denmark where employment rate was at 80percent in December of 2020 according to the EUROST. Young people are especially at risk from poor labor market conditions and may be drawn towards criminal or terrorist elements, both of which are highly active in Somalia. The situation is critical. According to the United Nations Development programme UNDP, youths are the largest population cohort in Somalia today; 60% of the population is below the age of 25, with 60% unemployed (UNDP, 2020) making it one of highest unemployment levels in the world.

Among the most important challenges facing governments in developing countries, including Somalia, is the task of identifying development strategies that can generate new employment and income opportunities and reduce underemployment and unemployment the urgent need to create employment opportunities is underscored by the higher rate of labor force growth than population

growth. Persistent slow economic growth, particularly in the public sector, has forced many people, notably school leavers and college graduates, into marginal activities in small-scale agriculture and the urban informal economy. In recent years, many economies in both developed and developing countries have experienced transformations in their labor market structures resulting from such trends as globalization and economic restructuring.

The labor theory of value proposed by Adam Smith suggests that the value attached to a commodity can be measured using the average number of labor hours that are required to complete the product or project. Building projects are labor-intensive. According to this theory, the value of goods or services is determined by the total amount of valuable labor needed to produce them, as opposed to the use or pleasure the owner gets from them. The theory has its fair share of criticism, but the concept of value has a logical bearing on this study on account of evaluating a project's performance. Value relates to the measure of the benefits one gets from something in relation to the resources needed to develop it. In the context of building construction projects, it would be expressed as the ratio between the functionality of the unit and the cost of that function. Thus, the value of the finished project can be increased by improving its function or reducing the cost of execution. In this study, the cost of labor in the project execution was considered the major component of the project's whole-life cost.

Generally, the labor market is affected by supply and demand for labor. It is a component of the availability of a labor force to serve the demands of the labor market in the production process. The characteristic features of a labor market comprise the rate of employment, the extent of unemployment, and the availability of vacancies. The whole concept is about employee-employer match (defined by the skills, experience, and education level of the human capital), earnings distributions, and an employment class size description. Labor market performance is thus a product of the effect of the skill level of the workforce in relation to the employer's needs.

Labor force distribution and labor market production affect economic growth in a country regardless of class (Tope, 1999). Nevertheless, both distribution and production are functions of population size, and Sub-Saharan Africa has high population growth but low labor force utilization. Underutilization of the labor force facilitates continued labor migration between rural and urban markets. Although both markets create resources, the distribution between the two markets has been a challenge in sub-Saharan Africa since more resources are channeled towards infrastructure and urban development. The level of efficiency and economic growth observed in the urban market thus presents the urban market as a better performer than the rural market (Prskawetz 2005). The growing rural-urban inequality in resource distribution leads to continued labor force migration to the urban market, thus causing overpopulation in urban markets and under population in rural markets. The urban market thus has a surplus of human capital, while the rural market suffers from a shortage of labor (Bigsten and Horton, 1997).

Labor force participation is the proportion of a country's working-age population that is actively engaged in the labor market (ILO, 2010). This includes those who are self-employed, part-time and full-time employees, and the unemployed. In Kenya, the working age group comprises those aged 15–64 years and this study follows this definition. It defines labor force participation rate as the percentage of the population aged 15 to 64 years that is employed or unemployed and actively seeking work.

Most posts created by employers have financial returns attached to them in the form of monetary

gains in cash or kind. When a person and an employer agree on terms for such a post, the person fills the post, which then becomes the person's job. So, jobs are the point where labor supply meets labor demand. A person who has secured a job is labeled employed' and is considered to be in the 'labor force'. It is important to note that a person can, in fact, have more than one job negotiated with one or more employers. Some persons, however, potentially want to supply their labor by securing any post but are unable to do so even though they want to and are looking for one. They are labeled as "unemployed," but are still considered to be in the 'labor force'. Some others who also potentially want to supply their labor by securing a post are unable to do so, even though they want to do so but are not looking. They are considered "out of the labor force' and as being in the potential labor force; hence, the supply side can be categorized as employed, unemployed, and out of the labor force.

1.1 Problem Statement

Continually high rates of unemployment and underemployment are a major problem for African countries' economies. As a result, many individuals are self-employed, most commonly in the agricultural sector but also in the non-agricultural sector. However, growth in conventional employment has been sluggish. There is little doubt that the fate of poverty in Africa rests on the issue of how quickly and effectively employment opportunities can be created for the working population (Bigsten& Horton, 1997).

One of the highest rates of youth unemployment in the world is found in Somalia, where 66 percent of young people are without jobs. The overwhelming majority of people are open to the idea of leaving the nation in quest of new employment and livelihood prospects. The widespread unemployment of young people is a key component of the issue that is currently hitting youth, but it cannot be addressed in isolation from the larger catastrophe that is currently threatening the Somali economy (Somalia Human Development Report, 2012).

Providing decent work and bolstering capacity for public and private sector development are two of the most pressing issues that need to be addressed simultaneously by any economic growth plan. A sustainable job creation strategy should be an integral component of any such strategy. Integrated national policy frameworks, including national employment strategies with specific action plans on young employment as well as coherent sectoral policies, need to be developed, implemented, and monitored as soon as possible. This is an urgent requirement that must be met. These policies have to be based on evidence that has already been shown to be successful and should be focused on sub-sectors that have the potential to function as development engines (UNDP, 2012).

1.2 Objectives of the Study

1.2.1 General Objective

The thesis' primary goal is to determine the factors that influence labor demand in Somalia. Specifically, we will be looking at GDP, investment, real wages, and export data.

1.2.2 Specific Objectives

The thesis aims to accomplish the following particular objectives:

- To analyze the factors that influence the demand for labor in Somalia
- To conduct examining the factors that have an impact on the demand for labor in Somalia.

- To identify the factors that influence demand for labor in Somalia.
- To investigate the influence that the revenue sharing of natural resources and the realization of capital expenditures from the government have had.
- To suggest policy recommendations based on research findings.

2.0 LITERATURE REVIEW

2.1 Introduction

The determinants of labor demand in Somalia are highlighted in this chapter. This chapter covers theoretical review, empirical review, theoretical framework, and conceptual framework. The data, theories, and concepts of this chapter come from secondary data that was gathered through the internet, textbooks, academic publications, and articles.

2.2 Impact of Human Capital on Labor Productivity

According to Goldin (2016), at the dawn of twentieth century industrial giants watched each other cautiously. The modern concept of the wealth of nations emerged by the early twentieth century. Capital embodied in people-human capital mattered. This definitely came to be the human capital century this started first in North America but later expanded to the rest of the world. However, mass education in the United States was reached early because of various virtuous characteristics. Education has been mainly open and forgiving nature in the United States. Openness means that all children were allowed enter to school. The openness of United States of America schools is connected to that fact that ever since the mid-nineteenth century, elementary and secondary schools were (fully) publicly funded by the federal government.

The earliest formal use of the term “human capital” in economics was probably by Irving Fisher in 1987 who indicated that human capital investment has high economic returns throughout childhood and young adulthood. it was later adopted by various writers but did not become a serious part of the economists until the late 1950s. It became significantly more fashion after Jacob Mincer’s 1958 Journal of Political Economy article “Investment in Human Capital and Personal Income Distribution”. His theory of human capital shows that neither luck nor decree lessen poverty, but instead concerted individual investments in human capital raise earning On the other hand, human capital that has been the great driving force of the economies of developed countries in the west and some South-east Asian countries has been missing in Africa (Shizha, 2017).

According to Schultz (1990), human capital is an important element that improves a firm’s assets and helps employees increase their productivity to sustain a competitive advantage. Human capital includes education, training, and other professional initiatives that increase the level of knowledge, skills, abilities, values, and social assets of an employee, which leads to an increase not only in the employee’s satisfaction and performance but also improves the firm’s performance.

According to Blanchflower (1991), human capital is just like an intangible asset of an organization. It includes all of the competencies and commitments of the workforce within an organization, i.e., skills, experience, potential, and capacity. Human capital theory is based on the assumption that education, training, and employee benefits raise the marginal physical product of labor. The firm’s performance is greatly linked with the workers remuneration and profit sharing, which significantly improves the employee’s attitude towards work.

In the early neo-classical economic models not, much attention is paid to the role of human capital. Crespi and Zuniga (2012) worked on it and pay attention to the role of human capital. Demirbag et al., (2006) argues that human capital effect labor productivity. Scholars like Nda & Fard (2013) and Ates & Yilmaz (2018) investigated that main element of productivity is proper training at work. He further shows some implications of differences in investing in human capital) higher educated people spend more in training at work,) people that are extensively concerned in training in one time are more likely to be concerned in training in future) more skilled and higher knowledgeable people are busier in training at work than the people with equal education level.

According to a study analyzed by Crespi and Zuniga (2012), human factor is critical for the improvement of our life and measure human capital as "labor managerial skills, entrepreneurial and innovative abilities qualities and physical condition as health and strength. Di Matteo and Ahmed (2005) analyzed that in a less industrialized country, lack of education and storage of skilled worker are two main obstacles to the economic development. According to Basu et al., (2001) the mismatch between job qualification and education levels negatively affects labor productivity.

