Entrepreneurial Orientation as Growth Predictor of Small Enterprises
Evidence from Tigray Regional State of Ethiopia

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Abstract
The primary objective of this study was to examine how and to what extent entrepreneurial orientation affect growth of small enterprises, following the resource based view on determinants of growth as theoretical frameworks. The research was conducted in the text of LDCs by taking one regional state of Ethiopia (i.e. Tigray). The study intends to address two basic questions: (1) To what extent are EO dimensions of proactiveness, innovativeness, and risks taking get demonstrated by small enterprise owners? (2) How and to what extent does entrepreneurial orientation influence growth of small enterprises? In order to address these questions, a mixed explanatory cross-sectional research design was crafted that is inclined towards quantitative approach. Data were collected from both primary and secondary sources through a standardized questionnaire, key informant interview (KII), direct observation, and documentary analysis. A combination of purposive, systematic, and simple random sampling techniques was employed to choose appropriate samples. Accordingly, primary data were collected from 333small enterprises operating in five urban towns of Tigray. These were selected out of 2765 small firms operating in the target areas. In this research descriptive statistics, statistical difference tests, and regression analysis were applied for the purpose of data analysis, with the help of Stata version 12 software. It was found that majority of the SEs (54%) in the study area demonstrate moderate entrepreneurial orientation and entrepreneurial orientationhas highly significant positive influence on growth of small enterprises ($p < 0.01$). This suggests that an entrepreneurial orientation is one of the key determinants to attain above average returns and sustained competitive advantage and growth by taking risks to introduce new and innovative products/services and proactively responding to changing market competition.Moreover, the study confirms the uni-dimensionality of entrepreneurial orientation that suggests that the three components of entrepreneurial orientation (innovativeness, proactiveness, and risk taking) are of equally important to explain the growth of small enterprises. Hence, the researcher suggests the use of summed index of the three dimensions in future studies instead of mean score of individual dimension.
Key words: Entrepreneurial orientation, Growth, Small Enterprises, Tigray-Ethiopia

1. Introduction
A hard look into the existing body of knowledge in small enterprises (SEs) sector and the day-to-day observation of the realities on the ground reveal that SEs do have a number of benefits.The small enterprises sector has been considered by academicians and policy makers as an engine of economic growth, poverty reduction, and social development due to its effect on employment and income generation, import substitution, its role as a springboard to entrepreneurship and industrialization, input distribution for large industries and distribution of their products through linkage and sub-contracting, and income distributions among different sections of the society (Mead & Liedhom, 1998; Liedholm, 2002; Bekele and Worku, 2008; Kabongo and Okpara, 2009).For instance, the sector takes 48% of the labour force in North Africa, 51% in Latin America, 65% in Asia, 72% in Sub-Saharan African Countries (ILO, 2002). According to Goldmark and Nicher, (2009), while over 96% of businesses are small enterprises in USA, approximately 97% of firms in Mexico and Thailand are MSEs.

According to the Ethiopian Central Statistical Authority (2004), almost 50% of all new jobs created in Ethiopia are attributable to MSE sector. According to Aregash (2005) cited in Bekele and Worku (2008), 98% of business firms in Ethiopia are MSEs , out of which SEs account for 65% of all businesses. In Ethiopia, MSE sector is the second largest employment generating next to agriculture. Report ofFederal Micro and Small Enterprises Development Agency FeMSEDA released in April 2013 indicated that the MSE sector created 1.5 million new job opportunities and about 4 billion birr loan was provided by microfinance institutions during the years 2006-2010.

Recognizing the significance of this sector as a key factor for rapid economic development, the Government of

Ethiopia had issued Micro and Small Enterprises Strategy (FDRE, MoTI, 1997). Besides, the Growth and Transformation Plan (GTP) of Ethiopia has envisaged the promotion of micro andsmall enterprises as an important tool of poverty reduction (FDRE, MoFED, 2010).

Countries define micro and small enterprises using different criteria. In Ethiopia, the MSE sector is categorized into industrial and service sub-sectors. The former subsector comprises of manufacturing, mining, and construction subsectors while the service sector includes the retail trade, transport, hotel and tourism, information technology and repairs(FDRE, MoFED. 2010). In the industrial sector,a business enterprise which employs 6-30 five labor force, including business owner and family labor, and/or the monetary value of the enterprise's total asset ranging from Birr 100001-1500000[1] is considered as small enterprise, and any enterprise with less than 6 employees and/or up to Birr 100,000 capital investment in total assets is considered as micro enterprise. In the service sector a business enterprise is considered as a small enterprise if it employs 6-30 five labor force, including business owner and family labor, and/or if the monetary value of the enterprise's total asset ranges Birr 50001-500000. A service enterprise below 6 labor force and/or capital up to Birr 50,000 is classified as a micro enterprise.

