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Editorial Note

JADS is a re-instituted journal after some seven years of interruption. Having been re-instituted in February 2019, the new JADS Editorial Board embarked on a series of institutional and framework setting and building for the journal. Since then, five issues (Vol 6, No 1 & No 2 for the year 2019; Vol 7, No 1 & No.2 for 2020 and Vol 8, No 1 for 2021) have been published. The present issue (Vol 8, No 2, December 2021 issue) is composed of five articles that have passed a rigorous review process.

The first article by Kidanemariam investigated the effect of tourism on current account balance in Ethiopia; tested causality between tourism and current account balance; and explored the main challenges of tourism development sector in Ethiopia. ARDL methods of co-integration and Granger causality test was used to explore the relationship and causality between the variables, respectively. The result from the econometric analysis confirmed that tourism industry positively and significantly affects current account balance, implying it is an alternative means to minimize current account deficit through generating foreign currency to the economy. The pair wise Granger-causality test also confirmed the existence of unidirectional causality that runs from tourism receipt to current account balance. However, the trend analysis and qualitative analysis clearly showed that the tourism sector has been challenged by many factors.The author recommends coordinated and integrated public intervention aimed at further developing tourism sector.

The second article by Maru and Zoomers *investigated inclusiveness of large-scale farming and factors that determine wage incomes earned by plantation workers in Ethiopia. Both primary and secondary data were generated from households, and large-scale farming companies. Data were subjected to a modified Mincer's earnings function to see which group of the society benefited from wage employment. The authors found out that inclusiveness in plantation agriculture in the form of wage employment was very limited to the local indigenous population in Gambella and Benshangul Gumuz regional states due to lack of prior farming experiences of the workers. Regional variation in wage rates was observed among Oromia, Gambela and Benshangul Gumuz regional states due to harsh working environment and low availability of workforce. The authors recommend inclusion of the local people in wage employment should receive attention by owners and the government, which will otherwise affect smooth and sustainable operation of the farms..*

Zerihun's study aimed at understanding how existing environmental policy instruments define and represent socio-cultural matters as part of the environment policy and impact assessment frameworks of the country. The study adopted a qualitative method approach through analyzing existing policy documents and interviewing relevant actors. The study found out that while existing instruments do indeed address socio-cultural issues, the main problem lies in adequacy of representation of socio-cultural issues, particularly cultural resources (notably heritages, identities, belief systems and social institutions). More so, the problem lies in the low state of realizing the policy provisions for socio-cultural issues. The study further identified gaps in policy formulators and implementers' general level of socio-culturally sensitive awareness, attitude and commitment. The author recommends a socio-culturally sensitive and duly informed environmental policy formulation and implementation.

The fourth article by Meshesha and Desalegn aimed at examining the economic effect of the COVID-19 on micro and small enterprises in Addis Ababa surrounding towns of Oromia National Regional State, using quantitative data that represent the situation of the enterprises before and after the outbreak of the pandemic in December 2020. The authors found out that the at the beginning of March 2020, before the outbreak of the pandemic, an enterprise had on average 3.8 workers whereas, after the occurrence of the pandemic, an enterprise had on average 2.9 workers. This implies that due to COVID-19, enterprises decrease their workers on average by 0.83 and the mean difference of workers before and after the pandemic was statistically significant at less than 1% probability level. The main challenges enterprises faced during the pandemic were a fall in demand, decline of orders from customers, and lack of operating finance. The authors recommend training on a business recovery plan development and new line production, an extended debt repayment period, and provision of short-term credit are suggested to make enterprises recover faster from the adverse effect of COVID-19.

The last article by Abay and Kidanemariam assessed opportunities available and challenges faced by students with disabilities (SWDs) in public universities in Addis Ababa, employing mixed research approach combining both quantitative and qualitative techniques. The study found out availability of various key services as opportunities and challenges facing SWDs. The study also found out most lecturers have negative attitudes toward SWDs. The regression result confirms that accessibility of infrastructures, high school GPA, monthly expenditure of students, occupation of parents, disability type and mother's education are significantly affecting the academic performance of students with disabilities. The authors recommend public universities and other stakeholders should prepare manuals and guidelines that show step-by-step processes that need to be taken to address issues of SWDs. Awareness creation schemes need to be carried out to change the negative attitudes and mainstream the issues of SWDs in all endeavours of the respective universities.

Editor-in-Chief

The Effect of Tourism on Current Account Balance in Ethiopia

Kidanemariam Gidey[1]

Abstract

Ethiopia is one of the countries that experience a persistent current account deficit, although it has recently realized a steady double-digit economic growth. International tourism can serve as an alternative means to minimize current account deficit through generating foreign currency to the economy. Therefore, this paper investigated the effect of tourism on current account balance in Ethiopia. Besides, causality between tourism and current account balance is tested. Furthermore, this study has tried to identify the main challenges of tourism development sector in Ethiopia. ARDL methods of co-integration and Granger causality test was used to explore the relationship and causality between the variables, respectively. The result from the econometric analysis confirmed that tourism industry positively and significantly affects current account balance, implying it is an alternative means to minimize current account deficit through generating foreign currency to the economy. The pair wise Granger-causality test also confirmed the existence of unidirectional causality that runs from tourism receipt to current account balance. However, the trend analysis and qualitative analysis clearly showed that the tourism sector has been challenged by many factors. Lack of infrastructures development, poor and inadequate tourist facility (quality and adequacy); lack of qualified man power; lack of peace and security; lack of stakeholder's collaboration; inadequate promotional or marketing works and lack of awareness and low participation of the community are among the major challenges mentioned by the respondents. Hence, coordinated and integrated public intervention aimed at further developing tourism sector and curbing the existing bottlenecks in the sector is necessary to fully utilize the constructive role of tourism industry in minimizing the persistent current account deficit in Ethiopia.

Keywords: Tourism, Current account balance, Challenges, ARDL, Ethiopia.

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Introduction

In the twenty-first century, the tourism sector is considered as the most imperative economic sectors in the world, as it is contributing more to income, employment and export (Hall & Seyfi, 2021 and Hafidh & Rashid, 2021). According to the 2019 World Travel and Tourism Council report it is contributing closely to 10% of the world's gross domestic product (GDP), considering its direct, indirect and induced impacts. It is also an engine of employment creation, generating 319 million jobs, or 10% of the total employment in 2018. One in every ten jobs worldwide is directly or indirectly linked to the tourism sector (World Travel and Tourism Council, 2019. It can also ameliorate the current account balance through generating foreign currency. International tourism is acknowledged as a significant foreign exchange earner contributing to capital goods that can be used in the production process (Matthew et.al, 2021). It is part of the current account balance (Balance of Payments) under the category's 'travel' and 'passenger transport' (UNWTO, 2015). Spending by international tourists is considered as exports for the destination country and as imports for the country of residence of the visitor. In current account balance, receipts from international tourism are recorded as credit and expenditure on international tourism is recorded as debit under the services balance (Thano, 2015 & UNWTO, 2015).

Developing countries are often characterized by persistent current account deficit (Orhangazi & Yeldan, 2021). Their value of import of goods and services is usually much higher than the value of exports of goods and services. As a result, they face problems in finding the necessary funds to import capital goods and secure services which are necessary for their sustainable

economic development (Thano, 2015). Ethiopia is one of the countries that experience a higher current account deficit despite its recent realization of a steady double-digit economic growth. According to several WDI and NBE annual reports the value of Ethiopia's export was much lower than the value of its imports for the last half century. For instance, the 2019 WDI data showed that, on average, Ethiopia's current account deficit as a percentage of GDP was about 5% for the year 1981-1990. In the next decade (1991-200), it was widened further to 7.6%. Further, the country has experienced a very high current account deficit during the year 2001-2010 with an average value of 18.5%. On average, this figure has slightly improved and reached to 17.8% during the year 2011-2019. Discouraging performance and unpredictability in export earnings, and ever-increasing demand for imports have led to worsening in current account balance of Ethiopia (Tesfalem, 2017).

International tourism is an alternate to minimize current account deficit through generating foreign currency to the economy. "It is a typical source of foreign exchange, which is helpful to import various goods and services that increase the productive capacity of the economy such as capital goods, and to maintaining the balance of payments of a country" (MoCT, 2009). It can improve the current account balance as international tourism denotes consumption of goods and services outside of the origin of the tourists. It directly affects the balance of payments of the host country as it appears on the balance of payments account under the entry of international services (Orhangazi & Yeldan, 2021). As a result, many developing countries including Ethiopia have encouraged and supported the development of tourism industry in order to transform their economies from mainly traditional agricultural economies to industries ones and thus set in motion the process of development (World Travel & Tourism Council, 2019).

Ethiopia has a lot of tourist attraction areas and mainly almost all types of primary tourist products. It is a home to numerous historical, cultural, religious and natural attractions (Asmare, 2016 and Belete, 2020). Until now, thirteen tourist attraction namely Axum's obelisks, the Rock-Hewn Churches of Lalibela, Gondar's Castles, the Omo lower valley, Awash lower valley, Konso Cultural Landscape, Tia's carved standing Stones, Semien National Park, Harar Jugol wall, *Meskel* festival, *Timket* **(**Ethiopian Epiphany**),** *Fichee-Chambalaalla*, and Geda-system are acknowledged by UNESCO as world heritages.

In order to develop tourism industry and to make the sector successfully contribute to the country's current effort of eliminating poverty, Ethiopia has designed different policies and strategies. For instance, during the imperial regime (1930–1974) legal support was provided for the development of tourism by establishing the Ethiopian Tourism Organization (ETO) instituted by Order No. 36 in 1964. This can be considered as a milestone in the effort to develop modern tourism sector as an imperative sector of economic development. After the overthrow of Emperor Haile Sellasie, the military regime also tried to recognize the tourism sector, but much emphasis was given to domestic tourism. During the EPRDF (Since 1991), significant institutional developments have been in place in Ethiopia to develop the country's tourism sector. These policy measures included the establishment of an independent tourism offices in each regional state by Proclamation No. 41/1993, the establishment of the Ministry of Culture and Tourism (MoCT) in 2005, the preparation of the National Tourism Development Policy in 2009, and the establishment of the Tourism Transformation Council (TTC). Possibly, these are an indication of higher

prioritization given by the recent government to the tourism industry. One of the objectives of the recent National Tourism Development Policy is to "build a tourism industry that makes important contributions in earning and conserving foreign exchange, and integrates into the economic growth of the country" (MoCT, 2009 p.11).

Though higher institutional priority is given to tourism industry development, still the sector is facing different challenges (MoCT, 2009 and UNWT, 2017). For instance, absence of textual information on tourist destinations; lack of promotion; poor sanitation standards and conditions in smaller hotels and restaurants; chronic begging and 'tourist baiting' on streets and tourist sites; mismanagement and/or neglect of existing tourist destinations and resources; lack of trained manpower in the tourist corridor; lack of physical infrastructure (road, transportation system, network facility, availability of hotel accommodations especially tourist site), lack of strict control and regulation of tourist related infrastructures and services; negligence on important cultural sites and facilities and misperceptions on the images of Ethiopia are among the different constraints of the tourism sector development in Ethiopia (Kidanemariam, 2019; Kidane, 2017; Sintayehu,2017; Woreta & Meskele,2018; & Belete,2020,).

The effect of tourism on current account balance has been theoretically understood; there are also extensive bodies of theoretical literature on the issue. So far, scholars such as Haile & Megerssa (2020), Kidanemariam (2019), and Reda (2021) conducted a research to evaluate the effect of tourism on economic growth. But there doesnot seem to be any time series analysis done on the effect of tourism on current account balance in Ethiopia. Hence, this study tries to narrow this research gap by primarily examining the effect account deficit through generating foreign currency to the economy of tourism on current account balance in Ethiopia over the period 1981 to 2019. Besides, this paper identifies the main constraints of the tourism sector development in Ethiopia through qualitative approach (KII).

2. Objective of the study

The general objective of this study is to examine the effect of tourism on current account balance in Ethiopia. Specifically, the study aims at addressing the following objectives.

1. To show the trends of tourism industry (in terms of tourist number and tourism receipt) between the years 1981 to 2019.
2. To evaluate the short run and long- run effect of tourism industry on current account balance.
3. To identify the main constraints of tourism industry in Ethiopia

Literature Review

Theoretical Literature

A large body of literature has been dedicated to the link between tourism sector and current account balance/balance of payment. The ourism-led growth hypothesis (TLGH) argued that international tourism is an engine of economic growth for many countries by generating foreign exchange revenues for government, encouraging investments in infrastructure that ultimately improves the living standard of the citizens of a country (Balaguer & Cantavella-J, 2002; and UNWTO, 2017). It has also been theoretically argued that the tourism sector contributes positively to foreign exchange generation which helps to minimize current account deficit (Matthew et.al, 2021). It is recognized that tourism helps to generate hard currency necessary for bridging or reducing whatever deficit there is in the balance of payments, and thus fosters the development of the national economy (Salah et.al, 1997). It is an alternate means to minimize current account deficit through generating foreign currency to the economy (Thano, 2015). Hall & Seyfi (2021) also

argued that international tourism is an alternative form of export which generates foreign exchange to a given economy.

Empirical Literature

The Effect of Tourism on Current Account Balance

There are several studies available for different countries that examine the relationship between tourism industry and current account deficit. Rubina et.al, (2019) examined the long-run relationships between BOPs deficit and tourism in Pakistan for the period of 1976–2015 using the autoregressive distributed lag (ARDL) model. Their findings proved a relationship between tourism and BOP deficit in the context of Pakistan economy. Another empirical work was conducted in Barbados by Lorde et al. (2013) supported the above finding. They used an inter-temporal budget approach and their result showed that attention on tourism industry has a great impact on the reduction of current account deficit. Bacovic et.al (2020) investigated the short-run and long-run relationship between export of travel services and current account balance equilibrium in twelve in Mediterranean countries by applying a VAR and Panel OLS model. Their result confirmed the strong relevance of export of travel services in achieving current account balance equilibrium.

Çelik, et.al (2013) conducted a research to examine the primary effect of tourism revenues on the balance of payments from 1984 to 2012 in Turkey. Their empirical findings suggest that rise in tourism revenues over has a favorable effect in closing the gap in foreign trade and balance of payments (BOPs). Rafiq et.al (2021) also conducted a research in Pakistan so as to determine the asymmetric impact of tourism on the deficit in BOPs. They applied ARDL model to investigate the asymmetric impact of tourism on BOPs deficit using from 1995 to 2019. Their finding indicated that the existence of co-integration between tourism and BOPs deficit and a favorable effect of tourism on BOPs.

Challenges of Tourism Sector in Ethiopia

Different researchers showed that Ethiopia's tourism industry development has been constrained by many internal and external factors. For instance, Belete (2020) identified lack of skilled human resources, shortage of tourist facilities, weak marketing and promotion, political uncertainty and conflict as the major factors that adversely affects tourism development in Ethiopia. Another researcher Asmare (2016) also argued that political unrest, outbreak of war, famine, unfavorable economic policies and poor infrastructure development are among the major reasons deterring tourism sector development in Ethiopia. Sintayehu (2016) also confirmed the findings of Belete (2020) and Asmare (2016). The result of his study confirmed that lack of promotion, lack of physical infrastructure (road, transportation system, network facility, availability of hotel accommodations especially around tourist site), wrong images about Ethiopia, shortage of trained man power are the main challenges of Ethiopian tourism industry. Low levels of community participation, lack of good governance, lack of stakeholders collaboration, tourism resources degradation, low/lack incentive to tourism investment, and weak policy implementation are also another that affect the progress of tourism sector in Ethiopia (Meskele , 2018). Further Kidane (2017) conducted a research to identify the socio-economic impacts of tourism. His finding argues that even though the sector has its own contribution, it is subject to many challenges such as poor infrastructure and accommodation, social-related problems such as begging & theft, high entrance fee, poor service provision, lack of awareness and promotional works, lack of coordination between stakeholders, and geographical location are among the main factors responsible for underdevelopment of the tourism sector.

Materials and Methods

Research Design

To address the objectives of the study, mixed research design approach combining both quantitative and qualitative method is used.

To analyze the effect of tourism industry on current account balance, quantitative research design (explanatory research design) is applied.

In addition, in order to identify the main challenges of tourism industry in Ethiopia, qualitative design is used.

Model Specification

To test whether there is a long run equilibrium relationship between the variables; *bounds test for co-integration* is carried out as proposed by Pesaran et.al (2001).

$$CAB_t = \beta_0 + \beta_1 \sum_{i=1}^{n} CAB_{t-i} + \beta_2 \sum_{i=0}^{n} TOUR_{t-i} + \beta_3 \sum_{i=0}^{n} OPN_{t-i} + \beta_4 \sum_{i=0}^{n} AGRI_{t-i} + \beta_5 \sum_{i=0}^{n} SERV_{t-i} + \beta_6 \sum_{i=0}^{n} REER_{t-i} + \beta_7 \sum_{i=0}^{n} TOR_{t-i} + \beta_8 D_{1999} + \beta_9 D_{2005} + \beta_{10} D_{2015} + \beta_{11} T + U_t \quad \ldots\ldots (2)$$

Before the selected model is estimated by ordinary least squares, the orders of the lags in the ARDL model are selected by the Schwarz Bayesian criterion (SBC). From this, a maximum of 2 lag length is selected. Because for annual data, Pesaran and Shin (2001) recommend choosing a maximum of 2 lags.

In the existence of cointegration, short-run elasticities are estimated by constructing an error correction model of the following form:

$$\Delta CAB_t = \alpha_0 + \alpha_1 \sum_{i=0}^{n} \Delta CAB_{t-i} + \alpha_2 \sum_{i=0}^{n} \Delta LnTOUR_{t-i} + \alpha_3 \sum_{i=0}^{n} \Delta LnOPN_{t-i} + \alpha_4 \sum_{i=0}^{n} \Delta LnAGRI_{t-i} + \alpha_5 \sum_{i=0}^{n} \Delta LnSERV_{t-i} + \alpha_6 \sum_{i=0}^{n} \Delta LnREER_{t-i} + \alpha_7 \sum_{i=0}^{n} \Delta LnTOT_{t-i} + \alpha_8 D_{1999} + \alpha_9 D_{2005} + \alpha_{10} D_{2015} + \alpha_{11} T + \alpha_{12} ECT(-1) + \alpha_t \quad \ldots\ldots (3)$$

Where: CAB_t = Current account balance to GDP ratio at time *t*.

$LTOUR_t$ = Logarithm of tourism receipt as a % of GDP at time *t*.

$LOPN_t$ = Logarithm of openness (sum of export and import as a % of GDP) at time *t*.

$LAGRI_t$ = Logarithm of agriculture sector share at time *t*.

$LSERV_t$ = Logarithm of service sector share at time *t*.

$LREER_t$ = Logarithm of real effective exchange rate at time *t*.

$LTOT_t$ = Logarithm of terms of trade at time *t*.

D_{1999} = Year dummy for 1999 spike(break)

D_{2005} = Year dummy for 2005 spike (break)

D_{2015} = Year dummy for 2015 spike (break)

T = Time trend

u_t = error term

α_0 = constant term

$\beta 1, \beta 2, \beta 3, \beta 4, \beta 5, \beta 6, \beta 7, \beta 8, \beta 9, \beta 10$ *and* $\beta 11$ *are* elasticity coefficients.

Long Run and Short Run Models

Once co-integrating relationship is ascertained, the long run model estimates of the ARDL model are estimated as follows.

Further, ***pairwise Granger causality test*** is applied to determine whether there is uni-directional causality or bi-directional causality between tourism and current account balance. To check the causality between the two variables, the following model is specified.

$$\Delta LTOUR_t = \beta_0 + \beta_1 \sum_{i=1}^{n} \Delta LTOUR_{t-i} + \beta_2 \sum_{i=1}^{n} \Delta CAB_{t-i} + \beta_3 T + u_t \quad \ldots\ldots (4)$$

$$\Delta CAB_t = \beta_0 + \beta_1 \sum_{i=1}^{n} \Delta CAB_{t-i} + \beta_2 \sum_{i=1}^{n} \Delta LTOUR_{t-i} + \beta_3 T + u_t \quad \ldots\ldots (5)$$

The null hypothesis (H0) $\beta_2 = \beta_3 = \ldots = \beta_n = 0$ and the alternative hypothesis (H1) state that at least one of them is not zero. If the null hypothesis is rejected for equation (4), it can be said that there is a unidirectional causality from LTOUR to CAB. On the other hand, if the null hypothesis is rejected for equation (5) it can be said that there is a unidirectional causality from CAB to LTOUR. If the null hypothesis is rejected for both equations, it can be said that there is bidirectional causality between CAB and LTOUR.

where is the first difference operator and $ECT_{(-1)}$ is the error correction term which measures the speed of adjustment. It measures how quickly the series can come back to its long-run equilibrium. The sign of the coefficient must be negative and significant.

Data Sources and Description of the Variables

To get adequate information for the study, this researcher has used both primary and secondary sources of data. With regard to the secondary data, thirty-nine years annual time series data from 1981-2019 is used from different sources, specifically, obtained from ministry of culture and tourism (MoCT, National bank of Ethiopia (NBE), World Development Indicators (WDI), United Nations Conference on Trade and Development (UNCTAD) and IMF database. Primary data was also collected through in-depth interview (KII) to triangulate and substantiate the quantitative analysis. Twenty key informants were purposively selected based on their unique experience and information that they have. To do so, an interview guide was prepared. The interviewees were selected from Ministry of Culture and Tourism (MoCT) and other stakeholders (Ethiopian Tour Operator Association, Ethiopian Chamber of Commerce, Ethiopian Tourism organization, Ethiopian hotel owner's association, Ethiopian Heritage Conservation Association and Authority for Research and Conservation of Cultural Heritage).

All of the explanatory variables (except dummy variables) are transformed in to logarithm while the dependent variable is as it is. As the values of the dependent variable (current account balance as a percentage of GDP) is negative and cannot be transformed in to natural logarithm. Therefore, the model is specified in level-log form and the interpretation of the coefficients is a little bit different from the usual elasticity interpretation. The descriptions and measurements of the dependent and the explanatory variables that are included in the model are explained in Table-1 as follows:

Table-1: Description of the Variables and Source

Variables	Descriptions	Sources
Current account balance (%GDP)	Current account balance is the sum of net exports of goods, services, net income and net current transfers as a share of gross domestic product	IMF
Tourism receipt (%GDP)	Expenditure of international inbound visitors including their payments to national carriers for international transport as a share of gross domestic product	MoCT
Trade openness	Trade openness is the sum of exports and imports measured as a share of gross domestic product	UNCTAD
Share of Agriculture value added	The value added in the agriculture sector, including forestry, hunting and fishing, and cultivation of crops and livestock production, after adding up all outputs and subtracting intermediate inputs as a share of gross domestic product.	WDI
Share of Service sector value added	The value added in wholesale, retail trade, hotels and restaurants, transport, and government, financial, professional, and personal services such as education, health care, and real estate services as a share of gross domestic product	WDI
Real effective exchange rate	The value of country's currency against a weighted average of several foreign currencies divided by a price deflator	National bank of Ethiopia (NBE)
Terms of trade	The ratio of a country's export prices to its import prices. It is the ratio between the index of export prices and the index of import prices.	UNCTAD

Method of Data Analysis

The methodology used to examine the effect of tourism sector on current account balance in Ethiopia followed three procedures. First, to ensure that variables are at most I (0) or I(1), I carried out unit root tests using the most commonly used Augmented, Dickey-Fuller (Dickey and Fuller, 1979) unit root test and Phillips-Perron (1988). The next step is to inspect the existence of a long run relationship between tourism receipt (LTOUR), current account balance (CAB) and other control variables using the bounds test. Lastly, the long-run and short run model is derived from the ARDL model through a simple linear combination, which integrates both short-run adjustments with long-run information. As compared to other multivariate cointegration techniques, the ARDL approach is more appropriate given its considerable advantages (Pesaran et al., 2001)). For instance, it is mostly well applicable for small sample size. It overcomes the problems of bias and inefficiency caused by the use of relatively small sample set. It is also applicable irrespective of whether the underlying regressors are purely I (0), purely I (1) or fractionally integrated. In addition, the model uses a sufficient number of lags to capture the data-generating process to the specific modeling framework. Further, endogeneity and serial correlation problems

are corrected through appropriate lag selection (Umoh and Effiong, 2013).

To determine whether there is uni-directional causality or bi-directional causality between tourism industry (TOUR) and current account balance (CAB), pairwise Granger causality test is applied. After estimating the long run and short run models, normality test, serial correlation test, heteroscedasticity test and Ramsey Reset test of model specification test is undertaken to check the robustness of the model. In order to estimate the models and to perform the pre-estimation and post estimation diagnostic tests, Eviews-10 statistical package is used. Finally, the qualitative data obtained from interview was transcribed & the transcribed data is analyzed manually using thematic content analysis.

