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EDITORIAL COMMITTEE

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Journal of Business and Administrative Studies (JBAS) is a peer-reviewed bi-annual journal published by St. Mary's University and dedicated to the promotion and production of knowledge through the scientific methods of

enquiry to achieve independent analysis as well as collection, processing and interpretation of data.

Cognizant of the complementary functions of transmission of knowledge (through teaching) and the conduct of scholarly inquiry (through research), SMU has aggressively been promoting publications of journals and conducting conferences for well over a decade. On one hand, while SMU recognizes that its faculty staff, academics and practitioners in the country possess a wealth of untapped scholarly and research potential. On the other hand, we believe that this immense potential has not been realized due partly to lack of resources and partly to the absence of a reliable outlet (i.e. journals). This concern has prompted the academic leadership at SMU to launch JBAS.

JBAS shall hopefully fill the vacuum created by the absence of outlets in the realm of business, economics and administrative studies in the country. The purpose of this Journal is to provide practitioners and scholars with a forum through which they would get opportunities to publish their research based debate as well as discourse in the fields intimated. Equally important, it shall offer insight into developments in the fields bringing Ethiopian realities under purview.

Contributors shall thus come from a broad range of fields and disciplines seeking to reflect on the theoretical and practical developments in the areas of accounting and finance, economics, management, marketing, public management as well as governance and related fields.

Factors Affecting Performance of Commercial Building Projects in Lideta Sub-City, Addis Ababa

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Abstract

The purpose of this study is to examine the factors affecting the performance of commercial building projects in Lideta Sub-city. The study employed a causal research design and used a quantitative research approach. A survey was conducted by using 174 structured close ended questions which were distributed to 58 contractors, 58 consultants and 58 owners of building construction projects. Multiple regression was used to examine the causal relationship between factors that affect project performance and project performance indicators such as construction cost, time, quality and scope. The findings of the regression analysis showed that project cost management factors, project time management factors, project quality management factors, project scope management factors and project risk management factors positively and significantly affected performances of building construction projects. Thus, this study recommended that contractors, consultants and owners should give emphasis on addressing the correlates of project performances so as to increase the efficiency, effectiveness and quality of building construction projects at the Sub-city.

Keywords: *Project cost, project time, project quality, project scope, project risk management, project performance, Lideta sub-city, Addis Ababa, Ethiopia.*

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1. INTRODUCTION

The construction industry is vital for the development of any nation. In many ways, the pace of the economic growth of any nation can be measured by the development of physical infrastructures, such as buildings, roads and bridges. Construction project development involves numerous parties, various processes, different phases and stages of work and a great deal of input from both the public and private sectors, with the major aim being to bring the project to a successful conclusion (Navon, 2005). Construction is one of the largest industries and contributes to about 10% of the gross national product (GNP) in industrialized countries (Navon, 2005). Construction industry has complexity in its nature because it contains large number of parties as clients, contractors and consultants. The success of construction project depend on its performance, which is measured based on timely completion, within the budget, required quality standards and customers satisfaction (Omran, 2012).

Performance is measured in several ways as time, cost, quality, client satisfaction; productivity and safety. The most important factors affecting project performance are: delays because of materials shortage; unavailability of resources; low level of project leadership skills; escalation of material prices; unavailability of highly experienced and qualified personnel; and poor quality of available equipment and raw materials (Enhassi, 2009). According to Kibuchi and Muchungu (2012) research paper on performance of building construction projects in Nairobi, Kenya, discovered that despite the high quality of training of consultants in the building industry and regulation of the industry in major urban areas, construction projects do not always meet their goals. This is manifested by myriad projects that have cost overrun, delayed completion period and poor quality resulting to collapsed buildings in various parts of the

country, high maintenance costs, dissatisfied clients and even buildings which are not functional.

Previous studies on factors affecting performance of construction projects in Palestine show that the failure of any project is mainly related to failure in performance (Karim and Marosszeky 1999, DETR KPI Report 2000, Lehtonen 2001, Samson and Lema 2002, Kuprenas 2003, Cheung 2004, Iyer and Jha 2005, Navon 2005, Ugwa and Haupt 2007). While individual organizations have been measuring their performance for many years, there has been little consistency in the data, and the way it has been published. The performance can be measured by key indicators for evaluation. The purpose of Key performance indicators (KPIs) is that clients want their projects delivered: on time, on budget, free from defects, efficiently, right first time, safely, by profitable companies. So, Regular clients expect continuous improvement from their construction team to achieve year-on-year: reductions in project costs and time.

Chan and Kumaraswamy (2002) stated that construction time is increasingly important because it often serves as a crucial benchmarking for assessing the performance of a project and the efficiency of the project organization. Cheung et al (2004) identified project performance categories such as people, cost, time, quality, safety and health, environment, client satisfaction, and communication. It is obtained by Navon (2005) that a control system is an important element to identify factors affecting construction project effort. For each of the project goals, one or more Project Performance Indicators (PPI) is needed. Pheng and Chuan (2006) obtained that human factors played an important role in determining the performance of a project. Ugwu and Haupt (2007) remarked that both early contractor involvement (ECI) and early supplier involvement

(ESI) would minimize constructability-related performance problems including costs associated with delays, claims, wastages and rework, etc.

KPIs are one of the factors that constitute the project success criteria. Swan and Kyng (2005) view KPIs as the measure of a process that is critical to the success of an organization and/or project. According to a publication by Price Waterhouse Coopers (PWC), KPIs means actors by reference to which the development, performance or position of the business of the company can be measured effectively. Thoor and Ogunlana (2010), together with Humaidi and Said (2011), suggested that KPIs are helpful to compare the actual and estimated project performance in terms of effectiveness, efficiency, and quality of workmanship and product. KPIs can be used to measure the performance of project operation and are usually used in construction projects. Moreover, performance measurement can be carried out by establishing KPIs which offer objective criteria to measure project success. The formal definition for KPIs according to Public Record Office Victoria (2010) is Key Performance Indicators are quantitative and qualitative measures used to review an organizations progress against its goals. According to Mbugua (1999) performance indicators specify the measurable evidence necessary to prove that a planned effort has achieved the desired result. In other words, when indicators can be measured with some degree of precision and without ambiguity they are called measures. However, when it is not possible to obtain a precise measurement, it is usual to refer to performance indicators. Performance measures are the numerical or quantitative indicators (Sinclair and Zairi, 1995).

Project management knowledge areas of PMBOK guide of project management institute (PMI, 2013) and its construction extension (PMI, 2005) are adopted as the main factors determining the performance of projects: (1) project

integration management (2) project scope management (3) project time management (4) project cost management (5) project quality management (6) project human resources management (7) project communications management (8) project risk management (9) project procurement management and (10) project stakeholder management. Therefore, identifying factors that affect the performance of construction projects is very important to connect industry and project goals and objectives for improvement of process and method of doing things and administering projects. In addition to identification of performance factors, investigation of performance of projects should have to be done in project and industry level along with their respective process and method.

Understanding the performance or progress of a construction project can help to know and improve the projects future. A failed project can be described as one delayed, over budget, out of scope or ultimately canceled. On the other hand, a project is said to be successful when the project is on time and within budget, within scope, within the satisfaction of the customers or project stakeholders, meeting of its objectives, quality specification, project risk, safety standards, health, environmental, cultural and security requirement (Storm and Janssen, 2004; Schwalbe, 2010). According to Enhassi (2009) the factors affecting the performance of construction projects in Palestine are delays because of materials shortage; unavailability of resources; low level of project leadership skills; escalation of material prices; unavailability of highly experienced and qualified personnel; and poor quality of available equipment and raw materials.

In Ethiopia, 79% of projects had failed to meet their objectives (Getachew, 2015). Abadir (2011) found out that among the management knowledge areas of project in Ethiopia which determine the performance of the project, project

time management is considered the critical one with only 24% projects managed well. The execution of most of the construction projects were not completed on time, within budget and desired quality Becker and Behailu (2006). Such problems lead to loss of profits, increasing cost and leading to technical and managerial problems between project parties. Ayalew (2009) also revealed a gap in practice of basic project management body of knowledge areas. Change in defined scope, lack of proper planning, lack of proper evaluation of tender documents by contractors at tendering phase and contractor's financial problems were identified as major causes which affect the performance of the construction project. Jemal (2015) stated that the most common effects of cost over run identified are delay, supplementary agreement, adverse relations among stake holders and budget shortfall of project owners. Fetene (2008) examined factors that cause cost overrun during construction and their effects on public building construction projects in Ethiopia. Utilizing questionnaire survey of 70 completed public building construction projects in Ethiopia. The authors identified, and assessed the impact of cost overrun on the delivery of construction projects. From the results it was found that 67 out of 70 public building construction projects suffered cost overrun. The rate of cost overrun ranges from a minimum of 0% to the maximum of 126% of the contract amount for individual projects.

According to a report by Federal Democratic Republic of Ethiopian, Ministry of Urban Development, Housing and Construction (2014) on project performance status evaluation stated that among 14 public building projects under construction 8 projects, i.e. 57%, have failed to meet the planned percentage, (MOUDHD, 2014). In Lideta sub-city, Addis Ababa, building construction projects performance problem appears through different directions. There are many constructed building projects fail in time

performance, others fail in cost performance, others fail in scope performance, others fail in quality performance and others fail in other performance indicators. In Lideta sub-city, Addis Ababa, According to a report from Lideta sub-city building permit and control office, from 2006-2010 E.C, 43 residential buildings and 58 commercial buildings construction license was given to owners. As per my observation and Lideta sub-city building permit and control office report, most commercial building construction projects are not finished on time, scope, cost and quality (Unpublished report, 2017). They are always asking and taking building extension permit from the office which is failing in performance. In addition, performance measurement systems are not effective or efficient to overcome such this problem. The evidences presented above indicate poor performance of building construction projects in Lideta Sub-City, Addis Ababa. Therefore, this research will identify the factors affecting the performance of commercial building construction projects and suggest ways to owners, consultants and contractors to improve performance problem and to improve their performances. More specifically, the study identifies factors related to

1. cost management knowledge area that affect performances of commercial building construction projects at Lideta sub-city.
2. time management knowledge area that affect performances of commercial building construction projects at Lideta sub-city.
3. scope management knowledge area that affect performance of commercial building construction projects at Lideta sub-city.
4. quality management knowledge area that affect performances of commercial building construction projects at Lideta sub-city.
5. risk management knowledge area that affect performances of commercial building construction projects at Lideta sub-city.

