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# A COMPARATIVE STUDY ON BUSINESS FACTORS RELATED TO MANUFACTURING FIRM'S PERFORMANCE

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## ABSTRACT

The main goal is to understand the way business factors affect the investment decision making process and business performance. This research undertaken to examine the reasons that manufacturing firms decide to invest on the acquisition of new machinery and equipment in order to improve their infrastructure. It incorporates various factors related to the internal business environment (quality management, investment decisions, supply chain management, etc.)

## INTRODUCTION

An investment decision is a well-planned action that allocates financial resources to obtain the highest possible return. The decision is made based on investment objectives, risk appetites, and the nature of the investor, i.e., whether they are an individual or a firm. Investments are primarily classified into short-term and long-term. Further, they are categorized into a strategic investment, capital expenditure, inventory, modernization, expansion, replacement, or new venture investments. The investment process involves the following steps: formulating investment objectives, ascertaining the risk profile, allocating assets, and monitoring performance.

Avram et al (2009) define the universal Investment as expenditure made now to make gains in future. A company



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has to

invest to be able to develop and stay in the competitive market. Today's investment decision issue is discussed and dealt with by international Institutions like World Bank: European Commission, European Bank for Reconstruction and Development and others. They are the ones who formulate some specific methodologies to manage investment decisions.

The investment expenditures are made to gain profits and they can be done in two ways. Investments can be fix Investments like buildings, machinery or plants; or monetary investments such as stocks, bonds etc. Both forms of Investment can make an enterprise grow. From another point of View, investments can be replacement investments: when a physical asset replaced; or Investments can be net Investments when, to the existing assets, new ones are added. The decision, whether to make an investment or not, depends upon the investor's profit expectation, the cost of the asset and availability to finance the Investment: and how to finance that.

In the present study, a thorough review of the literature is realized. Afterwards, the research methodology employed to achieve the research goals is described. Finally, the presentation of this study's outcomes and main conclusions are stated.

NEED AND SCOPE OF STUDY

The study investigated the investment decision making process in manufacturing firms. The basic aim of the study is to understand the way many factors affect the investment decision making process and to find out how business factors affect firm performance



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## STATEMENT OF RESEARCH PROBLEM

From foregoing the background studies, it is to understand the main goal is to find the factors affect the investment decision making process and business performance. It helps in examining the reasons that manufacturing firms decide to invest on the acquisition of new machinery and equipment in order to improve their infrastructure. It incorporates various factors related to the internal business environment (quality management, investment decisions etc.)

OBJECTIVES OF RESEARCH:

PRIMARY OBJECTIVE

• A comparative study on business factors related to manufacturing firm's performance.

## SECONDARY OBJECTIVES

• To analyze effective type of administration should be applied with the appropriate machinery and equipment investments, in order to improve the machinery itself and the firm's performance as well.

• To find out a positive relationship between firm performance and machinery and equipment investments.

• To find out whether technology can enhance the capabilities of a firm for innovation and environmental culture.

To analyze whether the TQM approach having the strongest impact on performance.

**RESEARCH HYPOTHESIS:** 



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Hypothesis 1

H0:. Machinery and equipment investments" have no positive effect on "Firm performance". H1: Machinery and equipment investments" have a positive effect on "Firm performance"

Hypothesis 2

H0: The adoption of the "just in time" (JIT) approach does not have a positive effect on "firm performance".

H2: The adoption of the "just in time" (JIT) approach has a positive effect on "firm performance"

Hypothesis 3

H0: The making of appropriate "investment decisions" has no positive effect on "firm performance. H3: The making of appropriate "investment decisions" has a positive effect on "firm performance.

Hypothesis 4

H0: There is no positive relationship between "total quality management" (TQM) implementation and "firm performance".

H4: There is a positive relationship between "total quality management" (TQM) implementation and "firm performance".

Hypothesis 5

H0: The right implementation of "supply chain management" (SCM) has no positive effect on "firm performance" .





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H5: The

right

implementation of "supply chain management" (SCM) has a positive effect on "firm performance".

## RESEARCH DESIGN

The researcher adopted the descriptive research design for this study. Descriptive research, also known as statistical research, describes data and characteristics about the population or phenomenon being studied.

## SAMPLE SIZE

Sample size of 52 companies has been taken on responding to the questionnaire. Convenience sampling method was used where the investors were chosen for the purpose of sampling and given a structured questionnaire to respond.

## DATA COLLECTION METHOD

• Primary Data was collected directly from the respondents through questionnaire.

## DESCRIPTIVE ANALYSIS:

In order to obtain conclusive results, hypotheses formulated is tested in the research. This process of analysis that follows description of data to provide conclusive results is called Descriptive analysis. Descriptive statistics can be useful for two purposes:

1) to provide basic information about variables in a dataset and 2) to highlight potential relationships between



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Descriptive Statistics								
Factors	No.of Years	Departments	Type of Company	Position of Person	Count of Employees			
Ν	52	52	52	52	52			
Mean	2.346153846	2.634615385	1.096153846	2.115384615	2.442307692			
Standard								
Error	0.1526157434	0.1554171299	0.04128055233	0.1277896738	0.1563475012			
Median	2	3	1	2	2			
Mode	2	4	1 3		1			
Standard					; e			
Deviation	1.100527777	1.120728862	0.2976782962	0.9215044424	1.127437865			
Sample		3						
Variance	1.211161388	1.256033183	0.08861236802	0.8491704374	1.271116139			
Kurtosis	-1.225074079	-1.32734041	6.199899262	-1.25235545	-1.369436283			
e s		- -			8			
Skewness	0.2707633298	0.1774052431	2.821838242	0.07632896225	0.063747946			



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Test 1- Correlation

Hypothesis 1,2,3 is tested using Correlation method

Since, Variable 1,3 has p value greater than 0.50, the relationship between the variables is stronger, whereas the variable 2,4 has moderate relationship.

