Innovations

Assessment of Socio-economic Impact of Corona virus (COVID-19) in Case Bule Hora and Dugda Dawa Town, Western Guji zone, Oromia Regional State, Southern Ethiopia

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Abstract

The Assessment of Socio-economic Impact of Corona virus (COVID-19) study was conducted at western Guji Zone, Bule Hora Town and Dugde Dawa Town, Southern Ethiopia.This paper provides some of the first evidence on the socioeconomic impacts and responses to the pandemic among households and individuals in western Guji Zone. The objective of the study is to determine the social impact of Corona virus (COVID- 19), to evaluate the economic impact of Corona virus (COVID- 19) and to identify community vulnerable by COVID-19 in the study area. To do so, Community-based cross-sectional survey was used for the study and 150 sample respondents (100 From Bule Hora town and 50 from Dugde Dawa Town) were selected by Cochran *formula from the two district. From the sample respondents 99.3% of the have information about COVID-19. The study show that 96% Corona virus highly affect people with the social groups of poor, elderly (greater than 65), pregnant women, people with disability, unemployed, street vendors and small retailers, taxi drivers in the study area. As Government declared states of emergency and issued stay-at-home orders, many individuals in low-income found them out of work, both in the formal and informal labor markets because of these households have lost income across a variety of sources. More than 50% of the households have lost income due to the pandemic as consumable purchasing increasing, slow down of import and exports and state emergency to stay home. The government should take actions and policies aimed at reducing the impact of the pandemic on manufacturing firms and service sector should resolve both supply side constraints and shortage of demand.*

Keywords: 1.COVID-19, 2.Socio-economic, 3.Knowledge, 4.Government, 5.Perception, 6.organization

Introduction

An outbreak of corona virus disease (COVID-19) caused by the 2019 novel corona virus - has been spreading rapidly across the world since December 2019, from Wuhan, Hubei Province, China to 65 countries and territories *[10]*.

WHO confirmed the outbreak of COVID-19 as a pandemic on March 12th 2020; COVID-19 has become a global emergency, given its impact on the entire world population and economy (WHO.2020). Indeed, Africa is not

immunized from COVID-19. As of today, according to COVID-19 Surveillance Update: 27 May 2020 of worldwide 215 countries affected by COVID-19 5,794,017 Cases 2,499,551 recover and 357,509 deaths on the world wide. Africa CDC, the spread of the virus has reached 57 African Union Member States: 126,838 cases, 52,784 recoveries and 3,721 deaths; and is showing no signs of slowing down. Corona virus in case of Ethiopia 731 cases 181 recoveries and 6 deaths. Thus, in Africa this problem is beginning worst with the barrier of health facility in which knowing the knowledge, awareness and mitigation before the outbreak of this pandemic [1]

The spatial distribution of COVID-19 is high where the overall case-fatality rate is about 2.3% but reaches 8.0% in patients aged 70 to 79 years and 14.8% in those aged >80 years [16].

[4], reported that, the economic impact of the virus will be from the actions people and governments take to avoid the virus and this response comes from three sources. Finally, individuals reduce trips to the market, travel, going out, and other social activities, affecting the demand side aid. As importantly, population outside of media outreach (radio, TV and other forms of communication) will likely miss out from national and local guidance of the pandemic.

Corona virus is threatening the world in multiple fronts, namely health, economy, and social challenges. The pandemic affects a wide range of sectors (Transport, Education health, manufacturing, services, agriculture, retails, social, national and international value chains) and population groups (rural, urban, casual laborers, self-employed, factory and government workers) with differentiated impacts [15]
Although the pandemic accidentally affect all segments of the public and sectors, population subgroups are estimated to be differently susceptible to the pandemic [6]. Therefore, the study is important to determine socio-economic impact of COVID-19 in Western Guji Zone, Oromia Regional State of Ethiopia and important to address more vulnerable group in this study area.

Statement of the Problem
COVID-19, pandemic is a worldwide confront that requires coordinated efforts from governments, individuals, businesses, and various stakeholders. The overall economy is practice a significant and extraordinary shocks as the virus triggers a quantity of shocks at the same time including health, supply, demand and financial shocks [14]. Thus, the spread of COVID -19 in Ethiopia is still increasing, where strong mitigation mechanisms should be taken into consideration [7]. Conducted the impacts of corona varus on COVID-19 and predictive models of COVID -19 in Africa, where still the attitude and awareness of COVID -19 is not touched.