2. LITERATURE REVIEW

2.1 Problem of Performance in Construction Industry

The failure of any construction project is mainly related to the problems and failure in performance. Moreover, there are many reasons and factors which attribute to such problem. Shaban (2008) stated that the construction industry performance problems in developing economies can be classified in three layers: problems of shortages or inadequacies in industry infrastructure (mainly supply of resources), problems caused by clients and consultants and problems caused by contractor incompetence/inadequacies. The subject of performance measurement or assessment has become a matter of concern to several countries at different levels of socio-economic development which have realized the need to improve the performance of their construction industry (Kingsley, 2010). Navon (2005) identified in various forms as low productivity, delays, cost overrun, poor, and quality and so on. Poor project performance has been noted as the bane of construction industries of several countries, particularly, developing countries. Ling et al (2007) remarked that architectural, engineering and construction (AEC) firms may face difficulties managing construction projects performance in China because they are unfamiliar with this new operating environment. International construction projects performance is affected by more complex and dynamic factors than domestic projects; frequently being exposed to serious external uncertainties such as political, economical, social, and cultural risks, as well as internal risks from within the project.

Time and cost overruns in construction projects in Ethiopia is one of the most significant problems in the field construction management. Research and studies in this field in Ethiopia are few compared to the problem of time and cost overrun. Having this in to consideration this research is done on factors

affecting performance in university building construction projects. Despite the importance and the significant of the construction sector in Ethiopia, it is noted that the parties of project (owner, consultant, and contractor) didn't give sufficient evaluation for time and cost overruns at the end of the project. Fetene (2008) examined factors that cause cost overrun during construction and their effects on public building construction projects in Ethiopia. Utilizing questionnaire survey of 70 completed public building construction projects in Ethiopia. The authors identified, and assessed the impact of cost overrun on the delivery of construction projects. From the results it was found that 67 out of 70 public building construction projects suffered cost overrun. The rate of cost overrun ranges from a minimum of 0% to the maximum of 126% of the contract amount for individual projects. The most important causes of cost overrun were found to be inflation or increase in the cost of construction materials, poor planning and coordination, change orders due to enhancement required by clients, excess quantity during construction.

Quality is an important issue in building construction projects. The objective of any construction project is to finish the construction within the estimated budget, time and according to the quality requirements. Poor quality of work leads to loss of money and time. The owner has the right to ask for rework when the executed job is not complying with the agreed quality standards. But if the required quality standards are not clearly defined in the contract, the client might overstate the quality requirement which will create problems with the contractor.

2.2 Performance Indicators for Construction Projects

Success of construction projects depends mainly on success of performance. Many previous researches had been studied performance of construction

projects. Dissanayaka and Kumaraswamy (1999) remarked that one of the principal reasons for the construction industry's poor performance has been attributed to the inappropriateness of the chosen procurement system. Reichelt and Lyneis (1999) remarked three important structures underlying the dynamic of a project performance which are: the work accomplishment structure, feedback effects on productivity and work quality and effects from upstream phases to downstream phases. Thomas (2002) identified the main performance criteria of construction projects as financial stability, progress of work, standard of quality, health and safety, resources, relationship with clients, relationship with consultants, management capabilities, claim and contractual disputes, relationship with subcontractors, reputation and amount of subcontracting.

Chan and Kumaraswamy (2002) stated that construction time is increasingly important because it often serves as a crucial benchmarking for assessing the performance of a project and the efficiency of the project organization. Cheung et al (2004) identified project performance categories such as people, cost, time, quality, safety and health, environment, client satisfaction, and communication. It is obtained by Navon (2005) that a control system is an important element to identify factors affecting construction project effort. For each of the project goals, one or more Project Performance Indicators (PPI) is needed. Pheng and Chuan (2006) obtained that human factors played an important role in determining the performance of a project. Ugwu and Haupt (2007) remarked that both early contractor involvement (ECI) and early supplier involvement (ESI) would minimize constructability-related performance problems including costs associated with delays, claims, wastages and rework, etc. Ling et al (2007) obtained that the most important of practices relating to scope management are controlling the quality of the contract document, quality of response to perceived variations and extent of changes to the contract. It was recommended

for foreign firms to adopt some of the project management practices highlighted to help them to achieve better project performance in China.

Takim and Akintoye (2002) defined the purpose of KPI's as to enable a comparison between different projects and enterprises to identify the existence of particular patterns. Dissanayaka and Kumaraswamy (1999) used different representation values to evaluate time and cost performance such as project characteristics, procurement system, project team performance, client representation's characteristics, contractor characteristics, design team characteristics, external condition. Takim and Akintoye (2002) stated that the development and use of key performance indicators (KPI's) can help to identify dysfunctional in the procurement process. Takim and Akintoye (2002) studied the development of key performance indicators to measure performance such as cost of pricing the tender as a percentage of contract value, cost of pricing the tender as a percentage of contract value, no. of times base tender price changed, time from the first tender to actual award of contract, average delay in payment of base claim, average delay in payment of agreed variations, average time for approval of agreed variations.

Cheung et al (2004) remarked that characteristics of emerging performance measurement indicators need analysis of both the organization and environment such as: nature of work, global competition, quality awards, organizational role, external demands and power of IT. The indicators should be able to identify causes of problems, address all possible performance drivers, and identify potential opportunities for improvement. Cheung et al (2004) remarked seven main key indicators for performance which are: time, cost, quality, client satisfaction, client changes, business performance, and safety and health. Takim and Akintoye (2002) identified good project performance consists of seven key

project performance indicators: construction cost, construction time, cost predictability, time predictability, defects, client satisfaction with the product and client satisfaction with the service. They also divide company performance indicators in to three, namely: safety, profitability and productivity. Ugwu and Haupt (2007) stated that project performance can be determined by two common sets of indicators. The first set is related to the owner, users, stakeholders and the general public which are the groups of people who will look at project performance from the macro viewpoint. The second are the developer, a non-operator, and the contractor which are the groups of people who will look at project performance from the micro viewpoint. They studied the relationship-based factors that affect performance of general building projects in China. Thirteen performance metrics was used to measure the success level of construction projects. These factors were categorized into four groups namely cost, schedule, quality and relationship performance. It was recommended that foreign firms that have entered or are going to enter the Chinese construction industry should learn how to build cooperative and harmonious relationships with Chinese partners and finally achieve satisfactory project performance by paying sufficient attention to the aforementioned factors.

Takim and Akintoye (2002) stated successful construction project performance can be grouped along three orientations: procurement, process and result orientations. Predictability of design cost and time, and predictability of construction cost and time can be regarded as procurement orientated, safety as process orientated and defects, client satisfaction with the product, client satisfaction with the service, profitability and productivity listed under result orientation. Ugwu and Haupt (2007) developed and validated key performance indicators (KPI) for sustainability appraisal using South Africa as a case study. It is used four main levels in a questionnaire to identify the relative importance

of KPI. The main indicators were: economy, environment, society, resource utilization, health and safety and project management and administration. Cordero (1990) listed key performance indicators for construction projects under four main groups of aspects. The first is cost aspect; construction cost, cost certainty, client satisfaction on cost, secondly time aspect; construction time, time certainty, client satisfaction on time, thirdly quality aspect; defects, liability period, client satisfaction on cost and the fourth aspect is sustainable development; profitability, partnership, environmental protection and health and safety.

Wateridge (1998) examine the United Kingdom (UK) construction industry launched best practice programme on the key performance indicators for construction before few years ago. This was to create an industry-wide performance measurement system to enable good companies to demonstrate their abilities and allow clients to select contractors and consultants on the basis of reliable data. These KPI's give information on the range of performance being achieved in all construction activities and they include the following: client satisfaction – product, client satisfaction – service, defects, and predictability – cost, predictability – time, profitability, productivity, safety, construction cost and construction time.

Takim and Akintoye (2002) find out the ten key performance indicators of project performance in UK construction industry. These consist of seven project performance indicators, namely: construction cost, construction time, cost predictability, time predictability, defects, client satisfaction with the product and client satisfaction with the service; and three company performance indicators, namely: safety, profitability and productivity. Most of these indicators can be regarded as having results orientation, except for predictability of design cost and time, and predictability of construction cost

and time, which can be regarded as procurement orientated, and safety, which can be regarded as process orientated.

Egan (1998) tried to put the most KPIs, such as Construction cost, Construction time, Defects, Client, satisfaction (product), Client satisfaction (service), Profitability, Productivity, Safety, Cost predictability (const.), Time predictability (const.), Cost predictability (design), Time predictability (design). These indicators are targeted at assessing industry-wide performance and individual companies as well. However, the findings fail to show any explicit link between the performance factors measures based on project phases (e.g., selection phase, execution phase) and the factors that may determine the project performance during the implementation phase. There is no key factor linking one phase to another. In addition, the working groups provide no indicators on the performances of the stakeholders involved in the project and prioritize their performance in determining project success.

2.3 Project Management and Project Performance

Management in construction industry is considered as one of the most important factors affecting performance of works. Ugwu and Haupt (2007) stated that documenting and archiving performance data could be useful for future reference, such as for settling disputes on claims, and in maintenance and repair works. Kuprenas (2003) remarked that quantification of the impacts of the project management processes are identified through three steps of analysis: comparison of summary statistics of design performance, proof of statistical significance of any differences and calculation of least squares regression line of a plot of design performance measurement versus amount/application of project management as a means to quantify management influence to design phase cost performance.

Kuprenas (2003) stated that while project management is only one of the many criteria upon which project performance is contingent, it is also arguably the most significant as people formulating the processes and systems who deliver the projects. Ugwu and Haupt (2007) remarked that an adequate understanding and knowledge of performance are desirable for achieving managerial goals such as improvement of institutional transformations, and efficient decision making in design, specification and construction, at various project-level interfaces, using appropriate decision-support tools. Ling et al (2007) investigated project management (PM) practices adopted by Singaporean construction firms. It was determined that the performance level of their projects in China; identifies PM practices that led to better performance; and recommended key PM practices that could be adopted by foreign construction firms in China to improve project performance. Since the client is the principal stakeholder in the construction process, by managing him/her, good performance has been defined typically in terms of the management of delivery of projects on time, to specification and within budget, providing good service and achieving reasonable life-cycle costs. More recently, managing the requirements of the other stakeholders such as employees and society has come into focus with the need to promote sustainable construction and corporate social responsibility (Ankrah and Proverbs, 2005).

