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Analysis of Strategic Success for an Automobile Manufacturing Unit

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Abstract: *Strategies are actions a business takes to compete more aggressively, to acquire additional customers and to operate the company more profitably. A successful strategic plan provides the information and guidance the management team needs to run the company with greater efficiency and help the business reach its full potential. Strategic planning helps managers make decisions based on logical assumptions and a clearer view of the future. Strategic Success of the industry relegated to the profitability, market share, growth and expansion, quality and reliability, labour intensiveness, etc. For accomplishing the success set parameters, the operations strategy links long- and short- term operations decisions to corporate strategy, which is composed of Core Competencies - these are the unique resources and strengths of the organisation, which include workforce, facilities, market and financial know-how, and systems and technology. This work correlates various strategic success issues and sub issues and their reliability based on responses from various industries. Thus helping in knowing the importance of these issues for an automobile manufacturing unit.*

Keywords: *Strategy, Strategic Success, Manufacturing Excellence, Manufacturing Strategy.*

I. Introduction

The word "strategy" comes from the Greek word for "generalship". Like a good general, strategies give overall direction for an initiative. A strategy is a way of describing *how* you are going to get things done. It is less specific than an action plan (which tells the who-what-when); instead, it tries to broadly answer the question, "How do we get there from here?" A good strategy will take into account existing barriers and resources (people, money, power, materials, etc.). It will also stay with the overall vision, mission, and objectives of the initiative. Often, an initiative will use many different strategies--providing information, enhancing support, removing barriers, providing resources, etc.--to achieve its goals.

(<http://en.wikipedia.org/wiki/strategy>). An organization's strategy that combines all of its marketing goals into one comprehensive plan. A good marketing strategy should be drawn from market research and focus on the right product mix in order to achieve the maximum profit potential and sustain the business. The marketing strategy is the foundation of a marketing plan.

(<http://www.businessdictionary.com/>). Developing strategies is really a way to focus your efforts and figure out how you're going to get things done. By doing so, you can achieve the following advantages:

- Taking advantage of resources and emerging opportunities
- Responding effectively to resistance and barriers
- A more efficient use of time, energy, and resources

Developing strategies is achieved by VMOSA (Vision, Mission, Objectives, Strategies, and Action Plans) process outlined at the beginning of this chapter. Developing strategies is the essential step between figuring out your objectives and making the changes to reach them. Strategies should always be formed in advance of taking action, not deciding how to do something after you have done it. Without a clear idea of the how, your group's actions may waste time and effort and fail to take advantage of emerging opportunities. Strategies should also be updated periodically to meet the needs of a changing environment, including new opportunities and emerging opposition to the group's efforts.

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II. Literature Review

Strategic Success in present turbulent times increasingly depends on competitiveness. Competitiveness comes through an integrated effort across different manufacturing functions and deployment of advanced manufacturing technologies. Advanced manufacturing technology plays a major role in quality and flexibility improvements in manufacturing organizations (Dangayach et. al, 2006). The authors provided a picture of maintenance management in Italian manufacturing firms supported by empirical evidence (Chinese and Ghirardo, 2010). The relationship between various factors influencing the implementation of TQM and TPM thus the manufacturing strategies for different approaches in an Indian context: TQM alone; TPM alone; both TQM and TPM together (Seth and Tripathi, 2006).

(Schlie, 2000) raised the issue of company strategies according to regional and global requirements. The presented evidence suggests that there are some valid reasons for companies to follow an eclectic course of regionalization as well as globalization. In the context of the automotive industry, however, the preliminary findings suggest that a car producer should first become a global company, in order to efficiently and selectively regionalize in a second step. Overall, regional strategies could be associated with later, rather than earlier, stages in the evolution of a company's global strategy. (Reed and Walsh, 2000) stated that a strategic approach to technology acquisition will become increasingly vital to manufacturing SMEs, and needs to be recognized as a key competence. (Dangayach and Deshmukh, 2000) A model is proposed linking the manufacturing competitive priorities and the action plan pursued by manufacturing firms. (Lazim and Ramayah, 2010) The author focused on improving equipment effectiveness, productivity, workplace safety and environmental issues. The manufacturing function can be a formidable weapon to achieve competitive superiority. Maintenance has become more challenging in the current dynamic business environment. (Chang *et al.*, 2005) identified the habitual expression modes used by individuals when conveying their desires for product forms.