According to Fening et al., (2008), employers prefer to hire people with higher education on prevailing wage. When worker does not get the job according to his skill, then they cannot worker properly. This has a negative effect on labor productivity. According to Firouz (2010) educated personal can get better advantage of technology and get more productivity.

Fryges & Wagner (2007), measure human capital as a person knowledge, skill of worker, experience of worker, attitude and behavior of worker, health condition of worker and wages of workers. According to them the concept of human capital is multidimensional. All these variables have positive effect on labor productivity. Crespi and Zuniga (2012) work on labor productivity growth model. In this model human capital is measure with two main variables education and health. They argue that human capital related to formal education and training in work, physical and mental health also affects labor productivity.

Mahfooz & mahmood (2015), present a Cobb-Douglas production function to analyze the impact of human capital on labor productivity. They found that for higher production, firms required more educated workers. Demirbag et al., (2006) argued that older workers have more skill and experience. These experiences and knowledge help in increase the production of firm. Older workers work better on the basis of own experience as compared to newly hired workers. Di Matteo and Ahmed (2005) argued that additional years of schooling by workers had a small effect on productivity.

According to Basu et al., (2001), workers can get more production with the use of new technology. If worker adopts new techniques for production, it positively affects labor productivity. Fening et al., (2008) also analysis the role of education in labor productivity at firm level. They argued that there is positive and significant relationship between education and labor productivity. Firouz (2010) has analyzed the impact of education on labor productivity. He argues that marginal productivity of higher educated workers is higher than less educated workers. Granovetter (2005) investigates whether training affect productivity of labor. The finding indicates that there is significant positive link between the two variables and blue-collar labors' production was higher than white- collar labors.

For the period 1997-2004, Fryges & Wagner (2007), investigated the relationship between productivity and growth factors. They found that technology and productivity of labor are significantly positively correlated. Productivity of labor is a main factor that determines the living standard because high level of per capita income directly affects output per worker. Delmas et al., (2013) argue that average working hours of workers and training positively impact productivity of labor but business size negatively impact productivity.

Lobby and Rosenberg (2002), examined the relationship between labor productivity and innovation in the context of Italy. Their findings indicated that process innovation via capital investment positively influence labor productivity. They further found that there is positive link between product innovation and productivity of labor. Arvanitis and Spyros (2011) also studied the impact of innovation on labor productivity. Their findings suggest that innovation positively influence labor productivity. Moreover, in Indian firms Hasa knowledge spillovers, R&D and labor productivity (2010) investigated productivity for the period 1994-2006. Using panel data their results suggested positive relation between labor and productivity.

Ngoc and Phuoc (2011) studied the drivers of labor productivity their findings indicated that in different sectors the important productivity drivers fluctuate and the most important determinant affecting labor productivity in all sectors is labor cost. Furthermore, Firouz (2010) and Papadogonas and Voulgaris (2005) found that export status significantly affects productivity of labor. Kien (2012) investigated a sample of French and Swedish firms over the period 1987-1993. The results indicated that training positively affects productivity in France however a non-significant impact is found in Sweden. Kirby and Kaiser (2013), utilizing a panel of around 1,500 Portuguese firms for the period 1995 and 1999, found out that an expansion of 10 hours out of each year in training per laborer prompts an increment in productivity of about 0.6 percent. There are numerous studies that show how positive impact from education and training on productivity development and innovation and prompt quicker industrial growth.

2.3 Real Wage and Labor

Archick (2014) examined the impact of labor substitution in the United Kingdom, France, Greece, Italy, and Spain. Most long-run coefficients were found to be statistically significant in the regression analysis. All individual price elasticity's were found to be significantly negative. The empirical findings also showed that while labor and imports are not substitutes in the United Kingdom, this is not the case in France or Italy.

According to a study analyzed by Onwioduokit et al., (2009) the factors that have shaped the Nigerian labor market in the wake of the country's dramatic economic shift in recent years, paying special attention to the impact of government policy. The Seemingly Unrelated Regression technique was used to estimate a two-equation model of labor demand and supply in Nigeria. On the supply side, labor force participation was weakly but positively correlated with the real minimum wage and population growth, whereas labor force participation was driven mostly by its own retroactive expectations and demand elasticity's. Even if the correlation between demand, capacity utilization, and the true minimum wage was weak, it was nevertheless demonstrated. Individuals' high degree of flexibility influenced the job market positively. Results show that price stability is necessary to boost labor market activity to optimal levels and reduce the labor market imbalance in Nigeria.

According to Makonnen (1993), the state of the labor market has also been shown to have an

impact on labor force participation, with higher salaries being associated with higher rates of employment. However, Maxwell (1990) started that women's lower opportunity cost of non-participation in the labor market when earnings are low contributes to the lower labor force participation of women compared to men. Researchers have also discovered that one's age and level of experience affect their likelihood of entering the workforce believes that disparities in labor market involvement between the sexes are the result of both prior work experience and the characteristics of the labor market. Disparities in labor supply often result from differences in productivity endowments, such as age, sex, and marital status, but demographic and societal obstacles limit women's access to the labor force.

According to Lanot and Muller (1997), imperfect competition and dualistic labor markets are hallmarks of emerging nations. This dualistic view posits that the traditional sector is characterized by activities that provide declining returns to labor, while the contemporary sector is characterized by high barriers to entry. This is especially the case in the realms of agriculture and the underground economy. In contrast to the well-paying jobs in the official economy. Low pay, poor returns to education, and falling returns to labor characterize the informal sector, whereas high returns to education and on-the-job training define the formal sector. Wage disparity is one manifestation of the consequent economic split.

Folawewo (2006), investigated the influence of labor demand in Nigeria's south-western states' informal sectors this study was conducted with the intention of examining the factors that influence the market's need for wage-earning labor in the urban informal sector located in the southwestern region of Nigeria, there are two distinct methods used in terms of methodology. The first approach utilizes several tried-and-true estimating strategies, such as the ordinary least squares (OLS) and instrumental variable (IV) methods. In the second step of the process, an estimated profit model is used to determine the chance of employees being hired by companies.

When it comes to methodology, there are two basic approaches that are applied. The first method employs a number of estimation techniques that have been demonstrated to be accurate in the past, such as the ordinary least squares (OLS) and instrumental variable (IV) approaches. An estimated profit model is utilized in the process's second phase in order to do the calculations necessary to determine the likelihood that workers will be employed by enterprises. Investigate the conceptual framework of applied growth accounting.

Based on the findings of the paper, it is suggested that the significance of various factors in the determination of labor demand in the informal sector would depend, to a large extent, on the methodological approach within which the analysis is examined. This is suggested on the basis of the fact that it is suggested that the significance of different factors in the determination of labor demand in the formal sector would depend on the findings of the paper. The study showed that pay was not found to be a major factor in determining labor demand in the informal sector. This finding holds true regardless of the methodological technique that was used. Despite the fact that the study spent a significant amount of time discussing methodology, it is essential to highlight the economic significance of the paper, which demonstrates that the demand for labor in the informal sector is responsive to both economic and non-economic variables. For this reason, employment enhancement programs in the industry will only be successful if all of these elements are taken into consideration throughout the process of formulating employment regulations (HCT, 2014).

According to Bacchetta & Bustamante (2009), employment opportunities exist in Zimbabwe's unofficial metal industry. The research set out to discover what factors were most important in influencing employment needs in the informal metal industry of Zimbabwe's metropolitan areas. To address the endogeneity issue, this research uses ordinary least squares (OLS) and three-stage least squares (3SLS). The variables of interest were the cost of labor, the cost of capital, and the output. Information for this study was gathered from the unregulated urban metal industry in Zimbabwe with the help of a questionnaire approved by the International Development Research Center (IDRC).

According to Etim & Daramola (2020), when taking into account the informal sector, the findings of the econometric analysis show that we should not pay a great deal of attention to the role that salaries play in determining employment. Employment levels in the informal sector are more difficult to ascertain than those in the official sector, according to studies of the formal sector. Wage work may take on many different forms in the informal economy, many of which do not adhere to the traditional definition of wage work. The proprietors of businesses are responsible for providing a significant portion of informal workers' total workforce. Employing fresh bodies is contingent on the varying levels of demand. The wages in the informal sector are sensitive to changes in productivity and are thus endogenous. The difficulty for policymakers in Zimbabwe is how to expand the number of people working in the informal sector, given that the country's economy is not expected to graduate from the practice of relying on informal employment. Growing production in the informal sector leads to higher pay and, as a result, lower levels of poverty among employees.

According to Aydiner-Avsa & Onaran (2010) the determinants of employment in a sectorial analysis for Turkey. The purpose of this study was to analyze the effects of wages, openness, and demand on employment in the private manufacturing industry in Turkey based on panel data for the period of 1973– 2001. Study applied Heckscher-Ohlin theorem. regression analysis is used to test the labor demand effects of trade, the study found out a significant impact of domestic factors, namely, real wage and real output. Output elasticity of labor demand is higher than wage elasticity in the total manufacturing sector for the whole estimation period and in the high- and medium-skilled sectors in the post-1980 period. This indicated that a stronger growth performance could have been a more effective policy than relying on low wages to stimulate employment. The wage elasticity of employment increases after trade liberalization, however despite this fact, the significant real wage declines in the post-1980s have failed to create a strong employment boost in the Turkish manufacturing sector. Trade effects, after controlling for output, seem to have a low economic significance. Trade openness alone does not generate the expected positive effects on employment. The positive effects of exports on the labor intensity of production are low or are offset by labor-saving effects of foreign trade, particularly in the high- and medium-skilled sectors.