In Ethiopia different, Studies indicated that societies with a lower economic status are more vulnerable to rising rates of chronic illness from the COVID-19 further complicated by economic and social welfare hardships [8].
The consequence of turn down in economic development would make enormous disturbance in different sectors. It is, therefore, essential to guess the economic and social impacts of the corona virus in the perspective of Ethiopia in order to intend successful strategies that would reduce shocks to health and economic activities. The objective of this study is to quantify economic and social effects of the pandemic and to suggest potential interventions to contain the pandemic in western Guji zone.

Based on the nature of the problem, the following research questions are formulated to be tackled the spread of COVID 19.

- What is social impact of corona virus (COVD- 19) in the study area?
- What is the economic impact of this Corona virus (COVID -19) in the study area?
- Which group is more vulnerable for this pandemic in the study area?

General Objective

To Assess Socio economic Impact of Corona virus (COVID-19) in Western Guji zone Oromia Regional State, southern Ethiopia

Specific Objectives

- To determine the social impact of Corona virus (COVID- 19) in the study area.
- To evaluate the economic impact of Corona virus (COVID- 19) in the study area.
- To identifies community vulnerable by COVID-19 in the study area.
- There is a rare review in this regard, so that it can be used as baselines for other researchers at national or international level.

Research Design

The study was designed to assess Socio economic Impact of Corona virus (COVID-19) with in a community of Western Guji zone Oromia Regional State, southern Ethiopia. To achieve this goal purposive sampling method was applied to select two woreda from Western Guji zone based on socio economic activity of the town to determine socio economic impact of COVID-19 in this study area.

Source of Data

The researcher used both primary and secondary data was used in the study areas .

Target Group

The target group of this research in the study area was, unemployed, street vendors, people with disability, small retailers, taxi drivers, construction workers, elder, and pregnant women.

Sample size and sampling technique

To determine the socio-economic impact of Corona virus (COVID 19) in the western Guji zone a cross sectional study design was used. The estimated population taken from the study area was 135,58 from Bule Horan and Dugdedawa respectively. The value for Z is found in statistical tables which contain the area under the normal curve.)

$$n = \frac{n_{\mathrm{o}}}{1 + \frac{n_{\mathrm{o}}}{N}}$$

Discussions were held with key informant in the zonal and district communication biro in the study area on the present condition of socio-economic activity in the district.

These numbers of sample respondent were acquired from the two (2) woreda to be selected (100 from Bule hora, 50 from Dugda Dewa). The number of selected sample respondent was varied between Woreda because of differences in populations.

Data Collection Instruments.

Quantitative and qualitative information was collected. Primary information was collected by through a well-structured closed and open questionnaire and using interview from key informant of the woreda in the study area.

Questionnaire.

A semi-structured questionnaire was developed and used, which was prepared in English language. On the basis of information obtained during pre-testing, modification has been made on the questionnaire. Information obtained during pre-testing has been included to the questionnaire and the final questionnaire was translated into *Afan Oromo* during the interview. Then, the enumerators was recruited from the study area and made acquainted with the questions, trained on methods of data collection and interviewing techniques. Then; the information was collected through field surveys made to the target. The researcher adequately administered and supervised the data collection process and checked the quality of the returns to avoid bias and errors on the spot.

Interview.

To supplement the data collected via questionnaire, the researcher was interview the sample respondent selected from each sampling unit based on activity performed at each sector.

Techniques of Data Analysis

The collected data was analyzed by means of the SPSS version 20.0. Soft ware package, by descriptive statistics, compared mean by T-test and linear regression model are employing to analyze both qualitative and quantitative data.

Descriptive statistics

Descriptive statistics was employed to have clear picture and to draw some important conclusions on assessment of Socio economic Impact of Corona virus (COVID 19). By applying it, one can compare and contrast different categories of sample unit with respect to desired characteristics [12]. In this study, descriptive statistics such as the arithmetic means, standard deviation, percentage, and frequency of occurrence was used to analyze data. The statistical significance of the variables were tested for both dummy and continuous variables using chi-square (χ^2) and t-tests, respectively.