2.4 Factors Affecting Performances of Construction Project

A number of studies have been conducted to examine factors impacting on project performance in developing countries. Mohammed Bader (2004) reported that shortage of skills of manpower, poor supervision and poor site management, unsuitable leadership; shortage and breakdown of equipment among others contribute to construction delays. Mohammed Bader (2004) examined causes of client dissatisfaction in the South African building industry

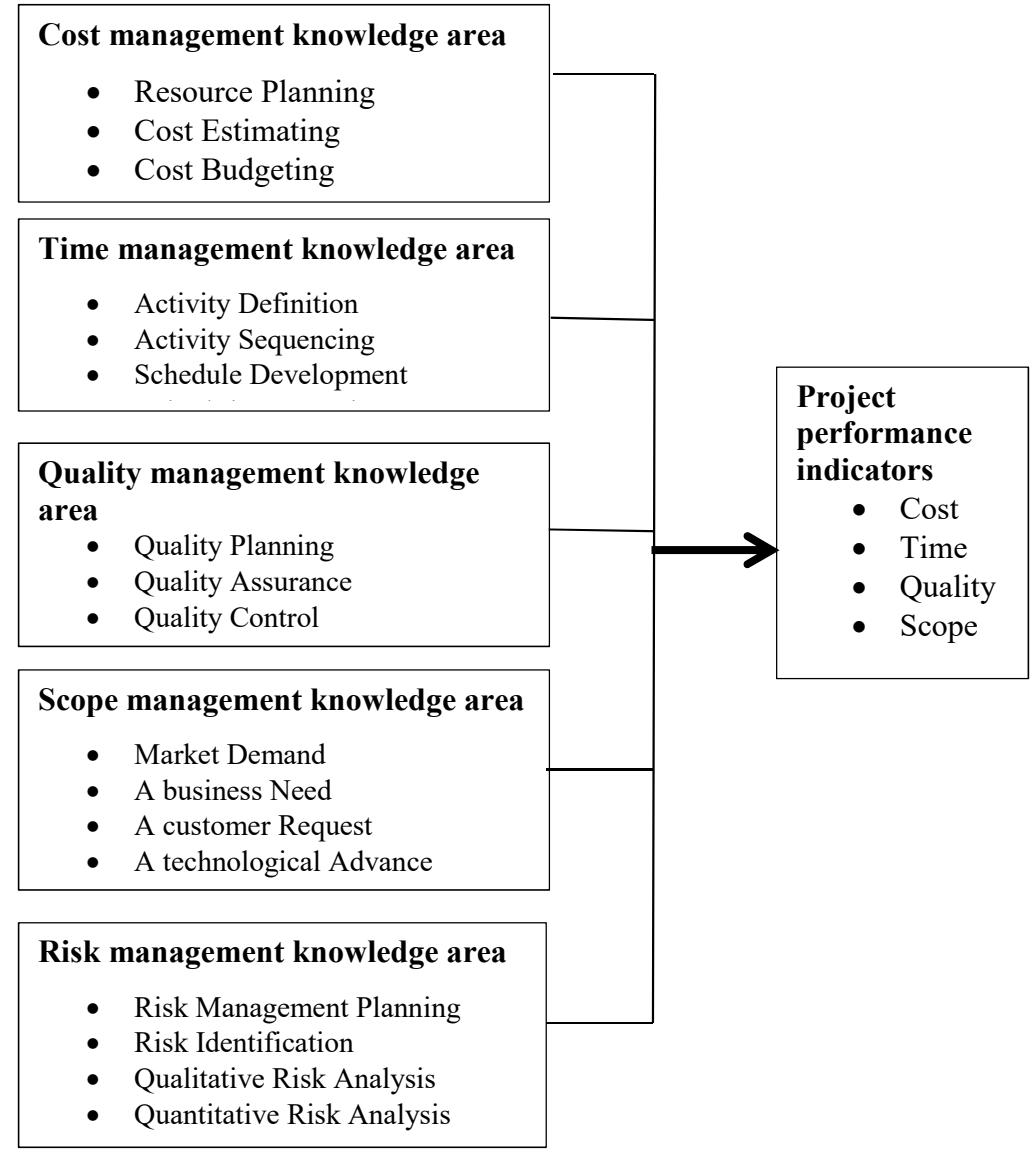
and found that conflict, poor workmanship and incompetence. Project performance can be measured and evaluated using a large number of performance indicators that could be related to various dimensions (groups) such as time, cost, quality, client satisfaction, client changes, business performance, health and safety (Cheung et al. 2004).

Mohammed Bader (2004) found in his report the cause for the failure of performance of construction contractors. These are; Lack of experience in the line of work, replace key personnel, assigning project leader in the site, labor productivity and improvement, use of project management techniques, procurement practices, claims, internal company problems, owner's absence from the company, using computer applications, frauds, neglect, low margin profit due to competition, cash flow management, bill and collecting effectively, poor estimation practices, employee benefits and compensations, controlling equipment cost and usage, increased number of projects, increased size of projects, change in the type of work, lack of managerial maturity, national slump in the economy, construction industry regulation and bad weather.

Owusu Tawiah (1999) identified two main factors affecting contractor performance. The two factors were financial and managerial capacities of the firm. Under the financial factors contractor's financial stability in terms of access to credit was questionable and that has gone a long way to affect their performance over the years. Again under the managerial capacities, he identified site management practices, lack of technical expertise among others as factors influencing contractor performance in Ghana. Ankrah (2007) classifies the factors that influence the project performance in to uncontrollable and controllable. From a project perspective, uncontrollable factors include the

external constraints and industry factors. By definition, these are beyond the control of project participants and hence may be difficult, if not impossible to influence at a project level in trying to improve performance, whereas the controllable factors which include project and organization-related factors.

2.5 Conceptual Framework



Source: Authors' own construction based on literature review (2019)

3. RESEARCH METHODOLOGY

The research investigated the performance of commercial building construction projects in Lideta Sub-City that have taken building permit license in the past five years (2013-2018) and were are under construction. The researchers adopted a causal research design and a quantitative research approach based on primary data gathered using questionnaire. The research considered a total of 58 commercial building construction projects in Lideta Sub-City and the target populations were owners, contractors and consultants of each commercial building construction projects. The total population size of the study was 174 (58 owners, 58 contractors and 58 consultants). The researcher distributed questionnaire for the owners, contractors and consultants of commercial building construction projects. The response rate was 93.7% with 163 valid response. The analysis result is thus based on this valid responses. Data were subjected to multiple regression analysis to establish the causal relationship between the dependent variable (i.e, construction performance indicators) and the independent variables. Different tests were carried out to ensure the goodness of the regression model.

4. RESULTS AND DISCUSSION

4.1 Results of Descriptive Statistics

This section discusses the results from descriptive statistics analysis. Table 1 presents the summary of descriptive results for the dependent variable building construction performance indicators and the independent variables project cost management factors, project time management factors, project quality management factors, project scope management factors and project risk management factors. The data consisted of 163 observations measured on six variables. The researcher conducted descriptive statistics and frequencies and percentages for categorical variables. The study conducted on explanatory

variables revealed that the mean score value for project cost management factors, project time management factors, project quality management factors, project scope management factors and project risk management factors in average was 3.65 (SD=0.79), 1.90 (SD=0.94), 2.02 (SD=1.06), 1.97 (SD=0.98), 2.43 (SD=1.14) respectively, which falls on importantly and less importantly affect the performance of building construction projects at Lideta sub-city. In regard to performance indicators, construction cost performance indicator mean score value was 3.21 (SD=1.00) which means the construction cost performance indicator falls on average, the construction time performance indicator man score value was 2.41 (SD=1.04) falls on poor, the construction quality performance indicator mean score value was 3.61 falls on good and the construction scope performance indicator mean score value was 3.43 falls on neutral.

Table 1: Summary of Descriptive statistics for Dependent and Independent Variables (n=163)

Variables	Mean	Std. Deviation
Cost Performance Indicator	3.22	0.91
Time Performance Indicator	2.41	1.04
Quality Performance Indicator	3.61	0.98
Scope Performance Indicator	3.43	1.29
Cost Management related Factors	3.65	0.79
Time Management related Factors	1.90	0.94
Quality Management related Factors	2.02	1.06
Scope Management related Factors	1.97	0.98
Risk Management related Factors	2.43	1.14

Source: Authors' based on **s**urvey data (2019)

4.2 Results of Regression Analysis

Before presenting the estimation results of the regression analysis, the model was diagnosed for problems of normal distribution, linearity, auto-correlation and multicollinearity. The test results confirmed that the regression models passed all the required diagnostic tests. Using four performance indicators such as project cost, project time, project quality and project scope, four regression models were estimated. Following what was stipulated in project management body of knowledge (PMBOK 2003), five project management knowledge areas were considered as independent variables that may affect performance of construction projects in Lideta sub-city. The estimation results of the multiple linear regression models are presented and discussed below.

1) Project cost as indicator of construction project performance (Model 1)

The overall model fit for the estimated regression equation using project cost as indicator of project performance revealed that the independent variables jointly explained 66% of the variation in the dependent variable, which is significant at $p<0.01$ ($F=59.754$). While all the variables maintained the expected signs, only the variables related to cost management and quality management knowledge areas were found to be statistically significant in explaining the construction projects in terms of efficiency (cost). When these knowledge areas are applied in a good manner, construction cost generally declines. More specifically, as the cost management related factors increase by a factor of one, construction cost declines by 0.79. Similarly, as project managers give much emphasis to quality by a factor of one, construction cost increased by 0.15. It should be noted here that there is tradeoff between quality and cost. As one opts for high quality, construction cost increases. The findings are in line with available literature (Hu & He, 2014).

Table 2: Ordinary Least Square Estimation Results for the Factors that Affect Performance of Construction Projects in Lideta Sub-City

Variables related to project management knowledge areas	**Model 1: Cost**		**Model 2: Time**		**Model 3: Quality**		**Model 4: Scope**	
	Coefficient[1]	t value	Coefficient	t value	Coefficient	t value	Coefficient	t value
Constant		1.67*		0.63		-0.46		-1.44
Cost management	-0.79	-15.59***	-0.80	-16.02***	0.86	18.37***	0.79	14.97***
Time management	-0.07	-1.12	-0.11	-1.79*	0.13	2.20*	0.05	0.74
Quality management	0.15	2.44**	0.11	1.79*	0.01	0.20	0.22	3.42***
Scope management	-0.09	-1.55	-0.01	-0.22	-0.04	-0.77	0.12	1.88*
Risk management	0.06	0.99	0.05	0.81	-0.06	-1.02	0.04	0.67
Adjusted R^2	0.66		0.67		0.71		0.63	
ANOVA	F=59.754***		F=62.875***		F=76.035***		F=52.135***	

***p<0.01; **p<0.05; and *p<0.1

Source: Authors' own analysis result (2019)

[1] Standardized coefficient

2) Project time as indicator of construction project performance (Model 2)

The overall model fit for the estimated regression equation using project time as indicator of project performance revealed that the independent variables jointly explained 67% of the variation in the dependent variable, which is significant at $p<0.01$ ($F=62.875$). Similar to the results of model 1, cost and quality management related knowledge areas were found to be statistically significant at $p<0.01$ and $p<0.1$ respectively in determining efficiency of construction projects measured in terms of time. In addition, in model 2, time management related factors were found to be statistically significant at $p<0.1$ in determining project time performance. More specifically, as time and cost related knowledge areas of project management improved by a factor of one, efficiency of the project measured in terms of time declines by 0.8 and 0.11 respectively (i.e takes lesser time to complete). As quality management related factors of project management knowledge areas improve by a factor of one, the time it takes to complete the construction projects increase by 0.11. Again, here it should be noted that as project managers give more curing time for constructions made of concrete, quality would increase than the otherwise. So, it is expected that these two factors exhibit a tradeoff in the case of construction projects.

