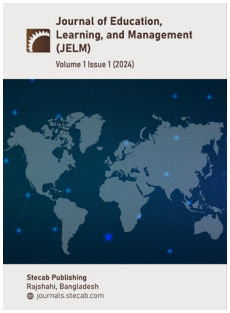


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*Research Article*

# Ethiopian Higher Education Institutions Impact on the Neighbor MSMEs

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## About Article

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**ABSTRACT**

Education is the best friend, engine for growth and an educated man is respected everywhere in every circumstances. In developing countries like Ethiopia is also crucial for economic development and societal services. This study examines the higher educational resources available in Ethiopian tertiary public institutions. The main obstacles to Micro, Small, and medium Enterprises (MSMEs) surviving include a lack of credit history, inadequate collateral; unsustain government programs, and exorbitant interest rates. Hence scientific research and development support will avoid such constraints. The right institution nearby is Higher Education Institution with significant research and community services budgets. So, the main objective of this study would be to diagnose both side impacts of HEIs on MSME and propose the solutions. Depending on the regional representation and researching limitation to make census, six university campuses were selected purposively from 50 public universities in Ethiopia. From those 200 respondents chosen through Slovin sampling formula and distributed with simple random sampling techniques. Both dependent variables (MSME) and independent variables (HEIs) were analyzed through Stata, one of the statistical analysis software. And the qualitatively collected data also made the cause and effect relationship modeling diagram using system dynamics venism software. Hence the results obtained on the three typical factors were; 76% neutrality, 22% nominal budget with fake reports, and lack of synchronization laid down as negative impacts. Whereas cooperation (45%), duplicate plans (34%), and infant attempts (21%) were also investigated as positive impacts of EHIs.

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## 1. INTRODUCTION

As a business theory, social entrepreneurship moves past economic, social, and environmental efficiency and toward effectiveness, which helps to sustain businesses over time. Entrepreneurship education started with one course taught at Harvard University way back in 1947. Higher education in this case needs to reform by moving towards active learning, teaching skills that will endure in a changing world, and adopting formative assessment.

Universities play a vital role in supporting small businesses, providing them with valuable resources, guidance, and opportunities for growth. A small business is a company of relatively limited size, as measured by its revenue, number of employees, or both. It can be structured in several different ways for scientific procedures, tax and legal purposes. The higher education system of Ethiopia is represented by 42 universities with 677 study programs. In addition 433 Bachelor programs at 40 universities, 194 Master programs at 29 universities, and 50 PhD programs at 11 universities. However, the main problems of MSMEs in relation to Universities in Ethiopian are demand overlapping and credit race in administrative platforms, fulfilling the market aspect, which is caused by the availability of the goods produced, a lack of credit history, inadequate collateral, unsustain government programs, and exorbitant interest rates. Numerous economical degrowth implications, slaw transition from one scale of enterprise into another and unemployability rate. Hence scientific research and development support will avoid such constraints. This study is to address the negative and positive impacts of Higher Education Institutions (HEIs) on Micro, Small, and Medium Enterprises (MSME) and propose solutions to combat the problem or tackle the challenges that are currently facing. Defining a role map of education sectors to economic hubs directly or indirectly is also another intention. The role of HEIs research and community services with budget, business incubation contributions and small business Development centers run up will be assessed as a kick off. Colleges and universities are becoming more and more essential growth engines for local communities in the eyes of policymakers. These institutions not only have immediate economic effects but also seek to improve the workforce's abilities (local "human capital") in two different ways.

Therefore this research article contribute to indicate the roles and responsibilities lied down on both sides (Education Institution and MSMEs) to make concrete integration and policy updates.

