Addis Ababa University, Ethiopian Journal of Business and Economics, EJBE Vol.: 13, No.: 2,
Doi: *https://dx.doi.org/10.4314/ejbe/v12i1.1* p-**ISSN: *2311-9772*** **e-ISSN: *2410-2393***
Available online: http://ejol.aau.edu.et/index.php/ejbe and https://www.ajol.info/index.php/ejbe

The Mediating Role of the Capital Growth of Wood-based Micro and Small Enterprises on Livelihoods in North Western Amhara, Ethiopia

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Abstract

A study was conducted to evaluate the impact of wood-based micro and small enterprises on livelihood improvements among entrepreneurs in the northwestern Amhara region. Data were collected from 225 wood-based micro and small enterprises through questionnaires, focus group discussions, and key informant interviews. Analysis methods included frequency tables, chi-square tests, and structural equation modeling (SEM). The findings indicated that 78.7% of enterprises were experiencing growth, while 21.3% were declining. Structural equation model analysis identified significant factors influencing business growth in the first stage, including the type of working place, access to credit, and market linkage. In the second stage, a positive and significant relationship was observed between business growth and various livelihood outcomes such as food security, health, education, and decision-making abilities. These results underscore the importance of continued support from the government and other relevant stakeholders to maximize the positive impact of wood-based enterprises on people's lives. Moreover, a comprehensive policy framework that acknowledges and leverages the diverse contributions of wood-based micro and small enterprises can facilitate sustainable and holistic improvements in the livelihoods of entrepreneurs and their communities.

Keywords: Wood-based micro and small enterprises, business growth, structural equation Model, livelihood improvement, Amhara, Ethiopia.

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Introduction

In the past, Micro and Small Enterprises (MSEs) were often overlooked in their contribution to a country's economic growth. However, recent years have seen a shift in perspective, with policymakers increasingly recognizing their significance in terms of job creation and income generation. Research has highlighted the crucial role MSEs play in economic development globally, particularly in emerging economies, by significantly contributing to job creation, income generation, poverty reduction, and overall improvement of household livelihoods (Bai et al., 2021).

Globally, Small and Medium Enterprises (SMEs) have been shown to make substantial contributions to GDP and overall economic growth, forming a significant portion of jobs worldwide, especially in developing countries (ILO, 2015; Runde et al., 2021). In developing economies, MSEs constitute a considerable percentage of GDP and employment, underlining their vital role in these regions (OECD, 2017). In Africa, notably in Ethiopia, MSEs have emerged as a dynamic sector driving employment, poverty reduction, and socio-economic development. They serve as catalysts for transitioning to an industrial society and provide a foundation for the development of larger enterprises (Abagissa, 2021; Getachew, Aradom and Hossein, 2020; Hailai et al., 2019; Mamo, 2020; Olana, 2020). Reports emphasize the strategic importance of MSEs in job creation in urban centers in Ethiopia (FMSEDA, 2011; FDRE, 2016). The growth of MSEs in Ethiopia has significantly impacted economic growth and employment, playing a crucial role in reducing unemployment, generating income, and enhancing livelihoods (Mahmud et al., 2020; Bekele, 2017). For instance, in 2019/20, over 100,000 new MSEs provided employment opportunities for millions and received substantial financial support for their operations (NBE, 2020).

MSEs not only contribute to economic growth but also play a vital role in improving nutrition by bringing nutritious foods to markets, facilitating job creation, and income generation (FAO, 2018). Operators benefit from increased profits, assets, and employment opportunities through the expansion and diversification of their operations (Semegn & Bishnoi, 2021). Few studies were conducted on business enterprises. One of them is by Kansheba & Wald (2021), which focused on the mediating role of entrepreneurial attitudes on the quality of the entrepreneurial ecosystem and entrepreneurship considering entrepreneurial activities at early-stage and high-

growth levels. However, the study was conducted in several countries with no clear indication about where exactly the study was conducted, making the findings difficult to generalize for other contexts. Another study was conducted by Yavaş, Demiralay, Capraz, and İlkay Demiralay (2020) on 45 countries focusing on business dynamism in the effect of innovation on the entrepreneurial intentions of countries. This research deviates from our area of emphasis.

However, despite recognizing the importance of Wood-based Micro and Small Enterprises (WMSEs) in income generation, employment creation, and poverty reduction, there is a notable research gap in understanding how their growth directly impacts the livelihoods of operators. Understanding how MSE growth translates into meaningful improvements in operators' lives, both socially and economically, is crucial for policy interventions and development strategies aimed at promoting sustainable growth and socio-economic empowerment (Feleke, 2015; Tarfasa et al., 2016; Alemayehu & Gecho, 2016; Seyoum et al., 2016; Hayelom, 2020). Another study was conducted in Pakistan by Muhammad, Shah, Yukun, Rauf, Khan, and Shah (2019) who examined the impact of SMFEs in reducing poverty and promoting rural livelihoods.

Despite the abovementioned studies at the global level, studies are scant in Ethiopia. Further research is, therefore, needed to understand how MSE growth empowers operators socially and economically and its broader impact on livelihood dimensions such as health, education, and overall well-being of urban households. Addressing these gaps is essential for designing effective interventions to maximize the positive impacts of MSE growth on operators and their communities. This study aims to investigate how income from the growth of WMSEs translates into meaningful improvements in livelihood outcomes, including food security, health, education, and decision-making of operators.

Review of Literature

Enterprise growth theories have evolved through a rich tapestry of perspectives, each offering valuable insights into the dynamics of organizational expansion. One seminal theory, articulated by British management professor Penrose (1959), emphasizes the role of internal resources and capabilities in driving growth. According to Penrose, firms expand by leveraging their unique resources, such as managerial expertise and technological innovation, to exploit market opportunities (Li & Diao, 2003). Another prominent framework developed based on Coase's

(1937) scale boundary theory, posits that firms face constraints as they grow, reaching points where further expansion becomes increasingly difficult due to limitations in resources or market saturation (Tang & Li, 2005). This theory underscores the importance of understanding the boundaries within which firms operate and the challenges they encounter as they strive for growth.

