Strategic Intelligence and Business Performance: A Study of Indian Pharmaceutical Industries

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Abstract

Purpose: This study's main objective is to examine how strategic intelligence affects the pharmaceutical industry in India in terms of their ability to perform financially.

Design/Methodology/Approach: Managers working at the middle-level in 15 Indian pharmaceutical industries were considered as the population of this research study. A total of 200 middle-level managers were approached, and they were all sent a questionnaire. A total of 148 responses were obtained after three follow-ups, for a response rate of 74 percent. To evaluate the connection between strategic intelligence and business performance, the author used Karl Pearson's correlation. The amount of variance in business performance that can be explained by strategic intelligence was calculated using simple regression.

Findings: The business performance of the Indian pharmaceutical businesses is benefited by strategic intelligence.

Research limitations/ Implications: Only middle-level managers were polled, and senior-level executives from a few Indian pharmaceutical companies were excluded. A double source approach may be used in future studies. Furthermore, the author's ability to generalize his findings is limited by his attention on only 15 Indian pharmaceutical industries.

Practical implications: The author suggests that a data centre or repository be established to centrally store useful data/information that can be used by senior managers to make strategic decisions.

Originality/value: This paper fills a void in the strategic management literature in the pharmaceutical industry, where empirical researches on the impact of strategic intelligence on business performance have been scarce.

Keywords: *Strategic Intelligence, Business Performance, Pharmaceutical Industry, CAGR, Strategic Management*

Introduction

The Pharmaceutical industry of India has been growing, with a turnover of US $ 1 billion in 1990 increasing to US $ 30 billion in 2015 out of which export turnover to 200 countries was US $15 billion ("Pharma Industry Promotion | Department Of Pharmaceuticals"). The Indian pharmaceutical market has shown compound annual growth rates (CAGR) of over 15% over the past five years and has substantial opportunities for growth. It is estimated that the Indian domestic pharma industry's CAGR will be 8-11% in the FY 2020-2023 (Jayakumar, 2020). However, businesses will have to reconsider their business strategies for the industry to maintain this robust growth rate. Strategic Intelligence is the tool through which this growth can be achieved. Strategic Intelligence (SI) roots can be traced back to the military, but the principle of SI can be used in all organizations to make better strategic decisions (Liebowitz, 2006). Strategic intelligence can be described as the

detailed and wide research of risks, threats, and opportunities through data analysis to make future programs, development plans, and policies (McDowell, 2009).

To serve their changing customers faster and better, organizations will have to embrace new business models and think of creative ideas as well as a well-designed strategy to enhance performance and effectively face the competition. A strategy is an essential and constructive strategic management tool that is specifically defined based on business nature. It is vital for an organisation to analyse internal capabilities and the external environment to generate the information for strategic decision making. *Information* is the one thing that encircles and acts as a pillar for strategy and strategic management.

A critical element of *information* must be evaluated strategically and/or *intelligently* before it is applied for the good of the company. The company needs timely and reliable information to develop and execute the plan to face the challenges posed by rivals in today's rapidly evolving business climate. Thus the need for intelligence for strategic implementation has led to the emergence of the concept of *Strategic Intelligence*. It is not a modern form of the practice of analytics. With a known history that goes back more than two millennia, it is a well-established type of intelligence crafts. However, despite this, its adoption in modern compliance practice is comparatively recent, and its growth is still sluggish and patchy even now in the early twenty-first century (McDowell, 2009). Strategic intelligence is a collection of actions and procedures for defining, interpreting, analyzing, and evaluating all business data to achieve a specific set of objectives, with an emphasis on strategic planning concerns for an organization (Sternberg, 2004).

A large volume of data or raw form of information is handled by various industries, collected from various sources, including a diverse customer base, vast networks, and shareholders, etc. The data collected must be evaluated to determine the future course of action and to extract real business value from this data, the right tools are required to capture and organize a wide range of data and easily analyze it in the sense of all enterprise data (Dijicks, 2012). As social trends and the competitive nature of the business world continue to evolve, in reaction to any changes in the market, strategic reformulation is often carried out regularly (Hitt and Duane, 2017). The provision of information and strategic formulation constitutes strategic intelligence.