## 2. LITERATURE REVIEW

Education is the best friend, and an educated man is respected everywhere in every circumstances. In developing countries like Ethiopia is also crucial for economic development and societal services (Birhan, 2023). Entrepreneurship education for women has also become a key focus of research, analysis, and experimentation (Endris, 2022). It can help develop entrepreneurs, and extensive research supports that premise. The strength of an individual's entrepreneurial intentions to launch a new enterprise is an excellent predictor of whether someone initiates entrepreneurial behaviors, according to early studies (Taiwo, 2022; Qi D, 2022). To address the common variations in attitudes, values, and beliefs between young men and women, education should take into account fundamental psychological incentives and barriers. MSMEs have contributed significantly to the increase of employment in the nation (Derhab, 2023). A geographical understanding of the role of universities in society includes an appraisal of the impact they have on their regional economies. The public and scholarly interest in the economic impacts of higher education institutions has significantly increased during the past 20 years. The expansion of globalization and the intensifying economic struggle for knowledge and innovation are two factors contributing to this trend. Academics and the general public have worked to clarify how colleges contribute to economic growth because it depends more and more on creativity and innovation. Previous studies stated that developing a social entrepreneurship ecosystem that puts forward innovation and collaboration is one of the solutions needed to overcome social problems that occur in Indonesian Islamic society (Wilson, 1973; Marozau, 2021; Huggins, 1997; Tavoletti, 2007).

As Metkin (2000) mentioned, "Universities are crucial elements of the social fabric, playing a critical role in national and local economic development. Despite the nation's preoccupation with large corporations, small businesses often drive innovation and constitute the most dynamic sector of the American economy. Small businesses, however, face many challenges that make them risky undertakings; most firms fail within a few years of start-up. The two primary modes of intervention are technology transfer and community development." (Garrido-Yserte, 2010)

In the first place, they boost the availability of human capital in a region by educating prospective employees (Simha, 2005; Guerrero, 2016; Morrison, 2022). Less clearly, by aiding neighborhood firms in filling vacancies for talented people, these schools can also increase a region's demand for human capital. In this post, we outline these paths and discuss how they could influence local economic development policies, drawing on our recent academic research and a Current Issues article. MSMEs contribute to achieving the 2030 Agenda for SDGs (Lukovics, 2018; Wittwer, 2022). It help reduce levels of poverty through job creation and economic growth, they are key drivers of employment, decent jobs and entrepreneurship for women, youth and groups in vulnerable situations. They are the majority of the world's food producers and play critical roles in closing the gender gap as they ensure women's full and effective participation in the economy and in society (Lorey, 1992; Agiomirgianakis, 2017).

According to OECD (2013), problems such as climate change, food insecurity, and inclusive growth can only be tackled by a highly skilled workforce. Similarly, job creation, innovation and wage growth are necessary precursors to a rapidly developing economy. Secondly, concomitant with the rapid industrialization and growth of the emerging and developing economies, demand for HE among traditionally marginalized cohorts is increasing. There is, therefore, greater demand for quality higher education than ever before (Anna Valero & John Van Reenen, 2019).

The impact of HEIs on the local economy is heavily influenced by the nature of the institution itself. More specifically, it is influenced by the HEI's purpose and funding sources. HEIs vary

widely in their principal income sources. Institutions may be supported by research funding, contracts, and collaborations with businesses, and/or tuition fees, but a large number of HEIs are also supported by government funds composed of the contributions of local citizens (Hayter, 2015).

Finally, while the demand for HE is growing, available resources that drive quality HE, such as land, infrastructure and financial capital, are shrinking creating the requirement to achieve greater outcomes with limited inputs The impact of HEIs on the local economy is heavily influenced by the nature of the institution itself (Labrianidis, 1995; Pan, 2015).