Complementing the scale boundary theory is the lifecycle theory, which conceptualizes firms as entities progressing through distinct stages of development, including birth, growth, maturity, and decline (Yang, 1996). This perspective highlights the changing dynamics and strategic imperatives that firms face at different points in their lifecycle, emphasizing the need for adaptive strategies to sustain growth and competitiveness. A third theory, the gene combination theory, focuses on the role of innovation and adaptation in fostering growth. According to this framework, successful firms continuously evolve by combining existing resources and capabilities with new knowledge and technologies, creating a dynamic process of renewal and expansion (Tang & Li, 2005).

The empirical literature underscores the pivotal role of Small and Medium Enterprises (SMEs) in driving economic growth, particularly in developing countries. Studies by ILO (2015) and Runde et al. (2021) emphasize the significant contributions of SMEs to GDP, job creation, and overall socio-economic development. In Africa, including Ethiopia, Micro and Small Enterprises (MSEs) are recognized as crucial drivers of change, fostering industrialization, poverty reduction, and employment generation (Abagissa, 2021; Getachew, Aradom, & Hossein, 2020). Research also highlights the transformative impact of MSEs in transitioning societies towards more resilient economic frameworks (Hailai et al., 2019).

Studies focusing on Ethiopia underscore the strategic importance of MSEs in urban job creation and economic growth (Mahmud et al., 2020; Bekele, 2017). Data from FMSEDA (2011) and FDRE (2016) highlight the significant role of MSEs in driving economic activity, with substantial financial support and millions of jobs created through the establishment of over 100,000 new MSEs in recent years (NBE, 2020). Furthermore, beyond economic growth, MSEs

contribute to broader societal impacts such as enhanced nutrition and livelihood improvements (FAO, 2018; Semegn & Bishnoi, 2021).

Methods and Materials

Description of the study areas

The study was conducted in Bahir Dar city, Debre Tabor, and Finote Selam towns of the Amhara region. Bahir Dar is the capital city of the region which is geographically located at 11°36' N latitude and 37°23' E longitude and has a surface area of 28 km² (2,800 hectares). The average annual temperature of Bahir Dar is 20°C and the average annual rainfall is 1416 mm, with the highest rainfall recorded in July. According to the national survey, the population of Bahir Dar city was 221,991 (CSA, 2007). Bahir Dar is located at an altitude of 1820 m above sea level.

Debre Tabor is the capital of the South Gondar administrative zone of the Amhara national regional state. The surface area of Debre Tabor town is about 21.87 km². It is geographically located between 11.83˚N to 11.87˚N latitude and 37.98˚E to 38.03˚E longitude. Topographically, the town is characterized by undulating terrain with significant elevation variation. The agro-ecology of Debre Tabor is determined by its altitude which ranges between 2447 m and 2838 m is Dega. The study area enjoys a moderate temperate climatic condition. The average temperature of Debre Tabor is 15°C and the mean annual rainfall is 1553.7 mm, in which the maximum rainfall occurs in July or August.

Finote Selam town is the capital of the West Gojjam administrative zone and is located 187 km from Bahir Dar city. The town is geographically located at latitude 10°41'23" N and longitude 37°15'35" E and has an elevation of 1917 m above sea level. The town administration has three urban and two rural kebeles with a total area of 16.6 km² (1663.14 hectares). The total number of inhabitants at the moment (according to the information from the utility manager) is 77,000 including the 10,000 inhabitants of peri-urban areas. The agro-ecology of Finote Selam town is Weyna Dega. The average annual temperature is 17.8°C and the average annual rainfall is 1450.3 mm.

Research design

Explanatory research design has been used in this study. The major purpose of explanatory research is to determine the cause-and-effect relationship of variables of interest. Moreover, the study used cross-sectional data in the sense that all relevant data were collected at a single point in time. Besides, a quantitative research approach was used since numeric data was collected through a semi-structured questionnaire.

Sampling procedures

The three study sites (Bahir Dar city, Debre Tabor, and Finote Selam towns) were selected purposively based on the raw material resource supply (most of the time *Cordia Africana*) and all the wood-based micro and small enterprises in those areas were taken as a subject of this study. Since the focus of this study is wood-based micro and small enterprises, the whole population was taken as a subject of study. Therefore, the census was applied to consider the respondent enterprise owners/managers. This is because the total number of wood-based enterprises was not large enough to take samples. A list of the wood-based micro and small enterprises was taken from the office of technical and vocational training and education and enterprises development offices.

Field observation was conducted to ensure whether the registered enterprises were present or quit the business. From the field observation, enterprises, that were not registered by the technical and vocational training and education and enterprise development offices and trade and industry offices, were also taken as a subject of the study to analyze whether formality would affect the growth of wood-based micro and small enterprises. The respondents of this study were the enterprise owners and/or managers.

Methods of data collection

Primary data was collected by administering questionnaires to respondents, discussions with focused groups, and interviews with key informants. Structured and semi-structured questionnaire, which contain open and close-ended questions was prepared and administered to the respondents during the survey. The research has also used retrospective questionnaires to gather information on the initial status of the enterprises. The questionnaire was prepared in

English and translated into the Amharic language. A preliminary survey was conducted and the tool was improved based on the feedback. The reliability and validity of the instrument were checked before the commencement of the actual survey.

Focus group discussion with 12 discussants was also conducted with enterprise owners/managers who have better knowledge about the enterprise and the business environment, and with the experts from TVET and MSEs development offices of each town to have better qualitative data and to triangulate the quantitative data collected via questionnaire. In addition, key informant interview was conducted with the experts of TVET and micro and small enterprises development offices, experts and managers from trade and industry offices, and other responsible bodies to validate and triangulate the data collected using questionnaires and group discussions.