VARIABLE - 1		
	Return on assets	logistics
Return on assets	1	
logistics	0.6568301513	1
VARIABLE - 2		
	Return on assets	commercial demands
Return on assets	1	
commercial demands	0.4581410398	1
VARIABLE - 3		
	Return on assets	environmental regulations
Return on assets	1	
environmental regulations	0.5018647201	1
VARIABLE - 4		
	Return on assets	Weather Conditions
Return on assets	1	
Weather Conditions	0.4286904762	1

**H**2

VARIABLE - 1		
	Return on assets	optimum use of materials
Return on assets	1	
optimum use of materials	0.7002786058	1
VADIADIE 2		
	Return on assets	efficiency of production
Return on assets	1	
efficiency of production	0.4496805112	1
VARIABLE - 3		
	Return on assets	frequency of orders
Return on assets	1	
frequency of orders	0.4858392613	1
VARIABLE - 4		
	Return on assets	movement of goods
Return on assets	1	
movement of goods	0.5209110931	1



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Since, Variable 1,4 has p value greater than 0.50, the relationship between the variables is stronger, whereas the variable 2,3 has moderate relationship.

#### Test 2 - (One Way Anova)

#### Test 2 is used for 1,2,3,4,5 hypothesis. Anova: Single Factor H1

1						
ANOVA		- T				
Source of Variation	55	đf	MS	F	P-value	F crit
Between						
Groups	5.360576923	3	1.786858974	1.034040696	0.3785108336	2.648863428
Groups						
	352.5192308	204	1.728035445	а		
Total	357.8798077	207				

Since, the calculated value is more than the tabulated value, null hypothesis is rejected and H1 is accepted. Anova: Single Factor H2

ANOVA						
Source of						
Variation	ss	df	MS	F	P-value	F crit
Between						
Groups	0.2692307692	з	0.08974358974	0.048437977	0.9858503417	2.648863428

Within	1	1 1	Ê.		
Groups	377.9615385	204 1.85275	264		
Total	378.2307692	207			1

Since, the calculated value is more than the tabulated value, null hypothesis is rejected and H2 is accepted.

Anova: Single Factor H3							
ANOVA	[ ]]	1		1			
Source of							
Variation							
	SS	df	MS	F	P-value	F crit	
Between	1.13461538	1	0.37820512	0.213177470	0.887195616	2.64886342	
Groups	5	3	82	8	5	8	
	361.923076	1					
Within Groups	9	204	1.77413273				
	363.057692						
Total	3	207					

Since, the calculated value is more than the tabulated value, null hypothesis is rejected and H3 is accepted.



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FINDINGS:

Through Correlation Method-

H1

Since, Variable 1,3 has p value greater than 0.50, the relationship between the variables is stronger, whereas the variable 2,4 has moderate relationship.So,all the variables in Machinery and equipment decisions tested with firm performance thus correlating and has significant relationship with firm performance.

H2

Since, Variable 1,4 has p value greater than 0.50, the relationship between the variables is stronger, whereas the variable 2,3 has moderate relationship. So,all the variables in Just in Time tested with firm performance thus correlating and has significant relationship with firm performance H3

Since, Variable 3,4 has p value greater than 0.50, the relationship between the variables is stronger, whereas the variable 1,2 has moderate relationship. So,all the variables in Investment decisions tested with firm performance thus correlating and has significant relationship with firm performance. Through ANOVA(One Way Method) –

H1

Since, the calculated value is more than the tabulated value,null hypothesis is rejected and H1 is accepted. So, Machinery and equipment investments have a positive effect on Firm performance.





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#### H2

Since, the calculated value is more than the tabulated value, null hypothesis is rejected and H2 is accepted. So, The adoption of the "just in time" (JIT) approach has a positive effect on "firm performance.

## H3

Since, the calculated value is more than the tabulated value, null hypothesis is rejected and H3 is accepted. So,The making of appropriate "investment decisions" has a positive effect on "firm performance.

#### H4

Since, the calculated value is more than the tabulated value, null hypothesis is rejected and H4 is accepted. So, There is a positive relationship between "total quality management" (TQM) implementation and "firm performance".

#### H5

Since, the calculated value is more than the tabulated value, null hypothesis is rejected and H5 is accepted. So, The right implementation of "supply chain management" (SCM) has a positive effect on "firm performance.

### CONCLUSIONS

Manufacturing firms have a lot of issues to deal with, in order to have a proper environmental operation. These issues are, for example the correct disposal of their waste (biological sewage treatment, water recycling systems, air ionization in production areas), the attempt to save resources (paper, raw materials and water) and the attempt to save energy by using renewable energy sources to cover their energy needs, as well. The cost of these resources,



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however,

is quite high and, at this point, the training cost of the firm executives, regardless of management level, has to be added. In order to materialize these environmental investments, it is necessary to invest significant firm capital, and government grants are a great motive for firms, in order to obtain the necessary machinery.

TQM is a wide perspective that involves several areas, such as customer service management and quality services in total.

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