



MEDIATING ROLE OF VALUE ANALYSIS BETWEEN INNOVATION AND COMPETITIVE ADVANTAGE

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Abstract: Innovation is very important for any organization. It provides opportunity to Organization to penetrate faster in today's global computation. Innovation built help organization to develop better connection with new developing markets. When any organization has innovation then that organization can grow easily in the market. Organization cannot survive the market by using their traditional manufacturing processes because due to new technologies every organization try to provide better quality product with less cost, hence to grow and survive in this competition organization need to use innovative methods and manufacturing processes. Organizations provide new, novel and innovative product to the customers through innovations. Value analysis helps to develop innovation in the organization. Many research found that innovation have positive impact on competitive advantage. Many other research shows that there is positive impact of value analysis on competitive advantage. The objective of this study is to find mediating role of value analysis between innovation and competitive advantage. Result of this study shows that value analysis mediates the relation between innovation and competitive advantage. Results also found that when value analysis mediate between innovation and competitive advantage, indirect effect of innovation on competitive advantage has become significant.

Keywords: Innovation, value analysis, Competitive advantage

Introduction

Innovation plays important role for organization. Organization can grow and survive in the today's global competition due to competitive advantage provided by the innovation. Every organization tries to give better quality product with less cost. Organization use value analysis for value enhancement. Value of the product can be improved by changing materials, design and manufacturing processes. Innovation shows competitive advantage enhancement through increased market shares, increase in profitability and improvement in customer satisfaction. Value analysis helps to improve innovative culture in the

organization. There is paucity of research which shows mediating role of value analysis between innovation and competitive advantage hence this area is selected for study. This study tries to find out mediating role of value analysis which improves organization innovation and competitive advantage.

Literature review:

Tidd et al. (2006) explained that Competitive advantage is necessary to organizations to sustain and grow in the market. Innovation helps to organization to grow in the global market. Innovation helps organization to shorten the manufacturing time and faster new product development in the market. Innovation helps organization to substitute the outdated product with new enhanced product. Innovation gives new developed product which increase sale, market share and increased profit. Innovation also gives opportunity to provide better design and good quality product to the customers with lowest price. Innovation provides products as per the market demand. Customer delighted due to better quality product at lowest cost hence this enhances customer loyalty. Innovation enhances market share, increase in sale, better profit which helps organization to gain competitive advantage. Innovation have positive relation with competitive advantage hence organization should focus on variables of Innovation to achieve enhanced competitive advantage

Martín-de Castro et al. (2013) described that development innovations is important organization's competitive advantage of organization. Expenditures on innovations helps organization for achieving a major part of the market. Innovation helps to enhance competitive advantage through waste reduction, appropriate use of resources. Innovation also boost morale and motivation of employees which gives enhanced performance. Innovation attract and retain talent from the industry which helps to get enhanced performance. Organization can provide goods and services with better quality at lower cost which increases profitability.

Antonio P. & Paulo Á. (2015) described that market globalization force to organizations to invest in innovation on continuous basis. Organization should create culture of value by using different methods of value analysis. Value analysis helps to enhance the value of organization in the market. Value analysis provide alternative to materials, design and manufacturing operations which gives reduced cost and enhanced performance. Value analysis and innovation are go hand in hand. Organization can develop innovative culture through different value analysis techniques. Employees use value analysis techniques which gives them better decision making and enhance their innovative creative thinking.

Chougule M. et al. (2012) explained that value analysis can used in any product for value enhancement. Material, design of component changed to achieve optimum value of the product. Value analysis helps to find out better material, design through functional analysis. Value analysis also helps to reduce inventory and requirement of tools. Value analysis attacks on unnecessary functions and remove that unnecessary functions. Cost reduction can achieved through value analysis which is necessary for organization to improve productivity.

P. Rohilla & A. Goyal (2017) Value Analysis is generally used in automobile sector to maximize the profit by increasing the overall production in plant as well as its demand in the market. Value Analysis used in different sectors to improve the overall efficiency and net profit without sacrificing the product value, quality and customer satisfaction level. So, Value Analysis plays a very important role in maintaining worth of a product in the market. Reliability and durability of the product enhanced and subsequently the profit as well as reputation of the organization improves. Value analysis also leads to the reduction of overall cost of the product manufacturing, Value analysis capable of reducing costs by 25% to 45% or even more without affecting its quality.

From above literature review it is found that innovation and competitive advantage have positive relationship. Value analysis has positive effect on competitive advantage. It is found that there is paucity of research related with mediating role of value analysis between innovation and competitive advantage. It is also found that research related with value analysis is carried out in other industry hence results of that research may not applicable for automobile industry, hence researcher selected this area for study.