Because of the sector's role in economic growth and poverty reduction growth of small enterprises has attracted considerable attention of researchers in recent years. Rationality of this research is justified based on the following facts. First, despite the increase in research volume, recent review of the literature on growth of small enterprises suggested that little is known about the phenomenon, that is there is no consensus among result of different researchers (Wiklund *et.al*, 2009) because of different reason, such as-existence of diverse theories on grwoth determinants, difference in metric of grwoth used and specific formaul used to calculate grwoth.

Second, the association of EO and other explanatory variables with growth has been widely discussed by different researchers (e.g. Covin and Slevin, 1991& 1989; Lumpkin and Dess, 1996 &2001; Wiklund and Shepherd, 2005 &2003). But the vast majority of these researches came from developed countries of America and Europe and Asian developing counties.Consequently,their research findings do not permit generalization on the importance of EO and their contribution to growth in less developed countries like Ethiopia. For example, Limpkin and Dess (1996) reported that the EO-growth relationship is context specific. That is, the degree of relationship between EO and growth is influenced by external and internal factors. Therefore, this research tried to examinethe relationship between EO and growth in light ofthe Ethiopian context, more specifically from the context of Tigray Regional State.

Third, findings of the earlier researches in Ethiopia are not only inconsistent and contradictory in identifying the critical challenges of small enterprises, but also none of them explained how and to what extent growth was associated with or explained by the stated business constraints. But this research applied statistical models to examine to what extent the explanatory variables influence growth of the small enterprises sector.

Fourth, unlike the previous studies conducted in Ethiopia and other parts of the world, this researcher integrated entrepreneurial orientation as explanatory variables and many control variables,which were either not considered or might have been tested separately in earlier studies,into one equation so as to get complete picture on the determinants of growth of small enterprises.

Therefore,this study applied statistical models to examine how and to what extent growth is affected by entrepreneurial orientation, by controlling firm specific tangible and intangible resources, motivation of owners, and environmental variables, by raising the following major questions.

1. To what extent are EO dimensions of proactiveness, innovativeness, and risks taking get demonstrated by small enterprise owners?
2. How and to what extent does entrepreneurial orientation influence growth of small enterprises?

2. Brief theoretical background

2.1. Conceptualization of Entrepreneurial Orientation (EO)

Unless the management of a firm sets suitable strategies and can exploit the opportunities, the firmwill not grow regardless of the amount and type of resources under its control (Wiklund & Shephered, 2003). Similarly, Barney (1991) has pointed outthat in addition to valuable, rare, inimitable, and non-substitutable resources, a firm must also have an appropriate organizational strategy in order to take advantage of these resources.

According to Miller (1983) and Lumpkin and Dess (1996) and Wiklund and Shephared, 2003) an enterprise is said to be entrepreneurial firm if it is engaged in product and market innovation, committed to allocate resources in order to undertake something risky business enterprise (whose benefits are uncertain), and first to come up with proactive innovations and products/services, exploit market opportunities ahead of competitors which enables it to gain superior growth. Thus, from what have been discussed so far, this study has conceptualized EO as the ability of a firm's leader/owner to demonstrate innovativeness, propensity to take risk and proactiveness to maximize opportunitieswhile managing the firm.

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[1] Birr is the official currency of Ethiopia whose current exchange rate (ask price) is about Birr 19.25 per dollar.

2.2. Dimensions of Entrepreneurial Orientation

According to Miller (1983) and Lumpkin & Dess (1996) entrepreneurial orientation refers to top management's strategy in relation to innovativeness, proactiveness, and risk-taking. Various researchers (Covin & Slevin, 1989, Zahra, 1993; Zahra & Covin, 1995; Lumpkin &Dess, 1996; Wiklund, 1999; Wiklund &Shphered , 2005) proved the reliability and validity of Miller's dimensions of entrepreneurial orientation and used these three elements to measure degree of entrepreneurial posture.

Innovativeness reflects a firm's tendency to engage in and support new ideas, novelty, experimentation, and creative process that may result in new products, services, or technological processes (Lumpkin & Dess, 1996, Wiklund, 1999).

Risk Taking is defined in terms of individual's/organization's readiness to make large and risky resource commitments (Covin & Slevin, 1991; Lumpkin, 1996, Lumpkin, 2001); tendency to take bold action such as entering into unknown new markets or projects with possibilities of failure or uncertain outcomes(Lumpkin & Dess, 2001; Lan & Wu, 2008).