**Table 1.** Progress of 17 SDGs and in the needy group challenges (UN, 2015)

| SDGs | Progress challenges | 2015 | 2030 |
|---|---|---|---|
| 1 | Since 2015, global poverty reduction was already slowing down. Eradicating extreme poverty will be particularly difficult in sub-Saharan Africa and conflict-affected areas. | 800 million people 10.8% | 575 million people 7% |
| 2 | conflict climate change and growing inequalities exacerbating the situation | 589 million people | 670 million people |
| 3 | 95% of these deaths occurred in low- and middle-income countries challenge | 227/ 100,000 live births | 70/100,000 live births, almost 800 women are still dying |
| 4 | Only one in six countries will meet SDG4, children and young people will still be out of school, Lack of numeracy and literacy skills they need to succeed in life | Over 14% of teachers are still not qualified | 84 million + 300million |
| 5 | Unequal access to healthcare, education, and economic opportunities. | 55% of the countries lacked laws | 286 years to close gaps |
| 6 | Still lack access to safe water, sanitation, and hygiene | Billions of people | 6- drinking water, a 5-sanitation, &8-fold increase for hygiene |
| 7 | Still cooking with unsafe and polluting fuels | 2.3 billion | 2 billion |
| 8 | Cost-of-living crises, trade tensions, uncertain monetary policy paths, rising debts in Developing countries, young people were not in education, employment, or training (NEET) | 23.5% | 22.2% |
| 9 | Manufacturing industry's recovery remains incomplete and uneven | high-income regions achieved 5%, In Sub-Saharan Africa, the gap is 18% | Invest in advanced technologies, lower carbon emissions, and increase global mobile broadband access. |
| 10 | Uneven recoveries in different regions of the world, conflicts and economic hardship | one in 251 people worldwide was a refugee | address the root causes of wage disparities |
| 11 | Huge movements of people in and out of urban areas, putting at risk the target of adequate housing | 1 risk reduction strategies | more than doubled |
| 12 | world is seriously off track in its effort to halve per-capita food waste and losses | tripled | |
| 13 | Failure to act leads to intensifying heat waves, droughts, flooding, wildfires, sea-level rise, and famines. | than 3 billion people | Half |
| 14 | Endangered by rising acidification, eutrophication, declining fish stocks and mounting plastic pollution | More than 35.4% of global stocks were overfished | restore fish stocks to biologically sustainable levels |
| 15 | The trend in forest loss, land degradation and the extinction of species is becoming worse, posing a severe threat to the health of the planet and people | at least 100 million hectares | restoring at least one billion degraded hectares |
| 16 | Ongoing and new violent conflicts around the world. Homicide, marginalized, victims and suspects. | 5.9 per 100,000 One in five was a woman | restore trust |
| 17 | Funding for development remains a major challenge, particularly in low income countries | 3 billion used the Internet | connecting everyone |

Table 1, defines the main challenges facing the world on economy and education because of the lack of integration in sub-Saharan African countries. Among 17 SDGs the selected 1, 4, 5, 9 and 10 plans are the core factors associated with it.

The contribution of MSMEs to economic growth is the creation of decent jobs, and the provision of goods and services, as well as to poverty alleviation and reduced inequality (Anna Valero, 2023). It is estimated that SMEs contribute as much as 40% of

the GDP of Arab countries and, an economical category, have become the subject of interest of both economic and security sciences. According to Ethiopia regional investment bureau definitions, enterprises with framed scales based on, number of employees including owner family, and working capital. Hence 1-11 employees (600,001ETB) are regarded as micro, 11-50 employees (600,001-10000000ETB) small, 11-50 employees (10000000-90000000ETB) medium, while large enterprises also 11-50 employees (above 90000000ETB). On the other hand, to be fair, it must be acknowledged that a great deal of women-owned micro-enterprises is driven by economic necessity, not psychological satisfaction. Micro firms are defined as enterprises with net assets less than 179,296.39ETB (Excluding land & building) or total annual sales less than 1,075,778.33ETB. Small firms are enterprises with net assets from 179,296.39-179296.39ETB or with total annual sales from 1075778.33-8964819.39ETB, and Medium-sized firms -net assets from 1792963.88 ETB to 35859277.56 ETB (land and buildings excluded) or with total annual sales from 8964819.39 to 179296387.80 ETB (Bewuketu, 2023).