Simple linear regression model

Suppose the outcome of any process is denoted by a random variable y, called as dependent (or study)variable, depends on k independent (or explanatory) variables denoted by $x_1, x_2, x_3, \ldots \ldots x_k$ Suppose the behavior of y can be explained by a relationship given by

$$Y = f(x_1, x_2, \ldots x_k, \beta_1, \beta_2, \ldots \beta_k) + \varepsilon$$

Where f is some well-defined function and $\beta_1, \beta_2, \ldots \beta_k$ are the parameters which characterize the role and contribution of $x_1, x_2, \ldots x_k$ respectively. The term ε reflects the stochastic nature of the relationship between y and $x_1, x_2, \ldots x_k$ and indicates that such a relationship is not exact in nature.

A model or relationship is termed as linear if it is linear in parameters and non-linear, if it is not linear in parameters. In other words, if all the partial derivatives of y with respect to each of the parameters $\beta_1, \beta_2, \ldots \beta_k$ are independent of the parameters, then the model is called as a linear model. If any of the

partial derivatives of y with respect to any of the $\beta_1, \beta_2, \dots \beta_k$ is not independent of the parameters, the model is called non-linear. Note that the linearity or non-linearity of the model is not described by the linearity or non-linearity of explanatory variables in the model.

Hypothesis and Variable Definition

The data was covered information necessary to make case level indices of social, economic, demographic. Accordingly, in order to investigate the research questions of this study, the following variables were constructed:

Dependent variables

Assessment of socio-economic impact: Is a continuous variable that denotes that is regressed in using linear regression model.Which is expressed in a form of

$$Y = f(x_1, x_2, \dots x_k, \beta_1, \beta_2, \dots \beta_k) + \varepsilon$$

Y= is dependent variable xi-------x$_1$, x2,x3----------------------xn is explanatory variable which influence Dependent variable
Result and Discussion