Proactivness is concerned with a forward looking behavior of an individual or organization. Itis reflected in terms of current actions of a firm (such as introducing new products or services ahead of competitors) in order to be a leader, rather than a follower of its competitors, in exploiting future opportunities/market demand (Miller, 19983; Covin & Slevin, 1989; Lumplin & Dess, 1996; Limpkin & Dess , 2001).

2.3. Relationship between Dimension of Entrepreneurial Orientation and Growth of Small Enterprises

Rapidly changing technology demands a firm to be innovative and develop new ideas, products, and process and be willing to take risk to cope with the rapid change. Thus, enterprises operating in such dynamic environment should constantly seek new opportunities and gain maximum benefits from these opportunities ahead of competitions.Innovative enterprises frequently watch market changes and respond quickly, engage in research and development (R&D) activities, introduce new product/services to the market and develop positive market reputation and ensure customer loyalty ahead of competitors. Proactivness is related with forward looking perspective of small enterprise owners/mangers. These enable enterprises to generate extraordinary economic performance and firm growth. Besides, proactveness, enables firms to be the leader to benefit from emerging opportunities- "create first-mover advantage, target premium market segments, charge high prices, and ''skim'' the market ahead of competitors" as the result of which it can earn more than average return and growth (Zahra & Covin, 1995; Lumpkin & Dess, 1996). The more owners/mangers of small enterprises adopt an EO, the more they achieve competitive advantage and enhance performance/growth. (Miller, 1983; Covin and Slevin, 1989; Wiklund and Shephared, 2005; Delamar & Wiklund 2008).

3. Research Methodology

3.1. Research design, sample and data collection

This research can be described as mixed explanatory cross-sectional research because both qualitative and quantitative data were employed during data collection and analysis processes. A combination of purposive, multi-stage, stratified, systematic, and simple random sampling techniques were applied to collect cross-sectional primary data, using structured questionnaire from the 333 small enterprises out of the 2765 total small enterprises (population) operating in five urban towns.

The researcher made decisions to use the following formula with finite population correction (Daniel, 1999) for calculating the required sample size in the study[1]. The final sample size, after a 5% increase to account for any lost questionnaires and uncooperative subjects that may happen during data collection, was 354 small enterprises (computed as 337 *1.05= 354). Out of the 354 distributed questionnaires the researcher proved that 333 (94.07%) of them were found to be complete and usablefor data analysis. However, 21 questionnaires (5.93%) were rejected because they missed some important information.

3.2.Hypotheses of the study

Strong EO could help enterprises discover more market opportunities, attain higher prices, and exceed competitors. Several researchers (Fairoz *et.al*., 2010; Ylitalo, 2010; Delamar & Wiklund 2008;   Jao & Susana, 2007; Wiklund & Shepherd, 2005; Wiklund and Shephered, 2003; Lumpkin & Dess, 2001; Wiklund, 1999; Limpkin & Dess 1996; Zahra & Covin, 1995; Zahara, 199; Covin & Slevin, 1989) found a significant and positive relationship between EO with growth (performance) of small firms. That is, firm with high entrepreneurial orientation show higher growth rate than those with low entrepreneurial orientation.

Other studies, on the other hand, reported lower association between entrepreneurial orientation and firm growth

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[1] $n = \dfrac{N*Z\,2*(p)*(1-p)}{d\,2*(N-1)+Z\,2*(p)*(1-p)}$; n = Sample size with finite population correction, N = Population size= Z statistic for a level of confidence, P = Expected proportion, expressed as decimal, and d = Margin of error, expressed as decimal.

(Lumpkin and Dess, 2001; Covin, Slevin & Schultz, 1994 cited in Wu 2009). Samrt and Conant (1994, cited in Wiklund and Shephered, 2005) were unable to find any significant relationship between EO and performance. Frank *et al.* (2010) found a statistically insignificant negative relationship between EO and business performance. The research of Andersson (2003) cited in Anderson and Tell (2009) has shown that motivation is not enough because well-motivated managers do not always succeed with their growth strategies.

