

EVALUATION OF STRATEGY: A CASE OF INDIAN TWO WHEELER INDUSTRY

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Abstract:

Strategy is considered to be response of organization to the business environment for above average return. Strategy is expected to generate better benefits for firm which is in general available to other players in industry. The Indian two wheeler industry has seen major changes in policy regime and performance of major companies. This research tries to measure the effectiveness of strategy of major companies of Indian two wheeler industry.

Strategic performance is measured by various approaches. This research considers the measure approach. It defines strategic performance measure and calculates it for major two wheeler companies operating in India. The performance of 10 years is considered as suitable for assessing strategy of these companies. The measure compares the firm performance with the industry performance and by performance of previous years of same firm. It identifies fluctuation of performance and superiority of performance of a firm.

The results show that Hero Honda is the only firm that maintains the superiority of performance over the industry performance and it shows consistency in increase of performance over the past years. TVS is another company that maintained superiority of performance but its performance has low consistency for performance. Rest all the firms do not enjoy good strategic performance and shall conduct strategic audit.

Key words: Strategy, evaluation of strategy, firm performance,

INTRODUCTION: The rationale for sustained superior performance is the possession of sustained competitive advantages. Therefore, the main task for managers is to find strategies that create, renew, and struggle to maintain competitive advantages, even in hyper competitive contexts (D'Aveni, 1994). For this reason, researchers have mainly focuses on competitive advantage as the dependent variable in explaining the sources of sustained competitive advantage. Wiggins and Ruefli (2002) points out that only a few studies have concentrated on the distribution of performance, or what they call the *topography* of performance.

Studies of the distribution of performance are found in two types of literature, first is the literature on the persistence of profits, which has generally used time series methodologies for analysis, the second type of literature is of the *ex pos* risk measurement.

The second branch of literature is relevant because it is concerned with what economic agents (e.g., firms, managers, and investors) are averse to or which are related to some type of failure in performance, and failure is part of the strategic performance. Secondly, it must be noted that an important part of the literature on risk has an ex post focus, which means that it is actually carrying out an evaluation of realized outcomes. For example, the recent works of Miller and Reuer (1996), Miller and Leiblin (1996), Miller and Bromiley (1996), Ruefli, Collins and LaCugna (1999), and Reuer and Leiblin (2000) run mainly along the lines of ex post risk measurement.

Another interesting feature of this body of research is that it is measure-oriented, which involves the development and evaluation of measures that synthesize *ex ante* or *ex post* performance. The following section describes literature on both of these approaches.

Time Series Approaches: The main body of research on superior performance has been based on autoregressive time series methodologies. These methods were selected because the aim of this part of the literature was to study the dynamism of performance, namely the persistence or decay in performance.

Mueller (1986, 1990) uses this methodology with the purpose of examining the long-term persistence of superior ROA for large US industrial firms. The same type of autoregressive methods are used in studies for US and European firms or strategic business units, with similar findings (e.g. Geroski and Jacquemin, 1988; Jacobsen, 1988; Schohl, 1990; Droucopoulus and Lianos, 1993; Goddard and Wilson, 1996; Waring, 1996).

Mueller and Raunig (1999) use the autoregressive model developed in Mueller (1986) and Geroski (1990) to test whether the results from Structure- Conduct-Performance models estimated at the industry level are sensitive to the degree of heterogeneity of the firms in industries.

Consistent with Mueller (1986) for the US over the period 1950-1972, and Mueller (1990) for six other countries, findings indicate that competitive forces require more than one year to eliminate short-term rents; that persistent differences in performance across firms exist within many industries, that it cannot be assumed that profits observed in an industry at a given point of time are near their long-term equilibrium which, in turn, is not the same for all industries; and that inter-, and within industry variations in profit rates are important in many cases.

Therefore, the existence and persistence of profit differences is still an issue because the empirical findings encounter room for delays or violations of the expected decay in abnormal profits that the economic theory predicts.

