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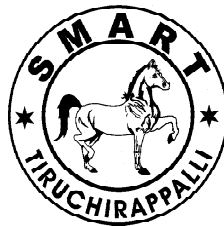**Professor MURUGESAN SELVAM, M.Com, MBA, Ph.D, D.Litt**
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FACTORS INFLUENCING MANAGEMENT DECISIONS OF MANUFACTURING COMPANIES IN ETHIOPIA

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Abstract

This study aims to investigate, factors affecting the management decisions of manufacturing companies, in Ethiopia. The study examined the effects of the accounting information system, managers' level of education, managers' experience, organizational size, environmental factors, corporate culture, pressure and stress, and risk management decisions. The study is descriptive and explorative. It included a sample of 140 manufacturing companies, engaged in wood and pulps production, non-metallic and chemicals, and its product in Ethiopia, and

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a questionnaire was distributed to them. The study revealed significant and positive relationship between accounting information systems, management experience, the management level of education, environmental factor, organizational culture, pressure and stress, risk and management decisions. Further, the risk factor showed a positive and insignificant effect on management decisions. The results also found that there was negative and insignificant degree of relationship between management decisions and organizational size.

Keywords: *Accounting Information, Experience, Organizational Size and Management Decision*

JEL Code: *O1*

1. Introduction

One of the most important factors defining the success or failure of the company is management's decision. Therefore, it is necessary to inspect the decision-making practice and related issues (**Khakheli and Morchiladze, 2015**). Decisions are the spirit of management and active in all the company's plans of activities and results. The study of the decision-making process is getting more and more important because the effectiveness of the activities, taking place in business, depends on the way decisions are primarily designed and implemented. When we look at the nature of decision-making, the constant and always the present factor is the decision-makers (**Omarli and Deborah, 2017**).

Many factors influence the management decision-making process. Frequently, decisions are made, without careful consideration of these factors or their status. Sometimes, one element is so understandable that it overpowers the others. The best decisions result when the factors are defined and then analyzed as a whole. Manager's decision mainly depends on several factors such as the manager's level of education, experience, accounting information system, environment, and organizational size. It should be mentioned that professional managers should be well aware of the responsibility for the decisions made (**Omarli and Deborah, 2017**).

Among business organizations classified globally, manufacturing firms contribute more to the country's economic growth and profitability size, produced within a given period (**Mohammed., 2017**), especially decisions particularly related to environmental protection and resource management (**Alshebami, 2021**). In Ethiopia also, manufacturing sector is among the key productive sectors of the economy, recognized under GTP I (2010-2015), which can spur economic growth and expansion because of its massive potential for wealth creation, employment generation, and poverty mitigation. Their success depends primarily upon management skills and abilities, and these skills can vary widely among different managers (**Tewodros, 2009**). One of the managerial job's critical functions is decision-making and decision-making is considered the primary duty of the top managers in an organization. It is vital that the decisions made by the managers, need to be beneficial to manufacturing companies. But the knowledge regarding management decisions is limited. The impact of determinants, related to decision-making, is unclear. Hence, the study to investigate the key factors, that affect the management decisions, in manufacturing companies in Ethiopia.

2. Review of Literature

An attempt has been made to trace the previous research, conducted on the topic under study. **Nooraie (2012)** investigated the factors, influencing strategic decision-making processes in Abhar Branch, Iran. The study's findings showed that research on contextual factors affecting strategic decision-making process, is either limited or have produced contradictory results, especially studies, relating to decision's familiarity, the magnitude of impact, organizational size, firm's performance, dynamism, hostility, heterogeneity, industry, cognitive diversity, cognitive conflict, and manager's need to achieve strategic decision-making processes. **Mehrotra and Gopalan (2017)** analyzed the factors influencing the strategic decision-making process for the oil/gas industries of UAE. The study reported significant factors, that influence strategic decision-making for UAE Oil/Gas operating companies' international business. **Hovi (2016)** also researched the managerial decision-making and management accounting information in Tecnotree Group. The study reported that the management should have financial information reports available, to support decision-making in many areas. The results also indicated that these reports affect decision-making and management is likely to act, based on the information received.