Therefore, the contribution of this study is to infer an entrepreneurial-based solution approach as one way to minimize the problems that occur in academia to all thus Micro, Small, and Medium Enterprises. The problem of MSMEs in relation to Universities in Ethiopian context was not explicitly studied. The gap(s) related to job creation and environmental workspace impact were not clearly identified or indicated. There should have been a roles played by the universities to have positive impact on the development of MSMEs, but that are missed in Ethiopia.

Executive education, institution-wide effects, and links between universities and business are other potential sources(Reitberger, 2015; Weiler, 1992).

It does appear therefore that new universities have a stronger impact on laggard regions within a country. Although there is no direct way to address this without an external instrumental variable, there are non-trivial time lags between (Valero, 2019).

(i) An unobservable local shock and a policy decision to build a university;

(ii) The decision to build and opening up of the institution and

(iii) The opening of the university and the economic impact

University research accelerates at least the development of new products, countries that support it secure a favorable position in a knowledge-intensive, globally competitive marketplace. The economic effects of universities on their regions are considerable, and these effects play an increasing role in calculations of the value of public investment in higher education and in attempts to stabilize and enhance regional economies. Most economists and policymakers know that people who complete a college degree tend to earn more than people who have not attended college. Yet they often overlook the fact these benefits extend beyond individual workers. The college earnings advantage also needs to greater economic activity, fueling property at the regional and national levels (Rothwell, 2015).

An institution's economic impact takes many forms University professors can share their knowledge with local businesses, governmental organizations, and nonprofits. They use a range of technology-transfer approaches to work directly with both large and small firms to commercialize the goods and processes generated via research.

## 3. METHODOLOGY

A survey type of research with mixed research design was used in this work. When sampling a population, Slovin's formula is used to determine the sample size required to achieve a given confidence interval. When you don't have enough knowledge about the behavior of a population or its distribution to determine the proper sample size, you use this formula. Slovins Formula is developed by Robert Slovin since1960 and It is used to determine the appropriate number of participants/sample in a survey. It works for simple random sampling. If the population to be sampled has obvious subgroups, Slovin's formula could be applied to each individual group instead of the whole group (Ayele, 2021).

n = N/(1+Ne2)

where n-sample size, N-population size, and e-a margin of error

n = N/1 + N(e)2 ……(1)

Hence, N=1200 MSMEs in the near location of six universities, e = 0.05

So the sample size (n) = 1200/1 + 1200(0.05)2

= 200

The sample populations of the study were the six Universities nearby randomly selected MSMEs by using simple random sampling. And descriptive and explanatory research designs were used from those 200 respondents (180 respondents correctly filled) and distributed with simple random sampling technique i.e;

- Mizan Tepi University, (650/2009 M.-T. U., 2017).
- Bonga University, (W/Giorgis, 2017):
- Debre Birhan University, (DBU Senate Legislation, 2012)
- Addis Ababa Science and Technology University, (Senate of AASTU in accordance with Article 49 (3) of Higher Education Proclamation No. 650/2009, 2017)
- Injibara University, (650/2009 I. S., 2017)
- Dilla University, (Senate, 2012). Table 3 Respondent's distribution per sector and Universities dispersion

Samples of all populations (200 enterprises) were purposively distributed due to resource limitations. The selection of samples in each of the six public universities and in each 7 sectors was based on the total number of respondents fair sharing. Only 180 answers were returned back in the sampling process successfully.

The participants in the questioner survey developed their ideas based on their personal experiences, the research paradigm used was their work background. The research participants came from a variety of professional, national, religious, and cultural backgrounds. The study location was a rural village in South West Ethiopia. The people who live in SWE were included in the research population. The convenience and non-random purposeful sampling used for the qualitative analysis was based on the volunteers who agreed to take part in the event. States in emerging nations, maintaining effective e-government programs is crucial. The literature that is currently available, however, shows that: (1) the failure rate of e-government

initiatives in those countries is very high, showing that the problem is difficult and poorly understood; and (2) the sustainability of e-government initiatives is a neglected topic, calling for an expansion of e-government research beyond success (Lessa, 2015). Table 3 convoys that 200 respondents were targeted but only 180 returned successfully. The data collected from people regarding their opinions on University impact on in the micro enterprises, small enterprises, and medium enterprises within society at large made up the unit of analysis for this study (Crick, 2018; Habtewolid, 2023).