The writer of this paper argues that entrepreneurial orientation enables small enterprises to generate higher economic performance and growth. Thus, the following hypothesis is developed:

> *H1: Entrepreneurial orientation has universal significant positive effect on growth of small enterprises.*

3.3. Variables of the study and their measures
(i)Dependent and independent Variables

Different writers used different types of growth measure and came out with different results and because of which comparison of findings was found to be very difficult (Lumpkin and Dess, 1996). There is no universally recognized superior growth indicator. Dependent variable of this study was defined as a logarithm of change in number of employees at the time of establishment and time of survey.Use of employment size as a measure of growth is justified because: (i) it is easily accessible data that can be easily remembered by small enterprises (USAID, 2002, McPherson, 1996). Since many ofthe owners of small enterprises do not keep records, they would be unable to remember and accurately report their firm's historical sales level; (ii) unlike sales, employment is not sensitive to change in inflation and exchange rate changes (USAID, 2002; Wiklund and Shephered, 2005,); (iii) employment size is preferred measure when the interest of policy makers is fostering employment growth (USAID, 2002; Davidson *et.al*, 2005); (iv)Pensrose (1959; in Delmar *et.al*, 2003) suggests employment as a measure of growth should be applied for resource and knowledge-based view of the firm; (v) studies found that growth in sales and growth in the number of workers are highly correlated, and (vi)its reliability and validity was proved by prior researchers (Mead 1994; McPerson, 1996; Mead and Liedlhom, 1998; Liedholm and Mead, 1999; DurimHxha, 2008; Chirwa, 2008; Beyene, 2010); and less developed countries like Ethiopia use micro and small enterprise as a source of employment opportunity and income.

Many cross-sectional studies have logrithmized the dependent variable in order to correct a skewed distribution, and thereby fulfilling the assumption of the normal distribution of residuals. Though normality is not an important assumption in estimating the most efficient unbiased coefficient, skiwness generates unnecessary outliers and compromises the interpretation of the least square fit, because fit is dependent on the distribution around the mean, and the mean is not an appropriate measure for a skewed distribution (Delamr, 1997). Different researchers (Delmar (1997, Evans, 1987; McPerson, 1996; Liedholm and Mead, 1999; Mulu, 2009) argues, the logarithm of the dependent variable is often an option for obtaining both a higher fit and a better use of the data.. Accordingly, the growth rate used in this study was measured as the logarithmic change in employment between the date of establishment and the date/time of survey. The commonly logarithmized formulas used to measure growth are presented in the following sections.

$$\text{Growth} = \frac{\ln\left(EMP_{t_1}\right) - \ln\left(EMP_{t_0}\right)}{\text{ageofentrprise}}$$

whereEMP_{t_1} = Number of employees at the time of survey

EMP_{t_0} = Number of employees at start-up (initial number of employees

$\ln$ = Natural logarithm

The explanatory variables comprises of entrepreneurial orientation with three dimensions of innovativeness, proactiveness, and risk taking. Entrepreneurial resources, mainly human capital of owners; organizational resources such as financial position and credit access, location of the enterprise, age and size of the enterprise, such firms specific and environmental variables as amount of initial investment, motivation of owners, sector in which an enterprise operates, gender and age of owners, marketing related problems, cost and accessibility of infrastructure, government policies and bureaucracy, business development services were controlled in the regression model.

(ii)Measures of Dimensions of Entrepreneurial Orientation

Miller (1983) suggested a firm's degree of entrepreneurship can be measured in terms of three dimensions: firms' innovativeness, propensity to take risk and their proactiveness to maximize opportunities. He also developed nine item entrepreneurial orientation scales to empirically compute these dimensions. Subsequently many researchers (e.g. Covin & Slevin, 1989; Zahra & Cvin, 1995; Lumpkin and Dess, 1996; Lumpkin & Dess, 2001; Wicklund & Shepherd, 2005; Joao & Susana, 2007) proved that these scales are valid and reliable measures of entrepreneurial orientation of a firm.

Thus, the researcher preferred to use the original 9-item scale of EO. Though Lumpkin and Dess (1996) recommended including competitive aggressiveness and autonomy in addition to the nine item-three dimension of EO, this researcher decided to use only innovativeness, proactiveness, and risk taking as measures of EO. This is because not only their validity and reliability have been proved by previous researchers as discussed in

the above paragraph, but also Faoroz et al (2010) said that proactivness better describes the entrepreneurship posture of a firm than competitive aggressiveness. Besides they reported that some measurement statements of competitive aggressiveness are compatible with praoctivness dimension. Besides, autonomy is not considered because it has been proved that it cannot be defined precisely and is difficult to put appropriate measures in EO context.

(iii) Scales used to capture EO

The three dimensions of EO were further scaled into nine items: three items were used to assess small enterprise managers'/owners' tendency toward innovation; three items assessed their degree of risk-taking, and other three items used to assess proactivness. In this measure, respondents were asked to point out the statement which most clearly matches the management style of the enterprise on a 5-point Likert scale (1= complete disagreement with the statement and 5= complete agreement with the statement).