In the field of strategic management, Wiggins and Ruefli (2002) have recently made a contribution to the measurement of persistent superior performance. They use a new methodology introduced in Ruefli and Wiggins (2000) to stratify firms in groups of performance, and they investigate the stability over time of pertaining to the higher performance group by means of ordinal time series methods.

Measure-oriented approach or ex post risk method: Many of the models and measures use to evaluate *ex post* risk have been borrowed from financial economics and statistical decision theory. The most traditional approach is the mean-variance model, which presents the mean as a measure of the central tendency of outcomes and the variance as a measure of its variability.

The mean is widely accepted as a valuable description of a series of outcomes, but there is more discussion on the use of the variance, which is often presented as a measure of risk. Alternative approaches have abandoned variance to complement the mean with other measures aimed at considering what decision-makers perceive as risk, such as semi-variance, deviations below a target level or some derivative of a covariance, like the beta of the Capital Asset Pricing Model (Malkiel, 1989).

However, strategy research has identified that reliance on these existing measures of risk may not be adequate for both the concept and the use in management research (e.g., Bettis and Thomas, 1990; Baird and Thomas, 1990; Miller and Leiblin, 1996; Ruefli, Collins and LaCugna, 1999).

It can be considered that, the mean being a measure of the central tendency of a series of performance outcomes of a firm, a measure to complement it, namely *ex post* risk measure, should convey the information of outcomes which is relevant and not related to centrality. In opinion, this should be the temporal dynamics of performance. The dynamic dimension has not been dealt with in literature on *ex post* risk which has largely had a static approach. Only some exceptions on *ex post* risk literature have developed measures which consider dynamism in a measure-oriented approach (Collins and Ruefli, 1992; Fiegenbaum and Thomas, 1990).

An integrative approach is proposed by Emili Grifell – Tatjé & Pilar Marquès – Gou, to integrate the synthesis provided by the measure-oriented approach and the concerns for dynamism, underlying the time series approach by putting forward a two dimensional Strategic Performance Measure (SPM).

The first component of SPM, which they have named Static Performance, will provide a cardinal evaluation of the superior (or inferior) performance attained by a firm. The second component of SPM, named Dynamic Performance, will provide a measurement of the sustainability (or erosion) of performance over time. In this way, the SPM will give information on the dynamism of performance, similar to a time series approach, but it further provides an explicit cardinal measurement of superior performance and its dynamic evolution

Objective:

To evaluate strategy of companies operating in Indian two-wheeler industry

Research Design: According to strategic management point of view a firm's prevalent preference of objective is attaining superior economic performance to that of competitors (Rumelt, Schendel and Teece, 1994), assuming that it is the reward for having competitive advantages (Barney, 1997, Grant, 1998), which firms must achieve and sustain. If competitive advantages are developed and sustained, organizational performance over a period of time shall reflect the same. Thus if strategy is to be evaluated, one can find availability and sustainability of competitive advantage in the performance of organization.

A competitive advantage is to be the source of superior performance for firms, as it provided a strong competitive position (Ansoff, 1965). Later, scholars emphasized on sustainability of superior performance (Porter, 1985; Ghemawat, 1986; Barney, 1991; Conner, 1991; Amit and Shoemaker, 1993; Porter, 1996). This expansion of the concept includes a dynamic issue in strategic point of view, by accepting that only some competitive advantages are difficult to imitate by competitors in the long run and, therefore, can lead to a sustained superior performance over time. Assuming this upgraded objective for firms, Tatje and Gou (2002) proposes a two-dimensional Strategic Performance Measure (SPM) to gauge sustained superior performance by carrying out a double evaluation as:

- i. The degree to which superior performance is obtained, as a result of achieving competitive advantages, and
- ii. The sustainability of this superior performance.

This approach provides analysis of organization on the span of time i.e. on 10 years of time span. This approach also works on ultimate outcome, which is firm performance. Performance of firm is an outcome of right kind of strategy selection and effective and efficient strategy implementation. Thus both major issues i.e. selection of strategy and implementation of strategy are taken care. Based on these reasons, researcher has used measure based approach.

The description of measure of strategy evaluation: Theoretically strategic performance measure can be explained by following.