(Jones and Parker, 2004) the author considered the strategic operations in which the firms have developed and adopted a strategic approach onto how they manage their operations strategically. (Demeter, 2003) described importance of manufacturing strategy (MS) and emphasized many theoretical concepts, frameworks, and models. Intuitively, it seems obvious that a smoothly running production system will have a positive influence on business performance. (Amoako-Gyampah and Acquah, 2008) examined the relationship between manufacturing strategy and competitive strategy and their influence on firm performance. The test how competitive strategy influences manufacturing strategy and also examine the impact that manufacturing strategy and competitive strategy have on firm performance among Ghanaian manufacturing firms. (Lee & Yang, 2011) discussed the effect of organization structure and competition on the design of performance measurement systems (PMSs) and their joint effects on performance. (Terziovski, 2006) compared the strength of the relationship between quality management practice and two key operational performance measures: productivity improvement and customer satisfaction.

(Sharma *et al.*, 2008) proposed a new framework for manufacturing excellence using the comparative analysis of the existing frameworks along with the domain knowledge of the concept of manufacturing excellence. Manufacturing excellence means to be the best in the field at each competitive priority and to demonstrate industry best practices. (Fredriksson, 2004) analysed and compared the internal, supply and customer side conditions that different organizational forms provide for module assembly units' performances. (Zhang *et al.*, 2003) Manufacturing flexibility is strategically important for enhancing competitive position and winning customer orders. It describes a framework to explore the relationships among flexible competence, flexible capability and customer satisfaction. (Singh *et al.*, 2010) described the status of manufacturing enterprises and examined the roles of government policies and strategy development for competitiveness. (Subramoniam Ramesh *et al.*, 2009) stated that the Remanufacturing is an industrial process whereby used products referred to as cores are restored to useful life. (Laosirihongthong and Dangayach, 2005) focused on competitive priorities of companies in India and Thailand manufacturing strategies implementation. The results indicated that competitive priorities of companies in both countries are improving product and process-related quality and on-time delivery.

III. Factors:

Based on the literature studied, following factors have been finalized:

1. Strategy Agility
2. Management
3. Teamwork
4. Administration
5. Interpersonal

IV. Analysis

This section presents the "*analysis and results*" of strategic success of automobile industry. The following classification of the section is based on the analysis performed for attaining the desired objectives of the research study. SPSS 21.0 has been used as the statistical tool for applying various techniques. Various statistical techniques applied in this analysis are: Croanbach alpha, Percent Point Score, Central Tendency and Correlation.

A. Response Analysis

1. Strategy Agility

Table- 1 depicts the performance of manufacturing organizations regarding the Strategy Agility.

Table 1: Response Analysis of the Respondents on Strategy Agility

S. No	FACTORS	No. of Companies Scoring Points				Total No. of Responses (N)	Total Points Scored (TPS)	Percent Points Score (PPS) $\frac{TPS}{4 * N} 100$	Central Tendency TPS/N
		A	B	C	D				
		1	2	3	4				
1	Quality conformance	10	33	60	15	118	316	66.9	2.68
2	Improving Customer Base	9	47	57	5	118	294	62.3	2.49
3	Developing and enhancing Market Share	11	45	42	20	118	307	65.0	2.60
4	Achieving higher profit	7	33	48	30	118	337	71.4	2.86
5	Competitive Pricing of the products	15	48	29	26	118	302	64.0	2.56
(Total Points Scored 'TPS' = A x 1 + B x 2 + C x 3 + D x 4)								65.92	2.64

The close analysis of various issues related to maintenance organization reveals that most of the organizations have generally scored quite low rating (percent point scored 'PPS') regarding major strategy agility issues. The data shows that most of the organizations press for achieving various strategic issues like quality conformance, customer base, competitive pricing, market share, profit. The response analysis results showed that the under strategy agility based on the idea that "*achieving higher profit*" in the organization was given maximum weightage which was followed by the idea based on *quality conformance* and *developing and enhancing market share*. In last almost similar extent of weightage was given in the surveyed organization regarding *competitive pricing of the products*, while least weightage was on the *improving customer base*. The analysis showed regarding the issues based on the strategy agility i.e. *quality conformance* and *improving customer base*, 50.8% and 48.3% of the organizations were implementing them reasonably well whereas 28.0% and 39.8% of the organizations reported that they were implementing them at some extent. On the issue of *development and enhancing of market share*, 38.1% and 35.6% of the organizations were implementing this concept at either some extent or at reasonable level while 16.9% organizations at great extent. *Competitive pricing of the products* concept was implemented at some extent in 040.7% of the organizations, while 24.7% and 22.0% of the organizations were implementing this concept at either at reasonable level or at great extent.

2. Management

Table – 2 portrays the performance of manufacturing organizations regarding the issues related to Management.