Method of Data Analysis

Data processing and analysis is an important part of research work. The collected data was edited to identify errors and omissions. Accordingly, corrections were made when needed. All these activities were carried out to make the data ready for analysis. Different empirical methods were used in this study to attain meaningful results. To analyze the contribution of enterprises to the livelihood of their operators, first, the growth status of the enterprises was calculated. The growth of an enterprise was measured using the changes in capital.

To calculate the growth rate of WMSEs, the study used capital size. The following equation was used to measure the firm growth.

$$\mathbf{W}MSE\ gr = \frac{\ln ca' - \ln ca}{Inca} \quad \text{..... (1)}$$

Where WMSEgr = micro and small enterprise's growth

ca'= enterprises' current capital,

ca = enterprises' initial capital

Taking the calculated growth, the WMSEs are classified into two categories i.e., growing (if growth > 0), non-growing (decreasing growth and survivalist if growth ≤ 0).

After calculating the growth of the enterprises, the Chi2 test was used to see the association between business growth and the improvement of livelihood components (food, education, health, and decision-making) of the entrepreneurs. We considered business capital growth as a mediator variable determining livelihood outcomes such as improvement in access to food, education, health, and decision-making. Accordingly, we used a Structural Equation Model (SEM).

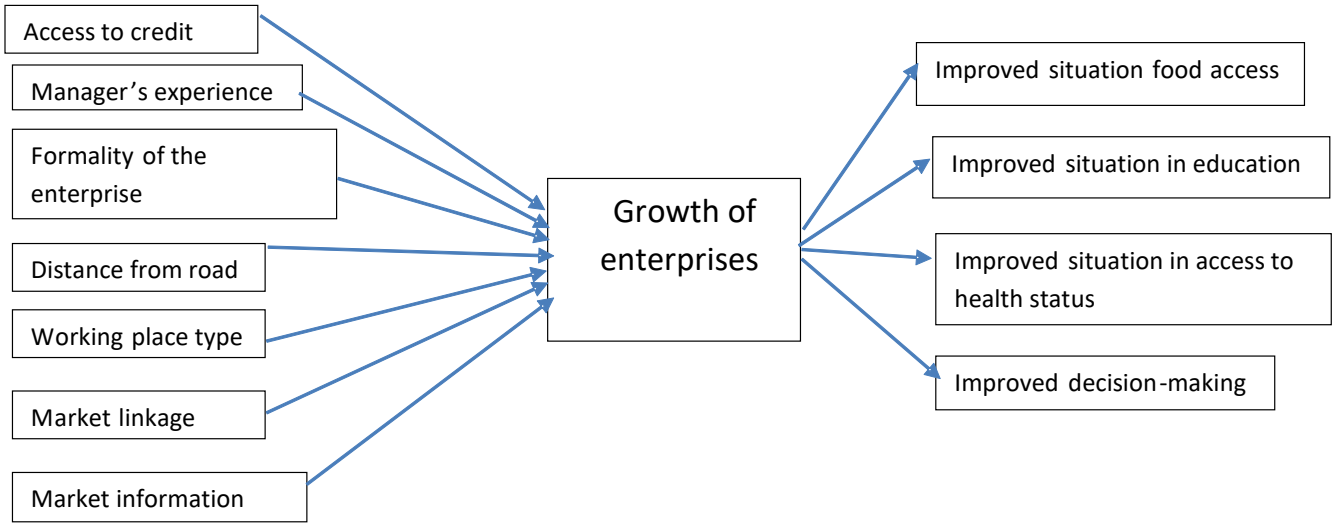

Figure 1. Format of the Structural Equation Model

In this model, the growth of enterprises serves as a mediating variable. In the first stage equation, several variables determine the growth of enterprises. In the second stage, the growth of enterprises determines livelihood outcomes.

The first stage is specified as follows:

$$Growth = \beta0 + \beta1*marktinfo + \beta2*managers\_experience + \beta3*creditaccess + \beta4*wrkingplacetype + \beta5*dstancefrmroad + \beta6*marktlinkage + \beta7*formalityenter + \varepsilon \quad (2)$$

In the second stage, growth determines outcome variables of interest:

$$Educ\_improvement\ (educnew) = \gamma0 + \gamma1*Growth + \varepsilon1 \quad (3)$$

$$Health\ improvement\ (healthnew) = \gamma2 + \gamma3*Growth + \varepsilon2 \quad (4)$$

Food improvement (foodnew) = $\gamma 4 + \gamma 5$*Growth + $\varepsilon 3$……..…….....(5)

Decision making (socialnew) = $\gamma 6 + \gamma 7$*Growth + $\varepsilon 4$……...…….... (6)

Where: $\varepsilon 1$, $\varepsilon 2$, $\varepsilon 3$, and $\varepsilon 4$ are error terms.

In estimating the model, we used the following form:

sem (marktinfo -> growth,) (managers_experience -> growth,) (creditaccess -> growth,) (wrkingplacetype -> growth,) (dstancefrmroad -> growth,) (marktlinkage -> growth,) (formalityenter -> growth,) (growth -> educnew,) (growth -> healthnew,) (growth -> foodnew,) (growth -> socialnew,), latent(growth) nocapslatent ……..(7)

Results and discussion

Contribution of WMSEs to livelihood improvements of owners/managers: The result of the analysis of the enterprise growth computed against their capital difference revealed that 78.7% of the WMSEs were growing enterprises whereas 21.3% of the enterprises were showing declining growth. The findings presented in Table1, reveal the reported improvements or lack thereof across various variables. Among the respondents, a significant majority reported positive changes in certain areas, while smaller proportions experienced improvements in others. Food improvement was reported by 87.6% of the participants, indicating that a large majority acknowledged positive changes in food-related aspects. On the other hand, only 12.4% reported no improvement in this area.