3) Project quality as indicator construction project performance (Model 3)

The overall model fit for the estimated regression equation using project quality as indicator of project performance revealed that the independent variables jointly explained 71% of the variation in the dependent variable, which is significant at $p<0.01$ ($F= 76$). Cost and time management related knowledge areas were found to be statistically significant at $p<0.01$ and $p<0.1$ respectively

in determining quality of construction projects. More specifically, as time and cost related knowledge areas of project management improved by a factor of one, quality of the projects improves by 0.86 and 0.13 respectively. It is intuitive that better quality goes with high cost (as most of the time high quality items are more expensive) and the longer the time a construction project takes for concrete curing, the better the quality it will be.

4) Project scope as indicator of project performance (Model 4)

The overall model fit for the estimated regression equation using project scope as indicator of project performance revealed that the independent variables jointly explained 63% of the variation in the dependent variable, which is significant at $p<0.01$ ($F=52$). Cost, quality and scope management related knowledge areas were found to be statistically significant at $p<0.01$, $p<0.01$ and $p<0.1$ respectively in determining scope of construction projects. More specifically, as project managers improve cost, quality and scope management by a factor of one, scope (i.e, effectiveness) of the projects improves by 0.79, 0.22, and 0.12 respectively. Again, it is intuitive to expect better project effectiveness as we apply knowledge areas that improve outcomes in terms of effectiveness.

5. CONCLUSION

This study examined the effect of project management knowledge areas on the performance of building construction projects in terms of cost (efficiency), time (efficiency) and scope (effectiveness) int Lideta Sub-city, Addis Ababa. The finding of the study generally indicated that project performance improves as project managers give due diligence to the project management knowledge areas. The authors conclude that the findings of the study are in line with the theoretical underpinnings that when projects are managed by applying relevant

project management tools and techniques, performances of projects in terms of effectiveness and efficiency improves. We, therefore, recommend that project managers should manage carefully the construction projects guided by important knowledge areas and associated tools and techniques such as cost management, quality management, time management and scope management which were found to be statistically significant in determining performances of construction project in Lideta Sub-City, Addis Ababa.

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Determinants of Performances of Micro- and Small-Scale Enterprises: The Case of Gulelle Sub-City, Addis Ababa

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Abstract

This research aims to identify factors determining the performance/growth of Micro and Small-scale Enterprises (MSEs) with a special attention to manufacturing, service, construction, agro industry, urban agriculture and textile and garment in Gulelle sub city. The research approach that was followed in this particular study was quantitative. It also adopted a causal research design and data were generated from samples drawn through stratified sampling procedure. Questionnaire was used to collect data from a sample of 312 operators. Data generated using questionnaire were analyzed using descriptive and inferential statistics. The regression analysis revealed that access to finance, technology infrastructure, and government support explained the variation of MSE's performance. Therefore, there should be a way to enhance the access of MSEs to technology, finance and infrastructure as well as providing them with the needed government support so that their endeavor to grow to medium scale enterprises can be realized in good time.

***Keywords**: Micro and Small Enterprise (MSEs), performance, Gulelle sub city, Ethiopia*

1. INTRODUCTION

1.1 Background of the Study

Micro and small scale enterprises are plays vital role in creating job opportunities, reducing unemployment problems, increasing economic growth and poverty reduction. MSEs are seen as the most powerful and preferable sector of improving the living standard of citizen. Micro & Small scale

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enterprise Development Program in Ethiopia meaningfully has been given due attention by government since 2004/2005. Of course, in 1996/97 National Micro and Small Enterprise Strategy was developed by the government. However, the degree of recognition to the sector with regards to job creation and the alleviation of poverty was not sufficient. Micro enterprises are those business enterprises with a paid up capital of not exceeding birr 20,000 and excluding high tech. consultancy firms and other technology establishments. Under manufacturing sector an enterprises operates with 5 people including the owner and their total asset is not exceeding birr 100,000. Under service sector it operates with 5 persons including the owner of the enterprises and the values of total asset is not exceeding birr 50,000. Small enterprise are those business enterprises with paid up capital of above 20,000 and not exceeding birr 500,000 and excluding high tech consultancy firms and other high tech establishments. Manufacturing sector it operates with 6-30 persons and with paid up capital of total asset birr 100,000 and not exceeding 1.5 million. Service sector it operates with 6-30 persons and total asset or paid up capital is with birr 50,001 and not exceeding birr 500,000 of the enterprises and the value total asset of not exceeding birr 1.5 million (FMSEDA, 2015).

Ethiopia is one of the developing countries which has taken measures to enhance the operation of MSE by considering their contributions. The Federal and Regional Micro and Small enterprises Development Agencies (FRMSEDA) was established by regulation No.33/1998. All these institutional platforms are created in order to promote the growth and development of MSE, which in turn are expected to contribute their parts in national growth and transformation. United Nations Development Programmers (UNDP) (2012) has indicated that the development of MSE's is the key component of Ethiopia's industrial policy direction that will contribute to the industrial development and

economic transformation of the country. When they grow in size, they would contribute more to economic growth and poverty reduction. MSEs Performance or growth is defined simply in terms of output terms such as quantified objectives or profitability (Martin, 2010).

Global Entrepreneurship Monitor (GEM) defined Performance as the act of performing of doing something successfully; using knowledge distinguished from merely possessing it (GEM, 2004). A business organization can measure its performance by using financial and non-financial measures. The financial measures includes profit before tax and turnover while the non-financial measures focus on issues pertaining to customers satisfaction and customers referral rates, delivery time, waiting time, sales volume, and employees turnover. The most common measurement of MSEs performance is growth in capital which shows that the enterprises are operating well or not. Determinants of MSEs performance are divided into two main categories external and internal factors, in this research management and expertise skill, educational level of the employees, marketing skill and entrepreneurial skills are considered as internal factor and government rules and regulations, financial resource, infrastructure, and access to technologies are considered as external factors. Beside of the fact that MSE's are playing great role, the sector is facing with many challenges whose severity varies across regions, cities and even within sub cities in determining their performance and development. Focusing on the factors which determines the growth or performance of the micro and small scale enterprises is essential because it helps the MSEs sector to consider the factors and use for their future in the business. That is why important to study in the area of key business sector in doing this problem are identified and solved. This will creates good opportunity to the nation's development and MSEs performance growth. In Addis Ababa Gulelle sub city six types of formal

sector are accessible in both micro and small scale enterprises. Those are manufacturing sector, construction sector, urban agriculture sector, service sector, agro industry sector and garment and textile sector. In all these sectors there are 916 micro enterprises and 844 small enterprises and a total of 1760 MSEs which contains 8601 members both male and female (Gulell sub city MSEs Office, 2019).

1.2 Statement of the Problem

In many cases there are inherent problems which affect long term survival and business performance of the MSEs due to different reasons. For example, a study by Bowen *et al.* (2009, cited in Mekonnen and Tilaye, 2013) revealed that in Kenya, three out of five micro and small businesses failed within the first few months of operation due to competition, managerial inefficiency, insecurity, debt collection, lack of working capital, power interruptions, political uncertainty, cost of materials and low demand of their products. The problem confronting MSEs appears to be similar in least developed or developing countries. Currently, there are many internal and external challenges facing MSEs in their operations and hinder their growth in Ethiopia (MUDC, 2013). The Government of the Federal Democratic Republic of Ethiopia has recognized and paid due attention to the promotion and development of MSEs for they are important vehicles to address the challenges of unemployment, economic growth and equity in the country (MoTI, 1997:5). Thus it evinced that the government exert much in ensuring the continuity of the MSEs for the growth and expansion of the enterprise in the sector. Despite government effort to promote and expand the sector, it is not functioning to its best. According to Belay (2000, as cited in Eshetu & Mamo, 2009), 98% of business firms in Ethiopia are micro and small enterprises, out of which small enterprises represent 65% of all businesses. Moreover the study revealed that

the majority of enterprises are micro and small indicates that established enterprises find it difficult to grow to the next stages of middle and large scale industries.

Earlier studies conducted on issues pertaining to MSEs focused on the identification of challenges by adopting a more exploratory design. For example, Dereje (2008) studied the nature, characteristics, economic growth, opportunities and challenges of MSEs in the construction sector based on 125 sample enterprises. The study revealed that the main constraints of MSEs were shortage of capital, lack of raw materials, absence of government support, lack of market, lack of credit facilities and high interest rate. Workneh (2007) also studied MSEs in Kolfe Keraneo sub-city of Addis Ababa and indicated that lack of capital, lack of market, unfavorable policy, and inadequate infrastructure, absence of adequate and relevant training, bureaucratic structure and procedures are among constraints faced by MSEs.

Similarly, Adil (2007) carried out a study in Addis Ababa shows that inappropriate government intervention, shortage of capital, location disadvantage, lack of market and lack of display room are the major challenges that obstruct MSEs. Mulugeta (2011) has also identified and categorized the critical problems of MSEs into market-related problems, which are caused by poor market linkage and poor promotional efforts; institution-related problems including bureaucratic bottlenecks, weak institutional capacity, lack of awareness, failure to abide policies, regulations, rules, directives, absence of training to executives, and poor monitoring and follow-up; operator-related shortcomings like developing a dependency tradition, extravagant and wasting behavior, and lack of vision and commitment from the side of the operators. MSE-related challenges are including lack of selling place, weak accounting

and record keeping, lack of experience sharing, and lack of cooperation within and among the MSEs and finally society-related problems such as its distorted attitude about the operators themselves and their products.

This research therefore deals with answering question of why the MSEs sector has not grown more by using the existing policy, the cheaply available labor force and by adopting production organizations that are suitable for MSEs to expand. From this perspective the study aims at identifying the different factors which determines the enterprises growth and reason for the poor performance of MSEs in Gulelle sub-city.

2. LITERATURE REVIEW

2.1 Definition of MSEs from Ethiopian context

According to Ethiopian context there is no uniform definition at the national level to have a common understanding of the MSE sector. Ministry of Trade and Industry (MoTI) and the Ethiopian Central Statistics Authority (CSA) have defined MSEs separately. While the definition by MoTI uses capital investment, the CSA uses employment and favors capital intensive technologies as a yardstick. The definition used by MoTI, which uses capital investment as a yardstick, has been developed for formulating MSEs development strategy in 1997 (MoTI, 1997).based on the revised sector both micro and small scale Enterprises are categorized into industrial sector and service sector.

Table 1: Classification of MSEs

Level of enterprise	Sector	Human power	Total asset
Micro enterprise	Industry	<5	<100,000
	Servicer	<5	<50,000
Small enterprise	Industry	6-30	<birr 1.5 million
	Service	6-30	<birr 500,000

Source: FMSEDA (2015)

Micro enterprise are those small business enterprises with a paid up capital of not exceeding birr 20,000 and excluding high tech. consultancy firms and other high technology establishments. Under manufacturing sector an enterprises operates with 5 people including the owner and their total asset is not exceeding birr 100,000. Under service sector it operates with 5 persons including the owner of the enterprise and the values of total asset is not exceeding birr 50,000. Small enterprises are those business enterprises with paid up capital of above 20,000 and not exceeding birr 500,000 and excluding high tech consultancy firms and other high tech establishments. Manufacturing sector it operates with 6-30 persons and with paid up capital of total asset birr 100,000 and not exceeding 1.5 million. Service sector it operates with 6-30 persons and total asset or paid up capital is with birr 50,001 and not exceeding birr 500,000. According to the new small and micro enterprises development strategy of Ethiopia (2011) the working definition of MSE is based on capital and labor.