Objectives:

- To find out Mediating Role of value analysis between innovation and competitive advantage
- To find out relation between innovation, value analysis and competitive advantage

Research methodology

Researcher used exploratory research design. Primary data collected through structured questionnaire which is collected senior management of production and materials management department of automobile firms located in Mumbai region of Maharashtra. Five point Likert's scale used for all questions of the questionnaire. Primary data collected from randomly selected samples. Total 300 questionnaires have been distributed to senior management of production and materials management department of automobile firms located in Mumbai region. Secondary data collected from related research papers, thesis and books. Cronbach's Alpha is used to find internal consistency of the data. To find Relation between Innovation, value analysis and competitive advantage correlation is used. Mediation role of value analysis between innovation and competitive advantage explained by using wrap partial least square.

Hypotheses:

H₀₁: There is no relation between value analysis and competitive advantage of automobile firms located in Mumbai region

H₀₂: There is no relation between innovation and competitive advantage of automobile firms located in Mumbai region

H₀₃: There is no relation between competitive advantage and innovation of automobile firms located in Mumbai region.

Reliability of data determined by using Cronbach's alpha. If value of Cronbach's alpha is more than 0.5 then data is called as reliable below table shows Cronbach's alpha for each variable of value analysis, innovation and competitive advantage

Sr.No	Factor	Variables	Alpha Value (α)
1	Value Analysis	Alternative better materials	0.81
		Alternative better Design	0.82
		Alternative better Operations	0.86
		Alternative better manufacturing	0.87
2	Innovation	Improved decision making	0.88
		Creativity enhancement	0.92
		Cost reduction	0.82
3	Competitive advantage	Enhanced market share	0.83
		Revenue enhancement	0.90
		Enhanced organization reputation	0.93
		Reduction in waste	0.93
		Increase in Customer satisfaction	0.85

All values are above 0.5 hence data is reliable for the study.

Sr .No	Factor	Mean	S.D	Correlation		
				VA	INV	CA
1	Value Analysis	4.2	0.32	1		
2	Innovation	4.4	0.98	0.84***	1	
3	Competitive Advantage	3.7	0.45	0.64***	0.76***	1

S. D= Standard Deviation, **VA** = Value Analysis, **CA**= Competitive Advantage

INV= Innovation, *** = P= 0.000

From values of the mean innovation is important variable with highest mean 4.4 then followed by variable value analysis with mean 4.2 and last variable is competitive advantage with 3.7 mean. Inter factor correlation between Innovation and Value analysis is 0.84 shows positive relationship. Positive value of inter factor correlation is positive indicate that when one variable increases then another variable also increases. P-value

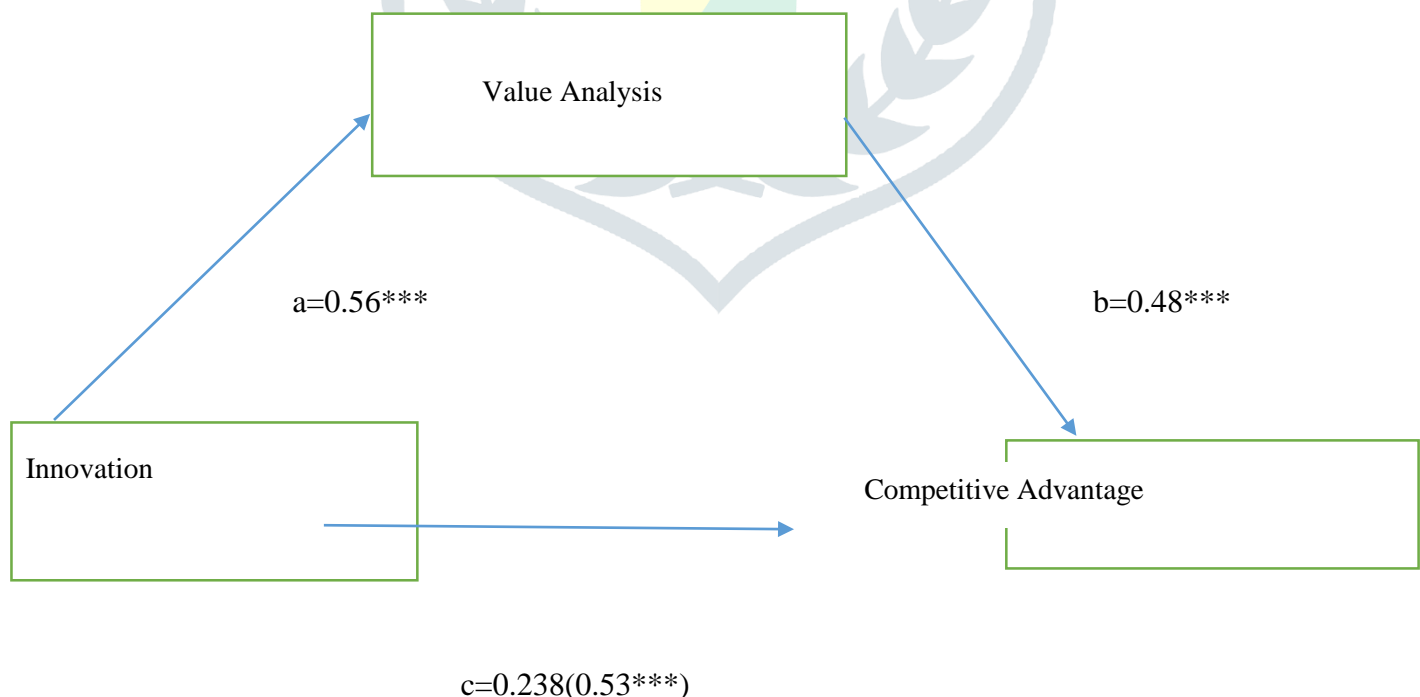
for this inter factor correlation is 0.000. As $P < 0.05$. Relationship between innovation and value analysis is statistically significant. It can be concluded that when value analysis increases, innovation increases.