(iv)Universal versus independent effect of EO

The impact of the dimensions of EO on growth can be treated as a single construct comprising the related dimensions or separately/independently, assuming they vary independently. Majority of research work (e.g. Covin, Slevin & Schults, 2004; Lee, Lee & Pennings, 2001; Naman & Slevin, 1993; Walter, Auer, & Ritter, 2006; Wiklund & Shepherd, 2003 cited in Fairoz, 20100 treated EO as single construct because it was found that dimensions of EO usually show high correlation (Rauch et al, no date)

Therefore, as treating the dimensions of EO has been dominant approach in examining its effect on growth of small enterprises,the researchershad applied uni-dimensional measures of EO in order to test its effect on growth.

3.4. Methods data analysis

In this study, both descriptive and econometric analyses were used. The researchers applied descriptive statistics, statistical difference tests, and regression analysis for the purpose of data analysis.Different descriptive statistics like percentages, ratios, mean, tables, and standard deviationshave been used.What is more, a multiple linear regression was used to test whether or not the key independent variable (EO) affects growth of small enterprises.The multiple linear regression analysis was chosen because growth measure, the dependent variable, takes a continuous measure (see Appendix A for model Specification)

Following the advice of Sekeran (2005), Bryman (2008) and Churchill (1991) as cited in Cheng 2006, the researchers hadapplied Cronbach's Alpha coefficient to estimate internal reliability of multiple-item scales. The figure 0.70 is typically employed as a rule of thumb to denote an acceptable level of internal reliability, though many writers work with a slightly lower figure (Bryman pp151).

In order to ensure the internal consistency and reliability of variables captured by five point Likert scale, Cronbach's alpha coefficients were calculated. Accordingly, the alpha coefficients of entrepreneurial orientation (EO); motivational factors; government policies, strategies, and bureaucracy; access and cost of infrastructure; BDS; and marketing and market related factors were found to be 0.78,0.74, 0.76, 0.700, 0.75,and 0.64, respectively.These are beyond the acceptable range recommended by Bryan (2008), Sekeran (2005) and Nunnally (1978) as cited by Fairoz et al (2010).

4. Results and Discussion

4.1. Growth Category of Small enterprises

Small enterprises covered in this study are categorized into two: survival and growing. Survival types are enterprises with static or declining growth rate and growing SEs are those that registered greater than zero growth rate (in percentage). Accordingly, 187 small enterprises (56%) werefound to be survival type and 146 (44%) were growing type of enterprises. This indicates that the majority of the small enterprises (both male owned and female owned) have beenoperating for survival due to different internal and external challenges.

The average growth rate of the small enterprises was found to be 7.085percent with the minimum of -13.86 percent and 76.11 percent maximum growth rate. Average growth rate of those of growing typeof SEs was found to be16.37%, ranging from a minimum rate of 1.16% to maximum of 76.11% while the growth rate of survival type of SEs ranged from
-13.86% to zero with a mean growth rate of -0.165%.

4.2. Demographic profiles of the respondents

Out of the 333 respondents of the study, 259 SEs (77.78%) weremaleowned which registered higher growth rate than those female owned small enterprises (7.25 percent against 6.52 percent for female).

Concerning the marital status, 80 percent of the respondents are married owners, single and divorced/widowed owners comprise 16 percent and 4 percent, respectively. With regard to age of entrepreneurs, the majority of the small business (about 81%) are owned and operated by the working age group (21-50 years old). Out of the 333 respondents 112 (33.63%) fall under the age category of 21-35 years, and 159 owners (47.75%) are within the category of 36-50 years age.

4.3. Sectoral Engagement of Small Enterprises and Growth

With regard to sectoral distribution, 65 percent of the small enterprises have been engaged in trading

(merchandising) business sector followed by manufacturing (16%), service sector (16%) and construction sector (3%). The highest growth rate was registered in the manufacturing sector (14 percent) while the lowest growth wasin trading sector (4.02%).

4.4. Effect of Entrepreneurial Orientation on Growth

(i)Relationship between Entrepreneurial Orientation and Growth

As depicted in Table 1 below, small enterprises are classified as high, moderate and low in each of the dimensions and overall EO based on their mean values. High entrepreneurial firms are those whose score ranges from 4.00-5.00; moderate EO consists of firms with mean value falling between 3.00-3.99; and SEs which scored mean value of below 3 are classified as low entrepreneurial oriented enterprises. Thus, based on the number or proportion of SEs in high category of each dimension, we can infer that small enterprises' propensity to proactivness was found to be highest. Risk taking behavior in turn is higher than innovativeness. One hundred forty two SEs (43% of total) demonstrated higher level of proactiveness, 132 SEs (40%) are high risk takers and only 80 firms (24%) showed high degree of innovativeness. Based on the mean score of the overall EO, instead of mean score of individual dimensions, the majority of the small enterprises (54%) demonstrated moderate level of EO, and 23% fall under the high EO category (see No 4 of table 2).