Secondary data sources were taken from a reputable journal articles that were published in the last 5 years onwards. Particularly from the Science Direct database www.sciencedirect.com, IEEE Digital Explore ieeexplore.ieee.org or Scopus Database www.scopus.com. The main references are international journals and proceedings 80% of total references used in the study. And the qualitatively collected data also made the cause and effect relationship modeling diagram using system dynamics venism software.

In this section, this research tries to describe the type, time, location research instrument and statistical analysis method. Ethiopia is strategically located in the Horn of Africa at 9.1450° N latitude and 40.4897° E longitude bordering Somalia, Sudan, Djibouti, Kenya, and Eritrea spanning a total distance of 5311 km. It is one of the oldest independent countries and the second-most populous country in Africa with a population of more than 125 million. According to Gadisa, (2023) Ethiopia has a total area of 1104,300 km2, and the climate varies according to elevation.

Since the EPRDF's rule in 1994, higher education reforms have been implemented. There will be 83 universities, 42 public universities, and more than 35 higher education facilities by the year 2022. 16,305 foreign students are enrolled in higher education. As of figure 1 the map indicates that location of 6 purposively selected public universities in Ethiopia.

Due to political differences between the Ethiopian federal government and the Tigray and Amhara regional states, a devastating war broke out in since November 2020 onwards, and intact the conflict has since expanded to other regions of Ethiopia, HEIs are not playing expected roles. These conflicts have hindered Ethiopia's economic development, derailing achievements of the SDG 7 targets (Pruetto, 2023), (Jaison, 2012).

Both regression and correlations of dependent variables (MSME) and independent variables (HEIs) were analyzed through NCSS, one of the statistical analysis software. Both qualitative and Quantitative research approaches and probability sampling method had been adopted in a selected sample of 200.


**Figure 1.** Location of Six research study universities in Goggle Earth Map of Ethiopia

## 4. RESULT AND DISCUSSION

The first part of the questionnaire consists of the demographic information of the participants. This part of the questionnaire requested some information related to personal and demographic characteristics of respondents. Accordingly, the following variables about the respondents were summarized and described in the table 2 below. These variables includes: Characteristics of respondents by age, sex, educational level, marital status table 4 and figures 6, 7, and 8 are all the demographic information's.