Table 1:

The proportion of Respondents Experiencing Improvement in their Livelihood

Variable		Number	Percent (%)
Food improved	Yes	197	87.6
	No	28	12.4
Education improved	Yes	165	73.3
	No	60	26.7
Health improved	Yes	190	84.4
	No	35	15.6
Decision making improved	Yes	163	72.4
	No	62	27.6
Social interaction improved	Yes	167	74.2
	No	58	25.8

Source: Authors' analysis based on survey data, 2022

Regarding education, approximately 73.3% of the respondents showed improvements, while the remaining 26.7% did not experience any positive changes. Health-related aspects showed a similar trend, with 84.4% of the participants reporting improvements, while 15.6% did not witness any positive changes in this domain. In terms of decision-making, 72.4% of the respondents reported improvement, while 27.6% did not notice any positive shifts in their decision-making abilities in the community. Social interaction showed a slightly higher proportion of positive changes, with 74.2% of the participants reporting improvements. Conversely, 25.8% stated no improvement in their social interactions in the community. These findings provide insights into the reported improvements across different variables, highlighting the varying degrees of positive changes experienced by the respondents.

Association between business capital growth and livelihood improvement: Association between business capital growth and improvement in access to food: - The chi-square test results revealed a significant association between business growth and food security status among entrepreneurs. Specifically, 98.5% of households with growing businesses were found to be food secure, while

only 48% of households without business growth experienced food insecurity. This stark difference underscores the positive impact of business growth on food security, indicating that increased income and resources from growing enterprises can enhance access to a consistent food supply.

Table 2:

Contribution of Enterprise Growth on Food Status of Entrepreneurs

Food status	Business Growth		Total
	Did not grow	Grew	
Not food secured	27 (51.92)	3 (1.52)	30 (12)
Food secured	25 (48.08)	195 (98.45)	220 (88)
Total	52 (100)	198 (100)	250 (100)
Pearson chi ^{2} (1) = 99.0974 Pr = 0.000			

Source: Authors' analysis based on survey data, 2022
Figures in parentheses are percentage values

Association between business capital growth and improvement in educational attainment: - The correlation between business growth and educational improvement is significant, with 84.9% of households experiencing business growth also possessing a high level of education, compared to 32.7% for households without business growth. This emphasizes the influential role of business growth in fostering educational improvement. Increased income from enterprises enables investment in education, including school fees, tuition, and educational materials, thus enhancing financial accessibility and quality of education. This leads to reduced dropout rates and better-equipped individuals for the job market. Entrepreneurs benefit from business growth by investing in their own education and skills training, complementing formal education with practical experience gained from running enterprises.

Table 3:

Contribution of Enterprise Growth on The Education Status of Entrepreneurs

Education status	**Business growth**		**Total**
	Stagnated or declined	Grew	
Education not improved	35 (67.31)	30 (15.15)	65 (26)
Education status improved	17 (32.69)	168 (84.85)	185 (74)
Total	52 (100)	198 (100)	250 (100)
Pearson chi2 (1) = 58.2284 Pr = 0.000			

Source: Authors' analysis based on survey data, 2022
Figures in parentheses are percentage values

Survey results show that 45.5% of respondents expanded their businesses to send their children to school, while 24.8% utilized business flexibility for personal learning. Additionally, 23.6% accessed short-term training programs, and 6.1% benefited from a combination of educational opportunities, highlighting the multifaceted ways in which business growth positively impacts learning journeys. This finding aligns with Ermias (2016), who observed improved education for managers and their families through engagement in MSEs, with 86.1% reporting educational improvement using earned income.

Association between business capital growth and improvement in health status improvement: - There is a significant correlation between business growth and individuals' health status, with 96.5% of households experiencing business growth exhibiting a high level of health condition, compared to only 40.4% for households lacking business growth. This highlights the potential benefits of entrepreneurship for personal and familial health. Entrepreneurs attribute their improved health status to the income generated from business growth, which enables them to support their family's health needs, including hygiene, a balanced diet, and regular health checkups. This financial stability reduces health costs during illness, contributing to savings and sustainable business growth.

Table 4:
Contribution of Enterprise Growth on Food Status of Entrepreneurs

Health condition	Business growth		Total
	Stagnated or declined	Grew	
Health status not improved	31 (59.62)	7 (3.54)	38 (15.2)
Health condition improved	21 (40.38)	191 (96.46)	212 (84.8)
Total	52 (100)	198 (100)	250 (100)
Pearson chi2 (1) = 100.4860 Pr = 0.000			

Source: Authors' analysis based on survey data, 2022
Figures in parentheses are percentage values

It was discussed during the FGD session that entrepreneurs emphasized that business growth meant they earned more income to support the health condition of their family. They earn money for their personal and family hygiene, supply a balanced diet for the family, and regularly visit health institutions for health checkups and during times of illness. Survey results show that 21% of respondents used income from their businesses to access a balanced diet, preventing malnutrition-related diseases. Another 20% invested in personal and familial hygiene, reducing the risk of diseases associated with poor sanitation. Additionally, 10.5% utilized business income for medical care when needed, highlighting the link between economic well-being and healthcare accessibility. Moreover, 48.5% of respondents experienced holistic health improvement through business growth, emphasizing the comprehensive benefits of flourishing enterprises on overall well-being. This finding aligns with Ermias (2016), where 87% of managers reported household health improvement after engaging in MSEs.

Association between business capital growth and improvement in decision-making: - The chi-square test results demonstrate a significant association between business growth and decision-making power. 87.9% of households experiencing business growth possess high decision-making power, whereas only 40.4% of households lacking business growth exhibit the same level of

decision-making power. This finding underscores the strong correlation between business growth and the ability to influence and make decisions within households and communities.