Strategic intelligence is about putting the best knowledge at the right time in the guardianship of the appropriate individuals so that they would be in a great position to make more strategic choices for the future of the business. Information is therefore the base for strategic intelligence. Employees would struggle to make effective decisions to gain and maintain market leadership if they do not have access to the right information. By managing and applying knowledge, companies with effective strategic intelligence processes can better anticipate and respond to future changes or opportunities. The scarcity of research for this topic in the pharmaceutical industries of India has motivated us to select the present study.

Literature Review

In 1967, the concept of intelligence was proposed by Wilensky (American Professor) for the first time and stated that Intelligence refers to the gathering and processing of data to ascertain the right organization. It also concluded that the organization's effectiveness and productivity depend on the use of information and support by intelligence to promote the application of intelligence agencies and businesses (Azma et al., 2012, Baei et al., 2017). Abuzaid (2017) concluded that strategic intelligence influences entrepreneurial orientation positively. Based on the findings of the report, to ensure the effective execution of its entrepreneurial orientation, companies need to adopt and foster strategic knowledge within it and thereby realize greater business efficiency, improve their competitiveness and

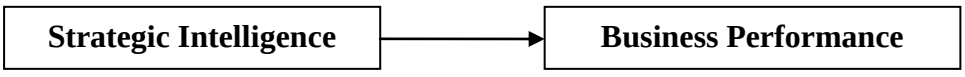
distinguish themselves from their competitors. The upper level personals of the 36 varied financial services companies in Jordan that are listed on the Amman Stock Exchange were chosen as the study's sampling unit. A self-structured and constructed questionnaire was administered to collect the data and multiple regression analysis was used to test the hypotheses. Baei et al. (2017) analyzed the relationship between managers' strategic acumen and the organisational growth in Iranian government agencies. To fulfill the purpose of this, the descriptive study was considered and 493 employees from a total of 920 populations were selected using the simple random sampling technique. The data were obtained using two standard questionnaires with validity (0.84) and (0.83) for strategic intelligence and organizational development. To analyze the data, SPSS@22 software was used (including Durbin-Watson, multiple regression, and variance test analysis). It was found from the study that the manager's strategic acumen and the OD have a favourable relationship. Additionally, it was shown that while some facets of strategic intelligence, such as knowledge, wisdom, and practical intelligence, have a significant association with OD, there is little to no correlation between emotional intelligence and creativity and innovation. Keikha et al. (2016) investigated the strategic managerial intelligence's effect on staff performance in Zahedan's private banks. 500 employees of the Zahedan's private banks were considered as population and 217 employees were selected as sample units of analysis using stratified sampling methods and Cochran's formula for this descriptive study. Variables namely strategic intelligence and employee performance were measured. The internal consistency (0.82 and 0.84 respectively) of both the instruments was calculated. Statistical techniques such as one-variable regression, stepwise regression, and structural equations modeling were used and findings showed that strategic intelligence and all its facets have a significant effect on employees' performance. Further, all three facets of strategic intelligence can predict employees' performance, according to the stepwise regression study. Finally, structural equation modeling showed that the causal relationship between strategic intelligence and employee performance is appropriately causal to a satisfactory degree. The relationship between the philosophical mindset of the manager and strategic intelligence was examined (Omidifar and Radmehr, 2016). Descriptive and field survey methods were adopted. In the SAIPA Kashan Automotive Company, the study population consisted of 90 (high, intermediate, and operational) managers and the sample size, provided that the population size is small. In this study, the hypothesis was evaluated using SPSS and AMOS statistical software. The test results analysis revealed a substantial association (0.757) between philosophical outlook and strategic intelligence. At the Iranian University of Applied Science and Technology in 2015, Pourdjam, Siadat, and Rajaeepour discussed the relationship between organizational information and strategic intelligence. The study was based on research designs' typological parameters. Using stratified random sampling methods, a sample size of 236 individuals was determined from the study population of 591 employees. Data was collected using a 108-item, 5-point likert scale with internal consistency of 0.93. Based on regression coefficients and suitable model indices, the data was analyzed using stepwise regression and structural equation path analysis. The findings revealed that organizational wisdom has a significant relationship with strategic intelligence, as determined by a researcher-created model based on the study literature's most common components. In their 2015 study of Amman's five Jordanian commercial banks, Salih and Abdulrahman demonstrated the role of strategic intelligence in the portfolio growth of managers' competencies. 120 administrative managers (upper, middle, and first-line) were selected for conducting a census survey. Based on the findings, it is concluded that a manager's competence portfolio growth results in improving efficiencies and depends on strategic