According to Majid (2004), the anticipated beneficial effects on employment will not be generated only by increased trade openness. The beneficial impacts that exports have on the labor intensity of production, especially in high- and medium-skilled industries, are outweighed by the labor-saving effects of international trade. Exports' positive impacts on labor intensity in production are either small or counteracted by the labor-saving benefits of international trade. While local labor and imported inputs have a complementary relationship in the high- and medium-skilled groups, there is some evidence of a negative import effect in the low-skilled sector. This is because the high- and medium-skilled group produces more output per unit of domestic labor than it does with

imported inputs. In spite of the fact that lowered tariffs on imported goods seem to have a favorable impact on employment, it should be noted that this impact is in fact attributable to the high- and medium-skilled industries' reliance on imports.

According to Batarseh (2007) *the* employment opportunities in China's private sector and the demand for workers in China, this research was conducted with the intention of determining how urban housing changes have contributed to the expansion of the private sector in China's metropolitan areas based on data collected by China's National Bureau of Statistics as part of the Urban Household Income and Expenditure Surveys (UHIES) (NBS).

Research estimates labor demand to show that for every 10% increase in the supply of workers in the private sector, wages fall by between 1.5% and 1.8%. Labor demand elasticity's are estimated to range from 5.7% to 6.5%. given the extraordinarily despite the strong elasticity of private sector labor demand, our estimates reveal important ramifications for policymakers due to the considerable increases in China's urban private-sector labor supply that are predicted in the near future. Our forecasts reveal that if current urbanization rates and the transfer of urban personnel from the state to the private sector continue, urban private sector incomes might fall by more than half in the next decade. Increases in predicted labor supply are outside the scope of our data collection efforts; we focus solely on the impact on labor earnings rather than pay rates (so that hours worked may be a secondary margin of adjustment in the future); and we measure just the impact on labor earnings. With the latter scenario, large numbers of people may be forced to leave the public sector and find work in the private sector, where they may face much greater salary cuts than we expect (Issa Salim Batarseh, 2007).

This may become less of an issue when pay scales in the commercial sector start to resemble those in the public sector. In the second scenario, significant involuntary job moves to the private sector may lead to pay reductions that are much more severe than the ones we anticipate. The most important takeaway from our study is that other low- and middle-income countries can benefit from the realization that there is a serious misallocation of production components, to the point that relocating a large number of people into the urban private sector would be necessary to correct the problem. Since capital and technology are unable to advance as rapidly, may lead to significant pay decreases in the near to medium future (IOM, 2013).

Cardenas (2003) examined the factors that determined labor demand in Colombia between the years 1976 and 1996. This research aims to assess the own wage elasticity's of the demand for labor as well as the elasticity's of substitution between various components of production in order to draw conclusions about the relationship between the two. The Generalized Leontief function, often known as the GL function. Based on the findings of the National Household Surveys, the authors of the research came to the conclusion that the primary consequence of regulatory changes was their direct influence on labor costs, which in turn influenced labor demand. It is possible that the elimination of the 9 percent payroll tax could result in a 1.3 percent increase in employment in urban areas. This is because these costs have increased, making it likely that the net effect of labor, health care, and pensions in the dynamic framework will result in an increase. Naturally, when the elasticity's that were obtained from the static exercise are employed, the impact is of a considerably bigger magnitude. In this scenario, a decrease in labor expenses by 10 percent might potentially result in a 5 percent rise in the demand for workers.

The research also shows that there is an increase (in absolute terms) in the pay elasticity of labor

demand when there is a recession. When there is a contraction in the economy, the effect of increased production on employment is also greater than when there is an expansion. In this sense, we discovered that the response of labor demand to the circumstances of the economic cycle is asymmetric. In conclusion, the research did not uncover any evidence to support the hypothesis that structural changes, such as trade liberalization, have a major influence on the labor demand elasticity's that are important. According to the findings of the research, the only factor that contributed to the impact that reforms had on labor demand was variations in relative price levels (Cardenas, 2003).

2.4 Exports and Labor

According to a study conducted by Grollean *et al*., (2012), the study showed the impact of exportation on available jobs investigated the impact that exporting has on employment. Neoclassical economists believe that trade policy is less of a factor in determining long-run unemployment than macroeconomic factors and institutions of the labor market. To obtain full employment in today's market, it is necessary to use as much of the active labor force as possible. The adherents of the traditional school of thinking argue that fluctuations in the supply and demand of labor in business marketplaces are only transitory because of the availability of complete and accurate information as well as the adaptability of pricing and salaries. Both buying power and real salaries are important in determining job supply, while real earnings are the primary factor in determining job demand. Keynesians who disagree with this idea suggest that due to the money illusion and unions, workers would respond to a fall in wages anytime there is a decrease in earnings; but, when wages are constant, people are not sensitive to price increases since their incomes remain the same.

According to Kojima (1973) the impact of exports on employment in the Iranian economy is investigated using Microsoft software for the years 1976–2005. The data used in this analysis come from a variety of sources, including publications published by the Central Bank of the Islamic Republic of Iran. The outcomes of running the error correction model on the currently used model According to the findings, the ECM coefficient in the model has a value that is statistically significant; it was found to be -0.761, and it represents the tempo at which the short term and the long term are coming into equilibrium with one another. It indicates that the next course will fix 76 percent of employment's deviations from its long-term trend. Increases in both production and export are necessary to achieve the desired level of employment.

According to Arnold & Hussinger (2005) the relationship between firm productivity and export behavior in German manufacturing firms by using a total factor productivity approach; they found that highly productive firms self-selected for export market entry, while exporting itself did not play a significant role in productivity improvements. In a sample of agricultural and forestry firms in New Zealand, Iyer (2010) reported that labor productivity was a determinant of export intensity at the firm level. Aw et al., (1998) addressed the question of the self-selection hypothesis and exporting improves productivity further or not by using micro data of manufacturing plants in Columbia, Mexico and Morocco. Bernard and Jensen (1999) did the same for the United States of America. Delgado et al., (2002) did likewise for Spanish firms. All these studies showed the importance of self-selection in export markets, they found little evidence to suggest that becoming an exporter improved productivity.

Memmel *et al*., (2007) investigated the demand for Labor in relation to exports evidence at the

microscopic level from in Germany. The objective of the study was to investigate the impact that a company's exporting activity has on the elasticity of the labor market. The study analyzed panel data spanning the years 1996 to 2008. The LIAB dataset, which comes from Germany and links employers and employees administratively, served as the basis for this investigation.

Dizaji & Badri (2014) analyzed the impact of Iran's exports on the country's labor market, the purpose of this research was to put a study of the labor market's response to free trade to the test using actual data. Neoclassical economic theory predicted that further economic integration will resulted in increased levels of trade, technological innovation, advances in efficiency, and overall economic development. Model Specification the Cobb–Douglas production function illustrated how the level of material output is related to the amount of labor and capital that is put into the economy Qit = Aγ Kiαt Niβt. To begin, the data set that is currently accessible only spans a limited amount of time. Second, the scope of this research is limited to the examination of the effects on industrial jobs as a result of freer trade. Third, in Vietnam, changes in the pay gap between skilled and unskilled employees are a common trigger for trade's employment consequences. The findings confirm the hypothesis that higher industrial production leads to higher labor demand, but higher wages dampen the effect. Number of jobs available in the labor market, an employment level that may be considered statistically relevant at the usual thresholds. Exports have a positive and statistically significant coefficient, showing that increasing the number of exports would result in an increase in the demand for labor arising from those exports. In terms of imports, the calculated coefficient is positive but not significant from a statistical point of view.

Callaghan (2020) conducted 38 SSA nations and two sub-groups (mineral exporters and non-oil non-mineral exporters). Our objective is to determine whether or not the economic and trade structure has an effect on the relative employment opportunities available to women. On an imbalanced panel data set spanning the years 1991–2010, we use the estimation methods of fixed effects (FE) and two stage least squares (TSLS). According to the results of our study, the liberalization of trade may have gendered consequences on employment, with the direction of these effects depending on the structure of the economy. Nevertheless, the conclusion that a country's infrastructure plays a decisive role in gendered labor market outcomes in SSA since the early 1990s is the one that has the most backing behind it. Trade, economic structure, gender, and employment are some of the key concepts to keep in mind while discussing sub-Saharan Africa.