Ullah et al. (2014) also revealed that there was significant relationship between accounting information and strategic decisions and strategic decisions. **Khakheli and Morchiladze (2015)** reported, in their study, the most critical factors as leadership qualities, the culture of the leader, the environment where the decision is made, certainty, risk, uncertainty, time, and related factors. **Omarli (2017)** disclosed that MIS affects the managerial decision-making process and plays a crucial role in providing a wide range of streamlined options from which decision-makers can make their preferred choices. This ensures that whatever choices are made by decision-makers, the outcome, more often than not, becomes positive. **Becker and palmer (2009)** found negligible difference between the two countries' decision-making, based on countries than initially anticipated. **Tesfaye (2009),** in the study entitled, "Assessment on the use of Management Accounting Information for Decision Making and Management Control: A Case Study of Some Selected Manufacturing Companies in City of Addis Ababa", indicated fair use of management accounting information in manufacturing companies in Addis Ababa. It also showed how managers, who employed management accounting information, were effective in their decision and control. **Legesse (2009)** showed that managers are mostly influenced by the accounting information. Besides, managers' dedication to incorporating accounting information in their decision-making was found to be weak. In other words, managers were not comfortable with making decisions with the type of data being produced. **Gemmechu (2009)** found that the MIS was not up to expectations and it is not automated to support management decisions as well. Managers' decision-making processes, in commercial banks in Ethiopia, were highly influenced by MIS's availability and utilization, to achieve their organizational goals and objectives. From the above literature review and empirical studies, it seems interesting to investigate the most significant factors, that affect the management decisions, in the manufacturing companies of Ethiopia. The conceptual model given in **Figure-1** explains the factors influencing management decisions.

3. Statement of the Problem

The success and failure of business organizations depend entirely on the decisions taken by the management, particularly in developing countries such as Ethiopia. The study

is descriptive and explorative, to investigate the key factors affecting the management decisions, in the Ethiopian manufacturing companies.

4. Need of the Study

This study proposes to provide, a new theoretical framework, on the factors influencing decision-making in Ethiopian manufacturing companies and to offer some practical recommendations, to policymakers to follow and improve the decision-making process.

5. Objectives of the study

To identify the key factors affecting the decision-making process in the Ethiopian manufacturing companies.

6. Hypotheses of the Study

NH-1: There is no significant effect of accounting information systems on management decisions.

NH-2: There is no significant effect of managers' experience on management decisions.

NH-3: There is no significant effect of managers' educational level on management decisions.

NH-4: There is no significant effect of environmental factors on management decisions.

NH-5: There is no significant effect of organizational size on management decisions.

7. Research Methodology

7.1 Sample Selection

There were 1,307 manufacturing firms in Addis Ababa, according to the Central Statistical Agency (2015). The targeted population included three manufacturing sectors, i.e., wood and pulp products and chemicals and hence the total target population was 220 and the sample size was 140.

7.2 Sources of Data

The study included both primary and secondary information. Preliminary data were collected from the questionnaires, distributed to the companies whereas secondary information was obtained from various available sources.

7.3 Period of Study

The study covered the period from 2010 to 2020 but the primary data were collected in 2020.

7.4 Tools used in the Study

The study employed SPSS software and applied the multiple regression analysis and other necessary tests.

8. Data Analysis of Factors Influencing Management Decisions of Manufacturing Companies

Table-1 shows the relationship between management decision as the dependent variable and factors affecting management decision as independent variables. Based on the value of 'r', indicated in the **Table-1**, there was no perfect positive or negative correlation between variables. But there was positive correlation between Accounting Information System (AIS), Management Experience (MAEX), Management Level of Education (MALE), Environmental Factor (ENVTF), Organizational Culture (ORGC), and Risk (RI) Pressure and Stress (PRST) and Management Decision (MADE), which varied between weak, medium and robust relationship among the variables. However, there was weak and negative correlation between Management Decision (MADE) and Organizational Size (ORGSZ), with an R-value of -0.066. It can be concluded that the variation of dependent variables, included in this study, changed in the same direction (positive), with a variation of four independent variables and three control variables and changed in the opposite direction, with one independent variable, which is the organizational size (ORGSZ).

Table-2 shows that the management decision was measured by five independent variables and three control variables, a total of eight variables. It also presents R-value at 0.901, R2 at 0.811 and Adjusted R Square at 0.796. The coefficient of determination revealed that about 90 percent of the variation in management decision, for a sample of 140 manufacturing companies in Addis Ababa city, could be explained by accounting information system, management experience, the management level of education, company's size, environmental factors, organizational culture, risk and pressure, and stress. The remaining 10 percent could be explained by other factors, which were not incorporated in this model. As revealed in **Table-2**, this model significantly determined core factors that affected the samples 140 manufacturing firms in Addis Ababa, Ethiopia. **Table-3** presents the summary results of the variance analysis and F-test statistics for multiple regression analysis of data, processed by SPSS V-21. It revealed a mean square value of 106.853, with a value of F at 53.657, which was significant at 0.000 i.e., the regression model is an excellent fit of the data. F's value was large enough to conclude that the set of independent variables, as a whole, contributed to the variance of management decisions, measured by those factors. Further, it revealed the significance of the multiple regression model, employed for this study. **Table-4** presents the coefficient results of variables, along with their t-value and significance level. According to the result shown, out of eight factors identified as independent variables, six variables significantly influenced the management decision, based on the significance level and the t-statistics and probability values of each variable. The remaining two factors were insignificant, considering its significance, its value computed by SPSS V-21. This minor factor, at 0.05 levels,