Table 2: Response Analysis of the Respondents on Management

S. No	FACTORS	No. of Companies Scoring Points				Total No. of Responses (N)	Total Points Scored (TPS)	Percent Points Score (PPS) $\frac{TPS}{4 * N} 100$	Central Tendency TPS/N
		A	B	C	D				
		1	2	3	4				
1	Enhanced production capabilities and improved control	3	39	49	27	118	336	71.2	2.85
2	Better Production Planning and Control Functions	2	35	54	27	118	342	72.4	2.89
3	Information Flow within departments through intranet	37	24	46	11	118	267	56.6	2.26
4	Information analysis in different departments	32	34	51	1	118	257	54.4	2.18
5	Risk Management	33	49	33	3	118	242	51.3	2.05
6	Crisis Management	25	49	44	0	118	255	54.0	2.16
7	Co-ordination between departments	6	36	52	24	118	330	70.0	2.80
(Total Points Scored 'TPS' = A x 1 + B x 2 + C x 3 + D x 4)								61.41	2.46

The response analysis results showed that the under management parameter of the strategic success based on the idea that "*better production planning and control functions*" in the organization was given maximum weightage which was followed by the idea based on *enhanced production capabilities and improved control* and *co – ordination between departments*. The scope of the *information flow within the departments through intranet* was also given preferences in the organizations, while somewhat equal importance's was also shared in between the concepts based on *information analysis in different departments* and *crisis management*. The least weightage was on the *risk management*. The analysis of the above table showed regarding the issues based on the

management i.e. *enhanced production capabilities and improved control, information analysis in different departments, co – ordination between departments and better production planning and control functions*, 41.0 – 46.0% of the organizations were implementing them at reasonably well rate whereas 29.0 – 33.0% of the organizations on the similar issues pertaining to management was being following them at some extent respectively. Also it was followed that 20.0 – 22.0% of the organizations were implementing the issues of *enhanced production capabilities and improved control, co-ordination between departments and better production planning and control functions*, at great extent.

3. Team Work

Table – 3 represents the performance of manufacturing organizations regarding the Team Work issues. The close analysis of various issues related to maintenance organization reveals that most of the organizations have generally scored quite low rating (percent point scored ‘PPS’) regarding team work issues. The data shows that although most of the organizations have better communication between team members (PPS=68.8), better promotion of products (PPS=68.2) and coordinated efforts for fostering next generation technology (PPS=62.1), some improvement can never the less be suggested for other factors as they have quite low PPS. The response analysis results showed that the under team work parameter of the strategic success based on the idea that *communication and co – operation among the team members and promotions of developed products* in the organization was given maximum weightage which was followed by the idea based on *co – ordinate efforts for the development of the next generation technology and effectively managing process capabilities*.

Table 3: Response Analysis of the Respondents on Team Work

S. No	FACTORS	No. of Companies Scoring Points				Total No. of Responses (N)	Total Points Scored (TPS)	Percent Points Score (PPS) $\frac{TPS}{4 \times N} \times 100$	Central Tendency TPS/N
		A	B	C	D				
		1	2	3	4				
1	Coordinated efforts for Development / fostering of next generation technology	8	45	65	0	118	293	62.1	2.48
2	Transforming a traditional hierarchical organization into a boundary-less organization	27	68	22	1	118	233	49.3	1.97
3	Promotion of developed product	14	29	50	25	118	322	68.2	2.73
4	Culture of Kaizen & Continuous Improvement	37	37	26	18	118	261	55.3	2.21
5	Overall Equipment Effectiveness (OEE) improvement	30	41	28	19	118	272	57.6	2.31
6	Effectively managing process capability	13	57	45	3	118	274	58.0	2.32
7	Enhanced Autonomous Maintenance capabilities	30	48	26	14	118	260	55.1	2.20
8	Communication and Co-operation among team members	8	39	45	26	118	325	68.8	2.75
(Total Points Scored ‘TPS’ = A x 1 + B x 2 + C x 3 + D x 4)								59.3	2.37

It was further inference that 23.0% - 25.0% of the organizations were not implementing the concept based on the team work i.e. *transforming a traditional hierarchical organization into a boundary-less organization, overall equipment effectiveness (OEE) improvement and enhanced autonomous maintenance capabilities*, while on same issues 57.6%, 34.8% and 40.7% of the organizations were following them at some extent respectively. The *Culture of Kaizen & Continuous Improvement*, was either not followed or to some extent in 31.4% of organizations while 22.0% followed at reasonable level.