Successful businesses empower owners/managers economically, enabling them to participate actively in community affairs. With resources to contribute to community projects, initiatives, and organizations, WMSE owners/managers become respected members of the community, often finding themselves in positions of influence where their opinions and decisions carry weight in community affairs. Survey data illustrates this correlation, with 87.88% of respondents with business growth having high decision-making power compared to 40.28% without business growth. This suggests that economic empowerment from WMSEs' growth enhances individuals' and households' ability to determine their economic and social outcomes, fostering financial independence and the allocation of resources according to their priorities and aspirations. While these findings provide valuable insights into the association between business growth and decision-making power, further research is needed to delve into the underlying mechanisms and factors contributing to this association, as well as to understand any potential causal relationships between business growth and decision-making power within households and communities at large.

Table 5:

Contribution of Enterprise Growth on The Decision-Making of Entrepreneurs

Decision making	**Business Growth**		**Total**
	Stagnated or declined	Grew	
No	31 (59.62)	24 (12.12)	55 (22)
Yes	21 (40.28)	174 (87.88)	195 (78)
Total	52 (100)	198 (100)	250 (100)
Pearson chi2 (1) = 54.1367		Pr = 0.000	

Source: Source: Authors' analysis based on survey data, 2022
Figures in parentheses are percentage values

Econometric analysis of the impact of business growth on livelihood improvement: - The structural equation model (SEM) analysis, rooted in a dataset comprising 225 observations and employing maximum likelihood estimation, unravels the intricate relationships crucial for economic growth and subsequent livelihood outcomes. This empirical exploration delves into the complex dynamics of sustainable development, providing a nuanced understanding of specific factors influencing these processes. The robustness of the SEM model is evident in the log-likelihood score of -1052.0968 and a likelihood ratio test against the saturated model ($chi2(23) = 78.80$, $p < 0.001$), affirming its capability to capture the intricate relationships within the specified framework. In this context, three variables have emerged as significant contributors to economic growth, necessitating a detailed examination of their roles in both the first and second stages of the SEM.

In the first stage, the variables determining the growth of WMSE capital are considered. From the variables included in the model, working place type, market linkage, and access to credit stand out to be positive and significant in determining the outcome variable of interest (business capital growth), which are discussed as follows. As per the results of the SEM, workplace type assumes a central role as a critical determinant of business capital growth, underlined by a substantial coefficient of 0.2234 ($p < 0.001$). This variable emphasizes the profound influence of working environments on the overall economic development trajectory of wood-based small-scale and micro businesses. The positive relationship, quantified by the figure of 0.2234, highlights the catalytic role played by businesses run by owners having their work premises, showcasing their integral contribution to enhanced productivity, innovation, and business expansion than those operating in rental working premises. The imperative of considering workplace types becomes evident, urging policymakers and stakeholders to devise strategies optimizing these environments for sustainable growth of businesses in the study area. This finding corroborates the findings of a study by Getachew, Aradom, and Hossein (2020) and Muhaba *et al*., (2022).

Table 5:

The Impact of Business Growth on The Improvement of Livelihood Outcomes

	(1)	(2)	(3)	(4)	(5)
VARIABLES	Determinants of Growth	Effect of growth on education	Effect of growth on health	Effect of growth on food	Effect of growth on decision-making
Market information (1=yes)	0.0401				
	(0.0524)				
Managers experience	0.0522				
	(0.0415)				
Credit access (1=yes)	**0.0646***				
	(0.0368)				
Working place type (1= private)	**0.223*****				
	(0.0425)				
Distance from road	-0.0601				
	(0.0377)				
Market linkage	**0.309*****				
	(0.0427)				
Formality of the enterprise (1= registered)	-0.0274				
	(0.0550)				
Growth (1= grew)		1	0.985***	0.837***	0.981***
		(0)	(0.0746)	(0.0675)	(0.0895)
Constant		0.326***	0.440***	0.536***	0.326***
		(0.0873)	(0.0805)	(0.0686)	(0.0866)
Observations	250	250	250	250	250

Source: Authors' estimation based on survey data, 2022

Similarly, market linkage emerges as a cornerstone of the growth of small and micro enterprises, boasting a robust and highly significant positive impact with a coefficient of 0.3086 ($p < 0.001$). The figure of 0.3086 quantifies the strength of the relationship between businesses having market linkages and their capital growth, emphasizing the strategic role that market connectivity and integration play in steering business development. Enterprises with strong linkages to broader markets, suppliers, and distribution networks are positioned for substantial growth. This finding

is a clear indication that policymakers and business leaders can leverage them to prioritize and invest in strategies enhancing market connectivity, and fostering collaboration and engagement with wider economic networks. This finding is in line with the findings of a study by Muhaba *et al*., (2022).

The third significant variable affecting business capital growth is access to credit. As evident in Table 6, while statistical significance hovers marginally below conventional thresholds in the first stage (coefficient = 0.0646, p = 0.079), access to credit reveals a positive relationship with business capital growth at a 10% level of significance. The figure of 0.0646 suggests that businesses with improved access to credit may experience a meaningful positive influence on their growth trajectories. This finding is in tandem with the findings of Hailai et al., (2019) and Tadesse and Henok (2023). Despite modest statistical significance, this finding shed light on the potential importance of financial accessibility as a catalyst for fostering business growth. This implies that policymakers and financial institutions may find merit in exploring ways to enhance credit access for businesses, recognizing its role as a conduit for investment, expansion, and business resilience.

Transitioning to the second stage of the SEM, the effect of business growth on livelihood outcomes is explored. According to the findings, business growth significantly and positively affects improvements in health, education, food, and decision-making outcomes. Education (education) unveils a direct and significant positive relationship with business growth, evidenced by a coefficient of 1.000. The constant term underscores that growth substantially contributes to advancements in education. Economic development not only fosters financial prosperity but also expands educational opportunities, potentially leading to improved skills and knowledge within the population. This linkage justifies prioritizing education as a vital channel through which growth positively impacts livelihoods. Policymakers can leverage these insights to develop education-focused strategies as integral components of broader development initiatives. This finding is in line with the findings of a study by Hailai et al (2019).