included the organizational size with the coefficient value (Beta) of -0.142 and risk with a coefficient value of 0.117. The results revealed that the accounting information systems, managers' experience, managers' educational level, environmental factors, and organizational size, at significance values of 0.000, 0.000, 0.000, and 0.000 respectively, were less than 0.05. According to the decision rule, reject the null hypothesis, if the significance level value was more significant than the significance level value adopted and accept the null hypothesis, if the significance level value was less than the significance level adopted. Hence, **NH-1: There is no significant effect of accounting information systems on management decisions**, NH-2: There is no significant effect of managers' experience on management decisions, NH-3: There is no significant effect of managers' educational level on management decisions and NH-4: **There is no significant effect of environmental factors on management decisions**, were rejected. In other words, there was significant effect of accounting information systems, managers' experience, managers' educational level, and environmental factors on management decisions. The results also revealed that organizational size, with a significance level value of 0.109, was greater than 0.05. Hence **NH-5: There is no significant effect of organizational on management decision**, was accepted. To put it differently, there was no significant relationship between organizational size and management decisions.

9. Findings of the Study

The Pearson correlation results demonstrated the relationship between management decision (dependent variable) and factors affecting management decision (five independent variables and three control

variables). Based on the value of 'r,' there was positive correlation between Accounting Information System (AIS), Management Experience (MAEX), Management Level of Education (MALE), Environmental Factor (ENVTF), Organizational Culture (ORGC), and Risk (RI) Pressure and Stress (PRST) and Management Decision (MADE), which varied between weak, medium and robust relationship. However, there was weak and negative correlation between Management Decision (MADE) and organizational size (ORGSZ), with an R-value of -0.066. The result of Model Summary found that the coefficient of determination at 0.796, indicated that about 90 percent of the management decision of manufacturing firms could be explained by variables, included in the model. This model also revealed the coefficient result of t-statistics and P-value of each variable and their relationship with the dependent variable. This finding demonstrated that the Accounting information system (AIS), managers' experience (MAEX), managers' level of education (MALE), pressure and stress (PRST), and organizational culture (ORGC), reported positive and significant relationship with management decision. There was insignificant effect of organizational size (ORGSZ) on management decision. The study concluded that there was significant effect of accounting information systems, managers' experience, managers' educational level, and environmental factors on management decisions. But there was no significant effect of organizational size on management decisions.

10. Suggestions

The study recommends hiring experienced and highly educated workforce, creating a good relationship with other companies, and using accounting information systems for making the right decision at the right time.

11. Conclusion

The researchers had collected data about factors influencing management decisions, from 140 samples of selected manufacturing companies, engaging in three activities, i.e., chemical, non-metallic, and pulps. The respondents of those selected companies affirmed that their capacity to make decisions was a key criterion for their position as managers. From the discussion and results of respondents' responses above, the study found that they were satisfied with the information provided for making any buy or sell decisions. The findings also indicated that the effectiveness of accounting information system (AIS) was required by various organization users. The study also found that balance sheets, income statements, cost information, and cash flow statements could affect management decisions. The impact of accounting information was frequently reflected in market-related decisions and buy or sell-related decisions. Furthermore, respondents reported that their experience and educational level positively influenced their decision. The respondents' responses had shown that price fluctuation, production and distribution competition, severe regulatory restrictions, age of resources, and unfavorable market demand did affect management decisions. In other words, changes in the price of their production, the competition from other firms and customers or adverse market demand positively influenced manufacturing firms' operation, leading to challenging the managers' decision.

12. Limitation of the Study

The study was an explorative and descriptive study, with a limited sample size and restricted area of the study and hence it may limit its capacity for generalization.

13. Scope for Further Research

The study covered a selected sample of a few manufacturing companies in Ethiopia. Future studies may focus on extending the regions of the research and increasing the sample size. It may also take into consideration the moderation effect of other variables.