Demographic Characteristics

Out of the total respondents 72.7% is male were as 27.3% female participated in the study. From the total respondents 57.3% were married and 42.7 %(64) were unmarried. The respondents who are married have an average of 4.193 children. About 70.7% of sample respondents have an education while 29.3% were not educated. Regarding to the religion 13%,53.5%19.3% and 12% were Protestant,Orthodox, musilim and wakefata respectively.out of sample respond 14.7% is Employed where as 85.3% of the respondents un employed.The sample respondents who are un eployed using different work for their lively wood.From the total percent of un employed 132(85.3%) of sample respondents they participated on different work like Tax drive,Constraction works,Selling vended food,trader and Others(Fig.1)
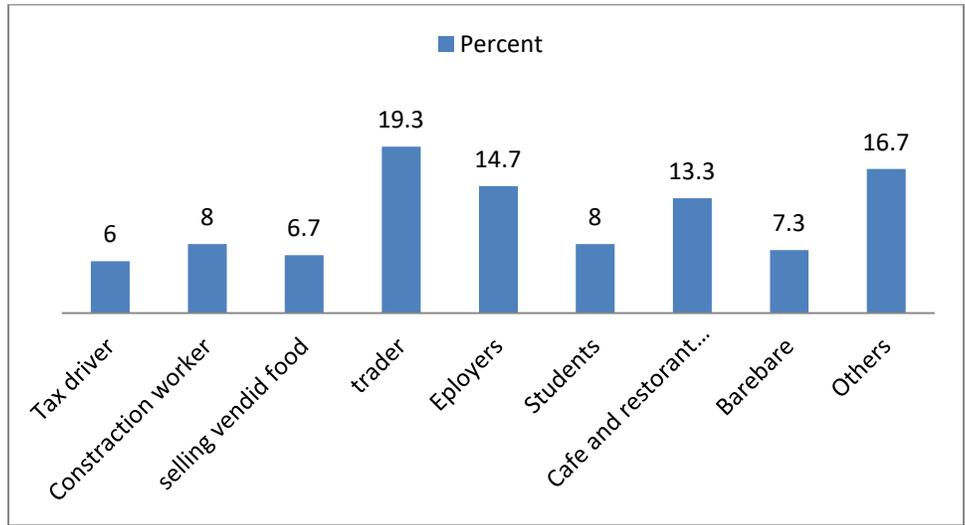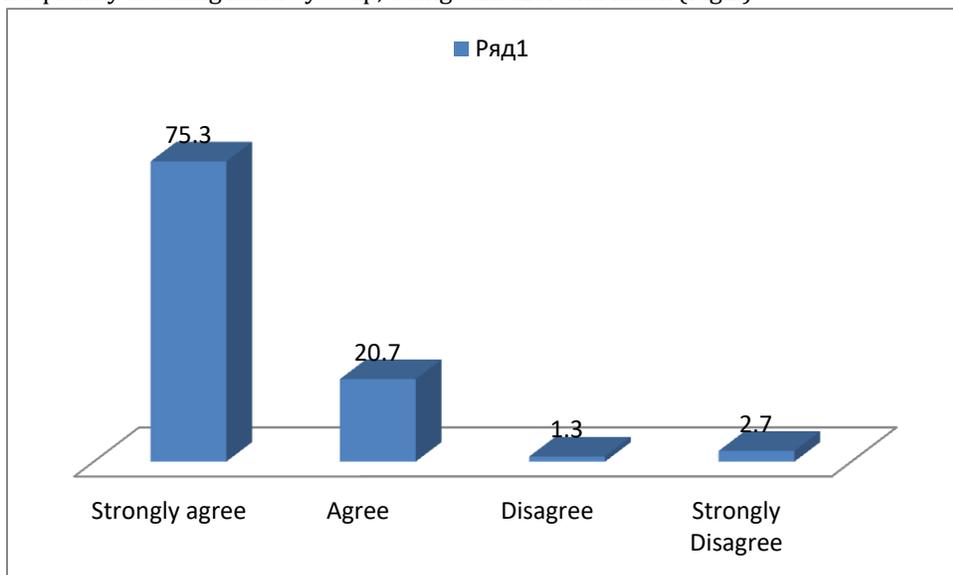

Figure 1 sample respondents of the study area.

Sources of information about COVID-19

About 99.3% of the respondents have information about awareness of COVID-19 where as 0.7% of sample respondents no agree with the information. According to the information from sample respondent and focus group discussion various sources of information about COVID-19 was assessed in this study, and the electronic media such as television, social media, online materials and radio constituted the primary source of information, followed by health workers, Bule Hora University Community service and print materials. About 90% of sample respondents agreed with media, health center, local NGO and other social media transmitting message for local community about COVID-19 continuously while 10% were no agree message is no transmitted continuously.

Knowledge of COVID-19 preventive

Respondents' knowledge level of corona virus prevention methods across the government level was different with in a community. The over whelming majority (97.3%) of the respondents strongly agree with all social groups have no equal understanding about COVID-19 on the knowledge of coronavirus prevention that includes the most important prevention methods such as stay at home, physical distancing, avoiding close contact with people including hand shaking, use of face mask, frequent hand washing with water and soap, avoiding touching eyes, nose and mouth, avoiding mass gatherings, movement restriction and use of sanitizers/disinfectants.

Of the respondents, only 2.7% thought that social group have equal understanding about COVID-19 they had very good knowledge on how to prevent the spread of novel corona virus. The study shows that, about 68.7%, sample respondents have agreed as people have an equal understanding about the transmission of COVID-19 while 31.3 respond as all peoples have no equal understanding. From the sample respondents about 20% agree with pandemic can only protected by religion and culture, while 71.3% disagree and 8.7% responded as neutral. The study show that, an individual's protecting himself from the virus by keeping social distance, frequently washing hand by soap, Using sanitizer and mask (Fig.2)

Figure 2. The knowledge of understanding in the study area

The Social Impact of COVID-19

About 96% of sample respondent agree on pandemic have social impact on a community in social interactions, like ceremony, weeding and other social interaction while 4% is not agree. The study show that about 90% of sample respondents agree with social determinants of health including poverty, physical environment (eg, smoke exposure, homelessness), and race or ethnicity can have a considerable effect on COVID-19 outcomes while 10 % of the sample respondents no agree with the question. The study show that 96% of the sample respondents agree with Corona virus highly affect people with the social groups of poor, elderly (greater than 65), pregnant women, people with disability, unemployed, street vendors and small retailers, taxi drivers. The discussion with key informants also show that public transport operators, construction workers, population with limited access to safe drinking and washing water, and population with less access to improved toilet facilities, health care workers, population with underlying medical problems, and those receiving emergency food Economic and Welfare Effects of COVID-19 and Responses in Ethiopia.