Result and Discussion

Descriptive Analysis

Trends in Total Number of International Tourists Arrived and Revenue Generated in Ethiopia

The trend of total **number and growth of international tourists arrived** in Ethiopia from 1981–2019 is shown in Fig-4.1, panel A and panel B. On the other hands, the value of international tourism receipt (in USD) is presented in Fig-4.2. The data used to produce the graphs was obtained from MoCT tourism statistical data.

Based on Fig-4.1 panel A, in 1981 the total number of international tourists arrived in Ethiopia was about 45963. In the next three years it has continuously increase and reached to 64240 in 1983. Similarly, the total tourism receipt has increased from 6.23 million USD in 1980 to 8.25 million USD in 1983, as depicted in Fig. 2. However, the smooth flow of tourist arrivals and the revenue generated from international tourism in Ethiopia appears to have significantly declined between 1984 -1986. This was mainly attributed to the outbreak of famine during 1984-1986 and political turmoil during the military regime. In the next 4 years, the flow of international tourists and revenue generated has slightly increased to 79346 and 25.26 million USD respectively. Despite the frequent outbreak of civil war and conflict, the military era was still relevant in the development of tourism in Ethiopia, though it was in its early stages (Amare, 2016).

In 1991, the military regime was replaced by the Ethiopian People's Revolutionary Democratic Front (EPRDF). During this year the tourism receipt was declined to 18.8 million USD, though the number of tourists was slightly increased to 81581. This clearly shows that the transition period was not a suitable time for the progress of the tourism sector (Amare, 2016). During the transition period, the destruction of parks built by the Derg regime as a reflection of community antagonism to the old regime was seen. The community who settled around parks cleared forests and parks, converting them to agricultural land and settlements" (Amare, 2016). This may decrease the average length of days that tourists stay in the tourist cites which decrease the revenue generated from international tourists. In the next 6 years, international tourism continued to recover. During this period, the flow of international tourists increased by nearly two-fold, from 83213 in 1992 to 138856 in 1997. Similarly, the revenue generated from this sector has increased by more than two-fold, from 20.6 million USD in 1987 to 43 million USD in 1997. This recovery could be due to the new economic policy measures taken by the transitional government immediately following the transition period. In 1992, a new economic policy under Proclamation No. 15/1992 was declared. This free market economic reform encouraged the establishment of private banks and insurance companies, the building of new hotels, and the establishment of tour operators, and travel agencies. Then tourist

accommodations became the central point of commerce, business, and administration in the country (Ayalew, 2009; & Amare, 2016, Kidane, 2017).

During 1998 &1999, the Ethiopia's tourism industry was challenged again by the Ethio-Eritrean border conflict. As reported in the Fig-4.1 Panel A and B, the number of tourists who visited Ethiopia showed a decline for years 1998 & 1999. During this period, the number of international tourist arrivals sharply dropped from 138856 in 1997 to 115,000 in 1999. The revenue was also declined from 43 million USD in 1997 to 33.6 million USD in 1999 (Fig 1).

After the Ethio-Eritrean war, the Ethiopia tourism industry started to recover & expand for the next 18 years. During this period, the government of Ethiopia gained different support from international organizations such as the World Bank and IMF, which offered the government an opportunity to strengthen its efforts to develop the socioeconomic sector (Amare, 2016). This laid the foundation for the postwar extraordinary expansion of tourist travel and revenue generation. During 1999-2017 period, the number of tourist arrivals in Ethiopia has also increased by more than six-fold, from 135,954 in 2000 to 933344 in 2017.The revenue generated from the sector has also shown a remarkable rise (except in 2008) from 73.8 million USD to 4.5 billion USD. But this remarkable performance could not sustain in the next two years. The number of international tourists and receipt has again declined to 884354 and 3.3 billion USD in 2019, respectively. This is due to the post reform political violence and conflict which restricted the free movement of tourist and damaged different infrastructures and social overheads such as lodges, hotels and other facilities.

From the above trend analysis, it can be concluded that political instability (during the military regime, Ethio-Eritrean war and the current post reform political violence & conflict) detrimentally affected tourism sector development as it deteriorates the confidence of tourists, potential investors and social overheads and infrastructures.

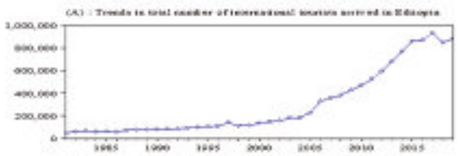


Figure 1 Total number and growth of international tourists arrived in Ethiopia (1981-2019)
Source: MoCT tourism statistical bulletin

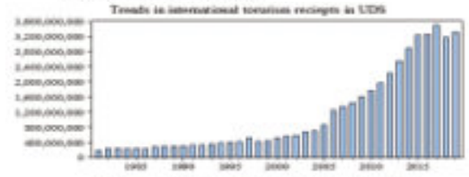


Figure 2 Trends in International Tourism Receipts in USD (1981-2019)
Source: Own computations based on MoCT updated parameters

Econometric Analysis

Stationarity Test

The integrating properties of the variables (stationarity of the series) included in the model was tested in terms of *Augmented Dickey–Fuller* (ADF) and *Phillips–Perron* (PP) approach. Trend and intercepts were included in the tests. The test results of ADF and PP unit root test presented in Table 2 clearly shows that most of the variables such as ratio of tourism receipt to GDP (LTOUR), trade openness (LOPEN), share of agriculture value added (LAGRI), share of service sector value added (LSERV), terms of trade (LTOT) and real effective exchange rate (LREER) are not stationary at level. However, the first differences of these series were stationary at level at 1% level of significance, implying that they were integrated of degree one I (1). On the other hands, current account balance (CAB) is stationary at level at 5% level of significance.

Table 2: Unit Root Analysis

Table 2: Unit Root Analysis

Variables	ADF Unit Root Test			PP Unit Root Test		
	T-	Prob.Values	Decision	T-	Prob.Values	Decision
CAB	-	0.0303	Stationary	-	0.0303	Stationary
LTOUR	-	0.9686	Non-	-	0.9731	Non-
LOPN	-	0.7174	Non-	-	0.7804	Non-
LAGRI	-	0.0011	Stationary	-	0.4448	Non-
LSERV	-	0.2842	Non-	-	0.2639	Non-
LTOT	-	0.2431	Non-	-	0.2266	Non-
LREER	-	0.8002	Non-	-	0.8002	Non-
ΔCAB	-	0.0001	Stationary	-	0.0000	Stationary
ΔLTOUR	-	0.0023	Stationary	-	0.0008	Stationary
ΔLOPN	-	0.0000	Stationary	-	0.0000	Stationary
ΔLAGRI	-	0.0061	Stationary	-	0.0012	Stationary
ΔLSERV	-	0.0004	Stationary	-	0.0000	Stationary
ΔLTOT	-	0.0001	Stationary	-	0.0000	Stationary
ΔLREER	-	0.0001	Stationary	-	0.0000	Stationary

Source: Author computation, 2019
Note: Significance at 1% and 5% is shown by * and ** respectively.

That means the integrating order of the variables was a mixture of I (1) and I (0). This underpins the tenability of ARDL bounds tests approach as the order of integration is mixed and none of the variables were found to be I (2) or above.

ARDL Bounds Tests for Cointegration

Once the stationarity of the variables is checked, the bounds test of cointegration is conducted to examine the long-run relationship among the variables in the model.

Since the observations are annual, we choose 2 as the maximum order of lags in the ARDL and conduct the bound test. Table 3 depicts the calculated F-statistics and critical values for bound test. As reported in the table the calculated F-statistic (6.385252) is greater than the upper bound critical value of 4.9 provided by Pesaran et al. (2001) at the 1% level of significance. Consequently, the null hypothesis of no long-run relationship exists is rejected, implying there is a strong evidence for the existence of cointegration or a long-run relationship among current account balance (CAD), LTOUR, and the other control variable included in the model. The existence of this cointegrating equation implies that the variables have tendencies to move together and maintain a long run equilibrium relationship.

Table 3: ARDL Bounds Test

Sample (adjusted): 1983-2019		
Included observations: 37		
Null Hypothesis: No long-run relationship exists		
Test Statistic	Value	k
F-statistic	6.385252	6
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	2.53	3.59
5%	2.87	4
2.5%	3.19	4.38
1%	3.6	4.9

The Long Run and Short Run Effect of Tourism on Current Account Balance

Having confirmed the existence of a long-run relationship between current account balance (CAB), tourism receipt (LTOUR) and other control variables in the model, the long-run and short run equations are estimated. Table-4 presents the long-run estimates of the model. The result depicts that the coefficients of all of the explanatory variables included in the model (except LTOT and LREER) are statistically significant. Tourism receipt to GDP ratio (LTOUR), share of agriculture value added (LAGRI), share of service sector value added (LSERV) positively and significantly affects current account balance (LCAB) at 5%, 1% and 5% respectively while trade openness (LOPN) and the year dummy variables (D_{1999}, D_{2005} and D_{2015}) negatively affects current account balance. As the model is specified as level-log form, the interpretation of the coefficients is a little bit different from the usual elasticity interpretation. The coefficient of my variable of interest, tourism receipt (LTOUR), is about 6.74, suggesting that as the ratio of tourism receipt to GDP ratio increases by one percent, current account balance will increase by about 0.0674 percent per year. This result is consistent with the argument of tourism-led growth hypothesis (TLGH) which argued that international tourism minimizes current account deficit by generation foreign exchange revenues. This finding is also similar with the findings of such as Rubina et.al (2019), Bacovic et.al (2020), Lorde et al. (2013), and Rafiq et.al

(2021) who argues that tourism is an alternate means to minimize current account deficit through generating foreign currency to the economy.

Table 4: Long Run Coefficients

Selected Model: ARDL (1, 0, 0, 2, 0, 0, 0)

				Dependent Variable: CAB
Variable	Coefficien	Std.	t-	Prob.
LTOUR	6.740294	3.086321	2.183925	0.0394
LOPN	-6.813142	1.718724	-	0.0006
LAGRI	21.054683	5.300510	3.972199	0.0006
LSERV	12.584950	5.933512	2.120995	0.0449
LTOT	-3.485848	3.867341	-	0.3767
LREER	-3.899363	2.665119	-	0.1570
D_{1999}	-5.230978	0.816578	-	0.0000
D_{2005}	-5.604776	1.333651	-	0.0003
D_{2015}	-9.050314	1.426382	-	0.0000
C	-	44.38038	-	0.0126
T	0.048149	0.091448	0.526522	0.6036

Source: Author computation, 2019

Once the long-run coefficients of the model are estimated, the short-run ECT model is estimated. The estimated error Correction model which helps to formulate the dynamic of the system is presented in Table-5. The result obviously shows that the ECT coefficient is correctly signed (negative as expected). The ECT coefficient is also highly significant as evident by its probability which is even less than 1% conventional level for significance. Such highly significant Error correction term is another proof for the existence of a stable long run relationship among the variables (Banerjee, et al., 2003). The coefficient of the error correction coefficient is about -0.73988 implying that about 73.4% of the disequilibrium could be corrected in each one year. In other words, approximately 73.4 percent of the disequilibrium from the previous year's shock converges back to the long-run equilibrium in the current year. Similar to the long run effect, the short run estimates presented in Table-5 reveal that tourism sector has a positive and significant effect on the current account balance in the short run. That means tourism sector is an alternate to minimize current account deficit through generating foreign currency to the Ethiopian economy both in the short run and in the long run.

Table 5: Error Correction Representation

Selected Model: ARDL (1, 0, 0, 2, 0, 0, 0)

				Dependent Variable: D(CAB)
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LTOUR)	4.987017	2.351809	2.120502	0.0450
D(LOPN)	-5.040916	1.158854	-4.349914	0.0002
D(LAGRI)	3.280941	3.116927	1.052621	0.3034
D(LAGRI (-1))	19.546590	5.320001	3.674170	0.0013
D(LSERV)	9.311369	4.448191	2.093294	0.0475
D(LTOT)	-2.579114	2.713523	-0.950467	0.3518
D(LREER)	2.885066	1.929247	1.495436	0.1484
D_{1999}	-3.870303	0.724674	-5.340751	0.0000
D_{2005}	-4.146869	0.936674	-4.427230	0.0002
D_{2015}	-6.696158	0.819922	-8.166825	0.0000
T	0.035625	0.066006	0.539718	0.5946
ECT (-1)	-0.739881	0.103833	-7.125690	0.0000

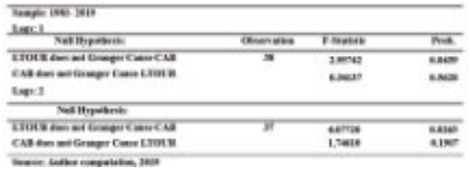
ECT (-1) = CAB + 6.7403*LTOUR - 6.8131*LOPN -21.0547*LAGRI +12.5848*LSERV-3.4858*LTOT + 3.8994 *LREER -5.2310*D_{1999} - 5.6048*D_{2005} - 9.0503*D_{2015} -120.0448 + 0.0481*T

Source: Author computation, 2019

Pairwise Granger Causality Results

In order to identify the direction of causality between current account balance and international tourism receipt in Ethiopia, pair wise Granger-causality test was conducted. The test result confirmed that causality runs from tourism receipt to current account balance. At a lag length of one and two there is a uni-directional Granger causal relationship from tourism receipt to current account balance.

Table 6: Pairwise Granger Causality Tests



Diagnostic Tests

To check the robustness of the estimated model, different diagnostic tests are conducted. These tests include Lagrange multiplier test of residual serial correlation; Ramsey's RESET test; Jarque-Bera Normality test, Breusch-Pagan heteroscedasticity test and CUSUM and CUSUM stability tests. The test results are reported in Annex Table-A, Table-B and Annex Figure-A. All of these tests indicate that the disturbance terms are normally distributed, serially uncorrelated with homoscedasticity of residuals thus confirming the models have correct functional forms. Besides, the CUSUM and CUSUM of Squares plot confirmed that the parameters of the models are relatively stable over time.

Challenges of Tourism Sector Development in Ethiopia

Ethiopia is a home to numerous historical, cultural, religious and natural attraction (Asmare, 2016 and Belete,2020). The man made and natural attractions make the country one of the top tourist destinations in the world. But, despite its tourism potential, Ethiopia is receiving less number international tourists and foreign revenue from the sector. In this research, a key informant's interview was conducted so as to identify the main constraints of tourism sector development in Ethiopia. Accordingly, the result obtained from the qualitative analysis (interview analysis), revealed that there are many factors that challenge the sector. These challenges can be categorized into seven major factors, namely, underdeveloped infrastructure, poor or inadequate tourist facilities, lack of skilled manpower, political instability, lack of coordination between stakeholders, lack of promotional works, and lack of awareness and low community participation. The detail description of each challenges mentioned by the respondents is given below.

Underdeveloped Infrastructure: Tourism industry by its nature requires adequate, reliable, and quality infrastructure such as electric power, communication service, water supply, accessible road, and sanitation around the hotels and tourist sites. In this regard, the interviewee from MoCT and ETOA said that lack of infrastructure is the main constraint that hinder the development of tourism sector in Ethiopia. According to them, those tourist attraction areas which are far from urban areas are not easily accessible to tourists due to lack of road transport or due to uncomfortable road infrastructures. These sites are also subject to unavailable or limited electric power, communication service, water supply, and sanitation facilities. The international tourism competitiveness index also confirms this fact. According to the travel and tourism competitiveness index (TTCI), Ethiopia's tourism sector performance is much lower than many East African countries such as Mauritius, Seychelles, Kenya, Tanzania, Rwanda, and Uganda in 2019. It lags behind Eastern Africa's average on the majority of the 14 TTCI pillars, especially due to an underdeveloped overall T&T infrastructure (128th out of 140 countries) which comprises Tourist Service Infrastructure index (138th out of 140 countries), Ground and Port Infrastructure index (116th out of 140 countries) and Air Transport Infrastructure (98th out of 140 countries).

Inadequate and/or Poor Tourist Facilities: The result obtained from the interviews, the quality and quantity of service provided to tourists in hotels, restaurants, in recreational centers and other activities is poor. The services are not in a standard that meets the demand of the tourists. There are hygiene and sanitation problems almost in all service providing centers. The hospitality is not good in some sites which frustrate the tourists. According to the respondents from ETOA and Ethiopian hotel owner's association, the quality and quantity of the services become worse when we go to zones and woredas. These problems have a great influence on the tourism development in Ethiopia.

Lack of Qualified Manpower: Availability of qualified human power that is capable of exploiting the potential benefits of the tourism sector is very important for all tourism destination countries (OECD,2020). However, in developing countries like Ethiopia, availability of qualified human power is a very great challenge, particularly in those countries experiencing the most rapid tourism growth. In tourism sector, the

predominance of small-scale tourism service providers presents particular challenges. According to the respondents from tourism expansion directorate, Ethiopia's tourism sector has been also facing a severe shortage of trained manpower, which may hinder the development of the industry. In Ethiopia, most of the people engaged in the tourism sector do not have extensive knowledge and experience which helps to extensively exploit the benefits from the sector. Even some times, leaders and experts who are not directly related to the sectors are assigned to culture and tourism ministers, bureaus and offices by the government. This is usually done as a demotion or penalty, when they fail to fulfill their responsibility in the other sectors. In addition, the tourists who come to Ethiopia are from different countries of the world with diversified language and culture. But there is lack of diversified tourist guiders with different international language skills who could provide quality tour operation services and confidently explain the different tourism resources in the country. The 2019 World Economic Forum T&T index verified that there is low level of qualified human resource and underdeveloped labor market that could support tourism sector development. According to the report, Ethiopia has scored a low score of Human Resources and Labor Market index (128th out of 140 countries).

Lack of Peace and Security: Tourism is possible in areas where peace is present as tourists are generally very concerned about their security and safety (Litvin, 1998 and Baker, 2012). Political instability and conflict lead tourists either not to go at all or choose for places where there is peace (Baker, 2012 and Yenesew, 2017). Many tourist destinations, especially in the developing countries like Ethiopia, are facing fluctuations in tourist arrivals, due to unsafe political conditions (Shin, 2005). In this research, an interview was conducted to investigate the main challenges of tourism sector in Ethiopia. The respondent from MoCT and chambers of commerce said that the Ethiopian tourism industry has also been highly affected by the absence of peace and security since the last three years. According to the respondents, the recent political instability has restricted the free movement of tourist and damaged different infrastructures and social overheads such as lodges, hotels and other facilities. One of the respondents from MoCT said that "Let alone significant conflict and violence, one bullet fire is enough to spoil the tourism and travel industry". Literary to say tourism demand is highly elastic (sensitive) to peace and security problems. The respondents from ETOA claimed that, recently, lack of peace and security is becoming the main challenge of tourism sector in Ethiopia. As a result of the conflict and violence, the number of tourist arrivals and revenue has been declined over the last three years. Besides, a lot of people engaged has been temporarily unemployed due to business collapse in the sector.

Lack of Coordination. Tourism is not at all a task to be left to a single organization. There are many actors and stakeholders in the sector which undertake inter-related activity that requires coordination and integration. It encompasses a wide range of stakeholders such as governmental, religious organizations, private sectors, civil societies and local communities, etc. The information obtained from the KII respondents (MoCT, ETOA, chamber of commerce) said that there is lack of cooperation and mutual support within and between tourism stockholders, they do not work together. Responsible stakeholders' failure to work in collaborative manner is among the key challenges for tourism sector development. Apart from acting separately, most actors such as hotels, tour operators, regional culture & tourism bureaus, *woreda* culture & tourism offices are not working in collaboration and in an integrated manner.

Most of the time the mandate is only left to the culture and tourist bureaus or offices.

Lack of Promotional Works: Among the several factors influencing tourism sector development in the host countries is tourism marketing(promotion) activity by tourism operators and concerned government organizations (Dwyer & Forsyth,1992). In this research, most of the respondents from different sectors (especially interviewee from chambers of commerce and MoCT) shared that lack of promoting tourism sites is one of the major factors advversely affecting the tourism prospects of Ethiopia. They said that most of the country's tourism resources are less known internationally, even by the domestic residents. Concerned bodies such as diplomats, ETO and ETOA are not promoting the tourism cites of the country extensively. Though there is an attempt to promote the tourism resources, it is not in a manner that neutralizes the bad image of the country. In addition, most of the tourism marketing activities focus on few sites (Aksum obelisks, Lalibela hewn churches, Gondar's Castles, etc.) that are already known by international communities, though there are many hidden tourist attraction areas.

Lack of Awareness and Low Community Participation: According to Saarinen (2010) and Cardenas et al. (2015), local communities' awareness and knowledge about tourism development in their areas is one of the factors that affect the sector. Tourism awareness and perceptions are very important as it can increase the participation of the communities in tourism. It can also change the community's perceptions about tourism (Lekaota, 2017). Not only the awareness but also active participation of the community is crucial for the tourism sector sustainable development.

Most of the KII respondents described that lack of awareness of the community is also adversely affecting the tourism sector development in Ethiopia. They said that there is a substantial misunderstanding at almost all levels of the society with regard to tourism sector. The misunderstanding includes hindering the free movement of tourists through begging; overcharging tourism services and unable to protect tourism resources. Usually, there are many beggars along the major roads and tourist sites. This bad habit may not only affect the development of tourism industry, but it may also damage the image and dignity of the country. On top of this, the communities have limited awareness about the tourist attraction resources and low commitment to protect the resources. For instance, the natural tourist attraction resources such as national parks are being adversely affected due to irrational human activity (deforestation, illegal settlement, and hunting) which is reducing the potential for ecotourism. This is mainly attributed by lack of awareness of the surrounding communities.

Conclusions and Policy Implications

The main purpose of this study was to examine the contribution of the tourism sector in minimizing current account deficit in Ethiopia. Besides, this study has also tried to identify the main challenges of tourism development sector in Ethiopia. ARDL methods of cointegration and Granger causality test was used to explore the relationship between tourism sector and current account balance and causality between the variables, respectively. The result from the econometric analysis confirmed that tourism industry positively and significantly affects current account balance and there is a bidirectional causality that runs from tourism to current account balance at both lag one and lag two. This result is consistent with the argument of tourism-led growth hypothesis (TLGH) which argued that international tourism

minimizes current account deficit by generating foreign exchange revenues. Consequently, we can conclude that tourism is an alternate means to minimize current account deficit through generating foreign currency to the economy.

Despite its contribution, the sector is being constrained by many bottlenecks. For instance, the trend analysis clearly showed that political instability (during the military regime, Ethio-Eritrean war and the current post reform political violence & conflict) has detrimentally affected tourism sector development as it deteriorates the confidence of tourists, potential investors and social overheads and infrastructures. This fact is also confirmed by the qualitative analysis. Further the qualitative analysis (from KII) showed that the Ethiopian tourism sector has been challenged by many other factors. Lack of infrastructures development; poor and inadequate tourist facility (quality and adequacy); lack of qualified man power; lack of peace and security; lack of stakeholder's collaboration; inadequate promotional or marketing works and lack of awareness of the community are among the challenges mentioned by the respondents.

Therefore, coordinated and integrated public intervention aimed at further developing tourism sector is necessary to fully utilize the constructive role of tourism industry in minimizing the persistent current account deficit in Ethiopia. First, concerned public bodies should give priority to the development of different hard and soft infrastructures such as, roads, air ports, electricity, telecom, payment system (like ATM, e-commerce) and other infrastructures around tourist attraction areas. To the infrastructure related bottlenecks, it is crucial for tourism strategies to be integrated with existing infrastructure plans and to design a cooperative arrangement with the private sector, including public-private partnerships (PPPs). Second, the government should create conducive environment to tourism sector by providing incentives to private investment in the sector such as hotels, lodges and others. Especially, in regions and remote areas there is a need to facilitate the expansion of the private sector. This intervention will help to deliver adequate and quality tourism products at the destination areas. Third, government should ensure peace and security in the country to build the confidence of tourists and potential investors. Fourth, policy makers have to design a mechanism that fills the qualified human resource gap. The government is still directly involved in the provision of tourism training. But these state-owned training institutions cannot close the tourism work force demand and supply gap due to their poor & limited capacity. In this regard, creating public-private partnerships and encouraging private sector investments in the areas of tourism human resource training is important to effectively solve the problem.

Fifth, sufficient resource should be allocated for tourism marketing and promotion as well as qualified human resource development. Currently, globalization and technology has created a new approach of marketing. So instead of relying on the conventional marketing strategies, concerned bodies should strengthen the social media and e-marketing as an alternative means of promoting Ethiopian tourism cites. Sixth, policy makers should create awareness about the benefit of the tourism industry to local communities, especially to those who reside close to the attraction areas. Besides, local communities should directly participate in decision making pertaining tourism in their respective localities. Further communities should benefit from tourism in the form of job opportunities or other indirect means.