4. Administration

Table – 4 illustrates the performance of manufacturing organizations regarding the Administration. The close analysis of various issues related to maintenance organization reveals that most of the organizations have generally scored quite low rating (percent point scored ‘PPS’) regarding major administration issues. The data shows that most of the organizations have efficient administration and

management (PPS=71.6), Policy formation (PPS=67.6) and Top level management commitment (PPS=63.1) while some improvement can be suggested for support and encouragement as it has low PPS. The response analysis results showed that the under administration parameter of the strategic success based on the idea that *efficient office management and administration* in the organization was given maximum weightage which was followed by the idea based on *policy formation*.

Table 4: Response Analysis of the Respondents on Administration

S. No	FACTORS	No. of Companies Scoring Points				Total No. of Responses (N)	Total Points Scored (TPS)	Percent Points Score (PPS) $\frac{TPS}{4 * N} 100$	Central Tendency TPS/N
		A	B	C	D				
		1	2	3	4				
1	Efficient office administration & management	5	25	69	19	118	338	71.6	2.86
2	Policy Formation	8	42	45	23	118	319	67.6	2.70
3	Commitment of Top level management	7	61	31	19	118	298	63.1	2.53
4	Support and Encouragement from Top level management	19	54	41	4	118	266	56.3	2.25
(Total Points Scored 'TPS' = A x 1 + B x 2 + C x 3 + D x 4)								64.65	2.59

The analysis of the administrative reforms like *efficient office administration and management* is being followed in 57.6% organization at reasonable level while 21.2% reported it at some extent whereas 51.7% of the organizations reported *commitment of top level management* at some extent whereas 26.3% of the organization were performing it at reasonable level. It was further assessed that 35.0 - .8.0% of the organizations were implementing the concept based on the *support and encouragement from top level management* and *policy formation* at reasonable level while 45.8% and 35.6% of the organization was implementing it at some extent.

5. Interpersonal

Table – 5 outlines the performance of manufacturing organizations regarding the interpersonal. The close analysis of various issues related to maintenance organization reveals that most of the organizations have generally scored quite low rating (percent point scored 'PPS') regarding interpersonal issues.

Table 5: Response Analysis of the Respondents on Interpersonal

S. No	FACTORS	No. of Companies Scoring Points				Total No. of Responses (N)	Total Points Scored (TPS)	Percent Points Score (PPS) $\frac{TPS}{4 * N} 100$	Central Tendency TPS/N
		A	B	C	D				
		1	2	3	4				
1	Self-Confidence of employees	0	30	74	14	118	338	71.6	2.86
2	Stress management	38	43	25	12	118	247	52.3	2.09
3	Waste Utilization	39	60	7	12	118	228	48.3	1.93
4	Multi skilling of workers	28	39	50	1	118	260	55.0	2.20
5	Safety and Health awareness among workers	17	55	34	12	118	277	58.7	2.34
6	Broader Job Perspectives & Employee empowerment	23	46	43	6	118	268	56.8	2.27
7	Self-managed project teams & Problem solving groups	30	31	48	9	118	272	57.6	2.31
(Total Points Scored 'TPS' = A x 1 + B x 2 + C x 3 + D x 4)								57.19	2.29

The response analysis results showed that the under interpersonal parameter of the strategic success based on the idea that *self-confidence of employee* in the organization was given maximum weightage which was followed by the idea based on *safety and health awareness among workers* and *self-managed project teams and problem solving groups*. The scope of the *broader job prospective and employee empowerment* and *multi skilling of*

workers was also given preferences in the organizations, while somewhat equal importance's was given to the concepts based on *stress management*. The least weightage was on the *waste utilizations*. Also on further analysis it was assessed that about 25.0% of the organizations were not implementing the concept of *multi skilling of workers* and *self-managed project teams and problem solving groups*, whereas about 42.0% of the organizations were implementing both these concepts at reasonable levels.

B. Correlation Analysis

Correlation analysis was performed in this section, the purpose was to identify the relationship between each statements within each parameters of the manufacturing competencies. Moreover, the direction of perception was measured by using correlation by assessing statements as all were measured on the same scale. The correlation process was Karl Pearson Correlation with significances level 0.05.

Table 6: Karl Pearson Correlation Matrix for the Strategy Agility

	Strategy Agility - 1	Strategy Agility - 2	Strategy Agility - 3	Strategy Agility - 4	Strategy Agility - 5
Strategy Agility - 1	1	.692**	.276**	.434**	.352**
Strategy Agility - 2	.692**	1	.418**	.425**	.370**
Strategy Agility - 3	.276**	.418**	1	.618**	.672**
Strategy Agility - 4	.434**	.425**	.618**	1	.519**
Strategy Agility - 5	.352**	.370**	.672**	.519**	1

The correlation analysis results showed that the process of strategy agility based on the idea that *quality conformance, improving customer base, developing and enhancing market share, achieving higher profit and competitive pricing of products* was well positively correlated with each other i.e. they had strong and significant positive inter correlation between each other.