The impact of COVID-19 on household welfare

From the total sample respondents 46.7 % of their family has no source of income while 53% of their family has income to survive during this pandemic. About 90.7% of the sample respondents respond as they believe that their daily income decreases during this pandemic expansion while 9.3% not agree with the statement. The slowdown in economic activity due to the COVID-19 pandemic can affect the population through its effects on the availability of commodities and purchasing capacity. The real incomes of households reflect purchasing capacity.

The discussion with key informant shows that, the pandemic is threatening the study area in multiple fronts, namely health, economy, and social challenges. The pandemic affects a wide range of sectors (health, manufacturing, services, agriculture, and retails, social, national and international value chains) and population groups (rural, urban, casual laborers, self-employed, factory and government workers) with differentiated impacts. Although the pandemic indiscriminately affects all segments of the society and sectors, population subgroups are expected to be differently vulnerable to the pandemic.

Economic Impacts

The study shows that 68% of the sample respondents have their own source of Income that support their Family during this pandemic while 32% were have no their own income. About 53.3% of sample respondent family members have their own source of income while 46.7% depend on the incomes on the respondents. The study revealed that 93.3% of sample respondents said that price of consumable good is increased after the pandemic expansion while 6.7% is not. The study show that 84.7 % of the sample respondent response that the transport facilities and its payment were no fair on their town While only 15.3% of the respondents take as fair with in prevention of the pandemic. The study showed that 93.3% of sample respondents react as price of transport cost is doubled after the pandemic expansion.

The study show that 96 % of the sample respondent said that daily income they receive is no enough to survive your family during this pandemic and 97.3% of COVID-19 have direct impact on your daily activity on the sample respondents and Cause the economic crisis. The study shows that the slowdown in economic activity due to the COVID-19 pandemic can affect the population through its effects on the availability of commodities and purchasing capacity. The real incomes of households reflect purchasing capacity. There is a significant effect of pandemic on income of the sample respondents have seen (Table.2)

Table 1. The significant effect of COVID -19

		Paired Differences							Sig. (2-tailed)
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper	T	df	
Pair 1	Correlation of income before and after pandemic	5.15930E2	705.99680	76.12959	364.56421	667.29626	6.777	85	.000