Seventh, while trying to minimize the main bottle necks at grass root level, an integrated approach between the tourism sector stakeholders should be designed and implemented. As the challenges of tourism sector are diverse, the elimination of tourism sector challenges requires active collaboration of all stakeholders. Therefore, multi-stakeholders' framework is recommended for successful tourism sector development.

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Inclusiveness of Wage Employment and Determinants of Wage Incomes: Empirical Evidence from Large-Scale Farms in Ethiopia

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Abstract

Unemployment is one of the critical problems of developing countries, including Ethiopia. Agriculture is not only the mainstay of the economy of Ethiopia, but also a major contributor of employment opportunities for its citizens. The government of Ethiopia promotes commercialization of the agricultural sector through large-scale farming investment by the private sector. The article examined inclusiveness of large-scale farming and factors that determine wage incomes earned by plantation workers in Ethiopia. Both primary and secondary data were generated from households, and large-scale farming companies. Data were subjected to a modified Mincer's earnings function to see which group of the society benefited from wage employment. Inclusiveness in plantation agriculture in the form of wage employment was very limited to the local indigenous population in Gambella and Benshangul Gumuz regional states due to lack of prior farming experiences of the workers. Men and those with technical training received better incomes from wage employment. Regional variation in wage rates was observed among Oromia, Gambela and Benshangul Gumuz regional states due to harsh working environment and low availability of workforce. Inclusion of the local people in wage employment should receive attention by owners and the government, which will otherwise affect smooth and sustainable operation of the farms. Further, it calls for an intervention to enhance the technical skills of workers, and improve women's participation and earnings in plantation agriculture.

Keywords: Plantation agriculture; wage employment; large-scale farms; inclusiveness; Mincer earning regression; Ethiopia

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Introduction

The neoclassical economic theory explains that wages are determined by the marginal product of labor (Ehrenberg & Smith, 2009). Thus, in a market-led economy, the amount of wages received show strong correlation with productivity (Belser, 2013). Under perfect labor market condition where wage rates are determined by supply and demand forces, unemployment is considered as a voluntary individual decision as market determined wage rates are assumed to clear all available labor and meet all labor demands. On the other hand, a proposition presented by the famous Shapiro-Stiglitz unemployment model in 1984 provided a sound technical explanation as to why involuntary unemployment occurs and why nominal wage rates are higher than market clearing wages. The model explains that employers could pay wages higher than the market clearing wage rates due to fearing of shirking by the incumbent employees that will reduce the efficiency of firms. Job seekers fail to convince employers that they can perform tasks at a lower wage rates than the equilibrium wage rate paid by employers as firms fear shirking behavior of job seekers once they are hired. This situation brings involuntary unemployment in the job market unlike what is postulated in the neoclassical economic theory (Shapiro & Stiglitz, 1984). In developing countries, labor markets are far from perfect due to various factors including asymmetric information resulting from low level of infrastructure development. Thus, they are characterized by missing and/or thin markets. As a result, unemployment tends to be involuntary. Therefore, the Shapiro-Stiglitz efficiency wage model sounds much better in explaining employment and wage rate conditions in developing countries where involuntary unemployment is the norm than the order.

Rising rate of unemployment has become a concern across the globe. The situation is worsened since the 2007/08 economic meltdown that hit many countries in the world. National governments in the developing south took policy measures to attract agricultural investment as a mechanism to create jobs to the youth. The World Bank report of *Rising Global Interest in Farmland* stated that large-scale agricultural investment contributes to poverty reduction through employment creation (Deininger *et al.,* 2011). Li (2011) challenged the World Bank's claim as unrealistic raising the argument that large-scale mechanized farms are labour-repealing than labour-absorbing reflecting the fact that such kind of business model is not inclusive of the local community. Inclusive business is a broad concept which describes the degree of involvement of the local community in investment projects as producers, suppliers, workers, distributors, and/or consumers (DCED, 2017). It promotes smallholders' integration into markets and thus it expands access of the poor to basic products and service. There are different business models – as in the case of contract farming, joint ventures, management/ventures, community leases, traders, farmer organizations, agrifood processors, retailers that link local communities' in the agricultural value chains as producers, suppliers, employees, shareholders and consumers (Kelly *et al.*, 2015). Studies on inclusive business models identified the principles, pillars and support schemes that business models should consider in improving inclusiveness of the local people (Kelly *et al.*, 2015; German *et al*., 2018), assessed the mechanisms by which inclusive business models contribute to livelihood and food security of smallholder farmers (Hahn, 2012; Kelly *et al.*, 2015; Woodhill, 2016; Schouten & Vellema, 2019; Wangu *et al.*, 2020), explored the different types of business models and degree of inclusiveness of smallholder farmers (Vorley *et al.*, 2008; Bernard & Spielman, 2009; Chamberlain & Anseeuw, 2019; Da Silva & Rankin, 2013) and assessed the caveats faced by enterprises while attempting to improve inclusion of local people along the value chain (Kelly *et al.*, 2015 & FAO, 2017).

Ethiopia is one of the top few countries in Africa that attracted investments in large-scale farming. Evidence presented by the Land Matrix (2020) showed that a total of 1.45 million ha of land was transferred to large-scale farming projects in Ethiopia between the period 2000 and 2020. An argument that is often put forward by the Ethiopian government in favour of large-scale farming is the employment it creates (MoFED, 2010). Studies on the contributions of large-scale farming in respect of employment generation are mixed. Lipton (1977) and De Schutter (2011) acknowledged that supporting the productivity of smallholder family-operated farming generates more employment than large-scale mechanized farming does. On the other hand, Cramer *et al.* (2008) in Mozambique indicated the positive welfare effects of plantation agriculture for the poor who have limited access to land, especially when the number of days that the poor are engaged in employment increases. Although large-scale plantation agriculture is criticized for limited inclusiveness due to adoption of mechanized farming techniques (Li, 2011), it can provide employment opportunities to the local community in the different stages of the production process. Previous studies not only provided mixed evidence as to whether large-scale farming positively contributes to job creation, but they offer little empirical evidence on issues of who benefited from wage employment opportunities (men or women; immigrants or local people, etc). That is to say, there is little evidence on the degree of inclusiveness of local people in wage employment disaggregated by gender and area of origin of the employees, and the determinants of wage incomes in Ethiopia.

Therefore, this study attempted to fill the existing knowledge gap by generating empirical evidence from Oromia, Gambella and Benshanguel Gumuz regional states.

Context and Description of Study Area

Three regional states in Ethiopia, namely, Oromia, Benshanguel Gumuz and Gambella Regional States, were selected for two important reasons: (1) massive agricultural investment projects flowed to these regions and studying the contribution of the investments to employment generation in these regions will potentially help improve agricultural policies; and (2) the regions chosen have different population density, level of infrastructure development, market integration, local livelihood patterns, natural resource base, skilled and unskilled labor availability, etc.

Oromia regional state provides information on the impacts of large-scale agricultural investment in the highlands of Ethiopia. Its dense settlements are smallholder dominated and it enjoys a relatively better infrastructure and market integration, better availability of skilled and unskilled labor, and a statutory dominated land tenure system. While Oromia can be considered as a densely populated and smallholder dominated region, it is by no means representative of other highland regions of the country, and the aim here is to have an overview of the contributions of large-scale farming to employment generation when investment is made in the highlands and lowlands.

The other two regions (Gambella and Benshangul regional states) represent the lowland parts of the country where a customary land tenure system dominates with sparsely populated agro-pastoralist communities who practice small-scale crop production through shifting cultivation using hand and hoe. Availability of labor, infrastructure development and level of market integration is very low in these regions, which will give us the opportunity to examine the contributions of investments to employment generation in these regions against those found in the highlands. While Oromia regional state represents the peasantry in the Center who are incorporated to the Ethiopian kingdom before the 19th Century, Gambella and Benshangul Gumuz regional states represent the peasantry in the periphery who are incorporated to the Kingdom only in the late 19th Century. Oromia region is characterized by smallholder farming with marked inequality in land ownership, better (road and market) infrastructure and overall regional development. The region is densely populated with high level of landlessness and land fragmentation. There is also a long history of wage labor employment by those farm households who are better off in terms of their land size and economic status.

On the other hand, Gambella and Benshangul regional states are characterized by poor road and market infrastructure and low level of overall regional economic development. The regions are sparsely populated and agro-pastoralism and small-scale crop production based on shifting cultivation and re-treat farming are the dominant livelihood systems. The people have limited experience in crop production and wage labour employment. Peasants from the Center with poor natural resource endowment and who have been frequently affected by drought are settled in this region some 30 years ago by the Derg government. The settlers have better experience in farming compared to the indigenous people. Interestingly, all the three regions are targeted by the present government for large-scale farming.

Methodology

Four large-scale farms operating in the three regions described above were considered as case studies to see how they affected the wage labor market in these regions. All the case studies adopted a business model in

which the local people are incorporated as employees of the large-scale plantations. The large-scale farms chosen are based on the type of crop commodity and origin of investor. In Oromia regional state, Karuturi Agro Products PLC., a Bangalore-based Indian investor who cultivated maize on 11700 ha of land in the Bako plains of Bako Tibe district, is considered.

In Gambella regional state, two large-scale farms were chosen as case studies. Basen Agricultural and Industrial Development PLC., a domestic investor who is producing cotton on 10,000ha of land in Abobo district of Gambella regional state, served as one case. Basen operates in an area where settlers from northern and southern Ethiopia are living with some distance from the indigenous Anuak people.

In addition, Karuturi Agro Products PLC., which cultivated maize and sugarcane on its 100,000 ha land concession in Jikawo and Itang districts of the region served as the second case. While Itang district is inhabited by the Anuak, the Nuer inhabit Jikawo district of the region. In Benshangul Gumuz regional state, Shaporji (S & P Energy Solutions), an Indian investor who cultivated *Milletia pinnata* (locally called Pongomia – a tree used as raw material for the production of biofuel and food oil) on its 50,000ha land concession, served as a case. All of the four large-scale farms didn't cultivate their entire concession but employed some wage labor on permanent and casual basis.

The total number of employee population show variability, and it was difficult to estimate sample size using a statistical formula that requires total population. Hence, a sample size determination formula for unknown population with a confidence level of 90% (Z=1.64), 0.5 standard deviation (S) and 5% error margin (E) was adopted following Cochran's (1977) formula, which is $n = (ZS/E)^2$.

Using this formula gives a sample size of 271, and adding a 10% allowance for a better precision, the sample size will be 300 employees. Thus, primary data were collected from 300 employees drawn through stratified and random sampling techniques who are working in the large-scale farms considered as case studies. Employees were stratified as 'machine operators', 'guards and maids' and 'other plantation workers'.

The sample size from each stratum was determined based on proportion to the size of the strata. Variables such as gender, age, area of origin (immigrant or indigenous), amount of wage/salary received, number of years of experience working in plantation agriculture, type of activity performed in the farm, level and type of skill training acquired, etc. were collected from the employees.

In addition, secondary data were collected from large-scale farms on employee's record such as number of casual and permanent employees recruited, size of land cultivated, salary/wage paid, major challenges farms encountered, income tax paid, etc.

Quantitative data were generated using survey method. Data were subjected to quantitative methods of data analysis. More specifically, a Mincer-type earning function was adopted in the analysis of the determinants of wage rate in plantation monoculture in Ethiopia. The Mincer earning regression is widely used in the conceptualization and operationalization of factors earnings.

It stipulates the statistical relationship between market wage rates, years of schooling and experience (Mincer, 1958). Mathematically, the original Mincer function is presented as follows:

$$lnY_i = a_0 + a_1 S_i + a_2 t_i + a_3 t_i^2 + \epsilon$$

Where the left-hand side (lnY_i) is observed earning, a_0 is the initial earning capacity of the employee without schooling and experience, a_1 is the rate of return to education, a_2 (coefficient for experience) and a_3 (coefficient for experience squared) are the rate of return to on-the-job training.

One universal characteristics of the Mincer's earning function is the concavity of earnings function in which the coefficient for experience squared is expected to be negative. This is to mean that for individuals who are continuously attached to the labor market, their earnings rise at a decreasing rate throughout their life cycle. Mincer suggested a log-linear functional form, which was criticized by other researchers.

For example, Thurow employed a log-log model assuming that earnings are produced by a Cobb Douglas production function (Thurow, 1969). Heckman and Polachek (1974) used Box-Cox and Box-Tidwell models to test the appropriate functional form. Their findings suggested that the Mincer's log-linear specification fitted their data best. In 1974, Mincer relaxed the constraint that log earnings increase linearly with schooling and the constraint that log earnings experience profiles are parallel across schooling classes by adding an interaction term between experience and schooling (Mincer, 1974). The Mincer earnings function implies that the more human capital investments an individual makes, the higher his or her earnings. Polachek (2007) argued that this happens in a competitive labor markets that reward employees based on their years of schooling, quality of their education and when the market rewards productivity of laborers. This is problematic particularly in wage employment in Ethiopia where labor markets are not competitive, and enough jobs may not be available for wage-workers with several years of schooling. Therefore, interpretation of the results should be done cautiously.

Although Mincer's earning function postulate the functional relationship between earnings and investment in schooling and on-the-job training (work experience), human capital theory explains that other demographic and socioeconomic variables are also important in explaining wage differences among different groups of workers in the labor market (Polachek, 2007). As a result, labor economists estimate Mincer-type earning functions by including variables such as gender, race, and ethnic background, geographic location, occupational type, health status, marital status, age (to capture child labor abuse), union membership, etc. to estimate discrimination against a specific group of population that has relevant policy implications (Gronau, 1988; Mellor & Paulin, 1995; Cline, 2001; Hirsch, 2007).

Based on the information generated during the exploratory survey, we extended Mincer's postulation by including other variables that are important determinants of wage incomes in plantation agriculture. This includes, but is not limited to: origin of wage-worker, location of the large-scale farm, crop type cultivated by the large-scale farm, type of wage work performed and characteristics of employee (sex, age, area of origin, experience in plantation agriculture, skill and level of training, etc). The data generated from employees' survey were then subjected to Mincer-type log-linear regression to identify the determinants of different wages among wage-workers. The analysis is carried out with the aim of identifying which group of the population has benefited from wage employment in plantation agriculture, which has the

potential to pinpoint the winners from wage employment. The study presented the following hypothesis based on literature and observations from the exploratory survey. See below the variables along with expected signs.

Table 1: Variables and expected signs

Variables	Measurement	Expected signs
Age of the employee	Years	-
Sex of the employee	Dummy, 0 if female and 1 if male	+
Years of farming experience	Years	+
Education level (Years)	Years	+
Origin of employee	Dummy, 0 if immigrant and 1 if indigenous	-
Type of work	Dummy, 0 if manual and 1 if technical	+
Location of the farm	Dummy, 0 if highland and 1 lowland	+
Type of crop	Dummy, 0 if food crop and 1 industry crop	+

Results and Discussion

Contributions of Large-Scale Farming to Employment Generation in Ethiopia

The number of jobs generated from each hectare of land show variation among the cases of this study. This is so because of the level of mechanization put in place and the type of crop commodity produced by the companies. In general, the farms generated 0.08–0.28 jobs per ha during slack seasons, and 0.13–0.38 jobs per ha during peak seasons. Cultivation of non-food crops by Basen Farm (e.g. cotton) generated more jobs (0.28–0.38 jobs per ha) than production of food crops by Karuturi (0.09–0.13 jobs per ha in Karuturi-Oromia and 0.15–0.23 jobs per ha in Karuturi-Gambella). This is consistently true both during off and peak farming seasons. Apart from ploughing and planting, most of the farm activities at Basen farm are carried out with manual labor. Especially cotton harvesting is the most labor-demanding and most paying activity compared to other activities performed by the wageworkers in the Basen farm. In the case of S&P, once the *Milletia pinnata* is planted, there is very little opportunity of generating additional employment for the needy, and thus only a small number of jobs (0.08–0.22 jobs per ha) have been created despite it being a non-food crop (Table 1). At present, the company generated some jobs by cultivating food crops such as maize, sesame and pigeon pea, in addition to planting the biofuel tree. In the case of Karuturi, there is a relatively high use of mechanization for the different farming activities such as cultivation, planting, spraying herbicides and harvesting. In Gambella, Karuturi used a combine harvester to do the first harvesting and manual labor for the second harvesting of maize stock skipped by the harvester due to short height. The use of mechanization and the cultivation of food crop (maize) were the reasons for the small number of jobs generated per ha by Karuturi compared to Basen farm.

A study by Deininger *et al.* (2011) in Ethiopia showed that plantation agriculture generated 0.005 jobs per ha, which is significantly lower than the findings of this study, probably due to the aggregation of data collected from all large-scale farms that cultivated different types of crops (food and non-food) and employed different levels of mechanization. The definitions of large-scale farming used by the different studies cited here is mixed and sometimes not clear. For instance, Deininger et al. (2011) used scale of 500 ha and above to the definition of large-scale farms. Others like Cramer et al. (2014) defined large-scale farms based on the

Table 2: Employment Generation from Large-Scale Farms in Ethiopia (2016)

We further analyzed the average wage rate paid by different companies. As expected,

Table 2: Employment Generation from Large-Scale Farms in Ethiopia (2016)

	Large-scale farm			
Variables	Karuturi (Oromia)	Karuturi (Gambella)	Basen (Gambella)	S&P (Benshanguel)
Number of wage jobs per year	200–300	600–1000	234–564	200–700
Going daily wage rate (ETB)	12	35	36	39
Number of permanent jobs	43–50	133	23–69	81
Number of jobs created per ha	0.09–0.13	0.15–0.23	0.28–0.38	0.08–0.22
% of immigrant labour	0%	76%	92%	93.8%
Proportion of women employee	58%	34%	36%	35.9%
Mean age of wageworkers	22.1	26.6	24.4	25.5
Mean education (Years)	6.3	7.8	8.3	9.5
Mean wage income in ETB/day (Mean wage income in US$/day)	13.5 (0.35)	46.2 (1.21)	92.4 (2.43)	57.6 (1.51)
Wageworkers with previous experience	14%	32%	50%	22%

Source: Authors' own computations-based survey data

number of workers. Therefore care should be taken in taking up the citations. Studies in other countries also indicated that it has generated 0.014 jobs per ha in Brazil (FAO, 2012a), 0.351 jobs per ha in the Democratic Republic of Congo (Deininger *et al.*, 2011), and 0.006 jobs per ha in Madagascar (Andrianirina-Ratsialonana & Teyssier, 2010), which are lower than the Ethiopian case. FAO (2012b) reported that plantation agriculture in Ghana and Uganda demonstrated a positive and significant contribution to the number of jobs generated for local people but these were not sustainable as companies replaced labor-intensive work with capital-intensive technology over time. In addition, the wages remained low. Although this study did not compare smallholder farming with large-scale farming, smallholder farming is contended to generate comparatively more jobs per ha than large-scale farming (FAO, 2012a). The impact of large-scale land acquisition on income generation through employment increases if there is a linkage between large-scale and small-scale farms through contract farming, as is the case in Ghana (Vath & Kirk, 2011).

there are differences in the average daily wage rates paid by the large-scale farms operating in the different regional states in the country. The location factor is found to be an important determinant in this regard. In Bako Tibe district (Oromia regional state) where landlessness is very high, labor availability is relatively better. Corollary to this, the average wage rate paid to wageworkers (ETB 13.5 or **US$0.35)** is relatively lower than the average wage rates paid in Gambella (ETB 46.2–92.4 or **US$1.21–2.43**) and Benshangul Gumuz regional states (ETB 57.6 or **US$1.51**) (Table 2). (ETB stands for Ethiopian Birr, which is the currency unit of the Federal Democratic Republic of Ethiopia.) In Bako Tibe district, Karuturi pays a minimum daily wage of ETB 12 (**US$ 0.32**) for manual jobs and a maximum daily wage of ETB 30 (**US$0.79**) for technical jobs. In Gambella, the same company pays a minimum wage of ETB 35 (**US$0.92**) a day, in addition to free accommodation services. There are some exceptions, however. The wages paid per day to women who provide water and weed in the oil palm nursery at Karuturi's Ilia site in Gambella regional state was smaller than the going wage rate of ETB 35 (**US$0.92)** per

day. This was also the case for young boys under the age of 14 years who earned ETB 10 (**US$0.26**) per day for the weeding job at Karuturi's Jikawo site in Gambella regional state while the going daily wage rate commonly paid by the company was ETB 35 (**US$0.92)** during the study period.

In Gambella Regional State (Basen's case), the maximum wage rates can go up to ETB 167 **(US$4.39)** while the minimum wage rate is ETB 36 **(US$0.95)** per day. But, there are substantial variations in the amount of wage rates offered to laborers depending on the arrangements. It can go as high as ETB 167 **(US$4.39)** per day for cotton picking, which is an arrangement on the basis of volume of work performed. Cotton picking, which is the most laborious duty, is foremost performed by migrant labor from Wolaita Sodo area of South Ethiopia and by highland settlers who live around the farm. The migrants from Woilata Sodo manage to harvest up to 167 kg of cotton at a rate of ETB 1 **(US$0.026)** per kg, while the settlers collect only 25 kg per day. This brings the average wage paid by Basen farm at ETB 92.4 **(US$2.43)** per day (Table 2). Competition for meager labor is a common practice in Gambella. In 2011, Basen cultivated 2,100 ha of cotton but managed to collect only the cotton planted on 1,200 ha due to labor shortage, and the remaining was damaged by rain. Due to poor level of road infrastructure and its remote location, cost of labor transport is huge costing the company ETB 450 **(US$11.83)** to transport a laborer from Wolaita Sodo to the farm site. Basen farm recruits labourers from Wolaita Sodo area by making formal communication with SNNP Labour and Social Affairs Bureau. Unlike the case in which companies recruit labourers by themselves from local community, this type of formal labour arrangement provides transparent agreement in terms of pay scale and other secondary benefits (e.g. transportation and accommodation).

In Benshangul Gumuz regional state, S&P pays an average wage rate of ETB 57.6 **(US$1.52)** per day. While the daily going wage rate paid by the company is ETB 39 **(US$1.025)**, the maximum daily wage rate can go up to ETB 120 **(US$3.16)** when wage-workers are offered jobs on the basis of piece rate arrangement. **(**This was estimated from a piece rate arrangement provided by the company, and converted into wage income per day.) A commonly piece rate arrangement is when an activity that takes 4–5 days is given to a laborer at a rate of ETB 600 **(US$15.78)**. Other investors in the district also use the piece rate arrangement in which they give a task that takes 4–5 days at a cost of up to ETB 1500 **(US$39.44)**, which portrays competition for meager labor. During peak season, S&P employed up to 700 casual laborers, which went down to 200 during off-seasons. The maximum monthly salary for a permanent employee in the S&P farm was recorded at ETB 30,000 **(US$788.84)**. There were 22 Indian expatriates in the preceding years working in the company before their number was reduced to three only in 2014. (S&P Farm reduced its operation in 2014 due to financial constraints and it laid off 19 Indian expatriates who had been working prior to 2014.) Two of the expatriates are working as Operation Managers, and the other one is working as a General Manager. All other employees are Ethiopians working in different capacities as Human Resource Managers and as technical persons.

Variations in wage rates and arrangements are observed in the lowland regions of Gambella and Benshangul Gumuz. As a result of labor shortage, competition for labor is common. The Great Renaissance Hydroelectric Dam, which is being constructed in Guba District – a district located adjacent to Dangur District – contributed to the stiff competition for labor in Benshangul Gumuz regional state. In Gambella regional state, Saudi Star – which

is owned by a multi-billionaire Mohammed Hussein Al Amoudi, created stiff competition for labor.

Inclusiveness of Plantation Wage Employment

In this section the level of inclusiveness of plantation wage employment in terms of gender, generation and ethnic origin is discussed. Especially, the issue of which ethnic group benefited from wage employment is a critical question that a country with an ethno-linguistic federal arrangement needs to address. In this respect, the proportion of the local indigenous people who were engaged in wage employment in the large-scale farms showed significant variations. In Oromia, all the wageworkers were from the local villages contrary to the case in the lowland regions. In Gambella and Benshangul Gumuz regional states, migrant labor is common, accounting up to 94% of the total labor force (Table 2). The companies in these regions preferred migrant labor above the indigenous people for their experience in agricultural activities and partly due to the negative preconceptions regarding the work ethic of the local population. The latter case is also supported by Moreda (2015) in his study in Benshangul Gumuz regional state. At the Karuturi site in Gambella regional state, 24% of the wageworkers were from the indigenous population, compared to the other cases (Basen farm in Gambella and S&P farm in Benshangul Gumuz) in which the level of participation of the local people in wage employment was only 6–8%. Cotton picking at Basen farm in Gambella regional state is dominantly performed by migrant labor from Wolaita Sodo area. They are perceived by the employers as having the necessary dexterity and speed in picking the cotton fiber with minimum wastage. Due to their traditional livelihood system, the local Anuak are also less interested in cotton picking.