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Figure-1: Conceptual Model
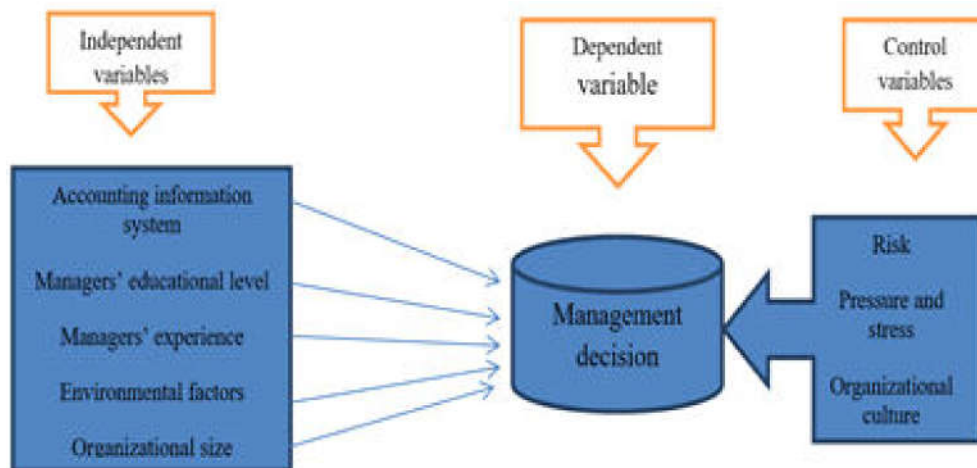
Source: Developed by Authors

Table–1: Results of Pearson Product-Moment Correlation Analysis

		MADE	AIS	MAEX	MALE	ENVTF	ORGSZ	ORGC	PRST	RI
MADE	Pearson Correlation	1								
	Sig. (2-tailed)									
	N	109								
AIS	Pearson Correlation	.357**	1							
	Sig. (2-tailed)	0.000								
	N	109	109							
MAEX	Pearson Correlation	.355**	.499**	1						
	Sig. (2-tailed)	.000	.000							
	N	109	109	109						
MALE	Pearson Correlation	.464**	.391**	.301**	1					
	Sig. (2-tailed)	0.000	0.000	0.000						
	N	109	109	109	109					
ENVTF	Pearson Correlation	.340**	.404**	.364**	.263**	1				
	Sig. (2-tailed)	0.000	0.000	0.000	0.006					
	N	109	109	109	109	109				
ORGSZ	Pearson Correlation	-0.066	-0.020	0.006	0.082	0.166	1			
	Sig. (2-tailed)	0.497	0.834	0.955	0.394	0.085				
	N	109	109	109	109	109	109			
ORGC	Pearson Correlation	.817**	.321**	.363**	.205*	0.139	-0.065	1		
	Sig. (2-tailed)	0.000	0.001	0.000	0.033	0.150	0.499			
	N	109	109	109	109	109	109	109		
PRST	Pearson Correlation	.209*	-0.031	0.079	0.087	-0.055	0.038	0.140	1	
	Sig. (2-tailed)	0.030	0.752	0.417	0.368	0.573	0.696	0.146		
	N	109	109	109	109	109	109	109	109	
RI	Pearson Correlation	.236*	0.050	0.133	0.115	-0.044	-0.140	0.182	0.052	1
	Sig. (2-tailed)	0.014	0.609	0.169	0.232	0.651	0.147	0.058	0.592	
	N	109	109	109	109	109	109	109	109	109

**. Correlation is significant at the 0.01 level (2-tailed). *. Correlation is significant at the 0.05 level (2-tailed).

Source: Primary Data computed using SPSS

Table-2: Result of Model Summary for Analysing the Key Factors of Decision Making Process

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | | Durbin-Watson |
					R Square Change	F Change	df1	df2	Sig. F Change	
1	0.901[a]	0.811	0.796	1.41117	0.811	53.657	8	100	0.000	1.631
a. Predictors: (Constant), RI, ENVTF, PRST, ORGSZ, ORGC, MALE, MAEX, AIS										
b. Dependent Variable: MADE										

Source: Primary Data computed using SPSS

Table-3: Result of ANOVA Test for Multiple Regression for Analysing the Key Factors of Decision Making Process

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	854.823	8	106.853	53.657	0.000[b]
	Residual	199.141	100	1.991		
	Total	1053.963	108			
a. Dependent Variable: MADE						
b. Predictors: (Constant), RI, ENVTF, PRST, ORGSZ, ORGC, MALE, MAEX, AIS						

Source: Primary Data computed using SPSS

Table-4: Result of Coefficients Results for Analysing the Key Factors of Decision Making Process

| Model | | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. | Collinearity Statistics | |
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.080	1.314		2.344	0.021		
	AIS	0.038	0.042	0.049	.885	0.000	0.620	1.614
	MAEX	0.127	0.091	0.075	1.405	0.000	0.659	1.517
	MALE	0.480	0.083	0.283	5.819	0.000	0.799	1.251
	ENVTF	0.312	0.067	0.231	4.629	0.000	0.756	1.323
	ORGSZ	-0.142	0.088	-0.073	-1.617	0.109	0.934	1.070
	ORGC	0.758	0.050	0.737	15.221	0.000	0.805	1.242
	PRST	0.090	0.041	0.096	2.164	0.033	0.953	1.049
	RI	0.117	0.069	0.076	1.695	0.093	0.928	1.078
a. Dependent Variable: MADE								

Source: Primary Data computed using SPSS