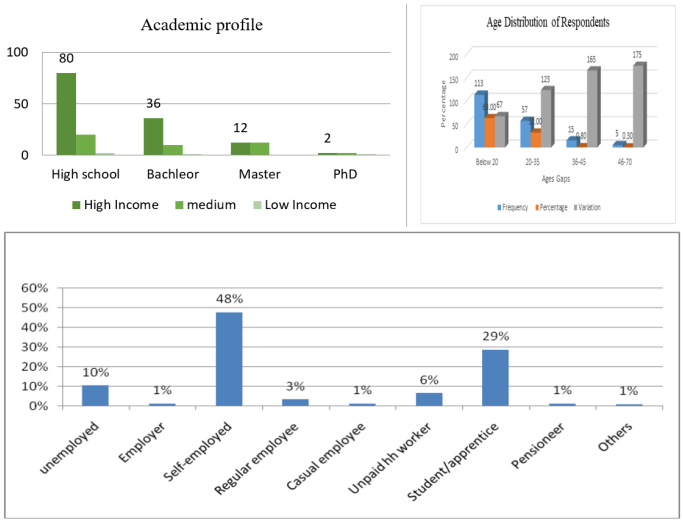



**Figure 2.** Occupational Distribution Respondents in the Enterprises

In the figure 2 employability rate of respondents were addressed, hence 48% of the respondents are self-employed (entrepreneurs), while other are a part time workers or recruiters for the job/enterprise. It is interrelated to the negative impacts of enterprises failure or dropping. Figure 2 Age distribution of respondents in the study enterprises, the majority of Enterprise workers are youths, especially teenagers and 20-35. In figure 2 95(63+32) percentage of respondents are covered by them. It also presents educational background versus economic status of respondents. Educational background inversely proportionated with economic status. Which means 80% of high school dropouts of the respondents were in the category of high-income level. Since income level is not defined quantitatively. But, it is expressed in terms of their response. Here the participation of PhD holders in enterprises are very limited, and they are categorized in small income divisions. This low percentage of divorcees indicates the stability of homes in the area and has also important implications for children upbringing. In the figure 61.88% of the respondents are single (unstable/fragile family), 28.37% of respondents are married which is 1/4th of the total respondent. 9.05, and 0.7 percent are also taking part in the widowed and divorced categories respectively.

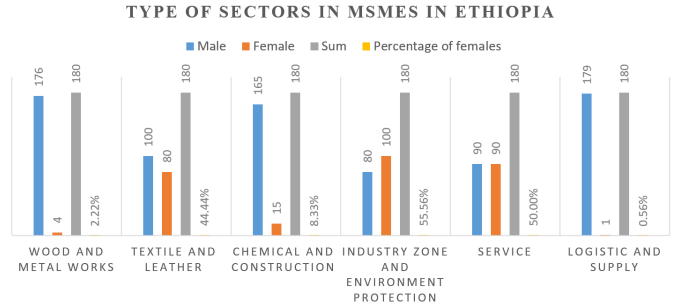


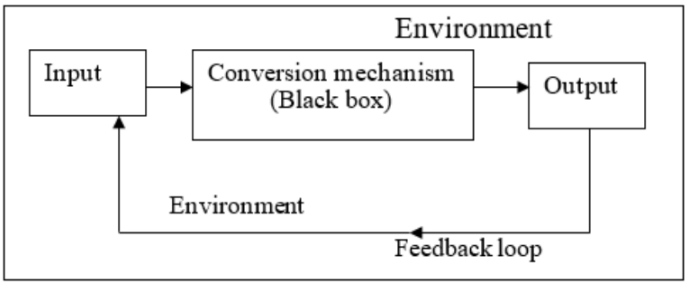

**Figure 3.** Various sectors distribution per sex ratio difference of employees

In figure 3 the participation of women's covered in wood and metal industry, Logistics and supply somehow in chemical/ construction industries are very low percentage. While it is better in environment protection, textile & leather, and service rendering enterprises. Hence, gender difference were diagnosed in enterprise to enterprise.

**Table 2.** Significance of HEIs Presence for Enterprises

| Typical factors | Neutrality | Nominal | Null |
|---|---|---|---|
| Frequency of responses | 137 | 39 | 4 |
| Positive impacts of EHIs | Cooperation | Duplication | Attempts |
| Frequency of responses | 81 | 61 | 38 |

The results obtained on the three typical factors were; 76% neutrality, 22% nominal budget with fake reports, and lack of synchronization laid down as negative impacts. Whereas cooperation (45%), duplicate plans (34%), and infant attempts (21%), were also investigated as positive impacts of EHIs. Based on the highest percentage (76+22=98%) of isolation in two sectors, it is been assessed the environments of such institutions for establishing an integration in the future. Figure 10 shows there is a conflict of interest to access input resources from same regional sources. Because of the common market demand the output also limited and insufficient, hence the feedback loop need to be strengthened very well to create a conducive environment for cooperation.




| Pearson Correlation | Technology | Motivation | Plan | Budget |
|---|---|---|---|---|
| **Technology** | 1 | | | |
| **Motivation** | 0.447 | 1 | | |
| **Plan** | 0.376 | 0.643 | 1 | |
| **Budget** | 0.564 | 0.321 | 0.654 | 1 |

**Figure 4.** Environmental Impact analysis of the study area and correlation

Figure 4, represents the study environment of this research. Inputs were Raw materials, Labor, Budget, Infrastructure, and their method of operation (policy, plan, schedule, technology, working structure and culture, organizational behavior, and employee's motivation). The outputs would be services, products, scratches, etc. but in the operation process or conversion mechanism, there are factors ought to be considered, those regarded as an environment of the enterprises and tertiary education sectors.