Access to wage employment is also gendered. It was confirmed that, except in the case of Oromia regional state, women's participation in paid employment in large-scale farms is far below the proportion of men's engagement (34−36%). In these regions, women are too busy doing different domestic activities and spend less time in wage employment. This is contrary to available evidence that showed the share of women employment in agriculture is 55% in Sub Saharan Africa and 58% in Southern Asia (Giroud & Huaman, 2019).

During the field survey, we observed that companies use young boys and girls as young as 11 years for watching birds and watering nursery sites, and pay a small daily wage much below the going wage rate. Boys and girls in Gambella received ETB 10 **(US$ 0.26)** per day to watch birds and watering palm oil nursery site, which showed a similar trend in Bako in which a boy who watched birds received a wage as low as ETB 7 **(US$ 0.18)** per day. The going wage rates in the two regions were, however, ETB 35 **(US$ 0.92)** and ETB 12 **(US$ 0.32)** respectively. The practice of involving young boys and girls in various activities is common in Ethiopia (Guarcello & Rosati, 2007). It is estimated to contribute 4–7% to the family's income (Cockburn, 2002), and often done at the expense of their school attendance (Guarcello & Rosati, 2007). Poor families welcome children involvement in waged labor since it complements the income of the family. Against this background, authorities in Ethiopia seldom check large-scale farming companies that employ children despite the Ethiopian labor law (Proclamation 377/2003) prohibits employment of children under 14 years old (Federal Negarit Gazeta, 2004).

The average age of our sample was 24 years indicating that the majority are high school graduates and looking for job opportunities. In Bako, about 7% of the population is estimated to be landless. The youth in this area used to cultivate parcels that they held

customarily. But with the advent of Karuturi, as a mechanism to compensate for the land lost, some of them became wage laborers in the Farm and others seek opportunities elsewhere. A focus group discussion with five youths working at Karuturi Farm in Bako, which was held in Goromitti village revealed that the wage income received from the company is too small to improve their life, but only serve as a mechanism to partially compensate incomes lost due to the land loss.

Determinants of Wage Incomes from Plantation Agriculture

This section discusses the factors that determine levels of income from wage employment in large-scale farming. We analyzed the determinants of wage incomes from large-scale farming in Ethiopia using the Mincer regression function. Before moving to the interpretations of the regression coefficients, let us see if the regression model fulfils the OLS assumptions. The Shapiro Wilk, the Kolmogorov-Smirnov and histogram visual test for normality tests were applied to check the normal distribution of our data. In this case if the Sig. value of the Shapiro-Wilk and the Kolmogorov-Smirnov tests are greater than 0.05, the data is considered normally distributed. The Q-Q plot is also adopted to visually examine the linearity of the data set. The Variance Inflation Factor (VIF) was used to examine if independent variables are correlated (VIF result presented in Table 2). The results of all the tests confirmed that the data set fulfilled the assumptions of linearity, normality and no serous multicollinearity problem (see Annex 1).

The Mincer (1958 & 1974) suggests including a variable that captures the effect of the interaction between schooling and experience, and the effect of returns to schooling at old age by squaring years of work experience. These two variables were included in the first estimation of the Mincer-type earning function, but due to the multi-collinearity problem, the variables were excluded in the final estimation.

The result of the final estimation is presented in Table 3. Theoretically (and in the Mincer function), level of education, working experience, age, sex of employees, etcetera determine incomes/wages of an employee and these were included in our analysis. While salaries of employees in the skilled labor market are fairly determined based on objective criteria such as level of academic qualification and working experiences, wage rates are, however, determined by less objective parameters in the unskilled labor market. In addition to this, the lack of minimum wage rate policy for unskilled labor in Ethiopia contributed to the arbitrary provision of wage rates by large-scale farms. Thus, this necessitated to identify and include other variables in the estimation of the Mincer function that would affect level of wage income in Ethiopia. Variables such as origin of laborer, type of work, type of crop and location were identified as important variables during the exploratory survey conducted in all the three regions prior to the formal employee surveys, and thus, included in the analysis.

The performance of the Mincer-type earning function was generally good. The overall model fit was significant (F value=233.7 and $p<0.01$), and the variables included in the model explained 87.8% of the variations in wage incomes, and the function is free from multi-collinearity problem. The result of the Mincer-type regression that explained about 88% of the variations in wage incomes among different groups of wage-workers is acceptable given that wage rates are determined by less objective criteria and minimum wage rate policy is effectively absent in Ethiopia. Interestingly, most of the variables included in the Mincer-type earning function were statistically significant, and thus determined variations in wage incomes in large-scale farms in Ethiopia. Since the functional form of the regression was a log-linear model, the interpretation of results is based on the percentage value of the coefficients of the independent variables that appeared significant in the estimation. The results are presented in Table 3 and in the remainder of the section, we discussed these factors in detail.

Wage incomes from plantation employment are not only biased towards the elderly but also towards male employees. Statistically, an employee's gender is found to determine the height of wage incomes significantly. The result showed that male workers receive about **8.8%** more per day than their female counterparts, since they have access to more paying jobs than females.

The companies that are engaged in large-scale farming in the case study areas maintained the commonly held stereotype that women are less fit/efficient as compared to men in performing farm activities. As a result, women are offered jobs such weeding, watering nursery site, maize shelling, and work as housemaids. Thus, they are paid relatively low wages. Men, on the other hand, are offered better paying jobs such as tractor operation, harvesting and threshing using combine harvester and supervising daily laborers. This happened because employers exercise their power to set wage rates, to whom to offer what type of work and in defining working conditions. This is also supported by Cramer *et al.* (2008) in Mozambique. FAO (2010) also presented a 90% wage gap between men and women in addition to inequalities in access to paid jobs between them in developing countries. Kapsos (2008) adopted the Mincerian regression and Blinder-Oaxaca wage decomposition model to decompose the observed gender earnings gaps in Bangladesh. The findings revealed that women earn 21% less than men.

The bias in wage employment is not only reflected in the degree of inclusiveness but also in terms of the wage incomes accruing to the wage-workers coming from outside the local area. Migrants generally received better wages (**12.2%** higher) than locals, and on average, their wages are ETB 11 **(US$ 0.29)** per day higher than those of the local people. The farm managers of the plantation firms argue that migrants have better skills, and thus they are speedy in accomplishing farm activities than the locals. This takes us back to the question of whose resources are expropriated for investment in large-scale farming for the benefit of whom? Apart from other political justifications, one of the

Table 3: Determinants of Rural Wage Rates in Large-Scale Farms in Ethiopia

Dependent variable: Ln (Wage per day)	*B*	*Std. Error*	*t*	*Collinearity Statistics*	
Independent variables				Tolerance	VIF
Constant	2.461	0.087	28.27***		
Age of the employee (Years)	0.001	0.002	0.27	0.71	1.41
Sex of the employee (0= Female; 1=Male)	0.088	0.036	2.45**	0.86	1.17
Years of farming experience (Years)	0.041	0.006	7.11***	0.70	1.44
Education level (Years)	0.022	0.005	4.59***	0.87	1.15
Origin of employee (0=Immigrant; 1= indigenous)	-0.122	0.062	-1.97**	0.25	3.94
Type of work (0=Manual; 1=Technical)	0.172	0.041	4.24***	0.83	1.21
Location of the farm (0=Highland; 1=Lowland)	1.072	0.064	16.75***	0.25	3.94
Type of crop (0=Food crop; 1=Industry crop)	0.131	0.048	2.73***	0.68	1.47

Source: Authors' estimation based on survey data; ***p<0.01; **p<0.05; *p<0.1

reasons for the adoption of an ethno-linguistic federal arrangement by the Ethiopian government was to narrow down regional development disparities. Nevertheless, the result from this study show that the indigenous people are not benefiting in the same way as the migrants from wage income.

Work experience is seldom considered in the recruitment of wage-workers and in the determination of wage rates. This is because laborers do not have written testimony certifying their previous experiences, and word of mouth is rarely accepted as valid evidence. On the other hand, most of the activities do not require vast experience. As a result, work experience only matters if the remuneration is based on a piece rate system. A well-trained laborer will be able to be more productive and subsequently be rewarded a higher salary. So the interest here is to see how acquired earlier experience in large-scale farming (reflected in speed and volume of work performed) affects the wage income levels of laborers. The variable that captures previous experience of laborers was found to determine the amount of wage incomes significantly at $p<0.01$. This in particular is a reason for wage differentials among those wage-workers when payment is made based on piece rate agreement and on the volume of work performed. On average, those wage-workers who had previous working experience earned 4.1% higher wages per day than those without any experience. For example, at Basen farm, the field observation revealed that experienced cotton pickers managed to harvest up to 167 kg of cotton per day enabling them to earn ETB 167 **(US$ 4.39)** per day. Starters would earn not more than ETB 25 **(US$0.66)** while the daily remuneration would be some ETB 36 **(US$0.95)**. The wage gap due to skill/ experience difference might level off only after beginners acquire the needed skill/ experience after some months.

The type of work performed by a wage-worker is also a factor that determines wage income differences. Generally, those who perform manual work such as weeding, chemical spraying, harvesting, threshing, housemaid, etc., are paid with the going wage rates of the region. On the other hand, those wage-workers who are engaged in supervising the laborers and operating machinery of different sorts received wage incomes higher than the going wage rates. On average, laborers that performed administrative and technical roles received a daily wage income that is 17.2% higher than those who performed manual jobs. Education is a factor that affects one's income level by affecting the type of work a wage-worker performs. Better educated wage-workers have jobs as supervisors. They received, on average, a daily wage that is 2.2% higher than those with less years of schooling. While the positive contribution of educational attainment to wage incomes is very clear and was also documented by the World Bank in Ghana (Fasih, 2008) and in Bangladesh (Kapsos, 2008), this does not mean that improved education will automatically lead to higher wages, as there may not be sufficient skilled jobs in the large-scale farms in Ethiopia to fill this promise.

The other interesting finding from the analysis was that wage incomes differ between wage-workers who worked for large-scale farms that produced food crops and industrial crops. Laborers who worked on cotton farms in Gambella received wage incomes significantly higher than those who worked on food-crop producing farms such as Karuturi, both operating in the same regions. On average, a wage-worker employed in a non-food crop producing farm received 13.1% higher wage per day than those employed in a food crop producing farm. Owing to the fact that the non-food crop producing farm is operated by a domestic investor (e.g. Basen Farm) and the other two food crop producing farms are operated by foreign investors, one may argue

that the wage difference is not a result of the type of crop commodity, but because of a difference in the ownership of the farms. The going daily wage paid by Karuturi (ETB 35 or **US$ 0.92**) and Basen (ETB 36 or **US$ 0.95**), both operating in the same regional state but operated by foreign and domestic investors respectively, are comparable. The mean wage incomes paid by these two companies for the different types of activities are, however, significantly different. In this regard, on average, Basen paid ETB 92 **(US$2.42)**, while Karuturi paid ETB 46 or **US$ 1.21** (Table 2). Therefore, it is indicative that the difference in wage incomes is because of the type of crop commodity cultivated but not due to the ownership type.

The government's strategy also iterated the significant roles of large-scale farms that produce raw materials for industries in terms of generating employment with a far-reaching income effect. In terms of the multiplying effect of wage employment, not addressed in this study, companies that produce raw materials for industries will have a much more significant impact than those that produce food commodities that are consumed domestically without much value-addition. Cramer *et al.* (2008) also found similar results in Mozambique in which workers engaged in the production of non-food crops (such as sisal and cotton) received relatively high wage incomes compared to those who engaged in food crops production such as rice, maize, groundnuts and sesame.

As expected, the location of the farm affected wage rates significantly ($p<0.01$). In lowland parts of the country, labor is a serious constraint and competition for wage-workers is stiff. This has raised the wage rates in Gambella and Benshangul Gumuz regional states, and wageworkers in these regions received a daily wage which is 107.2% higher than those in Bako Tibe district of Oromia regional state. This is also related to the harsh weather conditions, high risk of malaria infestation and snake bites, poor social infrastructure development, and high cost of living in those periphery regions. In these regions, unless wages are relatively high, laborers are not interested in taking up these job offers. Unlike the case of the large-scale farm in Oromia, the companies in Gambella and Benshangul Gumuz regional states offered free accommodation – sheds for laborers that accommodate 2–4 laborers – and set up basic health facilities to make their offers attractive. The large-scale farm in Bako does not have these facilities for the wage-workers since the laborers can operate from their own home. In addition to the advantage of enjoying relatively cheaper food prices compared to the large-scale farms in Benshangul Gumuz and Gambella regional states, its proximity to the nearby Bako town provides wage-workers with access to better social services. In an effort to address the sky-rocketing food commodity prices and costs of transportation, the companies operating in the lowland regions provided meal services at a reasonable price and transportation services to employees once a week to buy food commodities in the nearby Gublak (in the case of S&P) and Gambella (in the case of Karuturi) towns. In order to attract laborers, the large-scale farms in the lowland regions included secondary labor conditions in their employment, unlike the case of Oromia Regional State where labor availability is not by and large a constraint. Bardhan (1973) also found out that in areas where the magnitude of landlessness is very high, wage rates goes significantly down, as in the case of the large-scale farm in Bako Tibe district of Oromia regional state in Ethiopia.

Conclusions and Policy Implications

Although inclusiveness of investment is a broad concept that can be realized by implementing different business models, incorporation of the local people through wage employment in large-scale plantation agriculture is one way of inclusion. The policy formulation in support of large-scale

agricultural investment in Ethiopia is based on the expectation that it will generate jobs with decent incomes for the youth. It was evident that large-scale farming engaged in the production of crops for industrial raw materials (E.g. cotton) generated higher number of jobs per hectare with relatively better incomes compared to those farms that produced food crops. Access to jobs is disproportionately lower for women compared to men, and for the indigenous people compared to the immigrants (Table 2). Wage incomes are higher for men and immigrants, and those with technical skills and farming experiences (Table 3).

Limited participation of local indigenous people in wage employment will have implication to the sustainable operation of the large-scale farms, and thus should be addressed. In this regard, stakeholders such as the government, the investor, and NGOs working in job creation should formulate and implement a strategy of enhancing the skills of the local indigenous people by arranging training on relevant farming practices. Unlike what is commonly known in the literature, the proportion of women participating in wage employment is lower than men in Gambella and Benshangul Gumuz regional states which calls for interventions in improving their participation. The framework of inclusive business model suggests that income generated from engagement of local people in any form (including employment) with agribusiness companies should be welfare improving. However, as evident in the results of this study, income generated from wage employment is too small to support daily subsistence of employees. Agribusiness companies engaged in large-scale plantation agriculture in the three regional states should consider revising the wage rates in a win-win manner.

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Socio-cultural Considerations in Environmental Policy Formulation and Implementation in Ethiopia, *Zerihun Doda*[1]

Abstract

The idea of policies for holistic social development, healthy communities, and resilient socio-cultural institutions is one of the core issues of literature on sustainable society, development and environment. The nexus between national economic policies, resilient communities, and development is best understood in the context of policies for social development, particularly in terms of building resilient socio-cultural institutions, protecting communities, and ensuring useful traditional knowledge systems. Some research on environment and society in Ethiopia generally focus on policy failures and institutional dysfunctions leading to natural resource degradation and environmental exploitation. Others address increasingly insecure livelihood and political instability as a manifestation of unsuitable society, environment, and development. Further, policy instruments pertaining to environment, and the impact assessments are often analyzed in light of the legal perspective. This study aimed at understanding how existing environmental policy instruments define and represent socio-cultural matters as part of the environment policy and impact assessment frameworks of the country. The study adopted a qualitative method approach through analyzing existing policy documents and interviewing relevant actors. The study found out that while existing instruments do indeed address socio-cultural issues, the main problem lies in adequacy of representation of socio-cultural issues, particularly cultural resources (notably heritages, identities, belief systems social institutions, etc.). More so, the problem lies in the disturbing state of realizing the policy provisions for socio-cultural issues. Policy formulators and implementers' general level of socio-culturally sensitive awareness, attitude and commitment is a key gap.

Key words: socio-cultural issues, environmental policy, policy formulation, policy implementation, representation, Ethiopia, East Africa

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Introduction & Problem Statement

The issue of unsustainable development, environmental problems, climate change and their impacts on societal wellbeing and development are high on the international agenda (Conway & Schipper, 2011; Dove, 2014; Salick & Ross, 2009). Academic and policy literature on sustainable development and impact assessment call for careful considerations of socio-cultural issues in development policy formulations and practice. The Millennium Development Goals and the Agenda 2030- the Sustainable Development Goals have empirical and tangible points whereby issues of social and cultural significance are made part of the global policy dialogues (MEA, 2005; UN, 2015).

Some studies in Ethiopia show societal wellbeing, institutional resilience and livelihoods are being challenged through increasing risk of environmental problems and the inadequacy or poor implementation of policy frameworks to contain these challenges (Zerihun 2015). These also explore how local communities in the age of increasing environmental problems and risks cope with socio-cultural and livelihood challenges in Ethiopia (Dira & Hewlett, 2016; Hameso, 2018). Socio-cultural impacts of development activities in Ethiopia exist showing the in-salutary effects of such activities on local communities (Zerihun, 2015; Abbute, 2004; Berisso, 2004).

Relevant articles of the Ethiopian Constitution (FDRE Constitution, 1995), the Environmental Policy of Ethiopia (FDRE EPA, 1997) and Culture Policy of Ethiopia (MoCT, 1997) provide standard setting frameworks of regulating development activities, environmental impact assessments and the protection for social institutions and cultural heritages; but these often are seen as more of principles than of materialized realities (Keeley & Scoones, 2000), as well as imposed requirements for the sake of securing grants (Ruffeis, Loiskandl, Awulachew, & Boelee, 2010).

Recent national development policy and strategy documents (See, for example, National Planning Commission, 2016) provide for the inclusion of social issues along with environmental aspects in development impact assessment requirements. Further, the country has produced a range of regulations and protocols to guide financing of development projects within the framework of the country's development agendas and the climate resilient green economy, which in principle requires development projects to address social and cultural issues in planning and execution stages (See for example, Ethiopian Investment Authority, 2018; Development Bank of Ethiopia, 2017; Ministry of Environment, Forest and Climate Change, 2015).

However, there is a dearth of information on how socio-cultural aspects are represented in existing policies and, above all, how are they being implemented in the assessment of development impacts arising from various national and regional development endeavors. Further, gaps exist on how policy implementers perceive socio-cultural matters, how they are implementing the policy provisions relating to safeguarding social and cultural lives and rights of the communities affected by various development endeavors.

There is a need for an analysis of the representation of these issues so as to assess how the country's policy frameworks and their implementations align with the international expectations and how they take on board globally legitimate conventions pertaining to socio-cultural aspects of environment and development. The objective of this study was, therefore, to address socio-cultural considerations in environmental policy formulation and implementation in Ethiopia and how it fares in comparison with other African countries.

Methodology

The study maintains a paradigm of broadly qualitative, interpretivist research orientation. The strategy was cross-sectional, descriptive oriented. The data were generated on how socio-cultural issues are defined, scoped, and represented in policy instruments and the challenges facing implementation of policy provisions. Both primary and secondary sources of data were employed. The principle of *information redundancy* or *data saturation* determined the number of informants required for qualitative interviews. Key informant interview with 11 officers at the relevant federal offices was conducted. Initial plan of interviewing a total of 35 key informants was abandoned as the data that came from the 11 cases did a fairly good level of saturation. There was also a critical review of the contents including primarily the National Environmental Policy. Other relevant national instruments were also reviewed.

Key interview question guides were designed to generate data through interviewing the policy formulators and implementers. Question guides prepared in English were translated into Amharic and interview session were undertaken on face-to-face basis with each informant. The session was digitally audiotaped whenever feasible. Audio-recording was supplemented by careful notetaking.

Data transcription, management and analysis was done using Microsoft Excel 365 and MAXQDA 2020 computer assisted qualitative data analysis software. The former was used to prepare the transcribed data before importing to MAXQDA 2020. The data obtained through note taking and digital voice recording were organized

through transcription and summarization before being entered to the software. The interview data were transcribed using Google Live Transcription software and the transcribed data were then thoroughly edited for consistency, accuracy, formatting, and editorial issues. The data were exported to Microsoft Excel where they were prepared further for importation to MAXQDA 2020. Using MAXQDA 2020 Thematic Analysis approach, the responses were coded, and then thematic issues were identified.

Results

Description of Study Institutions & and Informants

The primary field data as well as supporting secondary data mainly came from various institutions in the Federal Environment, Forestry & Climate Change Commission. Justification for focusing on this public service organization is already outlined in the methodological section. As a small scale, qualitative study, this project is a snapshot of issues from the focal point of the Commission, which is a major actor and mandate- holding government organ in issues pertaining to environmental policy formulations and how these impact social and cultural issues.

The key institutions within the Commission where our informants were based at included the Ethiopian Wilde Life Protection Authority, the Ethiopian Biodiversity Institute and most of all, the various directorates in the Federal Commission for Environment, Forestry and Climate Change. The informants' posts in their institutions at the time of the interview ranged from Directors to Experts. Most of the informants held the post of a researcher. Four of the informants were experts at various levels of seniority; three were directorate generals, two were researchers and one, adviser. Regarding educational status, 56% of the informants held a master's degree, one had a PhD and the rest, bachelor's degrees. Two of the informants were female, the rest males. All the eleven informants represented eleven different but related fields of studies, ranging from forestry and climate change, environmental law, biology, sustainable development and legal studies.

Socio-cultural Issues in Environmental Policy Instruments: Representation and Instances

Analysis of the responses shows that a range of issues defined as socio- cultural were reported to be included in the existing environmental policy and legal documents, mainly the national environmental policy. The issues, according to the informants, that counted as socio-cultural directly or indirectly ranged from health, livelihood, economic development, cultural values, to natural heritages. As the figure below shows, most of the informants referred to such issues as gender, community participation, cultural values, and indigenous knowledge. Mention is also made of health, livelihood, and impact assessments.

Sure enough, the list of issues defined as social and cultural in the existing environmental policy and related documents reflect the views and experiences of the informants, and they may not be as exhaustive enough. Nonetheless, it is interesting to observe that, in the views of the informants, the things defined as social and cultural in the policy documents are diverse enough. There is a note of mixing, however, social-cultural, and economic development issues, all seemingly lumped as social. So the definition of social-cultural issues as represented in the policy documents, at least the way the documents are perceived by the informants, seem to be incomplete, or rather not very clearly singling out social issues. Moreover, as some informants acknowledged, there is even more confusion as to *what cultural or socio-cultural issues are* and all the various issues, including

health, economic development, social security, livelihood, natural heritages, local community participation, and gender, are lumped together as *social issues*.

What are the actual instances of strategies, directives or regulations that make specific references to socio-cultural issues? Informants were asked to cite specific, tangible instruments that are in place in this regard, particularly, any specific references to socio-cultural issues as such.

The informants were more convinced, when asked this question that many of the now known national policy and strategy documents and proclamations can be taken as clear, tangible instances of the specific references made to socio-cultural issues in the documents. Informants cited instances of existing policy and legal documents that in one way or another make references to socio-cultural issues. For example, according to KII-03-: 2 – 2-2020, there are clear references to socio-cultural issues in the 1997 Environmental Policy; Environmental Impact Assessment Proclamation No. 299/ 2002 and the detailed implementation strategies; and Biosafety Law.

Another informant argued that clear references are made to indigenous knowledge registration and recognition by Ethiopian biodiversity Institute; and cultural and heritage sites conservation and development by Culture Tourism Ministry (KII-01-: 2 – 2; 2020).

Overall, social, and cultural issues are clearly referenced in the existing legal and policy documents of the country in both broader framework such as, for example, in the national Constitution of 1995 where it is declared that citizens have the rights to live in green and clean environments; the 1997 environmental policy; and narrow, sector-wise policies. In broad frameworks, the environmental policy generally aims at creating environment based on sustainable economic development and stable social security. Social security, peace, indigenous knowledge, peoples' rights, local knowledge, and community participation issues are among the key pillars of the policy frameworks. According to this senior office, the various sector-wise policy documents and regulations further enshrine social issues as key components (KII-10-: 8 – 11; 2020).