Nevertheless, the conclusion that a country's infrastructure plays a decisive role in gendered labor market outcomes in Sub Saharan Africa since the early 1990s is that it has the most backing behind it. Trade, economic structure, gender, and employment are some of the key concepts to keep in mind while discussing sub-Saharan Africa. According to a study analyzed by Christoph (2005), showed the liberalization of trade, has an emphasis on exports, and rising job levels in Argentina, Brazil, and Mexico,

This thesis goal is to provide suggestions to the social partners in these nations about the development of employment based on an analysis of four policy areas: macroeconomic policy; trade, industrial, and regional policy; labor market policies; and social dialogue. These recommendations will be submitted to all social partners. The conventional international economic theory that we work with predicts that economic liberalization would lead to an expansion of global commerce, a quickening of the pace of technological advancement, improved productivity, and an expanded population. We make use of a variety of factors, some of which include tariff cuts, export increases, and import increases. Trade within a region encourages more specialization among high-

growth exporters. The amount of labor required to produce big exports the influence that exports have on employment the effect of exports on wages, the increasing imports will have a knock-on effect on employment. Due to the fact that the growth accounting technique was unable to identify a substantial impact of imports on employment, both indirectly and directly, during the period under consideration, the disappointing employment data may be explained by alternative channels that are more indirect. During the second half of the 1990s, the direct impact of increased imports on employment in the manufacturing sector was either positive or negative, depending on the industry. However, the indirect impact of increased imports was negative because of industrial restructuring and an increase in labor productivity, particularly in Argentina and Brazil (Layard et al., 2005).

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2.5 Investment and Labor

The United Nations Conference on Trade and Development (UNCTAD) released its World Investment Report in 1999, approximately half of all global investment has been directed toward nations whose economies are still in the process of developing or transitioning. Increasing investments may improve both the quantity and quality of job opportunities. Developing nations have a significant challenge in the form of high unemployment rates. Therefore, the influence of investment on the generation of jobs is very essential for nations that want to lower their rates of unemployment in their respective nations. Some academics, after examining the connection between investment and employment, have claimed that the impact of investment on employment is positive; however, other scholars have questioned whether or not this argument is accurate. Following is a more in-depth explanation of the differences in viewpoints that have been presented. There is a significant and favorable correlation between the two variables; more specifically, higher levels of investment inflows were linked to higher levels of employment. On the other hand, there are scholars who contend that when the phenomenon of crowding-out is taken into account, the impact of FDI on employment is not very significant.

According to a study by Makun (2018), findings were strengthened by utilizing variables related to foreign direct investment and drawing examples from nations located in the Fijian Islands. Makun (2018) discovered that foreign direct investment (FDI) not only covers the effects arising from job creation in the sectors of the economy that attract overseas investors, but it also covers additional employment opportunities in support sectors, particularly all production-oriented activities in the economy. According to what Dasgupta & Shimamora discovered, foreign direct investment (FDI) not only covers the impacts that result from employment creation in the industries. This is further reinforced by research that was carried out by Aterido *et al*., (2007), utilizing data from 70,000 businesses that were situated in 107 different countries. According to the findings of this study, the makeup of a nation's labor force is significantly influenced by the level of foreign direct investment. After conducting an inquiry into a situation that took place in

China, Banerjee (2006) came to the conclusion that there was a positive and tangible influence of foreign investment on the economy in China. This was based on the findings of the research.

Deepak (2012) conducted an additional study in the Special Economic Zone (KEK) in India, finding that investments from both domestic and foreign sources positively impact the potential for job growth in the zone. Especially if it's followed by a surge in infrastructure construction aimed at generating further economic activity.

According to Tsou et al., (2013), the findings of the China FDI Investment Panel Analysis, there is no evidence to suggest that foreign direct investment in China adds to the employment or skill improvement of the parent firm. Waldkirch *et al*., (2009) found that Mexico's FDI Investment Regression has a significant and positively affective influence on employment, particularly in the industrial sector. In the Asian Region, Rizvi & Nishat (2009) examined FDI investments from three nations: Pakistan, India, and China. They found that FDI had no influence on employment creation in any of these three countries.

According to Mpanju (2012) link between employments as the dependent variable and investment as the independent variable in Tanzania by using the ordinary least squares (OLS) approach of statistical model building and analysis. His findings demonstrated that when foreign multinational businesses concentrate their efforts on the market of the receiving country, it can have a major impact due to the crowding-out effect. The crowding-out effect of FDI will cause more domestic enterprises to fail, and as a result, more local employees will be laid off. This is because the influx of FDI will put more pressure on domestic enterprises and because the more advanced technology and higher efficiency associated with external investment will require fewer workers than in the past. This is because more domestic firms will go bankrupt as a result of FDI's crowding-out impact, resulting in the layoff of a greater number of local residents.

According to Pinn, Ching & Kogid (2011) from 1970 to 2007 in Malaysia using a bounds-testing autoregressive distributed lag model technique and an error-correcting autoregressive distributed lag model, they came to the conclusion that, in the long term, there is no co-integration link between employment and investment due to the high requirement for financial resources inherent in investment ventures in that nation that are carried out by foreign companies.

According to Mansi *et al*., (2010) in economic development levels among European countries, it is extremely challenging to generalize about the effects of investment on employment. In his view, the initial phase of investment's impact on employment is characterized by creative destruction, in which less productive jobs are eliminated while more productive ones are created. He reasoned that this would be the case since investment usually results in the creation of additional employment opportunities. The development of capitalism and the evolution of a command economy into a free market generate substantial competition. Foreign investors restructured their manufacturing techniques earlier than domestic businesses did so as to boost their profit margins. As a result, more individuals have lost their jobs as a direct result of the rising prevalence of mechanization and the division of labor.

According to Mark & Engels (2002) businesses were also responsible for the creation of a more productive labor force. The bourgeoisie and the managers eventually gained power over the workers, and the industries gradually became dependent on machines. At a later stage, investments that are labor-demanding lead to an increase in employment and transform the negative impact of transforming destructive creativity into something productive with reference to employment. And

further, according to Defraud, investments in green fields had a positive impact on employment, whereas investments in brown fields, which coincided with the move toward privatization and the resulting competitive market economy, did not have a pronounced beneficial effect on the job market. The results of this research show that investment is not a magic solution for creating new employment.

According to Ding (2005) domestic fixed investment and investment predict employment, a double logarithmic regression model was used to analyze data spanning the years 1986–2002. He came to the conclusion that domestic fixed investment as well as investment have a good impact on employment, but that the positive impact of domestic fixed investment is far larger than the effect of investment. According to Ding's findings, an increase of 1 percentage point in domestic fixed investment will result in an increase of 0.083 percentage points in employment, and an increase of 1 percentage point in investment will result in an increase of 0.064 percentage points in employment. He also discovered that investment has a very positive effect on the job market in the service industry, but the effect of investment in the secondary and primary sectors is not as clear. This was one of his key findings.

Using data from 1983 – 2002, Hom et al., (2009) constructed a simultaneous equation model of investment and employment. This model was based on both microeconomic and macroeconomic theory. They came to the conclusion that investment had both a direct and an indirect impact on employment; the former was good and the latter was negative. When all aspects are considered, it becomes clear that investment has a large and beneficial effect on employment: for every percentage point increase in investment, there is a direct correlation to a 0.008 percentage point rise in real employment.

2.6 Summary of the Literature

Empirical findings obtained indicate positive and substantial association between labor supply and demand due to the increase in output and employment. The ordinary least squares (OLS) approach is the methodology that was used for estimating the parameters in the model. The findings of the calculations showed that there is a positive association, both in the short-run and the long-run, between employment needs and both GDP and private investment levels that are grounded in reality. In addition, the findings demonstrated that real wages had an unanticipated favorable influence on demand in the long run, despite the fact that they had a negative effect on demand in the short term. According to the findings of one research study, domestic variables, namely real wages and real production, have a considerable influence. In the entire manufacturing sector during the entirety of the estimate period, the wage elasticity is less than output labor market flexibility. This is also the case in the high- and medium-skilled sectors, respectively. This suggests that a more robust growth performance should have been expected.

Being a strategy that has been more successful in stimulating employment than depending on low wages as the primary goal. Following liberalization of trade, there is a rise in the wage elasticity of employment. The findings also revealed that demand had a negative relationship with the supply of laborers and that demand for labor was positively related to capacity utilization and the actual minimum wage and negatively related to the level of the working-age population, despite the fact that these relationships were not statistically significant. Some academics, after examining the connection between investment and employment, have claimed that the impact of investment on employment is positive; however, other scholars have questioned whether or not this argument is

accurate. The goal of the research that was conducted by Kamuruana (2011) was to conduct an analysis of the variables that impact the level of female workforce participation in Kenya. The research uses data from the Kenya Integrated Household Budget Survey from 2005–2006 to estimate the status of women's involvement in the labor force using a logit model. The goal of the study is to determine the socioeconomic factors that have a role in the status of women. There is a discrepancy in the methodology between the two studies due to the fact that the previous research utilized a literature-based methodology as opposed to a logistic model in Somalia.

2.7 Theoretical Framework

The theoretical framework for this study is based on the classical economic theory of labor demand which suggests that the demand for labor is determined by several factors, including the wage rate, the price of output, and the productivity of labor. The efficiency wage model, which is used in this study, is a variation of the classical economic theory that emphasizes the role of the wage rate in determining the demand for labor.

According to the efficiency wage model, employers may choose to pay higher wages than the market equilibrium level in order to motivate workers to be more productive and reduce turnover (Akerlof & Yellen (1986). This, in turn, can increase the profitability of the firm and lead to higher levels of employment. The model also suggests that other factors, such as GDP, investment, and exports, can indirectly affect the demand for labor by influencing the productivity of labor and the price of output (Yellen, 1995).