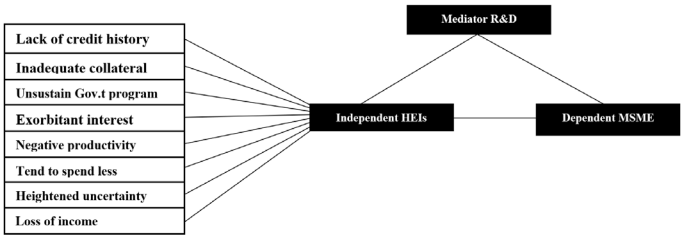



**Figure 5.** Impact association system framework of the study

Figure 5, Put the variable that is being changed is the independent variable, and the variable that is being measured or observed is the dependent variable. Predictors: Constant, HEIs, Dependent variables: MSMEs Factors outcome distribution was done through statistical software analysis in Table 3 i.e;

Y=ax+b..... equation(2)

**Table 3.** Anova and Coefficients

| Model | Sum of squares | df | Mean square | F | Sig. |
|---|---|---|---|---|---|
| Regression | 460.021 | 1 | 460.0 | 63.729 | 000a |
| Residual | 274.144 | 30 | 7.001 | | |
| Total | 734.165 | 39 | | | |

**Coefficients**

| Model | Understand coefficients | | Standardized coefficients | | |
|---|---|---|---|---|---|
| | B | Std. error | beta | t | Sig |
| HEIs | -13.870 | 9.803 | .800 | -1.317 | .199 |
| factors | 1.189 | .144 | | 8.210 | .000 |

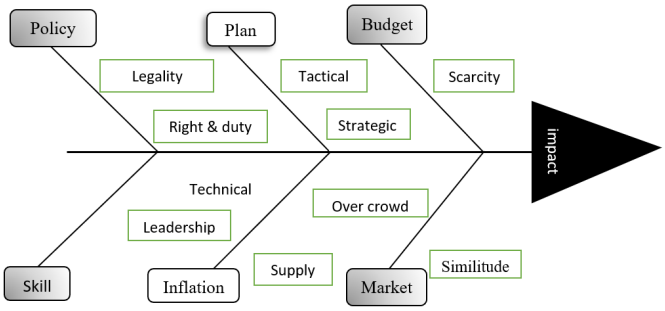



**Figure 6.** Fishbone diagram (Ishikawa cause and effect) Analysis

Figure 6 comprises brainstorming on the six headings of the major categories of causes of the problem. From the responses collected directly the systems, surrounding, skills, and suppliers are synchronized with the impact and indicates that absence of plan in the formal enterprises is lack of strategic and tactical plan, mismatch of University and enterprise plan, and contradictory plan and incompatible working plan are the main cause to associate a negative impact. While similar plans influenced as a positive impact. Hence other headings (Market, skills, inflation, policy, and budget) are similarly considered as an impact of MSMEs by HEIs in Ethiopia.

Table 3 Descriptive statistics by Stata software result-

Regional GDP per capita 14,055.75 10,958.30 262.15 8,463.02 105 638.25 8,128 12543

**Table 4.** Descriptive statistics by Stata software result

| Variable | | R | p-value |
|---|---|---|---|
| MSMEs density | - 0.598 | | 0.035 |
| HEIs density | - 0.672 | | 0.0132 |
| *ECTt*-1 | - 0.646 | F-Statistics | 14.166 |

From table 4, the mean of economic growth is 4.395, and its standard deviation is 1.52762. On average, the growth of ventures was moderate. The means of value creation, value proposition, and value addition are 4.4093, 4.7545, and 3.7256 respectively. This figure reveals that an enterprises are involved in creating, proposing, and capturing value, even if it's moderate and require further improvement. The highest standard deviation, 1.66773, for value capturing shows there is high variation among firms in capturing values. The mean value for integration of HEIs with MSME is 4.4186, which is better than the other practices of technology entrepreneurship. The p values of Respondents regression and correlation of enterprises are 0.035, and 0.0132 respectively.