2.2 The Role of MSEs for the economy

MSEs play a vital role for the nation's economic growth and reducing unemployment problem and eradicating poverty. according to Edmiston (2007) the MSEs indeed create a substantial majority of net new jobs in an average year On the same document it argues that MSEs are largely thought to be more

innovative than larger firms for three reasons: a lack of entrenched bureaucracy, more competitive markets, and stronger incentives (such as personal rewards). The hope is that MSEs can grow to become the large firms of tomorrow and offer the kinds of benefits that typically come with employment in a large firm. The small business sector is regarded as a fundamental ingredient in the establishment of a modern, progressive and vibrant economy. Ethiopia country Report (2014) the necessity of micro and small scale enterprises, which usually constitute the majority of the informal sector, have long been recognized, and increasingly support programs have emerged in Ethiopia to leverage the economic growth potential of this sector. The MSEs sector have great roles in improving economy, especially in creating employment opportunity, improving the income level, empowering women capacity, making people intends to save money, developing the operators‟ skills and knowledge, improving people's living conditions and social issues, and contributing to integrating different business levels, establishment of larger businesses and partnership for the people in the study area (Shiferaw, 2013).

2.3 Business Performance

Performance is defined simply in terms of output terms such as quantified objectives or profitability Martin (2010). Performance has been the subject of extensive and increasing empirical and conceptual investigation in the small business literature (Bidzakin, 2009). Global Entrepreneurship Monitor (GEM) defined Performance as the act of performing; of doing something successfully; using knowledge distinguished from merely possessing it (GEM, 2004). However, performance seems to be conceptualized, operationalized and measured in different ways thus, making cross-comparison is difficult (Srinivasan *et al.*, 1994). Among the most frequently used operationalization are survival, growth in employees and profitability. According to (Rami and

Ahmed, 2007) the most commonly adopted definition of success good performance is financial growth with adequate profits. Other definitions of success good performance are equally applicable. The accomplishment of giving a task measured against preset known standards of accuracy, completeness, cost, and speed. In a contract, performance is deemed to be the fulfillment of obligation, in a manner that releases the performer from all liabilities under the contract. Regular participation of employees in deciding how their work is done, making suggestions for improvement, goal setting, planning and monitoring of their performance.

2.4 Measuring Performance and Factors Influencing MSEs Performance

A business organization can measure its performance by using financial and non-financial measures. The financial measures includes profit before tax and turnover while the non- financial measures focus on issues pertaining to customers satisfaction and customers referral rates, delivery time, waiting time and employees turnover. By recognizing the limitations of financial and non-financial measures owner-managers of modern MSEs have adopted a hybrid approach of using both financial and non-financial measures. These measures serve as precursors for course of actions (Chong, 2008). In this study the research will consider both financial and non-financial measures.

MSEs have been confronted with a number of factors that affect their Growth. In particular, the study made by (Mekonnen and Tilaye, 2013) had pinpointed factors like inadequate infrastructure facilities, inadequate finance, poor managerial and technical skills, and inadequate working premises as the major factors of MSEs. Micro and small enterprises considered as a vital component of the socio-economic development of both developed and developing countries, usually some of these enterprises collapse within the first few years

of their start-up. Of those operating, some grow rapidly, while others grow slowly. So, it is important to identify the cause factors of better performance because it helps new entrants of the sector consider the factors and use for their future in the business. MSEs have faced a number of constraints, like lack of access to markets, finance, business information; lack of business premises; low ability to acquire skills and managerial expertise; low access to appropriate technology and poor access to quality business infrastructure (Woldetsadik *et al.*, 2018). There are several factors which are problems for the growth of MSEs some of these are the education level, managerial and expertise skill, Marketing skills, customer handling, finding financial source, the ability to come up with new idea and adapting with new technologies quickly. These factors are that micro and small business enterprises should possess to be successful survival in the future.

Education: Some business owners are highly educated and extremely successful whereas others have yet to complete their high school but are equally successful. In many instances, it may depend on the individual himself/herself. Nevertheless, education level can have an effect on the performance of a business as noted in many studies. A reason for supposing it would do so is that education improves literacy, quantitative training, and social and communication skills, and of course specialized education is necessary for many occupations. The study of Lussier (1995) suggested that people without any college education who start a business have a greater chance of failing than people with one or more years of college education.

Management and expertise Skills: SME owners or managers with more experience (managerial, sector or previous small businesses experience) tend to have more growth potential than with a lack of expected potential and also the

higher the level of education attained by the owner/manager, the higher the likelihood of growth of the enterprise (Woldetadik *et al.*, 2018). Managerial skills and experience affects businesses performance at certain level (Mbugua *et al.*, 2014).

Marketing: Marketing activities such product/service marketing, marketing research and information and promotion has impact on the performance of MSEs due to lack of marketing skills by SMEs owners. Most MSEs in Ethiopia lack marketing skills such as market surveys or analysis hence they rely on their immediate daily community demands (Gebeyehu and Assefa, 2004). However, if the marketing analysis is done it is done on a limited scale because of scarce resources. Because SMEs at times compete for the same customers with large enterprises, sometimes it is difficult for SMEs to secure markets for their products.

Government rules and regulation: There are government policies that supports the development of the micro and small scale enterprises The growth targets set in the growth and transformation plan (GTP) have been clearly presented in government policy documents i.e. employment creation, market linkage, technical and financial support, availing sales and manufacturing premises and the like (FMSEDA, 2015).Since our country has limited capital government support to SMEs depending up on the importance of the sector in the economy. Accordingly growth oriented sectors are selected for Maximum government support and the rest non selected sectors will get Minimum support.

Financial resource: MSEs are faced with a challenge of accessing financial means to get their businesses off the ground and make them grow and be

sustainable. According to Simeon and Lara (2005) MSEs appear to be disproportionately afflicted by the underdeveloped nature of financial institutions in developing countries. For various reasons ranging from a lack of collateral to bias against small firms, MSEs tend to face greater financial constraints than do larger firms. In Ethiopia nearly half of micro enterprises, 40 percent of small firms, and 18.5 percent of medium firms reported access to finance to be a major constraint to daily operations (World Bank, 2015).

Entrepreneurship: Entrepreneurship is the phenomenon associated with entrepreneurial activity, which is the enterprising human action in pursuit of the generation of value, through the creation or expansion of economic activity, by identifying and exploiting new products, processes or markets (OECD, 2016). Most MSEs face different problems with their business activity, in order to overcome these difficulties and promote their growth entrepreneurial skill required.

Infrastructure: MSEs have been confronted with a number of factors that affect their Growth. In particular, the study made by Mekonnen and Tilaye, (2013) had pinpointed factors like inadequate infrastructure facilities. These factors plays a great role in determining the performance or the growth of micro and small scale business. The major infrastructure facilities are like electric power, water supply, telephone access and the surrounding environment development which means good working environment.

Technology: According to Noghor (2015), the small business owner that recognizes the dynamic trend, with a strategy implemented for the application and insertion of technological tools in his or her business would be in an advantageous position to be competitive in the 21st century business

environment. MSEs are facing challenges brought about by changes in technological environment; hence they are failing to keep abreast of these changes. Large businesses, because they have the advantage of being technologically advanced, end up poaching the MSEs market niche and resulting in MSEs being kicked out of the game. Failure not to employ the latest technology means producing at higher cost than do competitors in the market thus, eventually exiting the market due to tough competition.

2.5 Conceptual Framework

The researcher attempted to develop a conceptual framework for this study by reviewing the previous works. Since business growth is influenced by both internal and external (contextual) factors, operators need to understand what influences businesses to reach peak growth. The contextual factors include government rules and regulations, technological, infrastructural, marketing and financial factors. The internal factors that influence the firm‘s growth can be classified as management and expertise skill, education and entrepreneurial factors. To align the conceptual framework with the research objectives, business growth (change in capital) is the dependent variable whereas management and expertise skill, education, entrepreneurial skill, Access to finance, access to technology and infrastructure, Government policies and regulations and marketing skill are the independent variables of the study. In this study capital growth is used to measure growth of these MSEs.

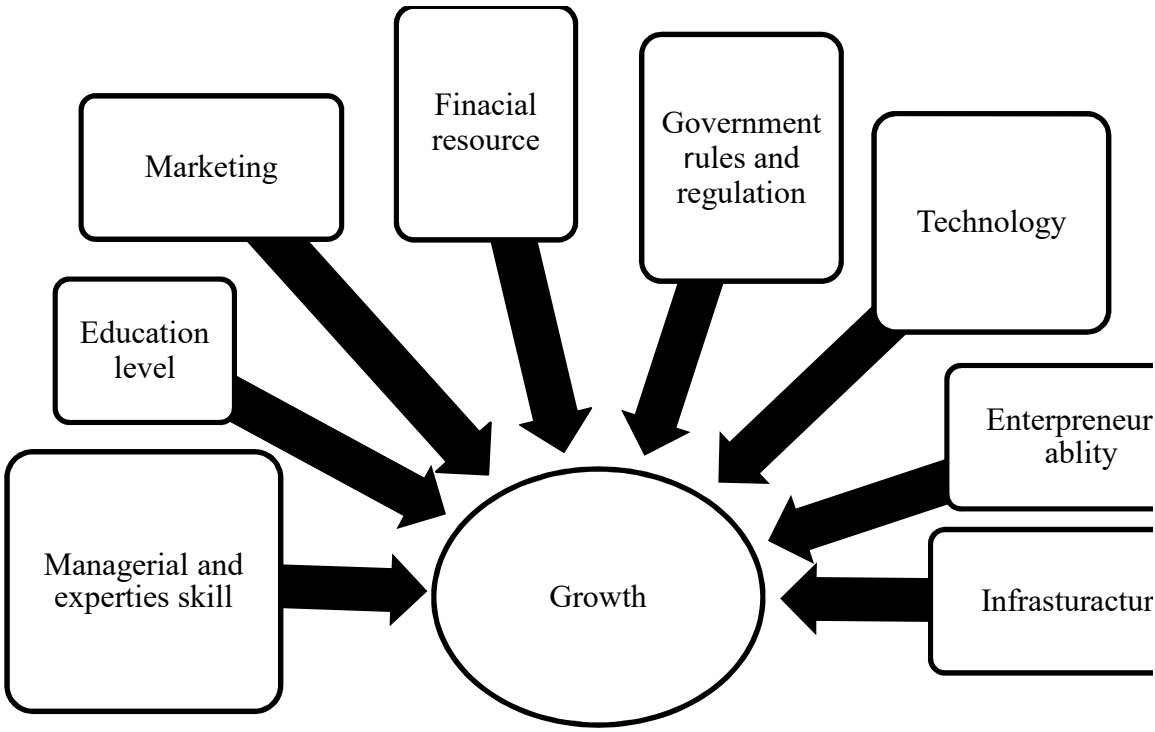

Figure 1: Conceptual framework

Source: Own construction based on literature (2019)

3. RESEARCH METHODOLOGY

The study adopted a quantitative research approach and a causal research design. This types of approach and design are research are appropriate to study the factors that determine growth of MSEs.