As informants further noted, sector-wise policies and strategies such as the national disaster risk management strategy considers how cultural heritage may be affected through disasters. There are also gender aspects and indigenous people's rights. The national forestry policy has a key component called Participatory Forest Management (PFM). The PFM enshrines participation of the community and other stakeholders as central; this is about social issues. It gives due attention to the role of the community, considering the role of the local community and their indigenous and traditional knowledge in these areas.

The Climate Resilient Green Economic Strategy of Ethiopia is a specific policy that focuses on climate issues. It pays much attention to resilience which is about people and social issues: how to be resilient in terms of risks and shocks to any kind of shocks to climate change manifesting itself in such disasters as drought or floods. Furthermore, according to an informant, the 1999 Water Policy, although mainly part of environment, is also social security issue in that water is public resources and public access to clean water is very important. It's also viewed as part of human rights issue.

Similar things are reported to found in the conservation strategy of the country. For example, the beneficiary schemes recognize local communities because their roles are very high in protecting the resources. Similarly, in Wildlife Protection there is beneficiary scheme; much of the benefit should go to community empowerment

issues so that the community has the sense of ownership of the wildlife resource. The national environmental impact assessment proclamation, it is argued by some informants, makes vivid references to social issues, as it sees the impact on environment, economic development and social security as three key components. These are very important components in environmental impact assessment proclamation.

It appears that the informants are overall confident that social-cultural issues are well represented in the national policy instruments. But from the overall tone of the data, it is fair to state that the existing environmental policy and related documents duly represent social and cultural issues. As one informant argued, while the documents fairly represent and define social issues, the issue of *how complete and adequate* as well as *clearly making distinctions between social and cultural issues* are matters for further debate. It is fair to note that the *extent of completeness and with what level of sensitivity are social and cultural issues defined and considered*, etc. are open to question.

When the more nuanced aspect of 'social' and 'cultural' issues is considered, it becomes even clearer that the existing documents do not duly consider and define these aspects adequately. Nonetheless, as noted above, it does not seem fair to argue that environmental policy should be detailed and specific enough to cite cultural and social issues in more details. As a policy document, and above all, as primarily targeting environmental sustainability concepts, these documents may not necessarily and fairly be expected to cover social and cultural issues in the level desired by concerned professionals of socio-cultural matters. But given the long-accepted tradition in the environmentalism and conservation movements and paradigms where biodiversity conservation and economic growth have been much emphasized and socio-cultural issues sidetracked, it is important to challenge and ask existing environmental policy frameworks whether they duly define, represent and consider social and cultural issues.

Policy Implementers' Awareness

Existence of socio-cultural issues in environmental policy instruments is one thing; awareness of the policy implementers with positive readiness to implement is another thing. Further still, the state of implementation of policy provisions for socio-cultural issues in various environmental policy documents is quite another important issue.

Although difficult to judge, given the limited cases we have in this small-scale study, policy implementers' awareness of socio-cultural issues as defined in existing environmental related policies and laws is overall reported as weak. Informants used various expressions for this: some stating it is "satisfactory'; some argued policy implementers have 'little awareness.' As one informant noted, "In general, the awareness level is not bad but… there is no separate component for social issues during project development and implementation as well as monitoring and evaluation," (KII-05-: 9 - 9).

Another informant generally made a solid argument saying "Many awareness creation activities have been done in the last three decades. The laws and policies have been progressively improving and the problems are also getting more complicated …. and it requires lots of resource. But we must ask: has it got broad impact? …" (KII-10-:25-25). This connotes awareness in general exists and it has improved, but the real question becomes: To what extent has it been implemented? We need to look at this in the following section.

Implementation State of , and Provisions for, Socio-Cultural Issues & Best Lessons

As the data show, overall, informants argued that while the existing policy and strategy documents are very impressive on the paper, their implementation state is woeful. Thus, to the question, "Are socio-cultural provisions in environmental related policy and legal instruments duly implement? If so, why?", all of our informants resoundingly replied that implementation is very weak. Quite wide-ranging reasons were offered for the failure, ranging from the challenge of implementing socio-cultural provisions in a multi-cultural, ethnically diverse society like ours; to lack of commitment and corruptive, selfish interests, as one informant noted: "Totally not implemented in our country because our politicians and implementers are selfish and rent-seekers," (KII-01-: 4 - 4). Another informant called attention to problems in integrating social and cultural issues with environmental issues: "They are not being implemented because economic and social issues have not been properly managed in integrated manner to ensure sustainable development," (KII-06-: 4 - 4)"

Other informants called attention to commitment citing it as very important. Even if there is proper awareness, it is difficult to implement given lack of commitment, as one informant noted: "They are not implemented correctly. This is because most communities and stakeholders have awareness problems. Even among those who have an understanding, there is also an unwillingness to implement due to the problem of negligence and commitment," (KII-07-: 4 - 4).

In general, the main reasons for poor implementation of socio-cultural provisions in environmental policy instruments may be categorized as: limited awareness and knowledge on the issue; lack of commitment; poor integration and coordination: lack of uniform implementation strategies across the board; social and cultural issues given very low attention in developmental project activities; and low implementation capacity.

In summary, while existing environmental policy and legal instruments are impressively crafted to include social and cultural issues, the provisions are generally poorly implemented. Of course, some level of implementation achievements may be cited, and indeed our informants made mentions of some model cases whereby socio-cultural issues are duly getting implemented. For example, as one informant mentioned, the community-forestry conservation and the participatory forestry programs may be a good model examples of implementation. A case in point may be that which is found in south-western Ethiopia and in western Oromia regions where robust community conservation and forestry programs have considered social and cultural issue, acknowledging the values and role of local knowledge and indigenous resource management practices. Socio-cultural issues in such endeavors as gender participation, participatory decision-making, benefit-sharing, sustainable use and conservation of forest resources, conservation of cultural and natural heritages, promotion of forest and biodiverse-friendly religious worldviews, etc. may be cited as good cases.

But apart from these limited cases, overall, the implementation state is generally reported as very poor and in need of reformation. To be fair, it is reasonable to acknowledge the good lessons in participatory forestry management areas, and in the now relatively stronger emphasis being put on the need for social, health and cultural impact assessment when reviewing and approving development projects. Encouraging community participation, providing for protecting cultural heritages and local knowledge systems, safeguarding

the rights of marginalized social groups and mainstreaming gender and youth matters in environmental related policy and strategy instruments may thus be acknowledged as good sings of implementing.

However, when taken overall, translation of policy provisions for social issues and cultural values in environmental policy formulations and implementation have remained elusive, weak, and very much wanting, with much stress still being laid on the purely physical-environmental aspects and the economic growth initiatives overshadowing the more soft power issues of cultural heritages, social institutions, local knowledge systems and world views, which are being considered very crucial part of the environment and conservation endeavor as a whole at global stages.

Key Challenges Facing Policy Implementation

What factors exist that impede the realization of socio-cultural policy provisions in environmental policy instruments? There is no lack of issues standing out as challenges. Many factors work towards limiting the realizations of policy provisions, in general not just for socio-cultural issues. The problem ore intensifies when it comes to 'soft power' of socio-cultural aspects. The various factors mentioned by the informants, indeed may be regarded as a representative sample of factors, the size of sample notwithstanding.

The issues are the same issues that also showcase in other areas. Staff turnover and the resultant institutional memory loss is a key issue that is hampering implementations in many public service organizations. Lack of capacity (financial, knowledge and skills) are also very important. Much more emotionally charged factors are the issues of lack of political will, the 'silo approach', fragile peace and security conditions, motivation and commitment from both policy formulators and implementers. The socio-cultural provisions in environmental policy documents have suffered from these assorted and interlinked challenges which are very much pronounced in the country.

Discussion

The issue of unsustainable development, environmental problems, climate change and their impacts on societal well-being and development are high on the international agenda (Conway & Schipper, 2011; Dove, 2014; Salick & Ross, 2009). Academic and policy literature on sustainable development and impact assessment call for careful considerations of socio-cultural issues in development policy formulations and practice. The Millennium Development Goals and Agenda 2030- the Sustainable Development Goals have empirical and tangible points whereby issues of social and cultural significance are made part of the global policy dialogues (MEA, 2005; UN, 2015).

Literature on environmental policies and the definition and representing of socio-cultural issues is generally patchy, particularly in Ethiopian context. However, some source suggests that there has been an increasing acceptance and recognition of social and cultural issues in environmental policy formulations in the recent decades across the world (Cahill, 2002). Despite such increasing recognition, hazy definitions and misrepresentations of socio-cultural issues when considering policy formulations in the hard, physically oriented fields is still a challenge (Sagnia, 2004).

Viewed from the literature context, the result on whether, how and to what extent socio-cultural issues are defined and represented in Ethiopia's environmental policy documents may be considered as technically and conceptually sound, given the improving trends in the past recent decades. Ethiopia's policy instruments on paper are generally touted as very impressive and progressive, these including those addressing socio-cultural issues in environmental policy formulations (Ruffeis et al., 2010).

Many policy and strategy instruments in recent years have been put forward, that directly or indirectly provide provisions for socio-cultural issues. This appears to be much so in the recent trends in putting up frameworks and instruments for guidance of social, economic, and environmental development projects. The national constitution, environmental policy, and a host of other policy instruments all make some references to social and cultural issues (FDRE EPA, 1997; FDRE-the CRGE Initiative, 2011).

Some most recent policy and strategy documents seem to draw home the message of the importance of socio-cultural nexus with environmental and economic sustainability. The national social and environmental impact assessment frameworks and in light of this, many initiatives from the private and para-governmental sectors have made efforts in putting forward policy directives and guidance on how best to consider social and cultural issues in the industrial development processes (DBE, 2017; EIA, 2018; MOST, 2016; Ministry of Industry, 2014).

While these and other empirical sources suggest the definition and representation of social and cultural issues can be considered fair and commendable, many of the problems are linked to the desired level of possessing appropriate awareness and attitudes towards socio-cultural issues, the level of actual implementation of the policy provisions and thus the scale of desired positive impacts that have accrued from the existing policy and legal frameworks.

With respect to these issues, the findings of the study as presented above compares with the empirical studies documenting the state of the successes of environmental policies and environmental impact assessment tools. The implementation status of environmental policy and impact assessment proclamations in the general sense has been assessed by many scholars, particularly from legal studies perspectives (see for, example Abdi, 2012; Bayou, 2008; Damtie, 2008; Gubena, 2016; Ruffeis et al., 2010). These studies generally focus on the implementation lacunae and not necessarily on whether and to what extent provisions for social-cultural issues are addressed and implemented. An unpublished master thesis report makes a good attempt at assessing how Ethiopia's environmental policies and impact assessment proclamations treat socio-ethical issues (see Taye, 2019, *Is Ethiopia's Environmental Policy ethical?* See also Desta, n.d., Environmental Policy for Ethiopia's Sustainable Social and Economic Development: A Working Paper, n.d.).

The empirical studies make reference to the most pressing factors that impede proper implementation of environmental impact assessment and similar policy instruments, although they do not make specific reference to socio-cultural issues. Nonetheless, the issues they raise as key challenges are also most notably the ones that are presented above. For instance, Taye (n.d.), Damtie (2008), Gubena (2016) argue that awareness limitations, resource shortages, and above all low political will and commitment, along with also knowledge and technology gaps are among the key factors that impede proper implementation of environmental policies and instruments in Ethiopia.

Some sources suggest that Ethiopia has put in place one of the best policies and legal instruments concerning environment, social development, and the nexus of society, development, and environment. The 1997 environment policy is a very comprehensive and cogent one (Abdi, 2012; S. Edwards, 2010; Gubena, 2016; Janka, 2012), the poor

implementation state notwithstanding. Perhaps, it may be fair to cite some cases in Ethiopia, as part of policy supported and promoted matter, the issue of participatory forest management (PFM), such as the case in southwestern Ethiopia and in western Oromia, which are taken as best lessons of environmental and conservation policies marriage amicably with social and cultural goals, some of the cases featuring in UNSECO World Heritage and Man & Biosphere Program (Vaughn, 2010; Woldemariam & Fetene, 2010; UNESCO, 2014).

When we situate the findings in the context of developing countries in general and (East) Africa, it is generally argued that Ethiopia has maintained a unique trajectory in its formulation and implementation of policies on environment, society, and culture, although the country has been consistently an active role player in the United Nations engagements pertaining to socio-cultural and environmental issues (EBI, 2014). However, like other African countries, the formulation and implementation of environmental policies in Ethiopia often suffered from a Eurocentric and conservation-science emphasis and a detachment from local socio-cultural realities. This may be understood from related study findings in African context. The processes and lacuna of environmental policy formulation ins Ghana (Ayee, 1998), Nigeria (Wonah, 2017), Kenya (Nasong'o, 2018), West Africa in general (IUCN, n.d.), Egypt (Nadia Hegazi, 2004), have been cogently discussed and the findings there have very relevant bearings to the present study.

Overall, as these and other related studies indicate, the proper understanding of the dynamics of processes of environmental policy formulations and implementations in general and their representation and definition of socio-cultural issues in Ethiopia and Africa in general requires careful scrutiny and the need to taking into account the global influences, local traditions and the range of the power politics and socio-economic dimensions (Keeley & Scoones, 2000).

Conclusion

Ethiopia's Constitution provides clear support for social and cultural goals linking with environmental rights and values. It stipulates that citizen have the rights to live in green and clean environments, to participate in national development initiatives affecting their lives, and obliges governments and other actors to uphold these goals. Existing environmental policy and the various proclamations and strategy documents on environment, pollution, development, and social inclusion all provide for social and cultural issues, promoting integration of local lives, livelihoods, and beliefs and identities with sustainable environments and economic development. The environment policy is hailed as very much replete with socio-economic and cultural goals, with issues of participation, the role of local communities, indigenous knowledge, bio-friendly religious worldviews and institutions, and benefit-sharing mechanisms very much showcasing the pages of the various policy documents. Sector-wise policy and strategy documents likewise do no lack focus on how social and cultural issues may be entertained. Respect and recognition for local role and knowledge in biodiversity and natural resource conservation, and the varieties of age-old local practices relevant for national and economic and social development, peace, are generally referenced in several policy documents.

However, the main problem lies in adequacy of representation of socio-cultural issues, particularly cultural resources (notably heritages, identities, belief systems social institutions, etc.). More so, the problem lies in the state of realizing the policy provisions for socio- cultural issues. Policy formulators and implementers' general level of socio-culturally sensitive awareness, attitude and commitment is a key gap. Often, policy formulators and implementers so often ignore socio-cultural issues, mainly out of low sensitivity and sometimes due to bias and low concern for these elements.

With all these challenges impeding the proper implementation, including capacity and technology limitations, lack of coordination and integration, low motivation and commitment as well as low level of capacity and awareness, some showcases exist that may best exemplify what happens when socio-cultural values and institutions are duly represented and considered both in paper and practice, this putting Ethiopia in the UNECSO world map.

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E*conomic Effects of COVID-19 on Micro and Small Enterprises in Addis Ababa Surrounding Towns of Oromia National Regional State,*

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Abstract

Micro and small businesses contribute a lot to Ethiopia's transition from an agrarian to an industrial economy. But, now, the sector's economic operations are affected by COVID-19. Accordingly, this study aimed at examining the economic effect of the COVID-19 on micro and small enterprises in Addis Ababa surrounding towns of Oromia National Regional State. To achieve this objective, quantitative data were collected from 436 MSEs by questionnaire that represents the situation of the enterprises before and after the outbreak of the pandemic in December 2020. Data was analyzed by descriptive statistics method. The findings of the study showed that at the beginning of March 2020, before the outbreak of the pandemic, an enterprise had, on average 3.8 workers whereas, after the occurrence of the pandemic, an enterprise had, on average, 2.9 workers. This implies that due to COVID-19, enterprises decrease their workers on average by 0.83 and the mean difference of workers before and after the pandemic was statistically significant at less than 1% probability level. Furthermore, 32.3% of respondents reduced their workers because of the pandemic, 60.55% and 31.02% of enterprises stopped working temporarily and partially (half a day) respectively. On the other hand, the enterprise's annual income for the year 2019 on average was 170,174.4 Birr whereas it was Birr 127,433.8 for the year 2020 during the pandemic and the mean difference was 42,740.6 Birr which is statistically significant at less than 1% probability level. The main challenges enterprises faced during the pandemic were a fall in demand, decline of orders from customers, and lack of operating finance. Based on the findings of the study, training on a business recovery plan development and new line production, an extended debt repayment period, and provision of short-term credit are suggested to make enterprises recover faster from the adverse effect of COVID-19.

Keywords*:* COVID-19, Micro and small enterprise, Sululta, Burayou, Ethiopia

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Introduction

The pandemic COVID -19 was first identified in Wuhan, China, at the end of 2019 and declared as a pandemic by World Health Organization (WHO) on 11 March 2020 (WHO, 2020). The virus has touched almost all continents of our planet and spread to more than 216 countries and territories. The pandemic has caused global health and economic disruption. As of April, 2022, more than 510 million people were infected by the virus and 6.2 million people died all over the World (WHO, 2022). In Africa, in March 2020, where most countries reported the first case, the virus surged slowly. But, now (April 2022) it has been proliferating and resulted in 0.25million deaths and more than 11.8 million confirmed cases (Johns Hopkins University, 2022). In Ethiopia, the number of confirmed cases surpasses 470,937 and 7510 deaths (Johns Hopkins University, 2022). To reduce the number of daily confirmed cases and deaths by the Coronavirus, governments of many countries have been taking different measures like social distancing, border lockdown, use of face masks, full or partial lockdown, and testing. However, governments of many countries faced challenges in choosing whether to save the economy before saving the people or to save the people before saving the economy ahead of deciding which measure should be applied for the reason that "one size may not fit for all". Even if, many countries chose “save the people before saving the economy”, these countries noticed that their health crisis has been shifted to an economic crisis (Ozili & Arun, 2020).

Despite the Coronavirus's devastating effects on human health, it is wreaking havoc on the global economy. Falling oil prices, decreased export and import, weakened tourism and aviation sectors, increased poverty and unemployment, supply and demand shock as businesses reduced or stopped production, and consumption decreased, as seen in the United States, China, South Korea, Italy, France, Brazil, and the rest of the world (Paolo & Andrea, 2020; Baldwin & di Mauro, 2020). These economic effects of the virus may have resulted from viral-control measures implemented by firms, the government, and people. Businesses have closed, reduced production, and lay off staff as preventative measures. Governments prohibit certain sorts of economic activities, such as restaurants, taverns, cinemas, and stores, and people limit their trips to the market, cross-border travel, recreational activities, and other social activities (Baldwin, 2020; Baldwin & di Mauro, 2020). Despite the efforts of firms, governments, and individuals, the virus continues to spread from time to time.

The economic effect of the virus is more likely to be severe in developing countries, as they are less able to subsidize their fledgling businesses than wealthy countries. Various health precautions aimed at containing the virus and its transmission vectors harm micro and small enterprise (MSE) supply and demand. MSE fosters the growth of a nation's economy by creating job opportunities and capital accumulation and reducing the gap in income inequality. For instance, micro and small-scale enterprises contributed 6.2% in the US, 22.3% in China, 80% in India, 67% in Japan, and 70% in the European Union of employment opportunity (Tegegne & Meheret, 2011). In Ghana and South Africa, MSEs represent a vast portion of businesses. They represent about 92% of Ghanaian businesses and contribute about 70% to Ghana’s GDP and over 80% to employment. MSEs also account for about 91% of the formal business entities in South Africa, contributing between 52% and 57% of GDP and providing about 61% of employment (Peter, 2015).

The pandemic's economic disruption is severe on MSEs, resulting in lower demand for goods and services produced by MSEs as consumers reduce current consumption spending due to fear of the virus spreading locally and internationally, as well as the side effects of health measures such as staying at home, social distancing, and declaring a state of emergency. The fall in demand for goods and services will also cause a substantial decrease in the income of the MSEs. Consequently, MSEs will fail to pay salaries and wages for their employees and then lay off workers, unemployment increased particularly in the urban area, faced financial constraints to pay rent for working areas, and loan to banks or microfinance if the pandemic continues for six (6) months and above (Job Creation Commission, 2020).Now, the pandemic has stayed for greater than two years and the findings of this paper also showed MSEs reduced workers , their income and saving were also reduced.

Different researchers made an effort to examine the economic and social effects of the virus. In research conducted by Bartik et al. (2020) on 5800 small firms in the United States, 43 % of respondents have already temporarily shuttered their doors and cut their workforce by 40%. Another research conducted in similarly, a survey on MSEs in the Netherlands found that 85 % of MSEs are in financial problems, with micro-enterprises facing the most challenges, and a study in Belgium found that 31% of MSEs are at risk of going out of business.

In a survey conducted by the Society for Human Resource Management in the United States in April 2020, 42% of small business owners, particularly in the service sector, had to close their businesses, with 62% experiencing a revenue decrease, 12% of small businesses unable to stay open for more than a month, and 32% unable to stay open for more than three months.

Shafi et al. (2020) aimed to determine the impact of the COVID-19 outbreak on MSMEs of Pakistan. They applied an exploratory methodology. They collected data by an online questionnaire from 184 Pakistani MSMEs. According to the findings, the majority of the participating businesses have been significantly impacted by the virus, and they are dealing with a variety of challenges including financial, supply chain disruption, decreased demand, decreased sales, and profit, among others. Furthermore, over 83% of businesses were unprepared or had no plan in place to deal with such a circumstance. In addition, nearly two-thirds of participating businesses claimed that if the lockout extended longer than two months, they would be unable to survive.

Kassa (2021) gathered data from 276 respondents for a study on the determinants of micro and small business continuity during the COVID-19 pandemic. The information gathered was evaluated using descriptive, correlation, and regression analytic methods. People and administrative factors, regulatory factors, economic factors, partnerships, and owner leadership have a positive relationship to micro–small enterprise continuous operations during the COVID-19 pandemic with r = 0.457, 0.558, 0.572, 0.519, and 0.654, respectively. With a value of (p= 0.05), the study regression analysis revealed that partnership, economic considerations, and the owner's leadership have a positive statistical significant effect on the continuous operations of the micro and small firm during the COVID-19 pandemic.

The Japanese government has also made steps to mitigate the pandemic's negative impact on MSEs. The package includes special loans of JPN 1.6 trillion offered to MSEs with zero-interest loans and no collateral, a specific guarantee program for firms affected by the outbreak whose sales and other profits are declining, subsidies to support teleworking in MSEs (including encouraging firms to adopt IT solutions and develop e-commerce sales channels), and MSEs facing a 15% decrease in sales can claim interest compensation and can borrow with no collateral (Organization of Economic Cooperation and Development, 2020). In South Korea, a survey of 407 MSEs performed in March 2020 revealed that the pandemic has affected 61.1% of MSEs, 42.1% of which will be unable to continue operating for more than three months, and 70.1% for no more than six months. A survey of 6000 MSEs in Italy found that 72% of enterprises were directly affected by the pandemic due to a drop in demand and/or supply chain, with 1/3 of respondents estimating a revenue decrease of more than 15% and 18% estimating a revenue decrease of 5-15% (OECD, 2020).

The Chinese government has also taken various measures to ensure MSE sustainability, including encouraging large enterprises to collaborate with MSEs, such as increasing their support in supply chains, in terms of loan recovery, raw material supply, and project outsourcing, motivating MSEs to engage in technology innovation, fostering MSE participation in public procurement by central and local governments, and the Chinese central bank launched a CNY 500 billion re-lending program (OECD, 2020).

Oyewale et al. (2020) investigated the impact of COVID-19-related cases and lockdown measures on issues affecting Nigeria's Small and Medium Scale Enterprises. The data collected was analyzed using a linear probability model to estimate the impact of the pandemic on entrepreneurs and a multivariate probit model to predict the factors impacting coping techniques. The finding showed that the majority of entrepreneurs have been affected (both significantly and modestly) by the COVID-19 pandemics due to partial and total lockdown and movement limitations.

Partially restrictive restrictions increased the chance of low sales among businesses, particularly in the non-agricultural sector.

Ethiopian government has implemented a variety of measures to restrict the virus's spread and mitigate its economic impact, having recognized the pandemic's severe impact on health and the economy. The announcement of a five-month state of emergency, partial lockdown, the suspension of airline flights to more than 80 countries, the provision of 15 billion Birr to private banks by the National Bank of Ethiopia, and the imposition of 14-day quarantine are a few examples. Despite these efforts, Ethiopia's GDP grew by 6.1% in 2020 compared to 8.4% growth for the year 2019 before COVID-19.

MSEs, like those in many other developing countries, play a critical role in the Ethiopian economy by providing jobs, saving money, ensuring a fair income distribution, contributing to GDP growth, and so on. According to a report published by the Federal Job Creation and Food Security Agency in 2019, Ethiopia had more than 602,715 established MSEs between 2015/16 and 2018/19, employing over 3.04 million people, creating more than 5.02 million jobs, mostly for youth and women, and saving 34.4 billion Birr. (Ministry of Trade and Industry, 1997, Ministry of Urban Development and Housing, 2016).