Awale (2023) is of the view that the efficiency wage model predicts that the level of employment in Somalia is likely to be positively related to GDP and investment, as these factors can increase the profitability of firms and motivate them to hire more workers. He further noted that the positive but economically insignificant relationship between exports and employment may be due to the fact that exports do not directly affect the productivity of labor or the price of output, but may have other indirect effects, such as increasing the demand for intermediate inputs or creating spill over effects in the economy (Awale, 2023).

The efficiency wage theory was initially proposed by economists George Akerlof and Janet Yellen in their seminal paper "Efficiency Wage Models of the Labor Market" published in 1984. The paper argued that firms may choose to pay wages above the market-clearing level in order to improve worker productivity, reduce turnover, and lower monitoring costs. The idea of efficiency wages has since been further developed and refined by many other economists, including Joseph Stiglitz, Andrew Weiss, and Carl Shapiro, among others. The theory has been used to explain a wide range of labor market phenomena, including wage rigidities, unemployment, and wage differentials between firms and industries.

Proponents of the efficiency wage model argue that paying higher wages than the market equilibrium level can have several benefits for firms and the economy as a whole. Some of the main arguments in favor of the efficiency wage model that by paying higher wages, employers can motivate workers to be more productive and efficient (Romaguera, 1991). This, in turn, can increase the profitability of the firm and lead to higher levels of employment. O'Halloran (2012) also argued that high wages can also reduce employee turnover, as workers are more likely to stay with an employer who pays them well. This can save firms the costs of recruiting and training new employees. Bidwell et al., (2015) further argued that High wages can also attract better-quality workers, as they are more likely to be attracted to firms that pay them well. This can lead to a more

skilled and productive workforce, which can increase the competitiveness of the economy. High wages can also reduce the need for monitoring and supervision, as workers are more likely to be self-motivated and take responsibility for their work (Magd, 2003). The efficiency wage model also has social benefits as advanced by Brecher (1992), it is argued it can reduce poverty and income inequality by increasing the wages of low-skilled workers.

There are several variations of the efficiency wage model that have been proposed by economists and scholars. Some of the main variations include:

Shirking model: The shirking model is a variation of the efficiency wage model that was first proposed by economist Charles A. Holt in his paper "Markets, Games, and Strategic Behaviour" published in 1985. Holt's model emphasized the role of monitoring and incentives in reducing worker shirking, and showed that firms may be willing to pay higher wages to induce workers to exert greater effort and avoid shirking. The shirking model has since been further developed and refined by other economists, including Stephen Nickell and Richard Layard, among others As variation of the efficiency wage model, the shirking model assumes that workers have a tendency to shirk, or not work as hard as they could. In this model, firms pay high wages as an incentive for workers to avoid shirking and increase their productivity. Another variation is the

Gift exchange model: The gift exchange model is a variation of the efficiency wage model that was first proposed by economist Herbert Gintis in his paper "The Nature of Labor Exchange and the Theory of Capitalist Production" published in 1976. Gintis' model emphasized the role of social norms and reciprocity in the labor market, and suggested that workers may feel a sense of obligation to work hard and be productive if they feel that their employer is treating them well and paying them a fair wage. The gift exchange model has since been further developed and refined by other economists, including George Akerlof and Rachel Kranton, among others. The gift exchange model emphasizes the role of social norms and reciprocity in the labor market. In this model, workers may feel a sense of obligation to work hard and be productive if they feel that their employer is treating them well and paying them a fair wage.

Signalling model: The signalling model is a variation of the efficiency wage model that was first proposed by economist Michael Spence in his paper "Job Market Signaling" published in 1973. Spence's model emphasized the role of wages as a signal of worker quality, and suggested that firms may pay higher wages to attract higher-quality workers, who are more likely to be productive and efficient. The signalling model has since been further developed and refined by other economists, including Joseph Stiglitz, among others.

The signalling model emphasizes the role of wages as a signal of worker quality. In this model, firms may pay higher wages to attract higher-quality workers, who are more likely to be productive and efficient. Insider-outsider model: The insider-outsider model is a variation of the efficiency wage model that emphasizes the role of labor market segmentation and wage differentials between insiders (existing employees) and outsiders (unemployed workers). In this model, firms may pay higher wages to insiders as a way of maintaining their loyalty and reducing the risk of turnover, even if it means that outsiders are left unemployed or underemployed.

The efficiency wage model has been subject to several criticisms and limitations by economists and scholars such as George Akerlof, Janet Yellen, and Alan Blinder, among others. Some of the main criticisms are:

- Market inefficiencies: One of the main criticisms of the efficiency wage model is that it assumes perfect competition in the labor market, which is not always the case. In reality, many labor markets are characterized by imperfect competition, where firms have some degree of market power, and workers may not have full information about job opportunities and wage levels.
- Distributional effects: Another criticism of the efficiency wage model is that it can have distributional effects, as firms that pay higher wages may have to lay off workers or reduce profits to cover the higher wage bill. This can lead to lower employment levels and higher prices for consumers, which can have negative effects on the economy as a whole.
- Implementation challenges: The efficiency wage model may also be challenging to implement in practice, as it requires firms to accurately measure worker productivity and make wage decisions based on this information. This can be difficult in industries where worker productivity is difficult to measure, such as in the service sector.
- Limitations of the model: The efficiency wage model has also been criticized for its narrow focus on wage incentives as the primary driver of worker productivity. Other factors, such as job satisfaction, working conditions, and non-monetary benefits, may also be important in motivating workers and improving productivity.
- Empirical evidence: One of the main criticisms of the efficiency wage model is that empirical evidence for its predictions has been mixed. While some studies have found support for the model's predictions, others have found little or no evidence of a positive relationship between wages and productivity or turnover.
- Empirical evidence: One of the main criticisms of the efficiency wage model is that empirical evidence for its predictions has been mixed. While some studies have found support for the model's predictions, others have found little or no evidence of a positive relationship between wages and productivity or turnover.

Generally, the efficiency wage model has been subject to several criticisms and limitations, which suggest that it may not always be a suitable framework for understanding labor market dynamics. However, the model has also contributed to important insights and debates in labor economics, and has led to further research and refinement of the theory

3.0 METHODOLOGY

This chapter of the study describes the research methodology, data source and type of data, theoretical structure, model specification and methods, and techniques used to analyze the data. It also outlines how the relevant approach will be developed, analyzed, and interpreted.

3.1 Type and Source of Data

Data from the World Development Indicators Dataset, Statistical Economic and Social Research and Training Center for Islamic Countries SESRIC, and World Bank data that was conducted in a period of 45 years, from 1970 to 2015 Somalia. According to the findings from this research, the number of employees in each firm used as a proxy for labor demand by such a firm, is highly variable. Gross domestic product, investment, and export are independent variables. Investment, is measured as the total amount of capital invested by firm I in the business; exports are proxied by the real value of exports; and GDP has been expressed by the real Gross Domestic Product.

3.1.1 Methods of Data Analysis

Several econometric techniques allow researchers to examine the connection between dependent and independent variables by means of descriptive statistics, model parameter estimations, and modal diagnostics.

3.1.2. Efficiency Wage Theory

The efficiency wage theory serves as the basis for the research's theoretical underpinning, and it is this theory that is employed to simulate the anticipated results of the study Harris-Todaro (1970), The Hypothesis of Excess Labor. The efficiency wage models have been successfully used in a variety of contexts, including research on productivity, earnings, and the factors that determine employment (Wadhwani and Wall, 1991; Levine, 1992).

The following is the specification of a continuous return to scale Cobb-Douglas production function with two inputs, effective labor, $(e^{a}L)$ and capital (K):

$$Y = (e^{a} L)^{b} K^{(1-b)} f$$

An organization-specific factor in productivity (f) that is independent of time has been provided by this specification. The following is true if we accept the efficiency wage hypothesis: This is what we get from considering the firm's fixed effects and formulating the production function in terms of labor output:

$$\Delta In\, Y / L = b\Delta In\, Rel(w) + (1-b)\Delta InK / L + \Delta\varepsilon$$

Where Rel (w) represent the relative salary that is being paid in the company. The coefficient for the relative pay phrase ought to be set at the same value as the parameter for the labor share. To calculate the relative wage, or Rel(w), just take the actual salary of the company and compare it to the wage that may be projected based on the human capital characteristics of the employees working in the firm. This is the same as expecting that companies in a competitive market will pay the projected salary to workers of a certain skill level in order to attract them as employees. One way to think about the process of determining wages is as a type of negotiation between employees and employers, with the performance of the employer serving as one of the determining factors in the game. Therefore, in order to account for the impact relative to the proportional distribution of rent, salary is permitted to be decided by a firm's profit as well as the intrinsic human capital of its workforce, which is defined as follows:

$$lnw = \beta_0 + \beta_1 \pi/L + \beta_2 w^{e} + \beta_3 H + controls$$

In this equation, π/L is the profit per worker, w^{e} is the exogenously available wage, and H is the human capital variable that allows for compensation based on varying degrees of education and experience. To use the Cobb-Douglas framework, for the production function, the fraction of output due to labor may be determined as b = wL/Y. Using the formula of value-added minus wages yields the following values for profits per employee: In order to better see the similarities, let's rewrite equation 4 in logarithmic form, which gives us the following:

$$\pi/L = Y/L - w = (1 - b)\ Y/L$$

$$Inw = \beta_0 + \beta_1 In\pi / L + \beta_2 Inw^e + \beta_3 H + Controls$$

and using the definition of profits per employee, this equation can be written, as:

$$Inw = \beta_0 + \beta_1 InY / L + \beta_2 Inw^e + \beta_3 H + Controls$$

In order to facilitate a comparison between the efficiency theory and the rent sharing theory, equation (6) will need to be rewritten such that it reads as equation describing the relative salaries of company. When we write, "where the," The human capital element in the earnings equation is used to get a simple estimate for the expected wage (6).

$$In\ [w/(Predicted\ wage)] = \beta_0 + \beta_1\ InY/L + \beta_2 Inw^e + controls$$

Productivity may be described by the following equation, which is derived by writing equation (7) as a describing equation and then differentiating to account for the firm fixed effect:

$$\Delta InY / L = \beta_0 / \beta_1 + (1/\beta_1)\Delta In\ Rel(w) - \beta_2 / \beta_1 \Delta Inw^e$$

Where "Reel" (w) stands for the ratio of the actual pay to the expected wage

3.1.3 Empirical Model

Equation (8) raises some serious questions, the first of which concerns the accuracy of production measurement, and the second, the accessibility of relative salary data. To empirically examine the factors that influence labor demand, the efficiency wage model transforms equation (8) to produce labor demand as a function of the firm's real pay and the rate of return on capital.