There are 1760 MSEs which are registered in Gulelle sub city MSEs Office which are engaged in manufacturing, construction, urban agriculture development, service, agro industry and garment and textile. To select sample of enterprises from the total population of MSEs a stratified sampling procedure was applied. Sampling was done proportional to the size of each stratum so as to get a representative number of enterprises from each sector. The strata

consisted: construction, service, manufacturing, urban agriculture, agro industry and textile and garment under both micro and small scale enterprises. The sample size which are selected from MSEs of the strata is considerers as representative and also large enough for precision, confidence and generalizability of the research findings.

Table 2: Target population

No.	Sector	Micro	Small	Percentage
1	Construction	199	179	19.4
2	Manufacturing	231	221	24.8
3	Service	180	160	20.6
4	Urban agriculture	23	31	2
5	Agro industry	113	103	11.8
6	Textile and garment	170	150	21.4
	Total	916	844	100

Source: Gulelle sub city MSEs Office (2019)

Based on Yemane (1996) sample size determination formula, it was possible to determine the sample size, at 95 % confidence level and 0.05 precision levels. Thus, the total sample size was 326 enterprises. Using proportional sampling technique, 156 were small enterprises and 170 were micro enterprises. Following a similar procedure of proportional to the size of the strata, samples were drawn from each sector.

Data were analyzed by using descriptive and inferential statistics. Descriptive statistics such as frequency, mean and standard division were used. Multiple linear regression was used to examine the variation in the performance of MSEs

in relation to the different levels of each of the explanatory (independent) variables with the aid of Statistical Packages for Social Science (SPSS Version 20). The empirical model specification is presented as follows:

$$\mathbf{Y= \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \epsilon}$$

Where:

Y represents performance measured in growth (Dependent variable),

$X_1 – X_8$ are independent variables such as management and expertise's skill, education level, marketing skill, government support, access to finance, entrepreneurial ability, access to infrastructure, and access to technology.

β_0 represents constant

$\beta_1 – \beta_8$ represent the slope of independent variables

ϵ represent the stochastic error term

The reliability of instruments measures the consistency of instruments. Creswell (2009) considers the reliability of the instruments as the degree of consistency that the instruments or procedure demonstrates. In this study each statements were rated on a 5 point Likert scale (from strongly agree to strongly disagree), and an internal consistency reliability test was conducted. The Cronbach's alpha coefficient for the instrument was found to be 0.92 which ensured acceptable reliability result.

4. RESULTS AND DICUSSION

In this chapter, data collected from sample respondents are presented and interpreted. To facilitate ease in conducting the empirical analysis, the results of descriptive analyses are presented first, followed by the inferential analysis. For the sake of convenience, related questions were treated together. Interview

responses obtained from MSE managers and Gulelle sub city administration officers were incorporated to substantiate the data obtained using questionnaire three hundred twenty six questionnaires were distributed across the six MSE sectors of the Gulelle sub city, out of which three hundred twelve were completed and collected back successfully, representing 95.7% response rate.

4.1 Results of Descriptive Analysis

As indicated in the methodology chapter in Gulelle Sub City Administration up to last June 2019 there are about 916 Micro and 844 Small Business enterprises engaged in six different business sub sectors. As indicated in the sub city MSEs registered book these 1760 enterprises managed to create jobs for about 8,601 individuals and could managed to accumulate and run about birr 238,501,151 capital, Gulelle sub City MSE Development office register book (2019).

Respondents were asked different questions regarding the factors determining the performance of MSEs in Gulelle sub city and their responses are organized in the following manner. There are a number of challenges that determine the performance of MSEs in association with different factors. This part explains the descriptive statistics calculated on the basis of the factors that determine the performance of MSE. The results of measures of central tendency and dispersion were obtained from the sample of respondents and the results are presented in table 3.

Table 3: Descriptive statics of Factors Determining the Performance of MSEs

Variables	N	Mean	Standard deviation
Management and expertise's skill	312	3.19	1.35
Education level	312	3.37	1.32
Marketing skills	312	2.94	1.15
Government support	312	2.46	1.05
Access to finance	312	2.39	0.99
Entrepreneurial ability	312	3.24	1.06
Access to infrastructure	312	2.42	1.04
Access to technology	312	2.66	1.18

Source: Author's analysis result (2019)

From the descriptive analysis it can inferred that management and expertise skill, education, marketing skills and entrepreneurial ability are found moderately in the enterprises surveyed. On the other hand, factors such as government support, access to infrastructure, access to finance and access to technology are below average. In the subsequent section, using a regression analysis, the researcher attempted to examine how these factors determined growth of the enterprises.

4.2 Results from Inferential Statistics

For the purposes of determining the extent to which the explanatory variables explain the variance in the explained variable, regression analysis was employed. The overall model fit of the regression analysis showed that the model predicted 45.5% (adjusted R square=0.454) of the variation in the dependent variables, which means that all the independent variables jointly

explained the performance of MSEs by 45%. The model was significant at p<0.01 level. The independent variables maintained the expected signs, and the results and interpretation of the findings are presented below.

Table 4: Estimation of Multiple Linear Regression Function

Variables	Unstandardized Coefficients		Standardized Coefficients	t value	Sig. level
	B	Std. Error	Beta		0.801
Constant	0.063	0.250		-0.25	0.801
Management	**1.28****	**0.52**	**0.16****	**2.48**	**0.014**
Education	0.082	0.73	0.94	1.12	0.260
Marketing	0.154	0.062	0.182	2.48	0.13
Government	1.41	0.65	0.152	2.16	0.31
Finance	**0.129****	**0.52**	**0.15****	**2.47**	**0.014**
Entrepreneur	0.089	0.068	0.110	1.31	0.19
Technology	**0.038***	**0.023**	**0.10***	**1.646**	**0.10**
Infrastructure	**0.121****	**0.06**	**0.14****	**2.01**	**0.045**

***p<0.01; **p<0.05; *p<0.1

Source: Author's analysis result (2019)

Table 4 presents the estimation results of the explanatory variables included in this study. The result showed that management support, access to finance, access to technology and access to infrastructure were significant in explaining individually the performance of growth in MSEs in Gulelle sub-city. More specifically, management support, access to finance and access to infrastructure were significant at p<0.05. Access to technology was significant at p<0.1 in predicting the variation in growth of MSEs. All the other variables were not

significant in predicting the variation in growth of MSEs individually though they maintained the expected signs.

The standardized Beta coefficient revealed that management skill related factors are the most important variables (Beta=0.16), followed by access to finance, access to infrastructure and access to technology in their respective order of importance. A one unit increase in the management competency of owners of the enterprises will increase growth of the enterprises by a factor of 0.16. Similarly, a one unit increase in access to finance will increase growth of the enterprises by a factor of 0.15; a one unit increase in access to infrastructure will increase growth of the enterprises by a factor of 0.14; and finally a one unit increase in access to technology will increase growth of the enterprises by a factor of 0.1.

5. CONCLUSION AND RECOMMENDATIONS

This research was conducted with the main objective to identify the factors determining the performance (growth) of micro and small scale enterprises in Gulelle sub city. Since the performance of micro and small scale enterprises have a crucial contribution in the economy and it will further reduce the unemployment rate and increase the number of products or services offered to the society. Taking the data analysis and the findings in to account the following conclusions could be reached. The most important factors identified are management and expertise skill factors including: with this regard the study shows division of duties and responsibility among employees are not clear, there are poor organization and ineffective communication, poor selection of associates in business and lack of well trained and experienced employees, insufficient low cost and accessible training facilities and absence of strategic business planning, these factors are the major obstacle for the growth of MSEs.

The main sources of finance or working capital funds for most MSEs are personal savings followed by family and micro finance institutions. The study indicates there is low cash management skill with MSEs operators and Since there is high interest rate and complicated loan application procedures by leading institution, most MSEs have been forced to use the informal institutions for credit. Despite the supply of credit from the informal institutions is often so limited to meet the credit needs of the MSEs. Further this study indicates that the enterprises faces challenges of infrastructure, including power interruptions, sufficient and uninterrupted water supply, business development services, sufficient and quick transportation service and appropriate dry waste and sewerage system. MSEs complain that these factor are needs to be fixed unless, it difficult to operate properly and bring growth for their enterprises. The research clearly illustrates that, even if the degree of those critical factors are not uniform across the sectors, most of the factors are considerably common for all sectors. It has been noted that the factors that are prevalent to the performance of businesses such as management and expertise skill, financial and infrastructure factors had high effect on the performance (growth) of MSEs compared to other factors in the research area.

On the basis of the major findings of the study, the following recommendations are forwarded with the view to improve the contributions of MSEs to the country in general and to the study area in particular.

- To make MSEs competitive and profitable, increase the capacity, knowledge and skill of the operators, experience sharing from successful enterprises, and provision of advice and consultancy, continuous capacity building initiatives and accessibility of relevant management trainings are expected from the government.

- The major sources of finance or funds for most of MSEs operators at the study area are informal sources. The reason for emphasizing on informal sector is that the requirement of collateral/guaranty is relatively rare or none when compared to the formal sectors like MFIs and banks. But the formal sectors are unable to provide/supply enough credit to them as they want. Therefore, the government bodies are recommended to develop sufficient sources of finance for MSEs by organizing and supporting the performance of MFIs and other sources.
- The government through various relevant departments is batter specialize more in taking up a facilitative role. To solve problems of enterprises with regard to infrastructure it is suggested to build water tanker and provide substitutive power generator for MSEs which are found at the same working area in addition it good if accessible and affordable transportation system is provided by the government and constructing sewerage system and place where to burn dry wastages. Working place is a crucial issue to address objectives of MSEs in making accessible product/service to customer and increase the annual revenue. Therefore, giving critical attention is expected from the concerning stakeholders and the government in creating proper working environment.
- Finally, investigating different factors based on the right information are vital for the performance of any business venture. This can be achieved by conducting more researches in related areas. The focus for this study was on the identifying factors determining the performance of micro and small scale enterprise.