The study shows that about 88. % of sample respondent in the study is needs emergency support emergency support from the government. The study show that 96% of the sample respondent agrees with COVID-19 has impact on health, education and Agriculture. The study revealed that the income of sample respondent compared before and after the pandemic significantly affect the income of the respondents. Economic impacts and food security vary with in community and gender of household head: As countries declared states of emergency and issued stay-at-home orders, hundreds of millions of individuals in low-income countries found themselves out of work, both in the formal and informal labor markets. Households have lost income across a variety of sources. To have lost income from a particular source, the household must have previously received income from that source; that is, our estimates of losses are conditional on having received income from a given source in the previous estimation .The study revealed that the income of the sample respondents decrease both directly and indirectly as the price of materials increased as the import and export stop (Figure, 5).
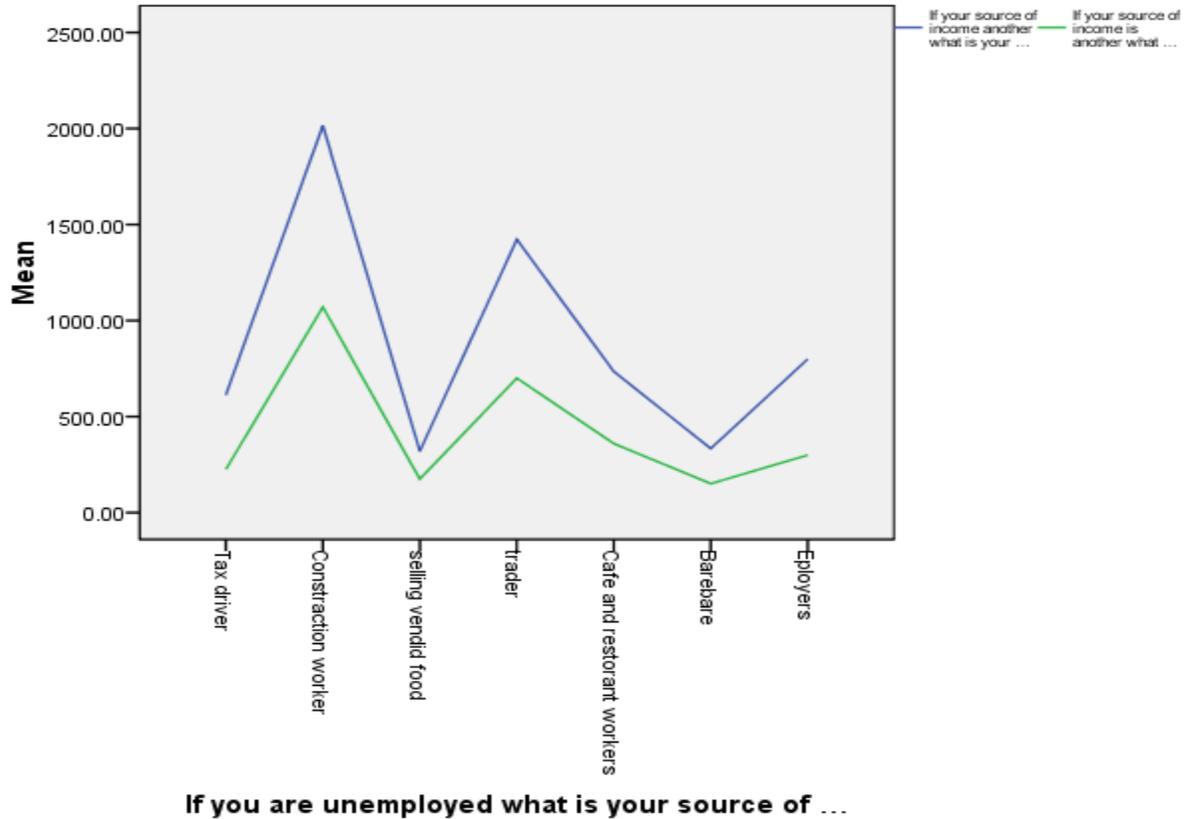
Figure 3 Compression of income before and after pandemic

Considering country-level heterogeneity in income loss, Ethiopian households are significantly less likely to have lost income from every source, except business income, compared to the other countries. The study show that income losses have been equally across the rural and urban populations, both within and across countries.

Discussion

This study aimed to investigate the socio-economic impact of COVID-19 among western guji zone Bule Hora and Dugdedawa Town selected from 150 Respondents in Western Guji zone during September to October, 2020. At the time of this study, the spread of COVID-19 in Western Guji Zone of confirmed case cumulatively increased. Studies indicate that the most of respondents have information prevalent clinical symptoms among COVID-19 infected individuals include fever, cough, and fatigue [17]. The current study shows that respondents were have less knowledgeable about the preventive measures of the COVID-19, with the most commonly cited measures constituting staying at home, physical distancing, avoiding close contact with people including hand shaking, use of facemask, frequently washing hands, avoiding mass gatherings, movement restriction, and use of sanitizers/disinfectants.

The study in line with the study conducted in Ethiopia in April 2020 also showed that about 90% of the participants had good prevention knowledge of maintaining physical distance and washing hands regularly [18]. some studies conducted in other countries have also indicated high levels of COVID-19 knowledge among the general population [19].The study resulted that the in general facts about the causes and symptoms, the unavailability of vaccine or particular antiviral treatment, and the main preventive measures of COVID-19 was 'less'.