$E = \beta o + \beta_1 GDP + \beta_2 I_i + \beta_3 x + \mu_i$

Where

E= is the demand for employment

GDP is the gross domestic product,

I is the value of capital formation (investment),

X is the value of exports,

μ= error

3.1.4 Descriptive of the Variables

- **Dependent Variable**

Dependent variable is employment, and it is quantified in millions.

- **Independent Variables**

The independent variables are the investment, export and GDP which is quantified by the sum of money that company I has put into the operation. Export proxied by the real value of exports...GDP have been expressed by the real Gross Domestic Product

3.1.5 Estimation Technique

Ordinary Least Squares is used to determine the connection between GDP and the explanatory variables (OLS). Consequently, the assumptions of the ordinary linear regression model are necessary for OLS to be implemented.

3.2 Diagnostic Tests

The diagnostic procedures employed in this study are discussed in further detail below.

3.2.1 Heteroscedasticity

Variation in the distribution from one instance to the next is a hallmark of heteroscedasticity. Over the range of experimental measurements, the dispersion of residuals in linear regression tends to change. Heteroscedasticity appears to be a problem when doing an ordinary least squares (OLS) analysis since it suggests that virtually all of the residuals are generated from a sample with a constant variance. If the regression assumptions are to be satisfied and the results verified, then the residuals must have the same variance.

3.2.2 Multicollinearity

In a multiple regression analysis, multicollinearity may be analyzed as the presence of significant intercorrelations among many independent indicators. Multicollinearity typically leads to skewed and erroneous results when a scientist or analyst wants to analyze how well each explanatory variable may be used to make predictions or gain understanding of the explanatory factors using a quantitative method. In conclusion, multicollinearity can increase confidence intervals and decrease reliability estimates for model explanatory variables. 3.2.3 Autocorrelation In statistics, autocorrelation measures how closely successive time periods share values for a collection of variables that are otherwise quite similar. Regression analysis is the cornerstone of both correlation analysis and regression analysis, with a similarity of 1.0 indicating complete positivity in the explanatory components. If there is no linear relationship between the two independent variables, the linkage value will be negative.

3.2.3 Autocorrelation

Autocorrelation is a statistical feature that reflects the degree of similarities among the values of all quite similar variables over repeated set intervals. The correlation analysis is founded on the regression analysis; when the explanatory factors are perfectly positive, the similarity would be 1.0. If the two independent parameters have a completely negative significant correlation, the negative linkage value means there is no linear correlation between the parameters.

3.2.4 Normality

It appears that the line predictor's consistency degrades with increasing size of the representative sample. However, it does not tell us very much about the distribution of our samples, and we need some way of evaluating and building this hypothesis of our study assumptions. Null hypothesis: Data is normally distributed. Alternative hypothesis: Data is not normally distributed

4.0 FINDINGS AND DISCUSSIONS

The descriptive section of the empirical research covered three major aspects: descriptive statistics, model parameter estimation, and, in addition, diagnostics to analyze the relationship between the variables, which were employed in our models described in Chapter three.

4.1. Findings

4.1.1 Descriptive Statistics

Large quantities of numerical (quantitative) data may be analyzed using a method called descriptive statistics. The average, often known as the mean, is the most frequently employed method for characterizing the dominant trend. To obtain the mean, combine all of the values together and total them. The average can be defined as the sum of all the numbers divided by the total number of values. A mean is defined as the mathematical average of a set of two or more data values. Average is usually defined as mean or arithmetic mean. Mean is simply a method of describing the average of the sample. When looking at a group of numbers, the median seems to be the middle number. Reporting all of the data numerically and then selecting the point in the middle of the sample yields the average. The standard deviation indicates the degree to which a group of tests deviates from the hypothesized pattern. The extremes of the sampled series are displayed by the upper and lower limits, respectively. In this series, the mean represents the lowest value in the data set, indicating its significance. The overall design is the subject of the investigation. Academics frequently employ this phrase.

Table 1: Showing Descriptive Statistics in Somalia Measured in Million Dollars between 1970 to 2015

Variables	Mean	Median	Maximum	Minimum	Std.Dev.
Employment	2763489	2.2109	24540222	22.59747	550233.8
GDP	2645285	2.2609	7520000	22.14085	3.1208
Export	3879137	2.6909	1.208	30.58240	30001001
Investment	2129276	1.6709	3170000	18.40548	2.480968

Source Author's Estimation Analysis

As shown in Table 1, the findings show that the mean value of the dependent variable, employment, is 27, 63489, with a standard deviation of 550,233.8. The maximum value of employment reached all the time is 3879137, as well as the minimum value of employment, which is 2129276. With the explanatory variables, include GDP, exports, and investment. The mean value of GDP is 2.2109, with a standard deviation of 3.1208. The highest GDP is 2.69E+09 all the time and the lowest1.6709.

Furthermore, the average value of export is 24540222 with a standard deviation of 24540222, and the highest and lowest exports during the observation are 1.2108 and 3170000, respectively. Also, the mean value of investment is 22.59747 with a standard deviation of 2.480968. The maximum value of investment is $30, 58240, and the lowest is $18, 40548.

According to an empirical study of Somalia's labor market, the average employment rate is 276.349%. Employment rates ranged from a high of 550233.8 percent to a low of 22.59747 percent, with a 3.134641 percent standard deviation from the mean expansion rate. External debt, on average, deviates from the norm by 0.8586 percentage points, with a range of -184.0822% to -4.6169433%. During the course of the research period, the average inflation rate was 45.47151 (ranging from 329.9850 to -5.755335). The Inflation rate divergence throughout the time was 63.73479%. Over the research period, the average capital stock was 20.53066, with a range of -2.817915 to 46.51123. During the time frame of the investigation, the capital stock standard deviation was 8.930809.

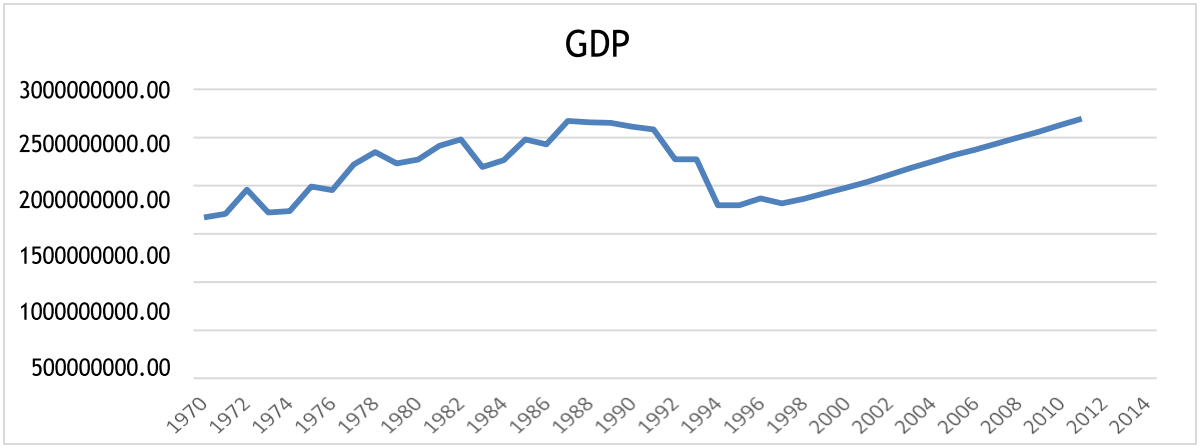

Figure 1: GDP of Somalia

Source: Author's Estimation Analysis

This figure shows that the GDP of Somalia from 1975-1990 was stable and went up year after year, but after 1990, as a result of the breakdown of the central authority, the GDP of Somalia dropped from 2.6 million to 1.8 million, but after 2000, the GDP of Somalia has been growing.