In light of our country's unique circumstances and the peculiar nature of COVID-19, the effect of the virus on MSE has not yet been thoroughly investigated. Thus, the study areas were towns surrounding Addis Ababa, which is currently the pandemic's epicenter, with the virus's transmission increasing day by day (MoH, 2020). The virus's rapid spread in Addis Ababa has a spillover effect on towns that surround the city. And, in comparison to other towns in the Oromia National Regional State, these towns have been heavily struck by COVID-19, and the pandemic has put a strain on ordinary business operations and people movement on MSEs in these towns.

Consequently, we aimed to conduct this research to investigate the economic effect of COVID-19 on MSEs in Addis Ababa surrounding towns of Oromia National Regional State with specific objectives of estimating the effect of the COVID-19 pandemic on the income and employment of MSEs, identifying the challenges faced by MSE during COVID -19 and assessing measures taken to overcome the effect of the COVID -19 pandemic on MSEs. The results of this study could aid policymakers in identifying economic disruption caused by Coronavirus, develop appropriate policies and strategies to help MSE recover quickly from the COVID-19 pandemic's economic crisis, and determining possible short and long-term solutions for the adverse effect of the virus and the findings could also be used as a reference source for future research due to the virus's peculiar nature.

Materials and Methods

Study Design and Source of Data

It has been more than a year since the first case of the COVID-19 pandemic occurred in Ethiopia, and the pandemic's spread has not been stopped. In terms of confirmed cases and deaths, the pandemic is showing an upward trend. A descriptive research design and a quantitative research approach were used in this study.

Micro and small enterprises in the trade/ service and manufacturing sectors provided the primary data. Data were collected from the towns of Burayou and Sululta in Oromia National Regional State, Oromia Special Zone, which surrounds Addis Ababa. These towns were chosen because they have a higher number of established MSEs than other towns, have been impacted particularly severely by COVID-19, and have a high

level of pandemic spillover from Addis Ababa.

Sample Size Determination and Sampling Techniques

The number of MSE (population) from which the sample was drawn is finite and known; the formula provided by Yamane (1967) was used to determine the sample size. Here acceptable error "e" is considered to be 5% to have a representative sample to withdraw relevant response and to keep the heterogeneity among sample MSE (Kothari, 2004).

Therefore: $n = \frac{N}{1+N(e^2)}$ Where,

N = number of MSE's (population),

n = size of sample e = acceptable error (the precision).

Thus, for N=7200, e=0.05,

the sample size (n) was:

$$n = \frac{N}{1+N(e^2)} = \frac{7200}{1+7200(.05*.05)} \approx 379 \text{ plus } 15\% = 436.$$

There are 2149 MSE"s in Sululta town and 5051 MSE's in Burayou town which are actively working with work experience of two and more than two years. During the data collecting period, our target population is MSEs who are working and have work experience two years and above. The target population was stratified into trade/service and manufacturing sectors after obtaining a list of MSEs engaged in trade/ service and manufacturing from the Job Creation and Food Security Office of each town understudy.

The service/trade and manufacturing sectors consists of 5185 and 2015 MSE's respectively. Then, 314 MSE's from service/ trade and 122 MSE's from manufacturing sectors were selected by systematic random sampling technique using proportional sampling to size. Thus, a total of 169 and 267 samples were selected from Sululta and Burayou towns from both trade/service and manufacturing sectors respectively (Table 1). Quantitative primary data were collected using a structured questionnaire from 436 MSEs. The data were analyzed using descriptive methods and presented in terms of figures and tables.

Results and Discussion

Descriptive Results

General Characteristics of MSE

The following analysis was done using data acquired in December 2020 from micro and small businesses in the trade/service and manufacturing sectors. The result showed that 92.4% (403 respondents) of the total 436 respondents were responded properly, with males owned MSE accounting for 57.6% and females owned MSE accounting for 42.4% of the respondents. MSE had an average of 3.5 years of work experience.

Education is a variable which determine the profitability of MSE. It helps them to keep recordings of returns properly and compete in the market better than non-educated operators. The survey result also showed that 96.8% of MSE owners or managers were educated and the remaining 3.2% were not educated (Table 3.1). This showed that MSE has provided a career opportunity for educated operators.

Table 1: Details of Sample Size by Sector and Towns

Towns	No of firms by sector		Sample Selected		Total sample selected
	Trade/ service	Manufacturing	Trade/ service	Manufacturing	
Sululta	2073	706	126	43	169
Burayou	3112	1309	188	79	267
Total	5185	2015	314	122	436

Source: Sululta and Burayou town profile, 2020

In terms of MSE's owners/ managers marital status, the study revealed that 30.52% were single, 64.27 % were married, and the rest were divorced (4.47%) or widowed (0.74%). Because most business owners/managers are married, the pandemic may affect them financially more than other marital status groups. The descriptive result also depicted that the majority of MSEs (76.92%) were registered as microbusinesses, while the remaining 23.08 % were classified as small businesses. In the same way, 76.43% of MSEs worked in the trade/service sector, while 23.57% worked in manufacturing. According to the study results, 63.52 % of MSE work in the shade constructed by the government, while 13.4% and 23.08% work in their own and rented premises, respectively (Table 1).

MSE's were asked whether its workers get contacted with COVID-19 or not. The finding showed that 6.95% of MSE had been contacted with the virus, 88.09% said their workers did not get contact, and 4.96% said they do not know whether their workers or the owner or the managers themselves had been contacted with the virus or not. In line with this, respondents were asked whether they stopped their business operation or not because of fear of COVID-19. Consequently, 60.55% of MSE stopped their business activity temporarily. Out of those who stopped working temporarily, 43.5%, 16.8%, 22.9%, 13.5%, and 3.7% of MSEs stopped working for more than three months, three months, two months, one month, and less than one month respectively. Similarly, 31.02% of MSEs stopped working partially (half a day) while 8.44% did not stop their business operation despite their fear of the virus (Table 2).

Effects of COVID-19 on Employment

To analyze the effect of the pandemic on employment, MSE's employment data were collected at the beginning of March 2020 (before the outbreak of the pandemic) and during December 2020 (after the outbreak of the pandemic). Accordingly, the findings of the survey depicted that 32.3% of MSEs said that they reduced their workers because of the pandemic, while 67.7% did not reduce their workers. Likewise, the survey result revealed that at the beginning of March 2020, MSE had, on average 3.8 workers (both permanent and temporary), whereas MSE had, on average, 2.9 workers in December 2020 (Table 2).

Table 2: General Information of Micro and Small Enterprises

Variables	Frequency	Percent
Education Level of the owner/Manager		
Attended above grade 12	114	28.29
Attended grade 9-12	207	51. 36
Attended grade 1-8	69	17.12
Never Attended	13	3.23
Level of Enterprise		
Micro	310	76.92
Small	93	23.08
Types of Business		
Trade/service	308	76.43
Manufacturing	95	23.57
Working area		
Own premises	54	13.4
Government shade	256	63.52
Rented	93	23.1
Virus contacted		
Yes	28	6.95
No	355	88.09
Don't know	20	4.96
Stopped operation		
Do not stop operation	34	8.44
Yes, stopped partially(half a day)	125	31.02
Yes, stopped temporarily	244	60.55

Source: Computed from survey data, 2021

Out of those MSE who did reduce workers, were asked to state the criteria behind reducing workers. Hence, the finding of the study showed that workers were reduced with no specified criteria (61.5%), those their place can be easily covered by other workers (22.3%), and workers who are not engaged in the main activities of the business (16.2%).However, MSE do not simply reduce workers; they applied a certain set of actions. Thus, allowing paid leave (30.8%), reducing working hours (24.6%), giving unpaid leave (23.8%), and working for reduced pay (20.7%) are the main action taken by MSE to lay off workers (Figure.1).

Figure 1: Action Taken by MSE To Reduce Workers

MSE's were also asked to justify why they did not reduce workers at the period of COVID-19. The survey result depicted that majority of MSEs (67.7%) did not decrease their employees because they had no employees employed and run their business themselves including their families (81.6%), demand for their product increases during the pandemic (5.2%) and the nature of their business did not directly affect by the pandemic (13.2%). But, this does not mean that these enterprises have not been affected by the virus.

Regarding the main reasons of fall in income 85.61%, 75.93%, 48.14% , 19.35% and 15.38% of respondents replied that their business was closed temporarily because of COVID -19, number of customers was reduced because of fear of the virus, demand dropped, workers stayed at home, and input problem were the main reasons, respectively.

Table 3: Descriptive Results of Employment

Description	Obs	Mean	Min	Max	t-value
Total workers at the beginning of March 2020	403	3.77	0	24	
Total workers at December 2020	403	2.93	0	24	
Worker laid off[Difference)	403	0.83	0	14	9.71
Workers reduced by enterprise					
Microenterprise	310	0.44	0	6	
Small Enterprise	93	2.12	0	14	
Workers reduced by sector					
Trade/service	308	0.51	0	8	
Manufacturing	95	1.85	0	14	

Obs=Observation. Source: Computed from survey data, 2021

Effects Of COVID -19 on Income and Savings of MSE

To compare the effect of COVID-19 on the income of MSEs, the annual income of the MSE's for the years 2019 (before the outbreak of the pandemic) and 2020 (after the outbreak of the pandemic, end of December 2020) were collected. Savings data were also gathered for the same years. As a result, 92.6% of MSEs said that their annual income for the year 2020 was reduced compared to the annual income of the year 2019 (Table 3).

Agreeably, 75.19% of MSEs said that they saved some amount of money from their annual income for the year 2019 and the rest 24.81% did not save. The main reasons for not saving are lack of market for goods and services (32%) and failure to compete with other similar businesses (26%). Similarly, 43.42% of respondents saved some portion of their annual income and 56.58% of respondents did not save for the year 2020.

Table 4: Summary of Income and Savings of MSE for the Years 2019 And 2020

Variable	Obs	Mean	Minimum	Maximum	t-value
Annual income_2019	403	170,174.4	8000	2,000,000	
Annual income 2020	403	127,433.8	2,000	1,800,000	
Difference	403	42,740.60			6.0657
Annual saving_2019	403	24,865.11	0	600,000	
Annual saving 2020	403	12,345.06	0	370,000	
Difference	403	12,520.05			5. 4948

Obs=Observation Source: Computed from survey data, 2021

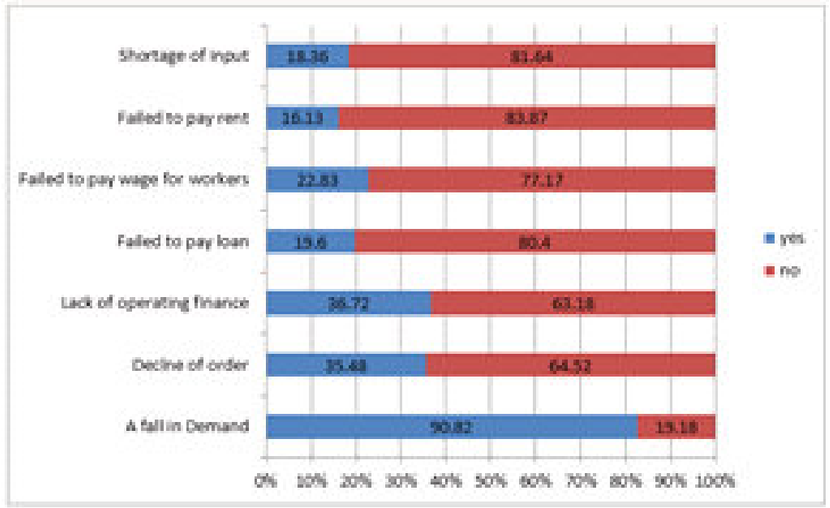
Table 5: Main Reasons for Fall in Income

Main reasons for fall in income	Percentage	
	Yes	No
The business closed temporarily because of COVID-19	85.61	6.45
Few customers because of COVID 19	75.93	15.88
Demand dropped	48.14	43.67
Can't get input	15.38	76.43
Workers stayed home because of fear of the virus	19.35	72.46

Source: Computed from the survey data, 2021

Challenges Faced by MSE During COVID-19

There are several challenges faced by MSE during COVID-19 which potentially hinders the growth of MSE. The survey result portrayed that 90.82%, 35.48%, 36.72%, 19.60%, 22.83%, 16.13%, and 18.36% of MSEs stated that main challenges of their business operation were a fall in demand, the decline of orders from customers, lack of operating finance to produce goods and services, failure to pay wage to workers, failure to pay loans to banks, microfinance, and individuals, and shortage of inputs to produce goods respectively (Figure 2).

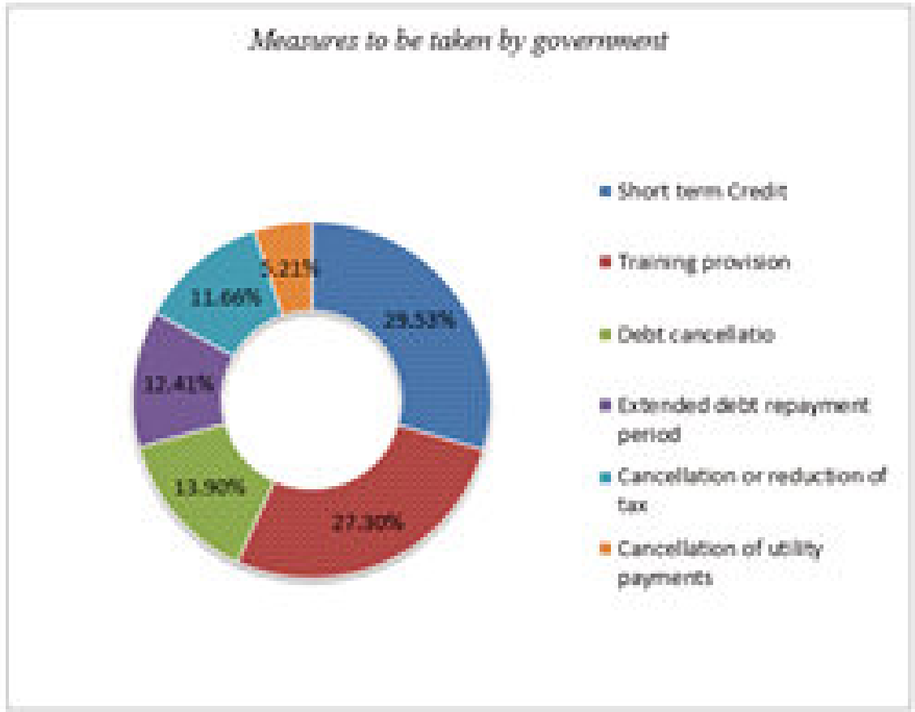


Source: Own computation, 2021

Figure 2: The Percentage Share of Challenges Faced by MSE

Measures to be Taken to Combat the Effect of the COVID -19 On MSEs

Different measures need to be taken by the government, owners of MSE, and other concerned bodies to make MSE resist and survive during this pandemic period. To this effect, MSEs specifically want the government to take a variety of steps to mitigate the coronavirus's negative effect on income and employment. Consequently, the survey result revealed that short term credit (29.53%), provision of training (27.30%), debt cancellation (13.9%), extended debt repayment period (12.41%), cancellation or reduction of tax (11.66%), and cancellation of utility payments (5.21%) are measures which need to be taken by government (Figure 3).



Source: Own computation from survey data, 2021

Figure 3: Measures to be Taken by Government

Discussion

The descriptive results revealed that the majority of MSE's were engaged in the trade/ service sector. Being engaged in the trade/ service sector makes business owners contact easily with their customers more frequently than the manufacturing sector, so that, the likelihood of contracting the virus is higher among the customers and owners of the business and could result in, decline of number of customers, decreased revenue and savings for business owners. From table 3.1, 60.55% and 31.02% of MSEs were stopped their business activities temporarily and partially (half a day) respectively and out of those that stopped their work temporarily, 60.3% of MSEs stopped their work for three and more than three months. This means that the majorities of business owners have ceased working as a result of the pandemic's spread and implies the degree of severity of the virus over business activities of MSEs. Decreasing workers from their permanent and temporary jobs do not only affect the workers and their family life but also affects the growth of the enterprise itself and ultimately affects the economic growth of a country. This also puts enormous economic pressure on MSE in particular, as well as Ethiopia's GDP in general. This finding is consistent with previous studies done by OECD (2020), Bartik (2020), and Senz (2020).

One of the primary goals of establishing micro and small enterprises is to create job opportunities for young people. Nonetheless, the pandemic could have an impact on the MSE supply side. It has an effect on the number of people a firm employs, as well as the workers' and business owners' income. From table 3.2, 32.3% of MSEs reduced their workers. During the beginning of the spread of the virus, enterprises have, on average, 3.8 employees while nearly after a year; enterprises have, on average, 2.9 employees.

This implies that as a result of the coronavirus, MSEs were forced to lay off employees, on average by 0.83 workers. The t-test statistics also showed that there is a significant mean workers difference between workers existed before the outbreak of the virus and after the outbreak of the virus at a probability level of less than 1% (p=0.000& t=9.71) which shows that coronavirus has put an adverse effect on the employment of the enterprises. This finding is compatible with the findings of ILO (2020), Oyewale et al. (2020), Fabeil et al. (2020), Zeidy (2020), and Kassa (2021).

In terms of enterprise types, small enterprises were hit- hardest compared to micro-enterprises. Small enterprises, on average, reduce 2.12 workers but micro-enterprises reduced, on average, 0.44 workers. This is because, at the beginning of March 2020, micro-enterprises have, on average, 2.8 employees while small enterprises have on average 7 employees, so that, number of workers of micro enterprises is so small and most micro-enterprise owners/mangers run their business by themselves.

Besides, MSE engaged in the manufacturing sector severely affected by the coronavirus compared to the trade/ service sector. Manufacturing enterprises reduced, on average, 1.85 workers, but trade/service enterprises reduced, on average, 0.51 workers (Table 2). The t-test statistics also show that the mean decrease in workers between the manufacturing and the service sector is statistically significant at less than 1% probability level (p=0.000 & t=-6.94). Since, small and micro enterprises make up 57% and 13.55% of the manufacturing sector, respectively; small enterprises reduced more labor than micro-enterprises in the manufacturing sector. This finding has important policy implications because the government wants to encourage young people to work in the manufacturing sector and the sector is the backbone of the transition from an agricultural-based economy to an industrial development economy. A similar finding was also reported by OECD (2020), Bartik (2020), and Amuda (2020).

Income is a variable that determine growth and continuity of enterprises. If the income of an enterprise reduced significantly, then MSE's could fail to pay wages for their employees and expand their business. MSE's were asked whether their income is affected by COVID-19 or not. Accordingly, based on the survey result presented in table 3.3, MSE's average annual income for the year 2019 was 170,174.4 Birr and 127,433.8 Birr for the year 2020, its mean difference is 42,740.6 Birr.

The t-test statistics showed that there is a significant mean annual income difference between the mean annual income of 2019 and the mean annual income of 2020 at a probability level less than 1%(p=0.000, t=6.0657). As the same time, MSEs were also requested to reason out for why the annual income of MSE for the year 2020 was declined compared to the year 2019.

Consequently, 85.61 % of respondents replied that their business was closed temporarily because of COVID -19, 75.93% of respondents said that number of customers were reduced because of fear of the virus and 48.14% said demand for their firms' product was dropped were the main reasons. This suggests that COVID -19 was the main

reason for the fall in income of micro and small enterprises for the year 2020 compared to the year 2019 (Table 3.4). These findings are consistent with previous studies done by Bartic et al. (2020), UNDP (202b), WB (2020a) and Shafi (2020).

In terms of enterprise types micro-enterprises annual income was reduced by 43, 586.97 Birr while small enterprises income was reduced by 39,919.35 Birr, but, the mean difference in income between micro and small enterprise is statistically insignificant (p=0.4134, t=0.2190). Besides, the annual income of enterprises involved in the manufacturing sector fell by 45,593.68 Birr whereas the income of enterprises engaged in the trade/service sector declined by 41, 860.58 Birr, however, the mean income difference between enterprises engaged in trade/service and manufacturing sector is statistically insignificant(p=0.4112 & t= -0.2246). This implies that being micro, small, manufacturing or trade/service COVID -19 adversely affect income of MSE. This finding was compatible with the findings of Kassa, (2021) and UNDP (2020).

Savings is the amount of money left over that has not been consumed or transferred for future use after direct tax payments are subtracted from current income (Cronje, 2009). The findings of the survey revealed that, in the year 2019, almost 25% of MSEs did not involve in saving due to a lack of market for their product resulted and failure to compete with other firms, however, in the year 2020, nearly 57% of MSEs did not save due to a drop in income caused by COVID-19 and shut down of business. Furthermore, the mean annual savings were 24,865.11 Birr for the year 2019 and it was 12,345.06 Birr for the year 2020 (Table 3).

The mean annual savings difference between the annual savings of 2019 and 2020 is also significant at a probability level of less than 1 %(p=0.000 & t=5.4948). This implies that COVID-19 has a negative impact on MSE savings. A nearly similar find is also reported by Beraha and Đuričin (2020), OECD (2020), and Shafi (2020).

Regarding challenges faced MSEs during the pandemic, the key challenges reported in figure 3.2 revealed that drop in demand for firms' goods and services, a loss in client orders, and a shortage of operating finance to create goods and services. Because their income plummeted, some businesses were unable to repay their loans to microfinance institutions and banks. Initiated by COVID-19, there are few businesses, particularly those in the trade/service and manufacturing sectors, have not yet resumed operations. These findings do not contradict with the findings of OECD (2020), UNDP (2020b), welter et al. (2020), and Oyewale et al. (2020).

To counteract COVID -19's negative impact on MSE economic activity, both the enterprise's owners and the government should devise and apply a variety of strategies. To solve financial problem faced by MSE during the pandemic, MSEs borrowed from individuals (50.9%) and microfinance (26.9%). Furthermore, MSEs biggest challenge during the pandemic was a lack of raw materials.

Thus, to deal with the shortage of raw materials, MSE reduced output (59.8%), outsourced orders (23.27%), and delayed goods delivery to consumers (17.15%). It is apparent that training will be critical in reducing the virus's impact and implementing preventative measures. As a result, experts from the ministry of health and MSE offices trained 64.02% of respondents on the topic of virus containment and techniques to reduce the virus's impact on MSEs commercial activities and 85.2% of those who were trained said that the training helped them save themselves, their colleagues, and their customers, as well as kept their firm afloat during the pandemic. MSE also wants a

longer debt repayment period, a tax break, and more credit to establish a new line of business, such as sanitizer manufacturing. MSEs owners also said that the nearby municipal authority needs to provide more training on how to contain the infection and keep their business lucrative during this difficult period. This finding is in accordant with the findings of Bartica (2020), WB (2020a), Paolo and Andrea (2020), and Fabeil et al. (2020).

Conclusion

The general objective of the study was to examine the economic effect of the COVID-19 on MSEs in Addis Ababa surrounding towns of Oromia National Regional State. The study used a descriptive research design and quantitative research approach. Quantitative data was collected from 436 MSEs which show conditions of MSE before and after the outbreak of the pandemic. Out of 436 questionnaires distributed to MSE's only 403 were valid with a response rate of 92.4%.

The findings of the descriptive result indicated that 76.92% of MSEs were registered in micro business enterprises and the remaining 23.08% were registered in small enterprises. Similarly, 76.43% of MSEs engaged in trade/ service, and 23.57% were engaged in the manufacturing sector. Due to the pandemic, 60.55% and 31.02 % of MSEs have stopped their activities temporarily and partially respectively. Among those entrepreneurs that stopped operation temporarily, 60.3% ceased their work for three and more than three months.

Regarding employments, 32.3% of MSE reduced their workers while 66.1% of them did not reduce workers. The survey result further revealed that before the outbreak of the pandemic, MSE had, on average 3.8 workers whereas after the pandemic MSE had, on average, 2.9 workers. This implies that as a result of the coronavirus, enterprises were laid off employees, on average by 0.83 workers and the difference is statistically significant at less than 1% probability level. Compared to micro-enterprise, small enterprises lay off more workers and in terms of sector, manufacturing hit hardest than trade/service sector.

Concerning to income and savings of MSE, 92.6% of MSEs said that their annual income for the year 2020 was reduced compared to the annual income of the year 2019. Similarly, the survey result showed that MSEs annual income for the year 2019 on average was 170,174.4 Birr while it was Birr 127,433.8 for the year 2020. The mean difference was 42,740.6 Birr which is significant at less than1% probability level.