Table 2: Growth by category of Dimensions of Entrepreneurial Orientation

Dimensions of EO		Growth rate					
		Obs	Perc	Mean	Std Dev.	Min	Max
1.Innovativeness	High	80	24.02%	11.29%	13.1923	-2.29%	51.34%
	Moder	147	44.14%	6.57%	11.6740	-13.86%	73.24%
	Low	106	31.83%	4.61%	11.5001	-7.84%	76.11%
2. Proactivness	High	142	42.64%	9.82%	14.0623	-0.58%	76.11%
	Moder	130	39.04%	5.32%	9.97567	-13.86%	46.21%
	Low	61	18.32%	4.49%	10.8296	-07.85%	53.65%
3. Risk taking	High	132	39.64%	9.02%	13.9368	-02.29%	76.11%
	Moder	148	44.44%	6.49%	11.0546	-13.8%	51.34%
	Low	53	15.92%	3.80%	9.88%	-7.84%	53.64%
4. Overall EO	High	82	24.62	11.99%	14.7168	0-2.29%	73.24%
	Moder	178	53.45%	6.57%	11.2922	-13.86%	76.11%
	Low	73	21.92%	2.82%	9.2575	-07.84%	53.64%

Many of the earlier studies (e.g. Wiklund and Shephared, 2005 Covin and Slevin, 1989, Miller, 1983) found that the more owners/mangers of small enterprises adopt an EO, the more they achieve competitive advantage and enhance firm growth. Consistent with the previous studies, results of the descriptive analysis of this study also show the same result. That is small enterprises that adopted higher degree of entrepreneurial orientation achieve highest growth compared to those with moderate and low degree of EO (see No 4 of Table 2). Enterprises in the high overall entrepreneurial category have grown at about 12% since start-up, which is almost four times more than the growth of those in the low category.

In addition to the descriptive analysis discussed above, consistent with findings of previous researches (Kroeger, 2007, Wiklund & Shephered, 2005; Covin and Slevin, 1989; Lumpkin and Dess, 1996; Miller, 1983) results of the econometric (OLS) analysis also show positive association between overall EO and growth of small enterprises with a beta of 3.59 significant at 1% level of significance. This may imply that a given unit increases in level of entrepreneurial orientation is associated with3.59% increase in growth. This means, the nine-item dimensions of EO (innovativeness, proactivness, risk taking) have joint statistically significant influence on growth of small enterprises. The more owners/mangers of small enterprises adopt an EO, the more they achieve sustained competitive advantage and enhance growth by taking risks to introduce new and innovative products/services and proactively respond to changing market competition.

5. Conclusions

Findings of this study indicate that small enterprises in the Regional State of Tigray, Ethiopia, demonstrate moderate degree of EO, with mean score of 3.46. Besides,consistent to the researchers' hypothesis and resource based view, it was found that there is significant positive correlation between EO and growth. This suggests that an entrepreneurial orientation is one of the key determinants to attain above average returns and sustained competitive advantage and growth. A low level of entrepreneurial orientation may be one of the main reasons why many of the small enterprises (56%) were found to be survival type. Therefore, the researcher reasonably concludes that EO represents a promising area for building a cumulative body of relevant knowledge about entrepreneurship. Therefore, government and other stakeholders need to provide business development services (BDS) such as training on entrepreneurship, benchmarking of best practices, rewarding innovative and proactive small enterprise owners. This can help the small enterprise to demonstrate higher degree of entrepreneurship

which in turn enhances their growth.

Moreover, the study confirms the uni-dimensionality of EO. The dimensions of EO bring favorable effect on growth when they are combined together and regressed as one single variable. Moreover, as his findings support the idea that EO dimensions (innovativeness, proactiveness, risk taking) are of equally important to explain the growth of small enterprises, the researcher suggest the use of summed index of the three dimensions in future studies instead of mean score of individual dimension.

6. Theoretical Contribution, Limitations and Suggestions for Future Research

(i) Theoretical contribution of this study

The theoretical contribution of this study is that it provides additional evidence to the existing body of knowledge in entrepreneurship research by investigating the importance of EO in growth of SEs. Findings of this study contribute to policy making in several ways. Policy makers and others stakeholders can support SEs in research and development activities, provide financial resources and training and consultancy services in order to enhance the degree of EO of SE owners/managers. in addition, owners and practitioners of SEs can take findings of this research as source of useful information to understand the importance of entrepreneurial oriented strategy so that they can take necessary actions to enhance their level of entrepreneurial orientation so as to sustain growth of their business.