- Static Performance measure
 - Dynamic performance measure
 - Strategic performance measure.
- i. **Static performance measure(SP):** The measure of static performance for a firm i in a period comprised between 1 and n is the mean value of δ_{it} where $t=1$ to n

$$SP_i(1,n) = \frac{1}{n} \sum_{t=1}^n \delta_{it}$$

Where

$$\delta_{it} = X_{it} - X_t^{\text{ref}}$$

Where X_{it} is performance outcome of firm i in year t and X_t^{ref} is the reference level of performance. For all practical purposes it is considered as industry performance.

If $SP_i > 0$, the firm has achieved a superior performance because its outcomes have been, on average, above the reference level. If $SP_i < 0$, the firm has not shown superior performance because outcomes have

been, on average, below reference levels, and if $SP_i = 0$, the firm has had, on average, the same outcomes as the reference, showing neither an advantage nor a disadvantage.

Dynamism of Performance: The property of dynamism is meant to reflect the sustainability of superior performance, i.e., the maintenance or the erosion of the advantage in performance. Therefore, the measure should increase if outcomes positively deviate from the reference levels, i.e., when δ_{it} increases over time, and should decrease if outcomes negatively deviate from the reference levels, i.e., when δ_{it} decreases. The measure of dynamic performance will be defined to incorporate this property.

Let z_{it} be the comparative performance change from period t-1 to period t as:

$$z_{it} = \delta_{it} - \delta_{it-1}$$

If $z_{it} < 0$, the firm has suffered an erosion in its outcomes relative to the reference levels in this transition from t-1 to t, failing to achieve any objective of sustainability. If $z_{it} = 0$, the firm has maintained its position relative to reference levels, whatever it is. If $z_{it} > 0$, the firm has improved its position, meeting its dynamic objective to improve performance over time. The aggregation of that behavior over time is carried out in the measure of Dynamic Performance (DP).

ii. **Dynamic performance measure (DP):** The measure of dynamic performance for a firm i in a period comprised between 1 and n is the mean value of it z from t=1 to n:

$$DP_i(1,n) = (1/n) \sum_{t=1}^n z_{it}$$

$$\text{Where } Z_{it} = \delta_{it} - \delta_{it-1}$$

If $DP_i < 0$, the firm has, on average, suffered an erosion in its outcomes relative to the reference levels over this time-period, failing to achieve the objective of sustainability. If $DP_i = 0$, the firm has maintained its position relative to reference levels in the period under analysis. If $DP_i > 0$, the firm has, on average, improved its position, meeting its dynamic objective to increase performance.

However, the strategic evaluation of performance implies the integration of both evaluations to measure the degree of achievement of the objective of attaining a sustained superior performance. For this reason Strategic Performance Measure is as follows:

iii. **The Strategic performance measure:** (SPM) is a two-dimensional measure which evaluates the degree to which a firm has achieved sustained superior performance, assessing its relative position by means of the measure of Static Performance (SP_i) and the temporal dynamics of the relative performance by means of the measure of Dynamic Performance (DP_i).

$$SPM = SP_i + DP_i$$

Research Methodology: The strategic performance measure proposed by Tatje and Gou is used for evaluation of strategy of organization.

Unit of analysis: Individual Company or strategic business unit operating in the area of two wheeler manufacturing is used as unit of analysis. Reason for this selection is based on fact that strategy is implemented on the SBU level and performance of SBU is the direct outcome of strategy selected.

Source of information: Secondary data showing the performance of firm is to be used. For this World Wide Web and corporate annual reports are used.

Sampling design:

- i. **Population:** Population in this case is the total no of organizations or strategic business units operating in two wheeler market.

Almost all major organizations or strategic business units are considered for study, so there is no need for developing sampling design further.

Data collection tools and method: The relevant data is collected and placed in researcher diary. Survey of sources of data is carried out. The list of sources of secondary data is placed in bibliography.