In addition, in the second stage of the structural equation modeling, as shown in Table 6, health improvement (Healthnew) substantiates a strong positive relationship with business capital growth, implying that economic growth is paralleled by a positive impact on health outcomes.

Owners running WSMEs experiencing capital growth are likely to have better access to healthcare resources, resulting in enhanced overall well-being. This linkage establishes a robust justification for investing in health as an integral component of holistic development strategies. The findings pinpoint directions such that policymakers and healthcare professionals can use these findings to design interventions that capitalize on the positive feedback loop between economic growth and health improvements. This finding corroborates the findings of a study by Hailai et al (2019).

Another outcome variable examined is improvement in access to food (Foodnew) features a noteworthy positive relationship with business growth in the second stage, suggesting that capital growth of small and micro businesses significantly contributes to access to better food. Economic prosperity translates into increased access to nutritious food, diverse dietary food intake, and overall advancements in food security. This underscores the pivotal role of growth in fostering improvements in food-related aspects, portraying it as both an outcome and a facilitator of sustainable development. Findings indicate that policymakers may find these insights invaluable in crafting policies that address not only economic growth but also the vital nexus between economic prosperity and food security. Respondents noted various benefits, such as financial stability, sustainable access to food, maintaining balanced diets, and ensuring three meals a day. A substantial portion of entrepreneurs expressed that their overall feeding conditions significantly improved as their businesses flourished. These findings align with past research, such as the study by Ermias (2016), which also emphasized the positive contribution of income earned from working in MSEs to enhance the food status of households. Establishing a connection between business growth and improved food security status sheds light on the broader impact of MSE development on household well-being and underscores the significance of fostering entrepreneurial growth for socio-economic advancement. In this regard, our findings resonate with those of Getachew, Aradom, and Hossein (2020) and Hailai et al (2019), which showed the positive contribution of micro and small enterprises to the livelihoods of people such as employment, income, and access to nutritious food.

The other variable positively affected by business capital growth is decision-making. As shown in the second stage, growth significantly contributes to enhanced decision-making (social news),

emphasizing the positive role of business capital growth in shaping improved decision-making processes. Business capital growth enhances the capacity for informed decision-making within the household and communities, fostering social cohesion and participatory governance. This justification highlights the transformative impact of growth on household ties and social fabric, positioning it as a key driver of positive decision-making dynamics. Policymakers can utilize these findings to prioritize initiatives that strengthen decision-making processes, recognizing their intrinsic connection to overall societal well-being.

Conclusions and Policy Suggestions

The research findings underscore the profound significance of wood-based micro and small enterprises (WMSEs) in Ethiopia, shedding light on their pivotal role in enhancing household well-being across various dimensions. The study illuminates a strong correlation between the growth of these enterprises and positive outcomes in education, health, and decision-making autonomy within households and communities. Entrepreneurial success emerges as a catalyst for societal advancement, with economic empowerment from business growth leading to increased participation in community affairs and overall societal well-being. Therefore, policy interventions should prioritize fostering entrepreneurship to leverage its positive impact on education, health, and decision-making. Institutional efforts should integrate entrepreneurship education to equip individuals with essential skills for business success and societal contribution. Health initiatives should capitalize on the economic benefits of business growth to improve healthcare access and nutrition, thereby enhancing overall community well-being.

The study's implications emphasize the critical importance of creating an enabling environment that supports the growth of WMSEs, particularly in addressing challenges such as low income, poverty, and high unemployment rates. These enterprises serve as instrumental contributors to livelihood improvements, impacting food security, health conditions, educational opportunities, social status, and decision-making within households. Furthermore, the correlation between business growth and food security underscores the necessity of policies that support thriving enterprises, directly impacting entrepreneurs' ability to ensure a reliable food supply. Similarly, initiatives promoting entrepreneurship education are crucial for facilitating access to training and educational resources, thereby enhancing educational opportunities for entrepreneurs.

The identified correlation between business growth and health status underscores the broader impact of successful enterprises on personal and family well-being. Policymakers should prioritize healthcare access initiatives, recognizing that business growth contributes not only to financial well-being but also to improved health outcomes for entrepreneurs and their families. Moreover, policies promoting financial inclusion and autonomy for entrepreneurs, particularly women, can further enhance decision-making power within households. The study's comprehensive analysis, supported by empirical evidence, provides a solid foundation for informed decision-making by policymakers and stakeholders, enabling the formulation of targeted strategies to foster comprehensive societal well-being and sustainable development.

ACKNOWLEDGMENTS

The corresponding author would like to acknowledge the staff of the Department of Natural Resource Management, University of Gondar for their crucial support in giving valuable professional comments starting from the start of the study.

COMPETING INTERESTS

THE AUTHORS DECLARE THAT THEY HAVE NO COMPETING INTERESTS.

5. References

Abagissa, J. (2021). The assessment of micro and small enterprises performance and challenges in Addis Ababa, Ethiopia. *International Journal of Applied Economics, Finance and Accounting*, 9(1), 8–21. https://doi.org/10.33094/8.2017.2021.91.8.18

Alemayehu, D., & Gecho, Y. (2016). Determinants of micro and small enterprises growth: the case of Durame Town, Kembata Tembaro Zone, Southern Nations and Nationalities and Peoples Region, Ethiopia, 2016. *International Journal of Business and Economics Research*, 5(5), 161–175.

Bai, C., Quayson, M., & Sarkis, J. (2021). COVID-19 pandemic digitization lessons for sustainable development of micro-and small-enterprises. *Sustainable Production and Consumption, 27*, 1989–2001

Bekele M. (2017). Micro and small enterprises as an anti-poverty and Employment Generation Strategy in Bahir Dar City, north-western Ethiopia. *Poverty & Public Policy*, 9(3), 258–275.