The main reason/s that made income fall during the pandemic (Year 2020) was the closing of business temporarily because of COVID-19 (85.61%), reduction of customers because of fear of the virus (75.93%), and dropping of demand for their product (48.14%). Besides, the mean annual savings were 24,865.11 Birr for the year 2019 whereas it was 12,345.06 Birr for the year 2020, and the mean annual savings difference is statistically significant at a probability level of 1%.

MSE faced many challenges during COVID-19. The main challenges were a fall in demand, the decline of orders from customers, lack of operating finance to produce goods and services, failure to pay the wage to workers failure to pay loans to banks, microfinance, and individuals. Business owners demand specific measures to be undertaken by the government to make their business revive and sustain, so that, the study revealed that short term credit, provision of training, debt cancellation , extended debt repayment period, cancellation or reduction of tax, and cancellation of utility payments are measures which need to be taken by the government.

Finally, it is possible to conclude that COVID-19 has resulted in a decrease in MSE's employment, income, and savings. To mitigate the effect of COVID-19 on MSE, the government at all levels should provide technical assistance and training to business owners who are vulnerable to COVID-19 on how to develop a business recovery plan and new line production, extend the debt repayment period, and provide short-term credit to help MSE recover from the virus's negative effects.

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Authors' Contribution

Both authors developed the proposal, designed data collection tools, and conducted fieldwork; however, Meshesha Zewdie did the statistical analysis and write-up, while Dessalegn Shamebo reviewed the manuscript.

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Opportunities Available and Challenges Faced by Students with Disabilities in Public Universities in Addis Ababa, *Abay Akemachew[1] and Kidanemariam Gidey [2]*

Abstract

This study aimed at assessing opportunities available and challenges faced by students with disabilities (SWDs) in public universities in Addis Ababa. To address the objectives of the study, mixed research approach combining both quantitative and qualitative techniques was used. The data was collected through questionnaires, semi-structured interview, focus group discussions (FGDs) and observation. The quantitative data were analysed through descriptive and inferential statistical techniques while the qualitative data was analysed by using the thematic analysis technique. The findings of this study have indicated that availability of reasonable accommodation services, recognition for best scorers, training & induction programs, establishment of special computer centres, provision of educational materials and assistive devices are the opportunities that SWDs have in each respective university. Conversely, inaccessible infrastructures, absence and/or competency problem of sign language interpreters, weak disability affairs offices, unavailability of effective guidance and counselling service, lack of different entertainment means, difficulty of getting personal assistants and different means of communication on academic/non-academic matters are identified as hindrances to their success. The finding of the study also reveals that most lecturers have negative attitudes toward SWDs. The regression result confirms that accessibility of infrastructures, high school GPA, monthly expenditure of students, occupation of parents, disability type and mother's education are significantly affecting the academic performance of students with disabilities. Therefore, the public universities & other stakeholders should prepare manual and guidelines that show step-by-step processes that need to be taken to address issues of SWDs. Awareness creation schemes need to be carried out to change the negative attitudes and mainstream the issues of SWDs in all endeavours of the respective universities.

Keywords: Students with disability, public universities, challenges, opportunities, support, Addis Ababa.

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Introduction

Education is one of the fundamental human rights that uses as a springboard for socio-economic and political development for people around the globe. Therefore, the educational systems at all levels need to promote inclusion and provision of equity services for all students regardless of their backgrounds (Blessinger, Hoffman, &Makhanya, 2018).

Higher educational institutions around the world are places where students with different gender, racial, ethnic, (dis)ability and the like backgrounds are found. As the students' backgrounds are diverse, their needs and expectations from the system are also unlike. To accommodate the various interests of students with different experiences, many higher learning institutions are required to redesign/reshape their systems (Guri-Rosenblit, Šebková & Teichler, 2007).

SWDs who have access to higher education in Africa constituted less than 1 percent (Mutanga, 2017). The number of students with disability in Ethiopian higher education was 398 and 1,000 in 2010 and 2015, respectively (Wondwosen, 2018). These figures have revealed that there is an increment in the participation of SWDs in higher education. A manual prepared by Addis Ababa University, Department of Special Needs Education (2014:2) citing a study of Tirussew et al (2014) has also expressed it in qualitative terms as "The number of students with disabilities enrolled in higher education of Ethiopia is increasing every year." However, different research findings have indicated, besides being a minority in terms of their participation in higher learning institutions elsewhere in the world including Ethiopia as compared to their non-disabled counterparts, SWDs are facing numerous challenges that hinder their academic success during their study (Wondwosen, 2018; Mutanga, 2017 & Kendall, 2016). The issues of students with disabilities (SWDs), most of the time, are not sufficiently addressed by the educational systems. Kochung (2011) has indicated in the study of the challenges that SWDs are facing at higher education with special experience of the inaccessible physical environment, one fits for all curriculum and examination systems are some of them. Morgado et al (2016) also shared what Kochung (2011) has identified are the challenges and further added that negative attitudes towards students with disabilities by service providers of the university community especially by staff are one of their challenges. Kendall (2016) has also discussed as students without disabilities have also a negative attitude toward students with disabilities.

Different researches have been conducted on the challenges of SWDs in the higher education context of Ethiopia. For instance, a study by Abdulfettah (2018) dealt with the accessibility of the physical environment for SWDs in five Universities. To mention some, the challenge of female visually impaired students in Addis Ababa University was studied by Endalkachew & Dessalegn (2017). Abraham (2010) has also studied the challenges and opportunities of persons with disabilities (PWDs) with particular emphasis on the issues of inclusive curriculum in the field of physical education. The study of Yared (2008) emphasizes about policy and provision in higher educations that can address the issues and concerns of SWDs. Research finding by Tirussew et al (2014) has indicated similar challenges as SWDs are facing in different Ethiopian universities mainly based on the experience of 11 universities. Besides, ill-prepared and insufficient support service provision schemes are the other determinant factor for SWDs in Universities (Wondwosen, 2018). Although these researchers identified conditions of SWDs in higher educational institutions, they failed to statistically analyze the effect of these challenges on their academic performance. All of the above research have applied descriptive methods to explain only the conditions of the SWDs. Therefore, the rationale behind to conduct this research is to investigate the opportunities available and challenges faced by SWDs and fill in the methodological gaps by applying an inferential statistic to analysing the effect of these challenges on academic performance in these respective Universities.

Objectives of the Study

The general objective of the research was to investigate the opportunities available, and challenges faced by students with disabilities in Addis Ababa, Ethiopian Civil Service and Kotebe Metropolitan Universities. The specific objectives of the research include:

- To find out the enabling learning environment to students with disabilities that have been created by the Universities,
- To investigate the main challenges that students with disabilities are facing during their stay in these respective Universities, and
- To analyze the effect of those challenges on academic performance of students with disabilities in these respective Universities.

Literature Review

Since disability is a multi-dimensional and argumentative term, it has been defined by different scholars differently. This is mainly resulted from the way different cultural and social groups of people understood the word in relation to their own perspectives (Abebe & Siseraw, 2010). For the purpose of this study, the term disability is defined as a "restriction or lack (resulting from an impairment) of ability to perform an activity in the manner or within the range considered

normal for a human being" (UN, 2003). To say a person has disability problem, his/her body parts impairment (loss or abnormality) should exceed about 40 percent, it should be attested by legal medical centers Ministry of Law Justice and Company Affairs [MoLJCA] (1996), and has to be “a substantial and long-term lasts more than 12 months or throughout a person’s life time adverse effect on his or her ability to carry out normal day-to-day activities (Office of Disability Issues [ODI], 2010). The types of the impairment of persons with disabilities are unlike. Scholars on the field generally classify disability types into physical, visual, hearing, learning and so on (Otaah & Mohamed, 2015). These types of disabilities broadly classified as visible and invisible (Connell, 2013; ODI, 2010).

There are several models on the issues disability. But the most widely models which are relevant for this study include medical, social, bio-psychosocial and human rights models. According to the medical model, disability is resulted from medical problems of individuals that can be caused by diseases, trauma and others. This model says that disability is personal health factors that affect persons with disability negatively and providing medication for those who have health problems either to cure or to adjust themselves with the environment (Retief & Letšosa, 2018). According to these authors, the social model of disability argues that disability is created by the society which includes the way society has been organized, the response given for the concerns of PWDs and their attitude towards them (Retief & Letšosa, 2018). According to the social model, therefore, the problem lies on the society rather than the individuals with disabilities themselves Scope (2018). The biopsychosocial model of disability, as the name indicates, is a combination of three interwoven factors including biological (disease, disorders and injuries), psychological (feeling, perception, behavior, personality and others) and social (social structure, environmental contexts, level of education, economic status and others) that determine the disability of individuals (Lehman, David & Gruber, 2017; Smeltzer, 2007). The biopsychosocial model of disability stresses on the influences of biological, psychological, and social factors on the health and wellbeing of individuals (Smeltzer, 2007). The human rights model of disability stresses that persons with disability are human beings just like everyone else so that their dignity and rights should be protected and promoted (Retief & Letšosa, 2018; Degener, 2016).

When the disability type of individuals varies, their needs and requirements also vary. Thus, knowing the types of disabilities that people have is very important to identify what they require from family, society and public at large to improve the quality of their lives in all aspects. Especially, rather than thinking one size fits all, service providers in public organization need to recognize the diverse disability types to accommodate their needs (Connery, 2016).

Many empirical studies have been conducted on opportunities available and challenges faced by students with disabilities, covering various scopes using different sample and methodologies globally. The findings of many studies with regard to the challenges of SWDs indicated that inaccessible physical environment also known as architectural or structural problems hinders SWDs to reach and utilize educational services provided in universities and not to use their full potential in their academic (Farooq, 2012).In addition, the negative attitude and stereotypes that university communities (staff and non-disabled 0students) developed are taken as one of the main hindrances of the academic success of SWDs (Kendall, 2016). The other challenge is related to academic environment (rigid curriculum). Inflexible or non-tailored instructional approach according to a specific disability type is acknowledged as one of the barriers for the academic success of students with disabilities in Ethiopian higher educational institutions (Tirussew et al, 2014).

Conceptual Framework

The conceptual framework indicated in Figure-1 shows the effect of accessibility of physical infrastructures, attitude towards disability, personal and family background and academic environment on academic performance of students with disability. The figure clearly shows that personal background, family background, accessibility of physical infrastructure, and academic environment can influence the academic performance of students with disability. There are also intervening factors (support services) that can affect the relationship between the independent and the dependent variables. Support services such as guidance and counselling services minimize the negative effects of attitudes towards the disabled students and create an enabling environment (Maingi-Lore, 2016)

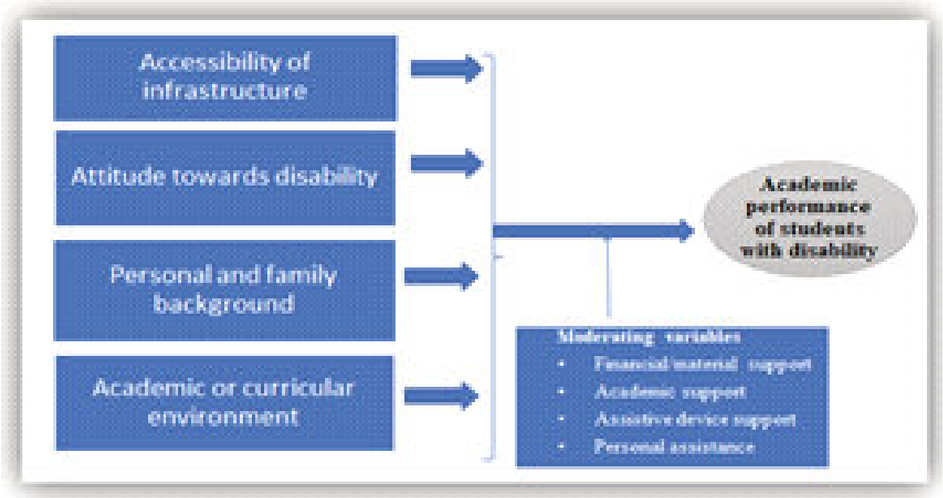

Figure 1 Conceptual Framework (Source: Own construction)

Methods and Materials

To address the objectives of the study, mixed research design approach combining both quantitative and qualitative techniques were used. The reason to use the mixed research method is to bring together the differing strengths and non-overlapping weaknesses of quantitative methods with those of qualitative methods. To identify the challenges and opportunities of students with physical disabilities, descriptive research strategy was employed. In addition, to analyse the effect of the main challenges and support services provided by the universities on the academic performance of the students, explanatory research design was applied. The researchers used both primary and secondary sources of data.

The total number of the target population of the study constituted 480; of which 37, 388 and 55 were in Ethiopian Civil Service University (ECSU), AAU and KMU, respectively. Out of these, 170 are visually impaired, 211 are deaf, 88 are physically disabled, and 11 of them are those who have other types of disabilities such as cognitive i

impairments, chronic dizziness etc. Concerning sampling, from the public universities located in Addis Ababa City Administration, three universities (ECSU, AAU and KMU) are selected purposefully. The rationale to focus on these Universities is due to the presence of SWDs. This is because SWDs (mainly the visual and hearing-impaired ones) usually or most of the time join universities where most social science fields are found. To determine the appropriate sample size for the study from the population, the researchers used Slovin's formula.

$$\frac{N}{1+N(e)^2}$$

Where n = Number of samples

N = Total population

e= Error tolerance (margin of error)

While using Slovin's formula, confidence levels and margins of error should also be taken into account. For this study, a margin error of 0.05 (with a 95% confidence level) is used. Given population (N) of 480 is the total number of disabled students in the three universities and a margin error (e) of 0.05, the sample size (n) is calculated as follows:

$$n = \frac{N}{1+N(e)^2}, \quad n = \frac{480}{1+480*(0.05)^2} = 218$$

In this study, a three-stage sampling procedure was employed to select the sample respondents from the target population. In the first stage, the proportional sampling method was applied to allocate the total sample to the three universities. In the second stage, students were categorized based on the type of disabilities, then for each type of disability sample size was determined depending up on the proportion of the size of the students in each type of disability. Finally, simple random sampling was used to select sample students from each type of disability.

The questionnaire was used to collect the quantitative data whereas the qualitative data of the study was obtained through interview, FGDs and observations. Interview and FGDs were used to get detailed and diversified information, respectively. A total of 11 FGDs were conducted in the three Universities. In each University (except ECSU), students with physical impairment, visual impairment, hearing impairment formed their own respective focus groups and one FGD was organized from each University that encompasses students from the three disability types (mixed group). In each focus group discussion, 10 individuals participated. Some selected managers in the respective Universities were parts of the interviews.

The quantitative data was encoded into STATA version 14.0 and analyzed using simple quantitative tools like percentage, mean, and variance. In addition, in order to analyze the effect of the support services made by the universities to SWDs on their academic performance, multiple regression model was used. To test the robustness of the estimated model, multicollinearity, heteroscedasticity and autocorrelation test were conducted. The quantitative analysis was supplemented by the qualitative ones. Content analysis was also used to analyze the data obtained through interview and FGDs. The reason is to bring together the differing strengths and non-overlapping weaknesses of quantitative methods with those of qualitative methods.

The Model

In order to analyze the effect of the main challenges faced, and the support services provided by the universities on academic performance of SWDs, the following multiple regression model was estimated. In addition to our variables of interest (accessibility of infrastructures, attitude towards SWDs, and academic environment), additional control variables that can affect the academic performance of SWDs are included in the model.

$$CGPA=\beta_0+\beta_1 infra+\beta_2 attit+\beta_3 acadm+\beta_4 suppo+\beta_5 higGPA+\beta_6 age +\beta_7) expend+\beta_8 inthour+\beta_9 stuhour+\beta_10 ocuppar+\beta_11 distype+ +\beta_12 univer+\beta_13 motheduc+\beta_14 sex+u$$

Where GPA= cumulative grade point of the student, infra = accessibility of infrastructures, attit =attitude towards SWDs, acadm =academic environment, suppo =supports provided by universities to SWDs, higGPA =highschool GPA, age =age of the student, expend =monthly expenditure of students, inthour =hours spent by the students browsing internet, stuhour = hours spent to study subject matter, ocuppar =occupation of parents, distype =disability type, univer =the university currently learning in, motheduc =mother's level of education. and u = error term.

Results And Discussions

General Background of the Respondents

A total of 218 questionnaires were distributed to students with disabilities learning in the three Universities. Out of these 216, questionnaires were returned thereby giving a response rate of nearly 99.1 percent. The result of the survey indicates that the percentage of male and female respondents constituted about 65 percent and 35 percent, respectively. The overall mean age of the respondents is about 24 with age range between 18 years and 50 years. Regarding respondents' academic background, most of the respondents (about 78 percent) are attending first degree level. While nearly 14 and 8 percent of the respondents belong at diploma and post graduate levels, respectively. Regarding their field of study, most of them joined in social science streams accounting close to 73 percent of the total respondents. Regarding disability type, about 44 percent of the respondents have hearing impairment, close to 35 percent are visually `impaired, and about 19 percent have physical disability while the remaining 2 percent of the respondents belong to others like students with learning disability, speech impairment and so on.

The result of the study showed that, on average, the respondents spent about 5 hours studying their subject matter while they spent 2.3 hours browsing the internet per day. Hu (2017) argued that using the internet has a significant role to reinforce knowledge acquisition and retention thereby improving the academic performance of students if they can use it for academic purposes and can manage their time properly. Students' time usage for academic and non-academic matters can influence their academic performance. Students' economic status can affect their academic performance either positively or negatively (Thomson, 2018; Bhat, Joshi, Wani, 2016). According to these authors students relatively with high economic status perform well because they can fulfill their material needs and get better facilities. Thus, the monthly average expenditure of the respondents is about 1,186 Ethiopian Birr. The mean monthly of their expenditure ranges from 100 to 10, 000 Ethiopian Birr with high variation among sample respondents. Students' parents' background such as occupation, and the educational level of their mother and father are important factors in their academic achievement. Accordingly, close to 36 present of the sampled SWDs replied that their parents are farmers followed by civil servants (about 22 percent) and merchants (18 percent). Concerning the education level of fathers, out of the total sample, near to 32 percent of the respondents replied that their

father is illiterate. Those who attained primary education account for about 19 percent, while 18 percent can write and read. These three groups of educational levels of fathers together account for about 69 percent while those who attained the first-degree and above account for close to 17 percent. This implies that the educational level of fathers of SWDs is low. It is clear that the background of students' parents such as the occupation and educational level of their mother and father are important factors in their academic achievement. Therefore, students with better family backgrounds can achieve better academic performance than students with low status (Bhat, Joshi, Wani, 2016).

Challenges of Students with Disabilities

Structural Challenges

Inaccessible physical infrastructures exclude SWDs from educational and other social participation (International Center for Evidence for Disability [ICED], 2019; UN-enable, 2003 and Agarwal, & Steele, 2016). The following table portrays the mean score of agreement and disagreement on the physical accessibility of Universities for SWDs. In this research, the sample respondents were asked to evaluate the accessibility of 17 types of infrastructures in their respective Universities. Table 1 summarizes the mean response rate of the students for each infrastructure.

The result clearly shows that almost all types of infrastructures at KMU are inaccessible. The only accessible infrastructure in this university is the dining room. Contrary to KMU, most of the infrastructures in AAU are accessible (except the rest room, language labs, instructors' and administrative offices, clinic, and recreational areas). Next to KMU, ECSU is subject to inaccessible infrastructures. According to the respondents, language labs, libraries, administrative staff offices, instructor's offices, meeting/training halls, bank/ATMs, and playgrounds are not accessible. Regarding ECSU, building entrances, dormitories, showers, clinics and roads are labelled as accessible. This shows that there is a significant difference between universities.

The result of the qualitative analysis also confirmed that most of the buildings and their internal facilities in the sample universities are not accessible. This contradicts the Ethiopian Building Proclamation No. 624/2009 (Federal *Negarit*

Table 1: Accessibility of Physical Infrastructures for Visually and Physically Disabled Students

	Structural or Architectural Challenges	Mean response rate					
		AAU		ECSU		KMU	
		Mean	Pr.	Mean	Pr.	Mean	Pr.
1.	Building entrance	3.51	0.00	3.56	0.01	1.61	0.00
2.	The classrooms in the university.	3.66	0.00	3.06	0.41	1.82	0.00
3.	The Dormitories in the university.	3.63	0.00	3.72	0.00	3.22	0.17
4.	The Shower (Washing rooms) in the university.	3.26	0.01	3.56	0.00	1.91	0.00
5.	The Rest rooms (toilets) in the university.	2.93	0.27	3.28	0.13	1.56	0.00
6.	The ICT labs in the university.	3.34	0.00	3.11	0.33	1.67	0.00
7.	The Language labs in the university.	3.11	0.13	2.06	0.00	1.88	0.00
8.	The libraries in the university.	3.77	0.00	2.56	0.02	2.36	0.01
9.	The Dining rooms in the university.	3.47	0.00	2.78	0.22	3.50	0.04
10.	The Administrative staff offices in the university.	3.02	0.41	2.11	0.00	2.73	0.16
11.	The instructor's offices in the university.	3.08	0.22	1.78	0.00	2.55	0.02
12.	Meeting/training halls	3.34	0.00	2.50	0.05	2.85	0.30
13.	The Clinic in the university.	3.13	0.10	4.06	0.00	2.24	0.00
14.	The places where you socialize and engage in school community activities.	3.09	0.20	2.72	0.18	2.18	0.00
15.	The banks/ATM machines in the university.	3.60	0.00	2.50	0.06	2.24	0.00
16.	Roads in the university	3.68	0.00	3.56	0.04	1.73	0.00
17.	Playground(s) in the campus.	3.37	0.00	1.78	0.00	2.55	0.03

Source: Survey result, 2019

Gazette, 2009) and Higher education proclamation No. 650/2009 (Federal *Negarit* Gazette, 2009) which emphasized the existence of accessible buildings and their inside facilities in organizations. Inaccessible training/meeting halls, washing areas, offices of academic advisors, lecturers, counsellors, and support staff, toilets around libraries and classrooms, the existence of fragmented physical locations of service providers' offices, and a lack of having certain permanent bus stations in Universities' compounds are the common challenges identified by visual and physical impaired students in their respective Universities. Not only entrances of the buildings but also the physical facilities such as chairs in classrooms are identified as they are inconvenient, especially for wheelchair users. Informants from disability offices in all Universities explained that most building entrances are inaccessible due to the reason that most of them were constructed before the issuance of the proclamations. The finding of this study is in line with Muzemil (2018) that students with disabilities in universities of Ethiopia have been challenged by inaccessible physical infrastructures is the pronounced one. Inaccessible physical infrastructures cause isolation and deprivation of the human rights of students with disabilities, however, and "The issue of access to public buildings has received little attention in Ethiopia…" (P.287). According to the same study, "… students who reported low academic status perceived the campus buildings as inaccessible for their needs (Muzemil, 2018).

But the buildings constructed recently are designed to address the needs of SWDs. In this regard, ECSU and AAU are trying to reasonably accommodate the issues of students with physical disabilities by preparing ramps into old buildings. The other identified challenge by physical and visually impaired students is the existence of uncovered ditches and unnoticeable holes on the main roads and/or sidewalks. Almost all discussants of visually impaired students in KMU revealed that they are dependent on students without disability for their mobility in the compound and academic exercise.

Therefore, it is possible to conclude that, SWDs in all sample Universities are challenged by the inaccessible offices and classrooms which may hurt their academic achievement. As the data obtained through observation, the case of KMU is quite serious as compared to the other two Universities. Because KMU has hilly topography, and its internal compound is not asphalted. Construction is carried out in different places of the University. Therefore, SWDs have been burdened by such physical constraints. These findings are consistent with the research results of Nel *et al (*2015), Kendall(2016), and Mutanga (2017).

Attitudinal Challenges

Attitude towards people with disabilities is among the factors that affect the socio-economic status of students with disabilities. Attitudinal barriers are recognized widely as an impediment to success of PWDs (Rao, 2004). In this research, attitude of classmates, friends, lecturers, and administrative staff towards SWDs have been investigated and the result is presented in Table 2 below. The attitude towards SWDs by students without disabilities, academic and administrative staff of universities was measured in terms of their initiative and willingness to support them in different aspects. As Table 2 illustrates, the respondents in all sample universities have indicated that students without disabilities and administrative staff have positive attitude towards SWDs. Further, respondents from ECSU and KMU replied that classmates do not consider their disability as an obstacle to their learning in classrooms.