Calculation of measure of strategic performance/ data analysis tool: This study uses measure for strategic performance evaluation proposed by Tatje and Gou. In this, there is calculation of strategic performance measure (SPM). This is to be based on the performance of the firm over a substantially long

period or strategy implementation period. For current study performance of the firm is considered as the over all sales in the given period. Thus sales data for 10 years i.e. from 1993 -94 to 2003-4 is used. Calculation of this measure needs reference performance also. In present study, industry sales figures are used as reference performance. Thus the data is analyzed in reference to strategic performance measure. The strategic performance measure for all the organizations, in the study is calculated and strategic performance is interpreted from this analysis.

Evaluation of strategy: Researcher has used strategic performance measure, for evaluating strategies of major companies of Indian two wheeler industry.

The out come of this research shall show the static performance, which describes the degree of achievement of superior performance as well as dynamic performance, which captures the trend of superior performance over a period of time, i.e. sustainability of performance over time.

The period under analysis is, of ten years from 1994 – 2004. The Strategic Performance Measure (SPM) is computed using the industry sales figure as the reference. The firm-level data is obtained from annual reports of companies and industry data from reports of Society of Indian Automotive Manufacturers (SIAM).

Data analysis by calculation of SPM: Strategic performance measure is calculated on the basis of absolute sales figures of companies and industry. The methodology presented in chapter 4 is used for the calculation. The calculation is placed in appendix 8. The table 6.3 presents the values of SPM.

Table 6.3
Calculation of static, dynamic & strategic performance measures

	Bajaj	Kinetic	Escort	HH	TVS	LML
Spi	-0.05627	-0.037	0.0155	0.20	0.0627	-0.086
Dpi	-0.01585	0.3879	-0.045	-0.000375	-0.04875	0.031
SPM	-0.07212	0.3509	-0.0295	0.199625	0.01395	-0.055

Results: The results of computing the SPM shows that, the sustained superior performance exists for two firms in over all ten years. Hero Honda is the only firm, which keeps its SPM maintained for sustained superior performance. This is an exceptional case. Another firm succeeded in maintaining performance is TVS, though the level of performance is fluctuating. Remaining all firms has shown erosion of performance between the years 1994-2004.

This SPM also predicts that, competition will increase further. This will lead towards promoting competitive moves, innovation, and increased dynamism in the industry. This situation will increase the possibility of transitions between performance states i.e. from superior performance to inferior performance, and vice versa, some firms will be able to build competitive advantages.

The results clearly indicate that strategy of Hero Honda is good and successful in developing and maintaining competitive advantage. TVS has also successful in developing right kind of strategy to respond to environmental changes. But Bajaj in last so many years could not find right kind of strategic responses. Their performance has shown continuously negative trend. Kinetic has two years of exceptional performance, else this company also registering continuous erosion of performance. Other players are also loosing in the market.

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Appendix 3**Calculation Of Strategic Performance Measure**

The methodology presented in chapter 4 is used for calculating SPM. The steps for calculation are as below.

Table A3- 1
Calculation of sales growth rate for four of the companies

Year	Bajaj Total	GR	Kinetic	GR	% growth rate	Escort	GR	% growth
2003-04	1,198,700	0.000176	200,191	72,222	0.56	231,767	-25,075	-0.09
2002-03	1,198,489	0.15	127,969	-56,750	-0.30	256,842	56,397	0.28
2001-02	1034536	0.075	184719	-96,786	-0.34	200445	27,338	0.15
2000-01	962,225	-0.11	281,505	-1,234	0.000436	173,107	-78,830	-0.31
99-00	1,093,309	0.064	282,739	30,565	0.120	251,937	80,668	0.47
98-99	1,027,480	0.031	252,174	-15,638	-0.05	171,269	-20,599	-0.10
97-98	995,916	-0.081	267,812	-1,574	-.000587	191,868	-44,901	0.23
96-97	1,084,720	0.0058	269,386	-891	-.000303	236,769	29,763	0.14
95-96	1,024,725	0.12	270,277	54,597	.25	207,006	45,205	0.27
94-95	908,257		215,680			161,801		