Ermias T. (2016). The Role of Micro and Small Enterprises on Local Economic Development: The Case of Nifas Silk Lafto Sub-city. Unpublished MSc thesis St. Mary's University Institute of Agriculture and Development studies.

FAO. (2018). Leveraging small and medium enterprises to improve nutrition. Author

FDRE. (2016). Federal urban job creation and food security agency establishment council of ministers' regulation. Federal Democratic Republic of Ethiopia.

Feleke, D. (2015). Factors affect the growth of micro and small enterprises in Hossana Town, SNNPR. Jimma: Jimma University

FMSEDA. (2011). Micro and small enterprise development strategy, provision framework, and methods of implementation.

Getachew Ayalu, Aradom Gebrekidan Abbay, and Hossein Azadi (2020). The role of micro- and small-scale enterprises in enhancing sustainable community livelihood: Tigray, Ethiopia. *Environment, Development and Sustainability* (2023) 25:7561–7584 https://doi.org/10.1007/s10668-022-02359-7 1 3

Hailai Abera Weldeslassie, Claire Vermaack, Kibrom K/kristos, Luback Minwuyelet, Mahlet Tsegay, Negasi Hagos Tekola & Yemane Gidey (2019). Contributions of Micro, Small and Medium Enterprises (MSMEs) to Income Generation, Employment and GDP: Case Study Ethiopia. *Journal of Sustainable Development*; Vol. 12, No. 3; ISSN 1913-9063 E-ISSN 1913-9071 Published by Canadian Center of Science and Education 46

ILO. (2015). Small and medium-sized enterprises and decent and productive employment creation (Report IV, Issue).

Kansheba, J. M., & Wald, A. E. (2021). Entrepreneurial ecosystems quality and productive entrepreneurship: entrepreneurial attitude as a mediator in early-stage and high-growth activities. *Journal of Small Business and Enterprise Development*. DOI 10.1108/JSBED-05-2021-0209

Li, Zhicheng & Diao, Zhaofeng. (2003). On Business Growth Force and Its Generating Mechanism. Journal of Wuhan University of Technology (Information & Management Engineering). No.25(5), P. 86-89.

Mahmud, M. A., Beyene, M. Y., & Mohammded, E. (2020). The role of micro and small enterprises in employment creation and income generation in Samara-logia town, Afar Regional State. Management, 10(1), 8–22. https://doi.org/10.5923/j.mm.20201001.03

Mamo, W. B. (2020). The Effect of Government Incentives on the Performance of Micro and Small Enterprises (Mse's) in Eastern Ethiopia: Evidence from Harar, Dire Dawa City Administration and Haramaya Town. *Journal of Economics and Business, 3(3).* https://doi.org/10.31014/aior.1992.03.03.268

Meressa, H. A. (2020). Growth of micro and small-scale enterprises and its driving factors: Empirical evidence from entrepreneurs in emerging region of Ethiopia. *Journal of Innovation and Entrepreneurship*, 9(1). https://doi.org/10.1186/s13731-020-00121-9.

Muhaba Nuredin Ferejo, Hamed M.S. Ahmed, Jemal Redwan Muzeyin, Shemila Jemal Amde, Murad Thomran, Fikadu Mamuye (2022). Exploring Factors Affecting Growth of Micro and Small Enterprises: Evidence from Ethiopia. International Journal of Sustainable Development and Planning. Vol. 17, No. 5, August 2022, pp. 1523-1533 Journal homepage: http://iieta.org/journals/ijsdp

Muhammad Zada, Syed Jamal Shah,Cao Yukun,Tariq Rauf, Naveed Khan and Syed Asad Ali Shah (2019). Impact of Small-to-Medium Size Forest Enterprises on Rural Livelihood:

Evidence from Khyber-Pakhtunkhwa, Pakistan. *Sustainability*, *11*(10), 2989; https://doi.org/10.3390/su11102989

Muiruri, S. (2018). Small and medium enterprises (SMEs), the heart of Chinese economic development: What can African governments learn? *European Journal of Research and Reflection in Management Sciences*, 6(3), 27–40.

NBE. (2020). Annual Report 2019-2020.

OECD. (2017). Unlocking the potential of youth entrepreneurship in developing countries: From subsistence to performance, development Centre studies.

Olana, D. R. (2020). The effect of COVID-19 on SMEs and entrepreneurial resilience in Ethiopia. A Case of Nekemte Town

Runde, D. F., Savoy, C. M., & Staguhn, J. (2021). *Supporting Small and Medium Enterprises in Sub-Saharan Africa through Blended Finance*. CSIS Briefs.

Semegn, A. A., & Bishnoi, N. K. (2021). Analysis of the effect of microfinance on the performance of MSEs in Amhara National Regional State, Ethiopia. *Journal of Entrepreneurship*, 30(1), 153–178. https://doi.org/10.1177/0971355720974822

Seyoum, A., Aragie, M., & Tadesse, D. (2016). Growth of micro and small enterprises in Addis Ababa City Administration: a study on selected micro and small enterprises in Bole Sub City. *International Journal of Scientific and Research Publications, 6(1), 581–592.*

Sun, Xuemin. (2004). The Growth Essence and Ways of the Middle and Small Enterprises. Journal of Zhengzhou University (Philosophy and Social Science Edition), No. 34(4), P. 66-69.

Tadesse Wudu Abate & Henok Ezezew Sheferaw (2023). Micro, small and medium enterprises and their linkage with key actors in Ethiopia: developing entrepreneurial ecosystem mapping. Journal of Innovation and Entrepreneurship. volume 12, Article number: 71 (2023)

Tang, Wenxian & Li, Panfeng. (2005). Theory of Firm Growth Based on Three Dimensions. Soft Science, No.19(1), P.17-21.