The study shows that 93.3% of sample respondents react as price of transport cost is doubled after the pandemic expansion and daily income they receive is no enough to survive your family during this pandemic. As Ethiopia declared states of emergency and issued stay-at-home orders, hundreds of millions of individuals in low-income countries found themselves out of work, both in the formal and informal labor markets. The study shows that households have lost income across a variety of sources.

The sample respondent estimate that 50% of the households that have lost income due to the pandemic as consumable purchasing increasing, slow down of import and exports and state emergency to stay home. The study revealed that governments implement various measures to control the prevalence of COVID-19 pandemic which will be disrupting economic activities of the country. The study in line with the study conducted with [6] the pandemic will significantly reduce the economic growth of the country. People are advised to stay at home; public institutions are also granting forced leaves for their workers operating at minimum capacity, business firms are laying off their workers; downscale their operations; some firms are under complete closure; self-employed workers (including day laborers) are also reducing their effort with many forced layoff days; etc. The impact of the pandemic on economic activities may differ, almost all sectors and sub-sectors are expected to be negatively impacted by the COVID-19 layoff effects, on the one hand, and workers who lose their jobs spend less, on the other.

The study agree with [1] and [9]which reported that the transmission channels of the COVID-19 epidemic impacts on the economic well-being is through direct and indirect effects of the sickness and death which will reduce people either temporarily or permanently from the labour force. The second channel operates through behavioral responses resulting from the fear of contagion (e.g. fear of association with others) and this reduces labour force participation, disrupts transportation and motivates private decision makers to disrupt trade, travel, and commerce. If left unmitigated, the combined effects of these shocks will result in a massive social crisis. Thus, the pandemic will generate reinforcing crises: *health crisis* leads to *economic crisis*, which in turn evolves into *social crisis*. [3] indicated that, the pandemic generates shocks to the economy through three entry points: supply, demand and financial shocks.

 The study revealed that pandemic could lead to recession when there is a prolonged slowdown in economic activity, widespread drop in spending arising from the adverse demand shock. Contraction of business sales and revenues and negative growth of household income and expenditure arising from measures taken to control the pandemic are associated with multiple economic consequences, including massive job losses, and adverse welfare effects of populations and societies.

Conclusions and Recommendation

The objective of this study was to provide preliminary insights on the potential effects of the pandemic on socio-economic growth and welfare in the study area. Very few tools exist in modern economic and social assessments that will sufficiently approximate the impacts of the pandemic and depict realities on the ground. Given that the impact of the COVID-19 is multidimensional affecting economic activities, households, and the financial sector, it requires a holistic and integrated approach to assess the economy-wide impacts of the pandemic. The supply side impact of the pandemic on the economy is through loss of labor inputs due to social distancing, movement restriction, stay-at-home, sickness and disruption to production. The supply side

impacts are also reflected in delays in business inputs being imported because of disrupted transport networks and border closures. There are also demand side impacts such as falling global trade including services, reduced tourism, and loss of income and these impacts can be rapid and very damaging.

Considering the grave human, societal, and economic consequences, there is a critical need for health professionals and policy makers to recognize the magnitude of the COVID-19 epidemic and the potential socioeconomic devastation. Multi-national and multi-sectorial efforts are needed because prevention is beyond the latitude of any one government or usual models of the health care system. Effective implementation of these policy solutions will therefore require full support of all stakeholders, including governments, health professionals, the media, non-governmental organizations, communities, and individuals. To fully curb the corona virus pandemic, it is crucial for international agencies and national governments to take the leadership role in developing and implementing wide-ranging policies that make the diagnosis, therapeutics and vaccines for the virus a global and national priority.

Based on the findings, we suggest the following recommendations:

• Overall, the government should implement the various economic stimulus measures annouced at the start of the COVID19 spread in the country.

• The government should create jobs and create new ones. Focus should be given to the manufacturing and services sectors.

• The government should take actions and policies aimed at reducing the impact of the pandemic on manufacturing firms and service sector should resolve both supply side constraints and shortage of demand.

• In order to improve the balance of payments, priority to access hard currency should be given to firms that import inputs to produce exportable output and substitute further imports.

• An immediate interventions together with recovery plan need to be designed and implemented by government before a temporary health shock turns into an economic and social crisis.

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