Table 7: Karl Pearson Correlation Matrix for the Management

	Management - 2	Management - 3	Management - 4	Management - 5	Management - 6	Management - 7
Management - 1	.642**	.547**	.647**	.430**	.566**	.613**
Management - 2	1	.477**	.438**	.378**	.563**	.441**
Management - 3	.477**	1	.749**	.629**	.610**	.581**
Management - 4	.438**	.749**	1	.534**	.575**	.607**
Management - 5	.378**	.629**	.534**	1	.699**	.577**
Management - 6	.563**	.610**	.575**	.699**	1	.621**
Management - 7	.441**	.581**	.607**	.577**	.621**	1

The correlation analysis results showed that the process of management in strategic success parameter based on the idea that *Enhanced production capabilities and improved control, Better Production Planning and Control Functions, Information Flow within departments through intranet, Information analysis in different departments, risk management, crisis management and Co-ordination between departments* was well positively correlated with each other i.e. they had strong and significant positive inter correlation between each other.

Table 8: Karl Pearson Correlation Matrix for the Team Work

	Team Work - 1	Team Work - 2	Team Work - 3	Team Work - 4	Team Work - 5	Team Work - 6	Team Work - 7	Team Work - 8
Team Work - 1	1	.267**	.472**	.570**	.399**	.447**	.482**	.391**
Team Work - 2	.267**	1	.590**	.430**	.420**	.253**	.221*	.439**
Team Work - 3	.472**	.590**	1	.548**	.392**	.435**	.379**	.483**
Team Work - 4	.570**	.430**	.548**	1	.755**	.635**	.754**	.640**
Team Work - 5	.399**	.420**	.392**	.755**	1	.467**	.773**	.645**
Team Work - 6	.447**	.253**	.435**	.635**	.467**	1	.448**	.685**
Team Work - 7	.482**	.221*	.379**	.754**	.773**	.448**	1	.509**
Team Work - 8	.391**	.439**	.483**	.640**	.645**	.685**	.509**	1

The correlation analysis results showed that the process of team work in strategic success parameter based on the idea that *Coordinated efforts for Development / fostering of next generation technology, Transforming a traditional hierarchical organization into a boundary-less organization, Promotion of developed product, Culture of Kaizen & Continuous Improvement, Overall Equipment Effectiveness (OEE) improvement, Effectively managing process capability, Enhanced Autonomous Maintenance capabilities and Communication and Co-operation among team members* was well positively correlated with each other i.e. they had strong and significant positive inter correlation between each other.

Table 9: Karl Pearson Correlation Matrix for the Administration

	Administration - 1	Administration - 2	Administration - 3	Administration - 4
Administration – 1	1	.264**	.236*	.469**
Administration – 2	.264**	1	.600**	.363**
Administration – 3	.236*	.600**	1	.539**
Administration – 4	.469**	.363**	.539**	1

The correlation analysis results showed that the process of administration in strategic success parameter based on the idea that *Efficient office administration & management, Policy Formation, Commitment of Top level management and Support and Encouragement from Top level management* was well positively correlated with each other i.e. they had strong and significant positive inter correlation between each other.

Table 10: Karl Pearson Correlation Matrix for the Interpersonal

	Interpersonal – 2	Interpersonal - 3	Interpersonal - 4	Interpersonal - 5	Interpersonal – 6	Interpersonal - 7
Interpersonal – 1	.568**	.382**	.497**	.211*	.349**	.653**
Interpersonal – 2	1	.727**	.649**	.592**	.465**	.551**
Interpersonal – 3	.727**	1	.655**	.762**	.484**	.483**
Interpersonal – 4	.649**	.655**	1	.590**	.398**	.535**
Interpersonal – 5	.592**	.762**	.590**	1	.480**	.369**
Interpersonal – 6	.465**	.484**	.398**	.480**	1	.603**
Interpersonal – 7	.551**	.483**	.535**	.369**	.603**	1

The correlation analysis results showed that the process of interpersonal in strategic success parameter based on the idea that *self confidence of employee, safety and health awareness among worker, self managed project teams and problem solving groups, broader job prospective and employee empowerment, multi skilling of workers, stress management and waste utilizations* was well positively correlated with each other i.e. they had strong and significant positive inter correlation between each other.

V. Conclusion

From above analysis it is concluded that the parameters of Strategic Success are highly correlated and they have a high internal consistency. Moreover, from the above analysis it is also shown that the strategic success factors have an important role in performance and achievement of an automobile manufacturing unit.

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