Inter factor correlation between Competitive Advantage and value analysis is 0.64 shows positive relationship. Positive value of inter factor correlation is positive indicate that when one variable increases then another variable also increases. P-value for this inter factor correlation is 0.000. as $P < 0.05$. Relationship between Competitive Advantage and value analysis is statistically significant. It can be concluded that when value analysis increases, competitive advantage increases.

Inter factor correlation between Competitive Advantage and Innovation is 0.76 shows positive relationship. Positive value of inter factor correlation is positive indicate that when one variable increases then another variable also increases. P-value for this inter factor correlation is 0.000. As $P < 0.05$. Relationship between Competitive Advantage and innovation is statistically significant. It can be concluded that when Competitive Advantage increases, innovation increases.

Mediation role of value analysis between innovation and competitive advantage

Bootstrapping method is used to find mediation role of value analysis between innovation and competitive advantage. Innovation is causal variable and competitive advantage is the dependent variable and the mediator variable is value analysis.



Steps	Path	Estimates	95 % Confidence Interval		Beta	Sig.
			LLCI	ULCI		
1	Innovation— CA (c)	3.86	5.688	12.36	0.53	0.000
2	Innovation— VA(a)	1.66	.302	4.644	0.56	0.044
3	VA—CA(b)	1.22	.353	1.894	0.48	0.010
4	Innovation + VA – CA(c')	1.80	-1.079	.359	0.25	0.265

Effect	Effect size	LLIC	ULIC	Sig
Direct	1.80	-1.07	.35	0.265
Indirect	2.05	.238	.302	0.000

It is observed that there is direct and indirect effect of innovation on competitive advantage. Innovation have significant effect on competitive advantage, $p=0.000$, as $p < 0.005$ with beta value 0.53 without mediating variable value analysis. Innovation have significant effect on value analysis, $p=0.044$ as $p < 0.005$ with beta value 0.56. It is also found that there is significant effect of value analysis on competitive advantage, $p=0.010$, as $p < 0.005$ with beta value 0.48. From table of direct and indirect effect it is clear that when value analysis play mediating role effect of innovation on competitive advantage increased. Direct effect of innovation on competitive advantage 1.80 is insignificant $p=0.265$, as $p > 0.005$ but when value analysis play mediating role then effect of innovation on competitive advantage is significant, $p=0.000$, as $p < 0.005$. Hence it is concluded that value analysis plays mediating between innovation and competitive advantage.

Conclusion

This study shows that value analysis plays mediating role between innovation and competitive advantage. Correlation shows that innovation variables Improved decision making, creativity enhancement and cost reduction has positive correlation with competitive advantage, it is clear that innovation gives competitive advantage. This study also shows that innovation and value analysis gives enhanced competitive advantage. It is suggested that organization should use value analysis with innovation for achieving enhanced competitive advantage. If value analysis is not present as mediating variable relation between innovation and competitive advantage is insignificant but when organization use value analysis as mediator relation between innovation

and competitive advantage become significant hence organization can use innovation with value analysis to get enhanced competitive advantage.

Recommendations

As seen from results that value analysis plays mediating role between innovation and competitive advantage hence, it is strongly recommended for organizations to implement value analysis as mediating variable with innovation to achieve enhanced competitive advantage.

As seen from results Organization can get enhanced innovation by using value analysis hence, it is strongly recommended for organizations to implement value analysis for improvement in innovation.

As seen from results value analysis gives enhanced competitive advantage hence it is strongly recommended for organizations to implement value analysis for improvement in competitive advantage.

Scope for future

There is scope for further study in other states for deeper insight in this study

Cost benefit analysis of value analysis with innovation to improve competitive advantage can be taken as area for further study.

Limitations

Findings may change from industry to industry.

This study considers automobile companies from Mumbai only hence results cannot apply to all geographic locations.

The findings of the study solely based on information provided by respondents.

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