Tarfasa, S., Ferede, T., Kebede, S., & Behailu, D. (2016). Determinants of growth of micro and small enterprises: empirical evidence from Ethiopia.

Xu, Xiaoming & Xu, Zhen. (2005). Probing into Firm's Growth Theory Based on Resources View. R&D Management, No. 17(2), P. 92-99.

Yang, Du. (1996). Enterprise Growth Theory. Beijing: China Renmin University Press.

Yavaş Özdemir, Demiralay Tülay, Capraz Kesan Y., Demiralay, Ilkay (2020). The Mediator Role of Business Dynamism in the Impact of Innovation Ability of Countries on Entrepreneurial Intentions. Journal of Business& Economic Policy Vol. 7, No. 4, December 2020 doi:10.30845/jbep. v7n4p6 45.

Zhang, Lin'ge. (1998). Theoretical Model of 3D Enterprise Growth Mode. Nankai Economic Studies, No. 5, P.45-49

Annexes

Table 1. Structural Equation Model Results

```
Structural equation model                       Number of obs     =        250
Estimation method  = ml
Log likelihood     = -1052.0968

 ( 1)  [educnew]growth = 1
```

	Coef.	OIM Std. Err.	z	P>|z|	[95% Conf.	Interval]
Structural						
growth <-						
marktinfo	.0401304	.052426	0.77	0.444	-.0626228	.1428835
managers_experience	.0522472	.0414761	1.26	0.208	-.0290445	.1335389
creditaccess	.0645776	.0367713	1.76	0.079	-.0074928	.1366481
wrkingplacetype	.2233843	.0425269	5.25	0.000	.1400332	.3067355
dstancefrmroad	-.0600986	.037722	-1.59	0.111	-.1340324	.0138352
marktlinkage	.3085646	.0427178	7.22	0.000	.2248392	.3922901
formalityenter	-.0274294	.054956	-0.50	0.618	-.1351412	.0802824
Measurement						
educnew <-						
growth	1	(constrained)				
_cons	.3256295	.0873121	3.73	0.000	.1545008	.4967581
healthnew <-						
growth	.984524	.0746198	13.19	0.000	.8382719	1.130776
_cons	.4399185	.0804586	5.47	0.000	.2822226	.5976144
foodnew <-						
growth	.837104	.0675111	12.40	0.000	.7047846	.9694234
_cons	.5358256	.0685981	7.81	0.000	.4013758	.6702754
socialnew <-						
growth	.9805631	.0894524	10.96	0.000	.8052397	1.155887
_cons	.325528	.0866139	3.76	0.000	.1557679	.4952882
var(e.educnew)	.0899069	.0094807			.0731196	.1105483
var(e.healthnew)	.0313947	.004801			.0232641	.0423669
var(e.foodnew)	.0341566	.0042099			.0268264	.0434898
var(e.socialnew)	.0976458	.0101927			.0795796	.1198134
var(e.growth)	.0547368	.0087311			.0400409	.0748263

```
LR test of model vs. saturated: chi2(23)  =     78.80, Prob > chi2 = 0.0000
```

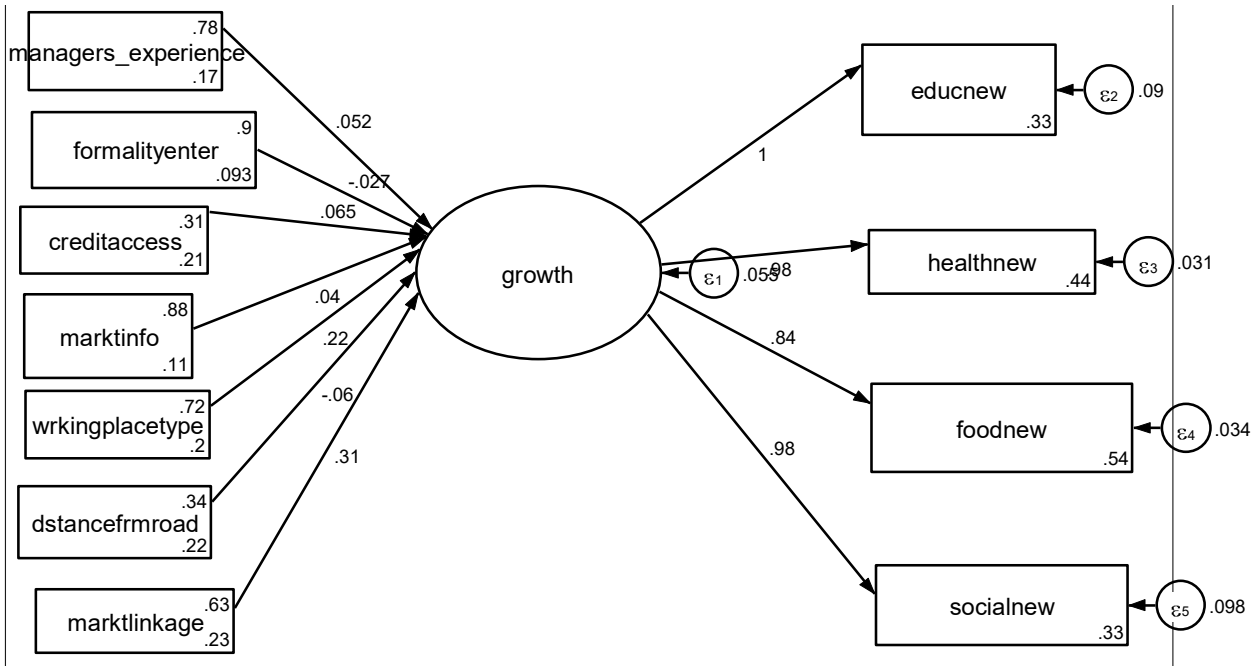

Figure 1. Structure of mediation analysis model