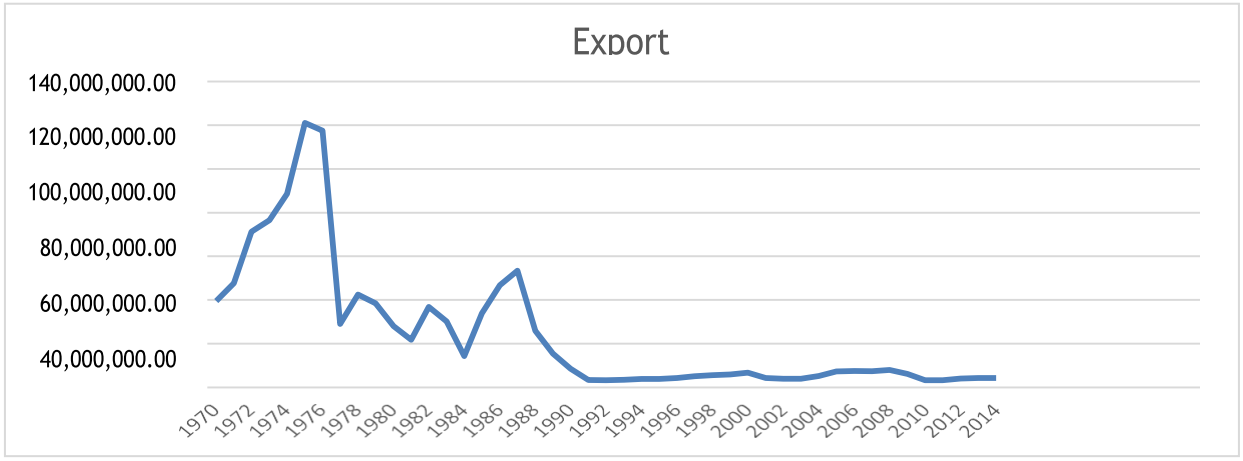

Figure 2: Export of Somalia

Source: Author's Estimation Analysis

The figure represents that the export of Somalia was not stable in the years between 1970 and 1990, but after 1990 the export of Somalia became stable because of the lack of government. In the last 25 years of less effective government, the condition of the economy was not good, and international trade was one of those suffering economic sectors. Exports were small, and only livestock played a crucial role, but they could not stabilize the country's trade balance account while other sectors did not have a surplus to export or were idle. However, the economy has been in continuous growth for the last six years, but this has not affected the country's role in international markets. The integration of Somalia into international markets is very weak due to the absence of an effective government, a lack of banks and financial institutions with international standards, poor infrastructure, and a lack of quality standards and controls to check exported

products. Somalia's main exports are livestock, including goats, sheep, camels, and cattle; hides and skins; bananas; sesame; fish; and charcoal, with its main export partners being Saudi Arabia, the United Arab Emirates, Oman, Yemen, and Brazil.

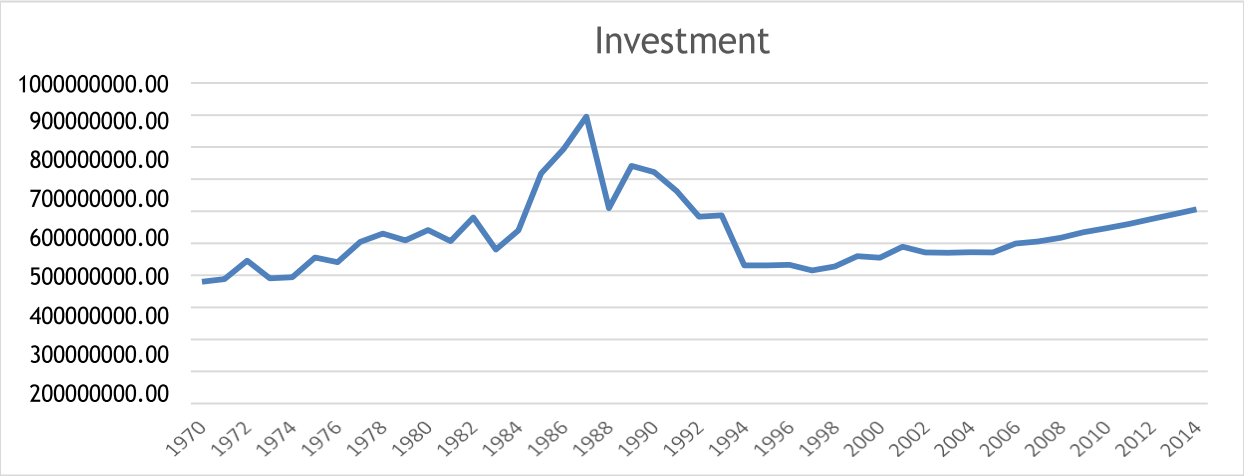

Figure 3: Investment of Somalia

Source: Author's Estimation Analysis

This figure shows that investment was stable years between 1970-1980. In 1986 the Gross Domestic for Somalia was the highest year with almost was 9m, but after two years in 1988 it goes down from 9m. to 6m as show the figure.

4.2 Model Parameter Estimation

Dependent Variable: Employment Method: Least Squares

Table 2: Estimation of the Model Coefficient

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDP	0.000487	0.000101	4.836769	0.0001
EXPORT	0.002504	0.011132	0.224974	0.8245
INVESTMENT	182780.8	13950.12	13.10246	0.0000
C	5536405.	370348.6	14.94917	0.0000

R-squared	0.918184	Mean dependent var	2594827
Adjusted R-squared	0.904548	S.D. dependent var	403698.4
S.E. of regression	124724.0	Akaike info criterion	26.46856
Sum squared residue	2.80E+11	Schwarz criterion	26.66693
Log likelihood	287.1542	Hannan-Quinn criter	26.51529
F-statistic	67.33515	Durbin-Watson stat	1.129147
Prob (F-statistic)	0.000000		

The model estimates reveal a positive and statistically significant (at the 5% level) coefficient of GDP. This indicates that GDP is positively correlated with employment levels in Somalia. The employment rate will rise by 0.000487 percentage points for every percentage point increase in GDP. However, at the 5% level of significance, the positive value of the export coefficient is not significant. That suggests exports are having no effect on Somalia's labor market.

The table also demonstrates that the investment coefficient is positive and significantly different from zero at the 5% level of significance. This indicates that investment and employment in Somalia are positively correlated. Employment would increase by 182,780.8 if investment increased by just one percent. The F-test of the model is statistically significant. Its value is 0.00003. This means that independent variables have a jointly significant effect.

The fitness of the model is good. This can be explained based on R2. The R2 of the model is high, which is 0.918184. This means that 91% of the variation comes from gross domestic product, investment, and exports Further, 91% of the change that happens to employment Comes from gross domestic product and investment.

4.3 Model Diagnostics

4.3.1 Multicollinearity Test

Multicollinearity is a situation where the independent variables of the study are correlated. To detect multicollinearity, variance inflation factor is used.

Table 3: Variance Inflation Factors

	Coefficient	Uncentered	Centered
Variable	Variance	VIF	VIF
GDP	1.0108	71.75792	1.227884
EXPORT	0.000124	6.991855	1.265894
INVESTMENT	1.9508	135.2267	1.034542
C	1.3711	193.9743	NA

The above table shows that there is no multicollinearity problem in the study. Because all variables are less than 10 according to their variance inflation factor.

4.3.2 Autocorrelation Test

Autocorrelation is what happens when the error terms are correlated. If this assumption is no longer valid, then the disturbances are not pairwise independent but pairwise autocorrelated (or serially correlated). Autocorrelation is most likely to occur in time series.

Table 4: Serial Correlation LM Test Breusch-Godfrey

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	1.483976	Prob. F (2,16)	0.2563
Obs*R-squared	3.442383	Prob. Chi-Square (2)	0.1789

Table above shows that there is no Autocorrelation. It is statistically insignificant at the 5% level, in this study there is no autocorrelation between the error terms it means the error terms are not correlated each other because the probability chi-square is greater than 5 percent.

4.3.3 Heteroskedasticity Test: Breusch-Pagan-Godfrey

Heteroskedasticity is what happens when the variance of the error term is not constant. To detect, Breusch Pagan method has been used for testing the presence of heteroskedasticity.

Table 5: Heteroskedasticity Test: Breusch-Pagan-Godfrey

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	0.897319	Prob. F (3,18)	0.4617
Obs*R-squared	2.862129	Prob. Chi-Square (3)	0.4134
Scaled explained SS	2.033551	Prob. Chi-Square (3)	0.5655

Table 5 shows that there is no heteroscedasticity. It is statistically insignificant at the 5% level, which is in turn a sign of homoscedasticity. As shown above, the Obs*R-squared is 0.4134, which is greater than 5%. So, we do not reject this test because it is focused on the variance of the error term. Homoscedasticity and conclude that the conditional variance of the error terms is equal.

4.4 Normality Test

A normality test is performed to make sure that there is a normal distribution for the mistake. The reason that this is done is its one of the assumptions of classical linear regression model. The following figure shows us the normality of the error term.