The discussants and interviewees in all the three Universities have also revealed that most of the students without disabilities and

Table 2: Attitudinal Challenges of SWDS, By University

Attitudinal Challenges	Mean response rate					
	AAU		ECSU		KMU	
	Mean	Pr.	Mean	Pr.	Mean	Pr.
Classmates consider my disability as an obstacle to their learning in classrooms.	3.15	0.11	2.50	0.05	2.09	0.00
My friends/peers are interested to support me in different aspects.	3.8	0.00	3.50	0.04	4.03	0.00
Some lecturers intentionally ignore disabled students during lectures.	3.09	0.17	2.22	0.00	2.58	0.01
Lecturers are concerned to solve non-academic issues of students with disabilities proactively.	2.85	0.08	2.83	0.30	2.49	0.01
The administrative staffs of the University are cooperative to help students with disabilities in their service provision.	3.27	0.00	3.388	0.10	2.58	0.04

Source: Survey result, 2019

administrative staff are cooperative and helpful to them in different ways. On the students without disability side, pushing wheelchair, carrying educational materials; guiding (mobility) and reading service; recording of lectures notes and other reference materials and facilitating communication are among the different supports provided by students without disability. But the support services getting from their peer students especially in reading, pushing wheelchair, communication facilitation for visually impaired, physically impaired, and deaf students with disabilities are not sustainable and organized. The support services provided by students without disabilities decrease when they get busy in course works especially when examination time approach when SWDs need much support at this time.

As to the administrative staff, it is reported that although there is unfamiliarity on the way how to treat SWDs, in ECSU and AAU they are trying their level best to address their concerns. On the other side, in KMU, most of the administrative staffs are uncooperative to provide the required services to SWDs. In this university, there is a little concern by the supportive staff and the University's management.

Pertaining the lecturers, most of the respondents replied that lecturers do not intentionally ignore SWDS during lectures. However, lecturers particularly in AAU and KMU are found to be unconcerned to solve the issues of SWDs proactively. This shows their unexpected ignorance towards disability issues. Data obtained from the informants and discussants from all disability types indicated that most lecturers in AAU and KMU do not give proper treatment for them while lecturing and taking examination. The other concern that most of students of all disability types in AAU and KMU identified as there are lecturers who do not believe as SWDs have potential to do their course works independently and score better grades. There are lecturers who demoralize SWDs when they request reasonable accommodation in examination schedule and space, in classroom learning. Data obtained from SWDs in ECSU is quite different regarding the treatment of getting from their lecturers. Both informants and discussants appreciate the sensitivity of the lecturers during lectures, examinations and so on is found to be morale for them. One of the reasons for the sensitivity of instructors in addressing the concerns of SWDs in ECSU resulted from the inbuilt organizational culture that staff have in accommodating diversity while giving services as informant from Disability affairs office explained.

From the above discussion, it is possible to conclude that administrative staff and students without disabilities in the sample Universities have positive attitude towards SWDs thereby contributing a lot for their academic success. But except ECSU, most lecturers in AAU and KMU found to be insensitive in addressing the concerns of SWDs.

Academic Challenges

The academic challenges of SWDs in terms of teaching and assessment methods like instructors' usage of teaching aids, module contents that consider their diverse abilities and requirements, availability of relevant/ appropriate teaching and learning materials and provision of tutorial/additional academic support service were assessed. The survey result on the curricula issues of SWDs are presented in Table 3.

The mean response rates presented in Table 3 are significantly lower than three for almost all types of academic challenges in the sample universities. This implies that disabled students learning in these universities are being constrained by different types of academic challenges.

Specifically, the sample respondents confirmed that the teaching methods and assessment modes are not flexible; instructors do not use teaching aids to SWDs; module contents do not consider the diverse abilities and requirements of SWDs; there are not appropriate teaching and learning materials (except in AAU); the available teaching and learning materials are not adequate; and the universities do not organize adequate tutorial classes to assist SWDs academically. Other researchers such as, Wondwosen (2018), Beyene et.al (2020) and Khomera et.al (2020) supported this findings.

The discussants of all disability types in the sample universities have pointed out that the instructional and assessment modes that lecturers apply do not consider the differentiated learning style of students with (out) disabilities. This problem even got worse or more complicated when students with hearing and visual impairments learn in the same classroom when some lecturers do not read/say orally what they wrote especially for those visually impaired, and others do not write what they say.

Table 3: Academic Challenges of SWDs, By University

Curricular/Academic Challenges	Mean response rate					
	AAU		ECSU		KMU	
	Mean	Pr.	Mean	Pr.	Mean	Pr.
The teaching methods of instructors are flexible to accommodate the needs of a specific disability types.	2.87	0.11	2.11	0.00	2.53	0.03
The assessment modes of instructors are flexible to accommodate the needs of a specific disability types.	2.81	0.03	2.11	0.00	2.47	0.02
Instructors use teaching aids to assist me because of my disability.	2.81	0.03	2.22	0.01	2.09	0.00
Modules contents take into account the diverse abilities and requirements of students with disabilities.	2.842	0.05	2.17	0.01	2.28	0.00
There are relevant/appropriate teaching and learning materials like textbooks, references, audio, video, braille and other formats etc.	2.96	0.37	2.55	0.04	2.00	0.00
The available teaching and learning materials are adequate.	2.85	0.08	2.33	0.01	2.312	0.00
Special/remedial/tutorial classes are often organized to assist students with disabilities academically.	2.73	0.01	2.61	0.09	1.84	0.00

Source: Survey result, 2019

Sometimes during lectures, when pictures or diagrams are demonstrated on board or paper as teaching aids, some lecturers could not explain them in a way it can be understandable for visually impaired and deaf students.

The other challenge raised by SWDs in all sample Universities is information inaccessibility mainly when there is a class/ examination schedule change. As informants and discussants indicated most of the time, they get information through students' representatives. But there are times when representatives do not know sign language; they forget to tell time and so on. Accordingly, most discussants confirmed that they missed examinations due to information inaccessibility.

The issues of timing, placement, diversification, and others are critical concerns for SWDs in the assessment process. During examinations, listening to the question by readers, processing the information to answer, and dictating readers to state their answers need extra time as compared with their students without disabilities peers (Kumar, 2019). But most informants and discussants in AAU and KMU have indicated as lecturers did not allow extra time during examinations.

Students with physical impairment have also concerns about time constraints during examinations. The experience of a student in AAU whose right hand is paralyzed also said as the lectures are not considerate to give him additional time to complete his examination.

Regarding the place of examination, assigning them on floors, especially during final examinations is reported as a challenge by physical and visual impaired students in the entire sample Universities. Especially visually impaired students in all the sample Universities explained as the place of examination are most of the time around corridors and/or somewhere at corners, verandas, etc which passers-by are disturbing around which negatively affects their concentration and to the extent creating miscommunication between the reader and the student.

During examinations, visually impaired students cannot easily understand diagrams and illustrations. According to students with hearing impairment discussants in AAU and KMU, one of the reasons for getting lower grades is inconsiderable examination items mainly the subjective ones like essays and/or short answers that appear in examinations. Further, both the survey and the qualitative data results have shown that SWDs do not get additional academic support (tutorial) services in all sample Universities. However, the necessity of getting the service is underlined by most of the discussants in the Universities. From the above discussions, it is possible to understand that lack of reasonable accommodation during lectures and assessment are the major curricular challenges that SWDs faced.

Thus, SWDs are negatively affected by the rigid curriculum and examination processes and systems; in this regard, the finding of this study is what Kochung (2011) found.

Opportunities (Support Service and Related Issues)

Universities usually provide different types of support services to create and enhance conducive learning environment for the SWDs. The following table summarizes the extent to which SWDs are getting support services during their stay in their respective universities.

According to the mean response rate presented in Table 4, the disability centers in ECSU and KMU are not properly coordinating the academic and non-academic support services required by SWDs while AAU is better in this regard. Especially, SWDs in KMU identified as their relationship with disability affairs office is

Table 4: Support Services to SWDs, By Respective Universities

Support Service and Related Issues	Mean response rate					
	AAU		ECSU		KMU	
	Mean	Pr.	Mean	Pr.	Mean	Pr.
The disability support center in the university properly coordinates the academic and non-academic support services required by students with disabilities.	3.42	0.00	2.33	0.01	2.25	0.00
The university provides financial support.	3.86	0.00	2.22	0.02	3.09	0.33
The University encourages best achievers of students with disabilities in different ways.	3.27	0.00	2.67	0.12	2.78	0.15
The University organizes workshops, trainings, seminar that can contribute to my academic success.	3.10	0.17	3.00	1.00	2.38	0.01
The guidance and counselling service in the University have contribution for my academic success.	3.15	0.08	1.83	0.00	2.50	0.01
There are different entertainment means for students with disabilities e.g., social clubs, discussion groups.	2.89	0.14	1.83	0.00	2.28	0.00
There are different means of communication on academic/non-academic matters through my mail, notice boards, etc.	3.02	0.43	2.44	0.04	2.44	0.01
Regular orientation (induction) program (s) for newly entrant (admitted) students with disabilities on the policies, physical surrounding, rights and obligations etc. is provided.	3.04	0.36	2.94	0.43	2.31	0.00
The university avail learning aids such as braille paper, slate, styles, computer, internet, recording system(materials) etc.	3.46	0.00	2.72	0.20	3.28	0.11
The university assigns someone to assist you with your day-to-day learning activities (Ex: Readers, sign language interpreters, helpers for those with physical disabilities and others)	3.042	0.35	1.67	0.00	2.16	0.00
The university avail assistive devices like wheelchairs, white cane, crutches, hearing aid, orthoses etc	3.20	0.03	1.78	0.00	2.34	0.01
The university arranges repair and maintenance service for your assistive devices.	3.02	0.43	2.11	0.00	2.22	0.00

Source: Survey result, 2019

too loose. Only one expert is assigned to coordinate the issue and most of the time he is engaged in teaching. Moreover, his office is located outside and about 500 meters far away from the main campus by crossing the main road of Kotebe. The only way of getting him is by scheduling through telephone arrangement. The qualitative data also strengthen this claim as the weakness of the centers results in difficulty of getting accessible lecture and examination room, delay in material support provision and others. However, informants argued that the challenges faced by SWDs are only due to the weakness of the disability affairs offices/ centers rather the inability of educational departments to mainstream the disability issues matters a lot.

Unavailability of effective guidance and counselling service, lack of different entertainment means and different means of communication on academic/non-academic matters, unavailability of assistive devices (like wheelchairs, white cane, crutches, hearing aid, orthoses) and maintenance services are also mentioned as constraints by ECSU and KMU students. The obtained quantitative and qualitative data contradicts each other regarding the absence of assistive devices in the two Universities.

As discussant and interviewees pointed out, SWDs in AAU and KMU have formed associations in their respective Universities. Thus, living together in the university environment in organized and unorganized form helps them to support SWDs each other emotionally and to facilitate the flow

information that concerns them among themselves, to push the concerned bodies of the Universities in organized way to address their requests.

In addition, both the quantitative and qualitative data have shown that one of the critical challenges identified by SWDs is difficulty of getting personal assistants in their day-to-day academic and non-academic lives according to their respective disability type like readers, sign language interpreters, helpers for those students with visual impairment, hearing impairment and physical disabilities, respectively. Although students with visual impairment are obliged to bring their own readers during examinations, difficulty of getting readers mainly during final examinations and weak reading competency of some readers, especially technical words of courses are identified as a challenge.

Absence and/or competency problem of sign language interpreters in and/or outside classroom is explained as a challenge faced by students with hearing impairment in AAU and KMU and which have negative effect on their academic and social lives. Academically, absence of sign language interpreters in classrooms results in missing what lecturers talk without writing on the board about coverage and timing of examination, elaboration of diagrams, class rescheduling, assignments and so on. Informants and discussants also revealed that there are interpreters who cannot communicate in English language and there is also a problem of understanding the subject matter that they are interpreting for them on the interpreters' side. When the interpreters failed to understand what the instructors have said they opted to escape intentionally. Absence of sign language interpreters inside AAU and KMU campuses limits the social services that students with hearing impairment must get from clinics, registrar, dining rooms, dormitories, and so on. Thus, absence of and/or insufficient number and competency problem of sign language interpreters in AAU and KMU impeded visually impaired students from getting academic and social services that they must get from their respective Universities and thus have negative impact on their academic achievement.

Students with physical impairment have also critical concern on the unavailability of personal assistants who can help them in pushing their wheelchairs, washing clothes, shopping, and in getting other social service is in the three Universities. There are wheelchair user students who cannot go anywhere even to the toilet without the support of others. The case of a female student in KMU shows that since toilets are inaccessible for her, she stays the whole day without going to toilet.

SWDs complained that their respective universities do not assign assistants who can help them in their day- to-day lives. Instead, some volunteer students without disabilities are providing different kinds of assistance although the support systems are not organized, regular and sustainable. Since universities do not assign personal assistance, getting support from their non-disabled peers cause SWDs to feel as they are dependent.

The quantitative data shows that unlike the other two universities, AAU is better in terms of providing financial support, encouraging best achievers, providing guidance and counselling service, availing learning aids (such as braille paper, slate, styles, computer) and providing assistive devices (like wheelchairs, white cane, crutches, hearing aid, orthoses etc.). However, it does not mean that ECSU and KMU are not providing any form of support. The FGD and interview results in the sample Universities shows that there are different kinds of support services such as reasonable accommodation in/around dormitory, library and cafeteria and so on to SWDs which can be taken as opportunities for their academic success.

All the sample Universities were supporting SWDs financially although the amount of payment differs from University to University. For instance, the ECSU was supporting from 750 to 350 Ethiopian Birr per month according to the severity of the disability type. Also, additional money was given for graduating class of SWDs when they conduct research. KMU was also provided 250 Ethiopian Birr monthly pocket money for all students with disabilities. But in 2019 the FDRE Ministry of Finance issued a guideline that decided the monthly pocket money and readers' payment in examinations for the visually impaired students to be 250 and 80 Ethiopian Birr, respectively. The Ministry of Finance's guideline obliged the Universities to assign sign language interpreters for students with hearing impairment. But this guideline does not include the concerns of students with physical disability. Therefore, during the data collection period, ECSU is following the guideline whereas KMU pended the payment. This has become a source of complaints for all most all SWDs in these two Universities. This is because on one side, it excludes students with physical disability, on the other side, the allowed payment could not be sufficient to support SWDs. The finding of the study is in line with Wolanin and Steele (2004) regarding support service provision to SWDs that mostly emphasized more of administrative rather than creating academic adjustments (accommodative assessment, curriculum, teaching-learning process and so on).

To sum up, living together in the university environment help them to support SWDs each other emotionally and facilitate the flow information that concerns them among themselves. From this finding it is possible to understand that SWDs are getting different kinds of support from their respective Universities which have positive role in their academic success, although the available support services are inadequate to address their differential needs as per their disability type. Moreover, it is also possible to conclude that, the academic and administrative support services of SWDs are not sufficient and guided systematically.

The Effect of the Main Challenges and Support Services on Academic Performance of SWDs

Table 5 presents the regression result. Accordingly, the result shows that, among the explanatory variables included in the model, accessibility of infrastructures, high school GPA, monthly expenditure of students, occupation of parents, disability type and mother's education are significantly affecting the academic performance of SWDs. However, the attitude towards disability, academic environment, and the support services (material/financial support, assistive device support and personal support) provided by the universities are not significantly affecting the academic performance of SWDs. This implies that although the universities are providing different support services, the services are inadequate to address the differential needs of SWDs. Similarly, the attitude towards the SWDs and the academic environment is not contributing to academic performance of students with disabilities.

The regression clearly showed that as students' satisfaction towards infrastructure accessibility increases by one scale their CGPA raises by about 0.117 point. These findings are consistent with the research results of Nel *et al (*2015), Ahmad (2016), Kendall (2016)., and Mutanga (2017). The figure reported in Table 5.5 also shows that when monthly expenditure increases by 1 Birr, CGPA raises by about 0.0001 point. This implies that the high economic status (high income) can fulfil their material needs

and get better educational facilities which boost their academic performance marginally.

Further, the regression result shows that some types of parents' occupation influence academic performance of students with disability. As compared to the students who have farmer family background (reference category), students with unemployed family background are more likely to score 0.74 less CGPA point. Obviously, the unemployed family (low-income family) could not fulfil the educational and non-educational material need of their children. As a result, students with extremely poor family background might score less CGPA. This finding is similar with the findings of Maingi-Lore (2016) and Casanova (2005).

Again, there is a significant difference in CGPA between some types of disability. Those students with hearing impairment are more likely to score lass CGPA as compared to the reference category (visually impaired students). On average, students with hearing impairment are more likely to score 0.29 point less CGPA than that of visually impaired students (reference category). Students with hearing impairment may face different challenges that affect their performance in the classroom. They may have difficulty of following lectures if the teacher speaks quietly, rapidly or unclear; classroom environment, qualification of the sign language interpreters (Maingi- Lore, 2016). In addition, as compared to the other groups of disabled students, the probability of getting volunteer students who could help

Table 5. The Effect of the Main Challenges on Academic Performance of SWDs

Dependent Variable= CGPA	Coef.	St. Err.	t	P>|t|
Accessibility of infrastructure	0.117	0.059	1.98	0.050*
Attitude towards disability	0.040	0.047	0.84	0.403
Academic environment	0.018	0.048	0.37	0.709
Support provided	0.003	0.061	0.04	0.964
High school GPA	0.001	0.001	2.13	0.036**
Age	0.022	0.014	1.66	0.100
Expend	0.0001	0.0001	1.89	0.061*
Internet hour	0.016	0.028	0.59	0.558
Study hour	0.015	0.021	0.73	0.464
Occupation of parents				
Merchant	-0.043	0.097	-0.44	0.661
Civil Servant	-0.163	0.121	-1.34	0.183
Unemployed	-0.737	0.214	-3.44	0.001***
Others	-0.109	0.117	-0.93	0.353
Disability type				
Hearing impairment	-0.292	0.096	-3.04	0.003***
Physically disabled	0.098	0.116	0.85	0.399
Others	-0.009	0.437	-0.02	0.983
University joined				
ECSU	-0.456	0.316	-1.44	0.152
KMU	-0.144	0.256	-0.56	0.574
Mother's education				
Diploma	-0.032	0.170	-0.19	0.850
Above Diploma	0.325	0.158	2.05	0.043**
Sex				
Female	0.115	0.087	1.31	0.192
Constant	1.629	0.442	3.69	0.000***
Obs =134 R-Squared = 0.4420 Adj. R-Squared = 0.3373 VIF=1.75				
Breusch-Pagan test for heteroskedasticity (chi2= 0.11 Prob > chi2 = 0.7401)				

Source: survey result, 2019 Note: *** p<0.01, ** p<0.05, * p<0.1

their day-to-day learning activity (sign language interpreters) is very law. Hence, in the presence of these challenges, their result is expected to be lower than the other students. This finding is consistent with the findings of the research conducted by Hatiye (2016), Agyire-Tettey et.al (2017) and Safder, et.al. (2012).

Mother's education is also another variable which affect the academic performance of students with disability. The regression result clearly shows that those students with mother's education above diploma level are more likely to score high CGPA as compared to those who have below diploma level. Specifically, on average, students with mother's education above diploma level are more likely to score 0.33 more than those who have below diploma level (reference category). This implies that mother's education is a key factor behind children's academic performance (quality of children's education). Parents with a high educational qualification are curious about their children education and try to provide learning materials to their children that in turn facilitate their learning and academic performance. This is consistent with the findings of Takeda & Lamichhane, (2018), Bakar, Mamat, & Ibrahim (2017) and Maingi- Lore (2016).

Conclusion and Recommendations

Conclusion

This study focused on assessing the challenges faced and opportunities available for SWDs in ECSU, AAU and KMU. The overall challenges that SWDs are facing include structural or architectural, attitudinal, curricular and others. Most buildings and their internal facilities, service providers' offices, and others are not accessible especially for those who are visually and physically impaired students. Besides, uncovered ditches and unnoticeable holes on the main roads and/or sidewalks and lack of having certain permanent bus stations in Universities' compounds are their common challenges.

Except in ECSU, most lecturers in AAU and KMU found to be insensitive in addressing the concerns of SWDs. Knowledge and skill gaps of lecturers and administrative staff in the three Universities are also identified as the root causes as SWDs failed to get support as expected. The finding revealed that reasonable accommodations during lectures and assessment are almost negligible.

The opportunities that SWDs have in the respective University's context include having reasonable accommodation services in/around dormitory, library and cafeteria and getting recognition/award for best scorers. Having training and induction programs (except KMU) and computer centers and getting educational materials and supportive/assistive devices are also the opportunities which have positive role for their academic success. Monthly financial support can be taken as one positive measure by the Universities to support SWDs.

Conversely, inabilities of disability affair offices to coordinate the overall support services (except AAU) are identified as hindrances for their success. One of the most critical challenges identified by SWDs is difficulty of getting personal assistants in the day-to-day academic and non-academic lives of SWDs according to their respective disability type. Regression result also confirms the different support services (academic support, material/financial support, assistive device support and personal support) provided by the universities have a positive effect on the academic performance of students with disabilities, though the coefficients are not statistically significant. Moreover, it is also possible to conclude that, the academic and administrative support services of SWDs are not guided systematically. There is no University which has specific guideline that

can address the needs and concerns of SWDs in organized and sustained ways.

Recommendations

Based on the findings of the research the following recommendations are given.

To address the physical inaccessibility, the sample Universities should work to modify the entrance of buildings and make reasonable accommodation on classroom assignments, washing areas, toilets around classrooms, libraries, offices of lecturers and support staff. In addition, the Universities should prepare signals and other alternative means that can notify ahead as the area is dangerous for SWDs when the roads and/or sidewalks have holes. Furthermore, the respective Universities need to work to prepare a permanent bus stations as to reduce the physical barriers that SWDs are facing,

In order to reduce the negative attitudes of lecturers towards SWDs, compulsory disability sensitization and awareness creation/raising training tailored to their respective roles should be given on regular basis,

The finding has shown that the instructional and assessment (timing, space and diversification) modes of lecturers are not tailored to the special learning styles of the diverse disability types of students. Therefore, appropriate reasonable accommodation on course/module delivery and assessment processes needs to be made,

Lack of personal assistants and the incompetency of readers in all sample Universities as well as sign language interpreters (in AAU and KMU) are also identified as the most critical concerns of SWDs. Therefore, the Universities should set strategies to organize and encourage voluntary services by staff and students without disabilities so as to strengthen their supports. Besides, the Universities should reduce the dependency of SWDs on assistants for their day-to-day academic and social lives through availing assistive technologies like braille embossers and providing training on how to use Job Access with Speech (JAWS) software and basics of computer mainly for those visually impaired students. Also, the Universities should work with other governmental and non-governmental organizations to provide motorized wheelchairs that can easily be manipulated by physically impaired students by themselves,

Disability affair offices especially in ECSU and KMU are found weak in coordinating the overall support services of SWDs. Therefore, they need to be strengthened through availing human and non-human resources. On the other side, since the issues SWDs are found cross-cutting, the respective Universities should work to mainstream disability issues across all their respective departments theoretically (in policies, guideline, plans and so on) and practically (in implementation) instead of cornering it the offices/centers,

To address the academic and other support service concerns of SWDs in organized, consistent, fair and sustainable way, separate policies and/or guidelines need to be issued in the respective Universities.

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Journal of African Development Studies Submission Guidelines

Manuscripts

Manuscripts need to be problem-solving research outputs. They can be original articles, systematic reviews, or short communications. Thematically, the Journal has broader aim and scope on issues of development broadly defined and the name "Africa" in its nomenclature displaying its commitment to engaging scholars from Africa as well as addressing regional matters of development. The Journal will accept manuscripts from disciplinary, multidisciplinary, and interdisciplinary policy and development sciences, social and behavioral sciences, humanities, education and language, health, agriculture, socio-economic development, and political economy.

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Manuscript Structure

Title: The title must be informative and specific. It should be easily understandable by readers and reflects the content and motive of the research paper. **Author name affiliation and email address**: author/s' first name and last name only. Please don't include salutations like Dr/ Mr./Prof, et cetera. If possible, provide only your professional/ institutional email address.

Abstract: one paragraph containing at most 150 words. The abstract should be informative and explainable without reference to the text. It should state succinctly the problem, objective method, result, and conclusion and recommendation of the paper. The use of abbreviations and citations is not advisable here.

Keywords: 5-6 most important terms that describe your research domain and the specific problem area investigated.

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Conclusion: This section provides the key messages and implications of your study findings. concisely elaborate on your final output here.

Recommendation: This is optional. But if you wish, you can forward not more than 3-4 salient recommendations, which should be firmly grounded in your conclusion.

Acknowledgments: In this section, you should outline all the main agents that have contributed to your research outcome, financially or otherwise.

Author Contributions: Here, briefly declare the type and level of contribution of each author, if the manuscript is authored by more than one author. For example, you can declare thus: XX has conceived the study idea and developed the proposal; YY has supported in the design and statistical analysis process; XX and YY conducted the fieldwork; ZZ has designed survey tools and reviewed the manicurist, etc.

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