(ii) Limitations and future research

All research studies have their own limitationsand this research is not an exception. For this reason, the researchers would like to pin-point some of the limitations of this research so that future researchers can consider in their research to fill the gab or correct the limitations.

In particular, though the universal effect approach has been dominant in the entrepreneurship research; some writers argue that both internal and external factors affect the relationship between EO and growth. For example, Covin and Slevin (1989) found the effect of EO on growth to be context specific.That is, EO had larger positive effect in hostile than benign environment. Besides, the EO-growth relationship can be moderated by internal environment. For instance, while access to financial resources provide the enterprises the resources slack necessary to engage in research and development activities, introduce new and innovative products/services by exploiting opportunities, resource constraints may limit firms to adopt entrepreneurial oriented strategy. Therefore, though findings of this study suggest that EO positively influence growth of small enterprises, relying only on this main effect may provide incomplete understanding about the EO-growth relationship. Greater understanding can be gained if the moderating role of internal and external factors on the EO-growth relationship is considered. Hence, the researcher proposes that future researchers need to consider both the main effect approach and two-way interaction (Effect of EO with moderators) effect in order to gain greater understanding about this issue. Special attention should be paid to differentiating between the effect of specific industry contexts and resources endowment.

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Appendixes

Appendix A: Model Specification of

The writer used the following multiple regression model for econometric analysis.

$$\text{emgrr}_i = \alpha + \beta_1\text{owedule}_i + \text{owedule}_i{}^2 + \beta_3\text{owexpc}_i + \beta_4\text{findiff}_i + \beta_5\text{locatn}_i + \beta_6\text{entage}_i$$
$$+ \beta_7\text{ entage2}_i + \beta_8\text{noemp0}_i + \beta_9\text{capam0}_i + \beta_{10}\text{avoaeo}_i + \beta_{11}\text{avomot}_i + \beta_{12}\text{sectr}_i$$
$$+ \beta_{13}\text{ageow}_i + \beta_{14}\text{ofpr}_i + \beta_{15}\text{avmkt}_i + \beta_{16}\text{genow}_i + \beta_{17}\text{avinfr}_i + \beta_{18}\text{avgovss}_i + \varepsilon_i$$

Where;

- emgrr = log of change in number of employees at two points in time (beginning and survey time) in percentage;

$$\text{emgrr} = \frac{\text{Lnnoem1} - \text{lnnoem0}}{\text{entage}}$$

- owedule= owners' years of schooling;
- owedule2= Square of owner's years of schooling (owedule)
- owexpc =category of owners' prior work experience (1= had prior work experience; 0= no work experience)
- findiff= financial condition of SEs (1= had financial constraints, 0= no financial constraint);
- loctn= locaiton of SEs (1= far from commercial district and else=0)
- entage= enterprise age in years
- $entage^2$= square of enterprises age in years (entage)
- noemp0= Initial number of employees (initial size in number of employees)
- capam0= initial amount of capital (size in initial capital)
- avoaeo= average of entrepreneurial orientation (EO)
- avomot= average motivation;
- sectr= sector of SE (1= Manufacturing, else=0)
- agow= age of owners in years
- ofpr= owners' financial preference = capital structure (debt equity ratio)
- avmkt = average of market related factors
- genow= gender of owners (1= male; else = 0)
- avinf= average of access and cost of infrastructure;
- avgovss= average government policies and strategies;
- β_i is vector of coefficients measuring the effect of each independent variable on the growth of small enterprises, keeping other factors constant.
- α is the constant or intercept in the model, and