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Determinants of Consumer's Brand Preference in Diaper Market, Addis Ababa, Ethiopia

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Abstract

This study is intended to investigate the determinants of consumer's brand preference for diaper products in Addis Ababa. The study adopted causal study design and quantitative research approach. Primary and secondary data were collected. To select appropriate sample size from an infinite population of diaper buyers, an infinite sampling formula was used and 384 respondents were taken randomly. Out of which, a total of 214 completed questionnaires were considered for the analysis. Descriptive and inferential statistics supported by SPSS version 20 were used. The study disclosed that there was moderate relationship between product quality (0.46), peer pressures (0.51), product advertisement (0.44) and product price (0.39). The result also showed that there was a positive and significant effect of product quality, peer pressure, product advertisement and product price on the brand preference of diaper products. Thus, it is essential to study behavioral patterns of consumers which lead to their buying preferences & influence their buying attitude towards diaper product.

Keywords: Brand preference, diaper products, product quality, advertisement, Addis Ababa, Ethiopia

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1. INTRODUCTION

1.1 Background of the Study

The aim of marketing is to know and understand the customer so well that the product or service fits him and sells itself. For that reason, it is very crucial to understand the consumer behavior that is relatively the root for success for marketers. This is due to the fact that consumer behavior is the most focused area in every field of business as well as services (Anjali & Rajesh, 2017). Thogersen *et al.* (2010) stated that research on consumer behavior distinguishes between high-effort and low-effort decision-making processes. Anjali and Rajesh (2017) stated that there are individual determinants to consumer behavior in the form of personality, self-concept, motivation and involvement, learning and memory and attitude of consumers. In general, consumers are influenced by the characteristics of the situation and circumstances surrounding their shopping trip. Major situational influences include the physical surroundings, social surroundings, time, task, monetary conditions, and momentary moods (Hoyer *et al.,* 2013).

On other hand, businesses and social agencies alike frequently succeed in altering behavior by changing attitudes towards a product, service, or activity; and these changes can result in injurious or beneficial consumption decisions (Asiegbu *et al., 2*012). Following such an influence by characteristics, it is usually assumed that consumers are relatively highly involved in the purchase decision (Zanoli, 2002). Mithilesh and Neelam (2014) studied consumers' brand preference that leads to the understanding of the major factors for selecting a product, identifying its main function or benefit to consumers.

Several studies have been conducted in brand choice in different industries. Brand choice may be determined by factors relevant to the nature of product,

size and competition level of the industry. Among these, Dejene (2010) conducted a study on determinants of consumer preferences and found that income has insignificant impact up on quality price trade of among consumers of different income categories. Grimm (2005) claimed that customer preferences reflect three responses. These are cognitive, affective, and conative or behavioral. However, most of studies like Anjali and Rajesh (2017), Hoyer *et al*. (2013), Assael (2006), Dejene (2019) and Grimm (2005) presented inconsistent results and separated psychological, sociological and economic factors from brand preferences. It is necessary to focus on individual differences, social groups, different income group, product advertisement, product quality and ability to pay for products. This is to say our consumer much is different from developed countries and lower income countries. However, as far as the researchers' knowledge, there is a lack of specific empirical evidence that shows factors in determining brand choice of diaper products.

It is understood that diaper demand in Ethiopia has increased from time to time, and it makes the market dynamic and unpredictable. As per interview conducted with shoppers and retailors, marketers conduct excessive advertisement and have transmitted message widely to the market. However, customers doubt the quality and durability of the product. Consequently, consumers cannot shape their preferences among brands using rational attributes. On the other hand, marketing researchers like Anjali and Rajesh (2017) and Hoyer *et al*. (2013) identified specific factors that influence customers' decision making which include product, price and promotions. They found out that customers tend to be loyal to specific company and identified mixed results on the importance of content to customers' choices. Currently, Assael (2006) clarified that wives' choice behavior depends more strongly on their husbands' choice behavior than vice versa. Considering the inconsistency of study results reviewed above, and

lack of specific empirical evidence on the current study tried to investigate the determinants that influence the consumers' buying decision considering diaper products as a specific reference in Addis Ababa.

1.2 Objectives of the Study

The main objective of this study is to identify and analyze the determinants of consumer's brand preferences of diaper in Addis Ababa market, Ethiopia

2. REVIEW OF THE RELATED LITERATURE

2.1 The Nature of Consumer Preference Formation

In the formation of consumer preference, there are two perspectives of preferences. First, consumers have well-defined preferences; this is linked to the archaeology uncovering hidden value. Second, consumers construct their preferences at the time of valuation; they are not simply revealed (Blackwell *et al*., 2001). The construction of preference has been the prevailing theme of behavioral decision theory. The notion of construction highlights the process of judgment and ignores the determinants of preferences, and the processed preference consumers brought to the context or choice situation (Huddleston *et al*., 2001). Consumers generate preferences for the product attributes and maintain them across different contexts while consumers can learn about the structure of the context. These context decision strategies are specific to each context and are not portable (Assael, 2006).

The two perspectives of preference formation are based on extremes, whether consumer preferences are well-defined at one stream or constructed at the other. Consequently, these two perspectives are suggested to be complementary rather than substitutes. It is assumed that the consumer has relatively stable preferences determined by the subjective assessment of the brand attributes. In

consumer behavior study, differences exist between economic theories; based on the normative assumption and consumer rationality, and the information processing theories; based on bounded rationality and regards consumer as a logical thinker. The rational assumption of the economists was then violated by early psychological theories, such as the Engel-Kollat-and Blackwell-EKB model or theory of buyer behavior then adopted the bounded rationality assumption (Huddleston *et a*l., 2001).

2.2 Determinants of Consumer Brand Preference

Consumer Brand Preferences: Consumer brand preference is an essential step to understand consumer choice behavior, and has therefore always received great attention from marketers (Huddleston *et al*., 2001). Brand preferences reveal the type of attributes a brand possesses, to strengthen its position and increase its market share. Moreover, it forms a critical input in developing a company's successful brand strategy, and gives insight for product development (Reham, 2013). Uncovering consumer brand preferences are considered critical input to design successful brand strategy, brand positioning, and gives insights to product development. In addition, understanding brand preferences contributes in building strong brands able to build long-term relationship with consumers (Lamb, 2000). In general, consumer preferences are the subjective tastes, as measured by utility of various bundles of goods. They permit the consumer to rank these bundles of goods according to the levels of utility they give the consumer.

Product Quality: Product quality is one of the marketer's major positioning tools. It is important to note that quality has a direct impact on product or service performance; consequently, it is closely associated to customer value and satisfaction. In the contracted sense, quality can be defined as "freedom from defects." But most customer-centered companies go beyond this narrow

definition. Instead, they define quality in terms of creating customer value and satisfaction (Kotler & Armstrong, 2010).

Demographic Variables: Economic factors constitute the main influence on purchasers as of many theorists. The economic well-being of the consumers is the main consideration. Basically, if consumers have more money, they are likely to spend more (Czellar, 2003). One of the methods of categorizing consumers, therefore, is by income group.

Peer Pressure: Individuals may also have reference groups (social cliques) to which they would like to belong. They may also identify groups with which they would not wish to associate (Asiegbu *et al*., 2012).

Product Advertisement: Advertising plays an important role in the process of moving the goods/services from the producers to the consumers. With mass marketing to distribute the output of production, the GDP (Gross Domestic Product) may increase to a considerable extent (Rahman, 2012). Advertising is efficiently used with at least one other sales method, such as personal selling or point-of-purchase display, to directly move customers to buying action. Advertising is to stimulate market demand (Singh, 2012).

Product Price: Price is actually the sum or amount of money at which a product is valued, or the value which a seller sets on his goods in market. It is affected by total cost, suitable price policy and payment period (John, 2008).

2.3 Empirical Literature Review

Asia *et al*. (2015) studied on determinants of consumer preferences of branded goods and found that due to low income levels more percentage of consumers were using non branded low quality goods as they are cheaper. Results indicated that variable income, education, consumer loyalty, taste, quality, and

advertisement were positively related to the choice of branded tea while price was negatively related to the choice of branded tea. Aswin *et al*. (2012) studied on relationship between Consumer Preferences and Value Propositions based on Study of residential product. They suggested that planned community (gated) concept, security and prestige help to determine consumer preferences to purchase a specific residential product and using property developer suggested additional factors of design, accessibility, facilities and brand also influenced the price of the product. On the other hand, Jivan (2018) studied about affective, cognitive and conative factors and found out that conative (behavioral intention) is most significant, whereas cognitive (belief) is less significant for both local and international coffee shops. In addition, cognitive component has greater variation in attitude score among three components.

Dejene (2019) conducted a study on determinants of consumer preferences in Addis Ababa using consumer behavior literatures and theories. It was hypothesized that disposable income, price, quality, hygiene practices, friendliness, safety of food and range or menu variety are important determinants of consumer choice for restaurants. His finding showed that income has insignificant impact up on quality price trade off among consumers of different income categories. Peneal (2017) assessed the factors influencing consumer buying behavior towards selected fast moving consumer goods (FMCG) in Addis Ababa. This study used various variables such as product quality, price, advertisement, availability, brand equity to inquiry into the buying behavior of consumers in three FMCG products. The study used Kotler's black box model with product quality, price, availability, advertisement and brand equity as independent variables influencing buying behavior. Thus, the study disclosed that advertisement was not accepted as a significantly contributing variable within the buying behavior of laundry bar soap and packaged milk products, while it was one of the significant predictors in the

toothpaste subcategory. FMCG marketers should consider the specific target markets of their different products and brands. The significant strategy or pathway that should be adopted by the FMCG marketers in this environment is to take the issue of brand awareness as one of their top priority. Schoenfelder and Harris (2004) that stated brand preference combines the desired attributes and consumer perceptions; thus, it offers an indirect and unobtrusive way to assess salient attributes.

2.4 Conceptual Framework

The customer is influenced by the above discussed factors in making choices and preferences for fuel stations. There are various specific factors that influence customers' decision making. Customers' needs, price, promotions and loyalty are the factors that influence choice. (Goodhardt *et al*., 1987 as cited by Asiegbu *et al*., 2012).