Table A3- 2
Final Growth Rate For remaining companies

HH	GR		TVS Total	GR		LML	GR		Industry	GR	
2,033,649	378,946	0.22	1118603	9490	0.000856	196382	11906	0.006	5364994	490750	0.10
1,654,703	340,421	0.25	1109113	309422	0.386	184476	26328	0.16	4874244	1015782	0.26
1314282	284,651	0.27	799691	-65156	-0.075	158148	-49842	-0.23	3858462	109008	0.02
1,029,631	267,931	0.35	864,847	29086	0.034	207,990	-74911	-0.26	3,749,454	-43517	-0.01
761,700	283,547	0.59	835,761	160126	0.23	282,901	-45999	-0.13	3792971	556885	0.17
478,153	70,590	0.17	675635	99210	0.17	328900	20444	0.06	3236086	193231	0.06
407,563	138,627	0.51	576425	61140	0.11	308456	32145	0.11	3042855	77366	0.029
268,936	38,742	0.16	515285	104454	0.25	276311	36958	0.15	2965489	307203	0.11
230,194	46,523	0.25	410831	120992	0.41	239353	39913	0.20	2658286	449016	0.20
183,671			289839			199440			2209270		

Year	Bajaj	Kinetic	Escort	HH	TVS	LML	Industry
2003-04	0.000176	0.56	-0.09	0.22	0.000856	0.006	0.10
2002-03	0.15	-0.30	0.28	0.25	0.386	0.16	0.26
2001-02	0.075	-0.34	0.15	0.27	-0.075	-0.23	0.02
2000-01	-0.11	0.000436	-0.31	0.35	0.034	-0.26	-0.01
1999-00	0.064	0.120	0.47	0.59	0.23	-0.13	0.17
1998-99	0.031	-0.05	-0.10	0.17	0.17	0.06	0.06
1997-98	-0.081	-0.000587	0.23	0.51	0.11	0.11	0.029
1996-97	0.0058	-0.000303	0.14	0.16	0.25	0.15	0.11
1995-96	0.12	.25	0.27	0.25	0.41	0.20	0.20
1994-95							

Average Industry Growth = $0.939/9 = 0.104 \times 100 = 10.4\%$

Table A3- 3
Calculation δ_{it} & Z_{it}

Year	Bajaj		Kinetic		Escort		HH		TVS		LML	
	δ_{it}	Z_{it}	δ_{it}	Z_{it}	δ_{it}	Z_{it}	δ_{it}	Z_{it}	δ_{it}	Z_{it}	δ_{it}	Z_{it}
2003-04	-0.0992	0.149	0.46	0.86	-0.19	-0.37	0.12	-0.03	-0.09	-.376	-0.04	-0.0006
2002-03	0.05	0.075	-0.4	0.04	0.18	0.13	0.15	-0.02	0.286	0.461	.06	-0.27
2001-02	-0.025	-0.235	-0.44	-0.35	0.05	0.46	0.17	0-08	-0.175	-0.109	0.33	-0.033
2000-01	-0.21	-0.174	-0.09	-0.11	-0.41	-0.78	0.25	-0.24	-0.066	0.196	-0.36	0.59
1999-00	-0.036	-0.105	0.02	-0.13	0.37	0.57	0.49	0.42	0.13	0.06	-0.23	0.27
1998-99	0.069	0.25	0.15	0.255	-0.20	-0.33	0.07	-0.34	0.07	-0.03	-0.04	-0.05

1997-98	-0.181	-.0868	-0.105	-0.0002	0.13	0.09	0.41	0.35	0.10	-0.05	0.01	-0.0399
1996-97	-0.0942		-0.1030	0.253	0.04	-0.13	0.06	-0.09	0.15	-0.181	0.05	-0.15
1995-96	0.02		0.15		0.17		0.15		0.3		0.1	
1994-95												

Table A3-4**Calculation of static, dynamic & strategic performance measures**

	Bajaj	Kinetic	Escort	HH	TVS	LML
Spi	-0.05627	-0.037	0.0155	0.20	0.0627	-0.086
Dpi	-0.01585	0.3879	-0.045	-0.000375	-0.04875	0.031
Index	-0.07212	0.3509	-0.0295	0.199625	0.01395	-0.055