Appendix B: Robust Regression results of the study

```
Linear regression                                    Number of obs =      333
F( 18,   314) =     4.34
                                                     Prob > F      =   0.0000
                                                     R-squared     =   0.2429
                                                     Root MSE      =   10.939
-------------------------------------------------------------------------------
             |               Robust
      emgrr |    Coef.   Std. Err.      t    P>|t|    [95% Conf. Interval]
-------------+-----------------------------------------------------------------
    owedule |  -1.296251    .52454    -2.47   0.014   -2.328308   -.2641935
   owedule2 |   .0765056  .0321569     2.38   0.018    .0132354    .1397759
     owexpc |    -1.0794   1.52008    -0.71   0.478   -4.070229    1.911429
    findiff |   2.716593   1.55588     1.75   0.082   -.3446744     5.77786
     locatn |  -2.725103  1.547053    -1.76   0.079   -5.769003    .3187963
     entage |  -.6912465  .2455174    -2.82   0.005   -1.174314   -.2081792
     entage2 |   .0115224  .0050466     2.28   0.023     .001593    .0214518
     noemp0 |  -.5869838  .2372151    -2.47   0.014   -1.053716   -.1202519
     capam0 |    8.95e-06   4.73e-06     1.89   0.059   -3.56e-07    .0000183
     avoaeo |    3.59233  1.065751     3.37   0.001    1.495413    5.689246
     avomot |   2.787862  1.146528     2.43   0.016    .5320128    5.043711
      sectr |   7.567183  1.767006     4.28   0.000    4.090514    11.04385
      ageow |  -.0618792  .0839659    -0.74   0.462   -.2270861    .1033277
       ofpr |   2.760157  1.457877     1.89   0.059   -.1082842    5.628599
      avmkt |   4.309996  1.913591     2.25   0.025    .5449142    8.075077
      genow |   1.147724  1.634404     0.70   0.483   -2.068045    4.363492
     avinfr |   .6370401  1.197336     0.53   0.595   -1.718775    2.992855
    avgovss |  -.6322322  .7895288    -0.80   0.424   -2.185668    .9212033
       _cons |  -18.96265  10.29928    -1.84   0.067   -39.22698    1.301679
-------------------------------------------------------------------------------
```

Appendix C: Cronbach's Alpha Coefficients

Ser No	Variable	No of Items	Reliability Coefficient
1	Entrepreneurial Orientation (Explanatory Variable)	09	0.7748
2	Motivational Factors (Control Variable)	12	0.7382
3	Government policies, strategies & bureaucracy (Control Variable)	05	0.7644
4	Access and cost of infrastructure	04	0.6955
5	BDS(Control Variable)	12	0.7457
6	Marketing and Market related factors (Control Variable)	05	0.6379

Appendix D: Strategic Posture scale (Entrepreneurial Orientation) Scales
Instruction to respondents

The following statements are meant to identify the collective management style of your enterprise's key decision makers (managers). Please indicate which response most clearly matches the management style of your business key managers by circling the closest number that best describes your views in the box in front of each statement.

Key	Code
Strongly Disagree (SDis)..1	
Disagree (Dis) 2	
Neutral (Neu) 3	
Modrately Agree (MAG)...4	
Strongly Agree (SAG) 5	

1. If you select 1, it indicates your **complete disagreement** with the statement
2. If you select 2, it indicates your moderate disagreement with the stated statement.
3. Selecting 3 means you are neutral with the statement
4. Selecting 4 indicates your moderate agreement with the statement.
5. Selecting 5 indicates your strong agreement with the statement.

Dimensions EO	Components of Each Dimension of EO	Choices				
		1= SDis	2= Dis	3= Neu	4= MAG	5= SAG
6.2.1 Innovation	**a)** In the past years we have provided very many new lines of products or services to the market	1	2	3	4	5
	b) Changes in products or services lines have usually been quite dramatic in order to satisfy the needs of customers.	1	2	3	4	5
	c)Management of our enterprises gives strong emphasis to creativity& innovation, research and development, and technological leadership	1	2	3	4	5
6.2.2 Proactivness	**a)**. In dealing with its competitors, my firm typically initiates actions which competitors respond to (instead of responding to actions which competitors initiate)	1	2	3	4	5
	b). In dealing with its competitors our enterprise is very often the first business to introduce new products or service administrative techniques, operating techniques etc	1	2	3	4	5
	c).In dealing with its competitors our enterprise typically adopts a very competitive, undo-the- competitors' posture.	1	2	3	4	5
6.2.3 Risk Taking	**a)**. When selecting projects or a course of action, managers of my firm have a strong proclivity/inclination for high-risk projects with chance of very high return, instead of for projects with low-risk but nominal and certain rate of return.	1	2	3	4	5
	b). In relation to maximization of environmental opportunities, managers of our firm believe bold wide ranging acts are necessary to achieve the firm's objectives (instead of exploring it gradually, via timid, incremental behavior)	1	2	3	4	5
	c). When confronted with decision-making situations involving uncertainty, my enterprise typically adopts a bold, aggressive posture in order to maximize the probability of exploiting opportunities					

Source: adapt from works of different researchers such as Fairoz, Hirobumi, & Tanaka (2010), Rynyan, Droge, & Swinney (2008), Runyan, and Swinney (2006); Wiklund & Shephered (2005); Lumpkin & Dess (2001); Covin and Slevin (1989) and James (nd).

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