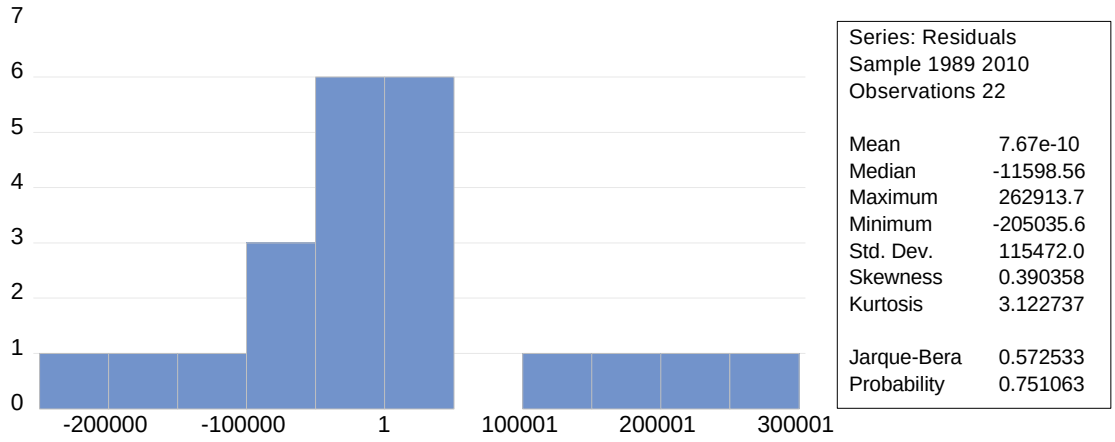

Figure 4: Normality Test

This figure shows that the data used in this study is normality distributed. The probability of the residuals is statistically insignificant at the 5%, which means that the data is normally distributed.

4.5 Stability Diagnostic

The figure below shows the stability of the model. (After making use of cesium test, the estimated parameters model is stable and is free from stability diagnostic because where (t) is the range of values for the dependent variable and the two lines. If it is not within the lines, the model faces stability diagnostic.

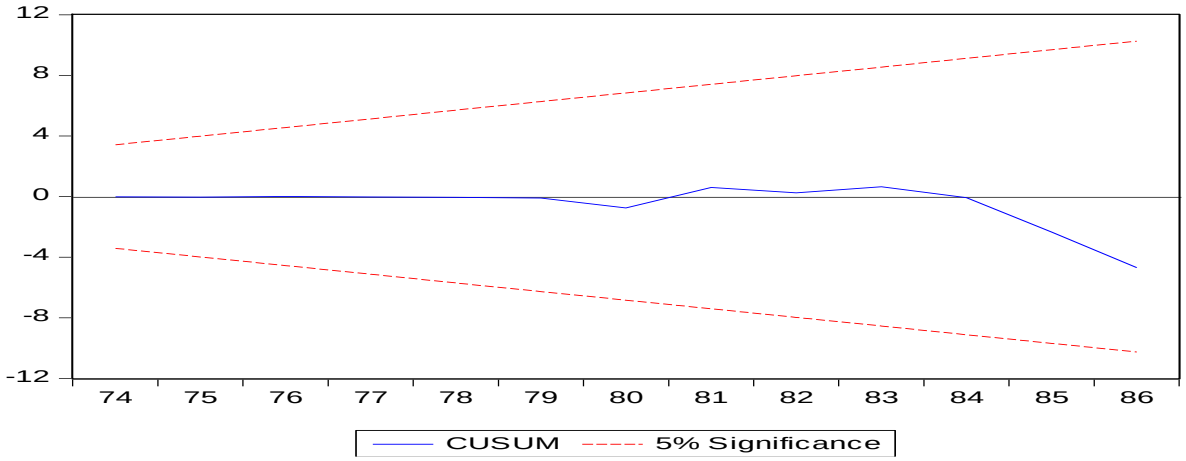

Figure 5: Stability Diagnostic

4.6 Discussion of the Findings

This study explored the determinants of labor demand in Somalia the study used employment dependent variable, while gross domestic product, investment, and export used independent variables. Based on the p-value of Diagnostic tests, the results show that the regression model is significant and correctly specified. Was conclude there is no problem of heteroscedasticity, autocorrelation and multicollinearity because the p-value of these tests is more than 0.05 and this finding will accept the null hypothesis of taste. Likewise, R-squared value highlights Export, GDP, investment explain 91% of the changes happens to the employment.

4.6.1 Investment and Employment

An interesting fact is investment that has a positive effect on employment. Which means high amount of investment will lead increases the amount of employment in Somalia. This result support some of studies including Pinn, Ching, and Kogid bounds, (2011), and Mark & Engels, (2002), (2002).

4.6.2 Gross Domestic Product and Employment

This study show there is a positive and significant relationship between gross domestic product and employment in Somalia. Similarly, scholars like Revenga & Bentolia (2015), Kien (2016), and Ibrahim (2013) analyzed the impact of gross domestic product on employment and found a positive relationship between gross domestic product and employment. This is consistent with the findings of this study.

4.6.3 Export and Employment

There is a positive and statically insignificant relationship between the two variables. Previous studies such as Demirhan & Masca (2008), Kiat (2008), and Wanjiru (2013) observed that export is positive statically insignificant of employment, consistent with this study. Insignificant of employment.

5.0 CONCLUSION AND POLICY RECOMMENDATIONS

Numerous studies have produced contradictory findings regarding the determinants of labor demand in Somalia. Some studies have indicated a positive correlation between gross domestic product and employment, while others have found a negative correlation. The goal of the study was to find out the determinants of labor demand. This chapter discusses the previous chapter's findings, the study's conclusions, and recommendations in determinants of labor in Somalia.

5.1 Discussion of Findings and Conclusion

The goal of this research was to analyze the factors that affect export demand for labor. There, in Somalia. To examine the information, was use a regression analysis technique known as ordinary least squares. As a frequent method for doing so, regression analysis uses past data to test for the presence of a connection between variables. The one-to-three simple regression function used in this study only required the inclusion of the dependent variable.

The dependent variable is employment, and the independent variables are gross domestic product, exports, and investment. An econometric perspective was utilized to process and investigate the data (E-view 12). The data was also analyzed using descriptive statistics. The research also made use of graphs as a means of data visualization. Secondary data from the World Bank, the International Monetary Fund, and the Social and Economic Research Information Center (SESRIC) were analyzed over the period of time spanning 1970 to 2015.

The study used the efficiency wage model, to develop the determinants of labor demand in Somalia. Study found that there is positive relationship between investment and employment demand and statically significant. The coefficient of investment indicates that if investment increases by one percent, the demand for employment will increase. while other variables remain constant. On the other hand, the coefficient of export shows a positive sign and is statistically insignificant at the five or five percent level. The study also found Somalia's GDP is positively correlated with its employment rate. The coefficient of gross domestic product is positive and statistically significant at the 5% level. This means that if the gross domestic product goes up by one percent, the demand for employment will go up by 0.000487.

The government and relevant arms of the law should do away with obsolete labor laws and inadequate regulations in place that do not conform to international labor standards and therefore do not meet the present employment challenges. There should be an extension of the legal framework conducive to the working masses the formulation, revision, and amendment of labor laws, and the effective implementation of these laws and regulations. They should also broaden the coverage and effective enforcement of minimum wages, ensure sound wage structures, and minimize unfair labor practices, particularly in relation to women workers, child workers, and bonded labor.

5.2 Recommendations

The following are the recommendations based on the study's key results in order to improve the contributions of MSEs to poverty alleviation in Somalia:

This study provides implications for both policy and practice. Based on the study's findings, it is recommended that the federal government of Somalia adopt measures to regulate labor costs. It is evident from past studies that cost is one of the major factors affecting demand for labor in developing countries. Therefore, the government should adopt policies that will ensure that the

workforce is well compensated. At the same time, the government should also protect the interests of the firms.

The study further recommends international interventions to ensure that Somalia's economy gets back on track. Stable economic growth will lead to an increased demand for labor.

Employers in Somalia, including the government, should stop changes in employment patterns that result in workers losing their jobs due to economic restructuring. There is a need for new employers to recognize trade unions, and as a result, there will be freedom of association in workplaces.

This study also recommends that the government focus on ensuring the security of the country because the biggest challenge facing foreigners is insecurity. If the government improves the security of the country, many foreigners will come to invest in Somalia and run many firms and industries, so that the firms will need many workers to run their businesses, and employment will increase and unemployment will decrease.

The study's findings indicated that the method of hiring labor greatly influenced the performance of building projects in Somalia County. The study has in particular concluded that the use of permanent labor is preferred to using casuals. The study also established that the use of permanent labor reduced the cost of labor and enhanced quality. This study 74 recommends that developers thoroughly interrogate the methods of hiring and, in particular, consider more the use of permanent labor as opposed to casuals. The study's findings showed that the level of training of construction workers enhances the performance of building projects. However, the majority of participants had only attained diploma-level training. The study recommends that all participants enhance their level of training.

Finally, this study recommends the government should formulate policies that encourage to increase local productivity especially agricultural sector and also government make more effort to eliminate the issues that suffering the most people those work in agricultural sector, to be success that policies the government should be rebuilding the infrastructure and developing the transposition because many sectors suffering lack of infrastructure because Infrastructure plays an important role in economic growth as better infrastructure reduces cost, raises productivity and also contribute increasing the level of labor. Finally, it recommends the strengthening and promotion of the exports of Somalia because, after its collapse, the exports were unstable and slowed down; if the exports become stable, they will enhance the economy of the country and benefit the employment sector.

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