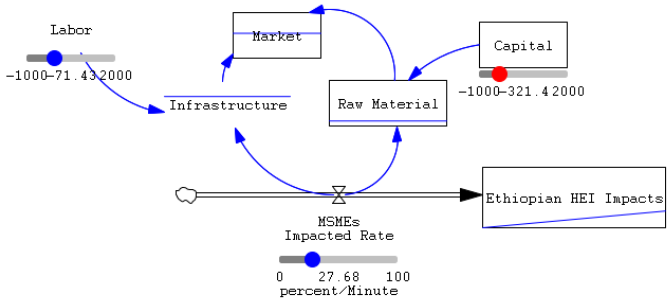



**Figure 7.** Causal relationship of MSME Impact factors by system dynamics (Venism software)

Figure 7 clearly shows that, the MSMEs Impacted rate by HEIs ranges from 0 to 100%/min time. Hence the practice of Infrastructure, Labor, Market, Capital, and Raw materials directly associated with it. Implies that when the impact of Universities becomes high, the impact rates of enterprises are increased in the positive slope direction. But if no impact against it, there is also a positive relationship with respect to the impacts. It was dealt with the SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis it's a technique for assessing these four aspects of your business (MSMEs). SWOT Analysis is a tool that can help us to analyze what enterprises does best now, and to devise a successful strategy for the future.

## 5. CONCLUSION

This paper presents an impact assessment on universities and its role map in nearby Micro Small and Medium Enterprises in Ethiopia. It found that increases in university presence are positively associated with faster subsequent economic growth. An increase in the number of universities related with GDP per capita in a country. While this is happened only for a planned circumstances, but not other violating influences. The advantage of universities does not seem to be limited to the area where they have to be erected, but rather spreads to other regions, with the closest regions experiencing the largest effects.

Table 5 findings predict that university growth will likely result in greater economic benefits than expenses. The goal of the SBDC program is to provide current advice, instruction, and technical support in all facets of small business administration, including finance, marketing, manufacturing, and organization, engineering, and feasibility studies.

## RECOMMENDATIONS

The actions of HEIs may change how the local labor markets are organized. Particularly, metropolitan regions with higher levels of educational engagement have a higher proportion of people employed in high-skilled industries including business-related fields and the sciences, math, and computers. According to figure 3, 8 & 9 relationship, the strongest connections between local economies and higher education institutions are those that involve innovative and technically skilled labor. Significantly, it has been established that these activities are key catalysts for regional economic growth. Although these measurable benefits are modest, they do indicate that regions can actually improve the number of skilled workers in their labor force by better using the potential of their higher education institutions. This study Recommendations might be forwarded as to provides a critical lesson for policymakers looking to maximize the economic impact of Public universities: helping local businesses create high-skilled jobs is at least as important as retaining local graduates. This can be achieved by encouraging collaborations between MSMEs and universities that enable them to benefit from the results of research. Therefore, it is highly recommended to continue to enhance the positive impacts and to work with full attention to eliminate the negative impacts. It is necessary to support a common plan and work in cooperation with Universities. On the other hand, HEIs are required to support small institutions in a special way by increasing their budget planning, awareness creation, short trainings, and enhancements. Launching Business Incubation and Small Business Development Centers etc. Because it helps the country economy, and promoting entrepreneurship and reducing jobless youths.

## DATA AVAILABILITY STATEMENTS

The author confirms that the data used to support the findings of the study are available in this article and its supplementary material. Raw data supporting the finding are available from the corresponding author, upon reasonable request. There is no conflict of interest between authors.

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