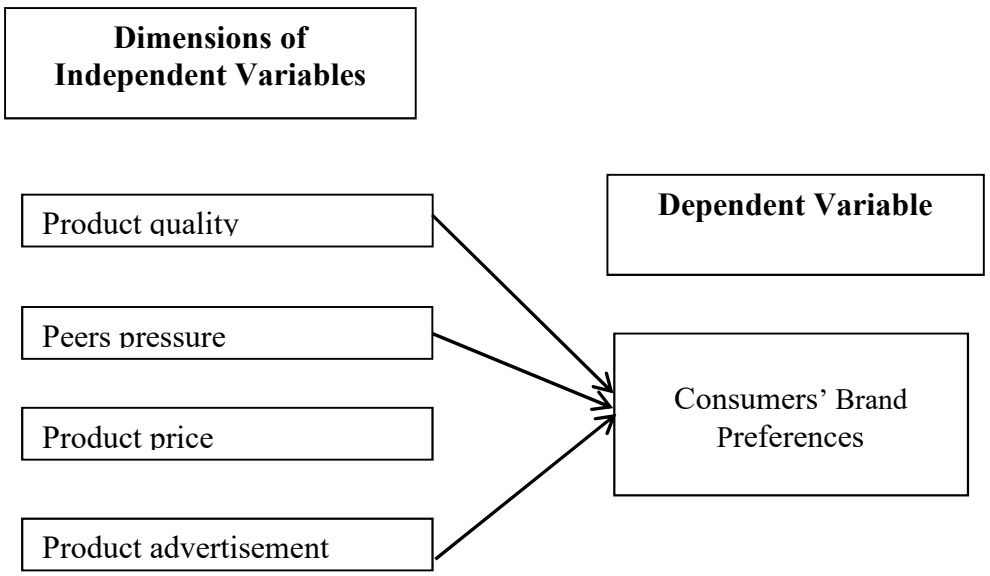

Figure 1: Conceptual Framework of the Study

Source: Adapted from Assael (2006) & Adeolu *et al.* (2005)

2.5 Research Hypothesis

Brand names help consumers identify products that might benefit them. Brands also say something about product quality and consistency—buyers who always buy the same brand know that they will get the same features, benefits, and quality each time they buy. Branding also gives the seller several advantages. The brand name becomes the basis on which a whole story can be built about a product's special qualities (Kotler & Armstrong, 2010).

H_1: Product quality is expected to have positive and significant effect on consumer band preferences for diaper products

Peer pressure has given rise to brand consciousness amongst people from all age groups and classes. Brands may vary from products to incomes. Peer pressure is always going to lead to purchasing; which product, shall be a question to be well answered. Endless products in the market can easily substitute each other (Shruti, 2017).

H_2: Peer pressure is expected to have positive and significant effect on consumer band preferences for diaper products

A study was conducted by Asia *et al*. (2015) on determinants of consumer preferences of branded goods. The study revealed that due to low income levels more percentage of consumers were using non branded low quality goods as they are cheaper. This is clearly indicating that price of the product is affecting consumers brand preference.

H_3: Product price is expected to have positive and significant effect on consumer band preferences for diaper products

Singh (2012) stated that advertising is more than a tool for selling foods and services. It has one overriding task, to position a brand in the prospectus perception or perceptual space in relation to competitors, so as to create distinctiveness and preference.

H_4: Product advertisement is expected to have positive and significant effect on consumer band preferences for diaper products

3. RESEARCH METHODOLOGY

3.1 Research Design and Approach

This study was undertaken to describe the perception of consumers' on brand preference for diaper products and determinant factors. The study also clarified the relationship between consumers' on brand preference and its factors. The researchers investigated the key determinants of consumer preferences in diaper market in Addis Ababa. Thus, the research was conducted using explanatory research design. This study utilized both quantitative and qualitative approach to investigate the determinants of consumers' brand preference and applied mathematical models and statistical techniques for data analysis. For that reason, this study used both qualitative and quantitative methods.

3.2 Data Source and Methods of Collection

As a of source data, this study used both primary and secondary sources. To gather primary data, target respondents specifically diaper product users were approached and some relevant document like prior researches were reviewed as secondary data sources. To gather the required data from the above mentioned sources, a standardized questionnaire was prepared and distributed to the targeted respondents.

It is logical that target population be determined before calculating a sample size. However, the users/buyers of the product under study were assumed to be infinite that made difficult to specify their figure. Hence, a sampling formula used for infinite population was applied to determine the sample size. The formula is:

$n = z^2.p.q / e^2$

Where,

n= sample size; z= the value of standard variation at a given confidence level and to be worked out from table showing area under normal curve; P= sample proportion; q= 1-p and e = given precision rate or acceptable error.

$n = (1.96)^2 (0.5) (0.5) / (0.05)^2$

$= 384$

3.3 Methods of Data Analysis

The data were analysed using descriptive and inferential statistics (correlation and multivariate regression) for examining the determinants of consumers' brand preference. Once the variables are summarized descriptively, multiple Regression was also employed to identify the relationship between the dependent and independent variables. Based on the variables reviewed in the literature part, four variables - Product quality, Peer pressure, Product price, Product advertisement – were considered to be determinants of brand preference. The model specification is given below:

$Y_i = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + e$

Where

Y_i = Consumers' brand preference

The following independent variables were used to determine consumer preference diaper product (Y)

B_0 – Coefficient of constant and B1-4 are the coefficient of independent variable where

X_1 –Product quality

X_2 – Peer pressure

X_3– Product price

X_4– Product advertisement

e is the error term

4. RESULT AND DISCUSSION

4.1. Descriptive Statistics Result

As presented in table 1, the grand mean for Product Quality is4.22 and this indicates that diaper buyers consider quality products as a buying factors. With regard to peer pressure, the grand mean is 4.18 showing the target respondents are influenced by peer pressure. As it has been discussed theoretically product advertisement initiate and remind buyers to consider competing brands in a market. As theabove table indicate, the sample respondents believe the advertisements made by different diaper supplying firms is among the marketing factors initiate them to prioritize diaper brands. This is supported by mean score 4.31. On the same table, consumers confirmed that the priced being charged by different brands and sizes is considered with a mean score of 4.42. Finally consumer preference was found to be a grand mean of 4.36 which shows that consumers feel peace of mind with no worries using their favourite diaper. To sum up, the sampled consumers have agreed on all the mentioned variables with above 4 mean score (Table 1).

Table 1: Results of Descriptive Analysis

Dimensions/Variables	Mean			SD
	Grand	Minimum Items	Maximum Items	
Product Quality	4.22	4.05	4.36	.929
Peers pressure	4.18	3.64	4.43	.950
Product Advertisement	4.31	4.12	4.53	.944
Product Price	4.42	4.34	4.57	.753
Consumer preference	4.36	4.11	4.56	.893

Source: Authors' survey result

4.2 Results of Inferential Analysis

1) Results of Correlation Analysis

Pearson's correlation coefficient (r) is used to measure the strength and direction of a linear relationship between two variables. John (2007) suggested that a low correlation coefficient lies between 0.1-0.29 which can be argued that relationship between the two items is weak or non-existent.

Table 2: Pearson's Correlation Analysis Result

Variables	PQ	PP	PA	PPr	CP
PQ	1				
PP	.586***	1			
PA	.514***	.439***	1		
PPr	.312***	.332***	.337***	1	
CP	.464***	.512***	.440***	.388***	1

***Correlation is significant at the 0.01 level (2-tailed).

Note: PQ= Product Quality; PP= Peer Pressure; PA= Product Advertisement; PPr= Product Price; CP=Consumer Preference

Source: Authors' survey result

Table 2 shows correlation results of the study. Accordingly, the Pearson Product Moment Correlation between product quality (.464), peer pressures (.512), product advertisement (.440) and product price (.388) and consumer preference showed moderate and positive relationship between all variables and consumer preference. Asia *et al*. (2015) who conducted a related study identified that variable income, education, consumer loyalty, taste, quality, and advertisement were positively related to the choice of branded tea while price was negatively related to the choice of branded tea. Aswin *et al*. (2012) determined consumer preferences to purchase a specific residential product using property developer, and they identified additional factors such as design, accessibility, facilities and brand that influenced the price of the product.

2) Results of Regression Analysis

Multiple linear regression analysis was used to measure the statistical significance of the effect of each four individual independent variable on the dependent variable (consumer preference). Before presenting the interpretation of the coefficients it is appropriate to describe the model performance in terms of different diagnostic tests and adjusted R square values. The model was tested for normality, autocorrelation and multicollinearity problems. The results showed that the histogram and the P-P plot behaved as a bell-shaped distribution revealing that the residuals are normally distributed. The Durbin-Watson test for autocorrelation problem showed that the model has a value of 1.869, which is below 2.5 indicating that there is no problem autocorrelation. The Variance Inflation Factor result showed that all the variables had values blow 10 indicating that there is no problem of multicollinearity.

The model summary (ANOVA) result showed that the independent variables jointly and significantly explained the variation in the dependent variable (F= 30.087, p<0.01). The adjusted R^2 value which is 0.67 revealed that the regression model explained 67% of the variation in customer's preferences for diaper product with the remaining 33% is determined by factors unaccounted in this study.

Table 3: Results of Regression Analysis

Variables	Unstandardized Coefficients		Standardized Coefficients	T
	B	Std. Error	Beta	
(Constant)	1.478	.284		5.2***
Product Quality	.119	.059	.147	2.02**
Peer Pressure	.216	.053	.287	4.08***
Product Advertisement	.159	.060	.176	2.64***
Product price	.178	.057	.188	3.12***

Note: Consumer Preference is the dependent Variable
***Significant at p<0.01; **Significant at p<0.05
Source: Authors' survey result

To identify the individual effect of the proposed variables on the brand preference, the unstandardized beta coefficient is used. The above table depicts that Product Quality positively and significantly affects consumer's brand preference by 11.9% at p<0.05. This indicates, as product quality is increased by 1%, customers brand preference for diaper product increase by 11.9 %, keeping all other independent variables constant. Peer pressure is found to be a factor with the highest positive effect, i.e., 21.6% on the dependent variable at p<0.01. As peer influence increase by 1%, brand preference of diaper product responds by 21.6%, again *citrus paribus*. The same result table also indicates positive and significant effect of product advertisement on the diapers brand preference. Statistically, as product advertisement increase by 1% brand

preference responds by 15.9%, *citrus paribus*. Finally, product price has statistically positive and significant effect on diaper brand preference with B = 17.8% at $p<0.05$. When the product price changes by 1%, the brand preference towards diaper products changes by 17.8%.

This study has similar with the outcome of Dejene (2019) who argued that price, quality, friendliness, and variety product and service found to be statistically significant. Other study stated that consumers, in general, are influenced by characteristics of the situation, circumstances surrounding their shopping trip. ICMR (2003) found that most of the studies focused on specific factors such as ethnocentricity, quality price, color scheme, country of origin and others. The equation of multiple regressions is generally built on two sets of variables, namely dependent variable and independent variables. The basic objective of using regression equation on this study is to make the researcher more effective at understanding, describing, predicting, and controlling the identified variables.

5. CONCLUSION

Based on the findings discussed above, the following conclusions are drawn. Consumer choice making or buying process has various stages that include need recognition, information collection, and evaluation of substitutes, purchase and subsequent to purchase assessment. Consumer passes through various stages during every purchase. Consumers are inclined to select a brand that they consider congruent with their self-perception. In this particular way, each consumer at an individual basis tries to reflect his or her own identity through choice. As part of a larger social group when consumer choices incline to converge to a certain pattern, they form the basics of an individual social identity. Similarly, brand preference is viewed as a key step in consumer

decision making, involving elements of choice. In creating brand preference, consumers compare and rank different brands by focusing on their uniqueness defined by brand preference as the extent to which the customer favors the designed service provided by his or her present company, in comparison to the designated service provided by other companies in his or her consideration set, with a thought of referring to brands that a consumer would consider buying in the near future. Also, product quality, peer pressure, product advertisement and product price have a positive effect on consumer brand preferences.

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