intelligence practices. Esmaeili conducted analytical-survey study on how strategic intelligence affects strategic planning and decision-making (2014). Organizations using smart systems in Khorramabad were considered for research as a statistical population, 150 employees were estimated as samples using stratified sampling methods and the formula of Cochran. To evaluate the hypothesis, the structural equation method and the AMOS @ 18 programs were used in this study. The study came to the conclusion that strategic intelligence has a significant and positive influence on the strategic planning and decision-making of smart systems in industries and organisations. In addition to this strategic intelligence, factors are recognized as human resources, organizational processes, technical, information, financial resources, competitors, and customer intelligence (Kruger, 2010). Agha et al. (2014) investigated the role of strategic flexibility as a mediator between strategic intelligence and firm performance. Purposive sampling was used to select 95 functional managers from 19 biotechnological companies situated in various countries. The hypotheses were examined using the SPSS program and AMOS (path analysis) software. The results indicate that strategic intelligence has a considerable positive impact on firm performance and this impact is enhanced when strategic flexibility acts as a mediator. Rahmatian and PourKiani (2013) analyzed the relationship between the strategic intelligence level of managers and the organizational success level in Rafsanjan's executive organizations. For this research, the method of correlation and the sectional method were used. 104 managers of executive organizations of RAFSANJAN were taken as a sample of the study. Due to sample volume, no sampling techniques were adopted. For data collection, two standard questionnaires, strategic intelligence (0.91, 0.79) and organization success (0.89, 0.85) were adopted. For data analysis (Karl Pearson correlation, Partial correlation method, stepwise regression method, and one-way variance analysis), the SPSS program was used and found that there is even an important link between organizational success and strategic intelligence. They also indicated that it is easier to concentrate more on various strategic intelligence elements like business intelligence, competitive intelligence, and knowledge management to make strategic organizational decisions (Atwa, 2014; Liebowitz, 2006). The development and transfer of knowledge or information which can be applied to make high-level strategic decisions is referred to as strategic intelligence. The focus is on how the organisation can better prepare for anticipated challenges and opportunities in order to maximize its success (Marchand and Hykes, 2006). Based on the review of previous research, the study on the impact of strategic intelligence on business performance of Indian pharmaceutical companies appears to be essential and worthy of exploration, as it is not fully represented in the existing research. In addition, past study has mostly focused on the population of enterprises in China, Spain, Jordan, Germany, and the United States, among other countries.

Objective

To investigate the impact of strategic intelligence on the business performance of Indian pharmaceutical industries

Based on the above objective, Figure 1 shows the conceptual model of the research developed and tested.



HYPOTHESIS

In light of the above conceptual model, the following hypothesis is suggested:

H_{01}: There is a statistically significant impact of strategic intelligence on the business performance of Indian pharmaceutical industries.

Research Methodology

To examine how strategic intelligence affects the pharmaceutical industry in India in terms of their ability to perform financially, a descriptive research design was used. Managers working at the middle-level in 15 Indian pharmaceutical industries were considered as the population of this research study. To pick the sample unit, a non-probabilistic sampling technique (convenience sampling technique) was used.

Instruments: Two standard questionnaires; strategic intelligence (Kruger, 2010) consisting of 21 items and business performance (Krieser and Davis, 2008) consisting of 8 items were used. Internal consistency of both the questionnaires was calculated and it was found 0.82 and 0.92 respectively.

Data Collection: Initially, questionnaires were distributed to 200 middle-level managers of selected Indian pharmaceutical industries and got back out of which 174 questionnaires resulting in an 87 percent response rate, out of which 26 incomplete questionnaires were rejected. Finally, we used 148 questionnaires with a response rate of 74 percent.

Respondents Profile: The following are used as inclusion criteria: (1) good command of the English language; (2) being 18 to 65 years old and (3) being full-time working adults. Table 1 summarizes the details. It shows that the majority of the respondents (49.32 percent) were over the age of 45, while 16.21 percent were under the age of 35, and 34.45 percent were between the ages of 35 and 45. The gender distribution of the respondents revealed that the majority (79.72 percent) were males, with just 20.27 percent females. The majority of respondents have a postgraduate diploma (88.7%) and a degree (11.3%), respectively, in terms of qualifications.

Table No 1: Respondents Profile

Description	Classification	%age
Gender	Male	79.72
	Female	20.27
Age group	Less than 35	16.21
	Between 35-45	34.45
	More than 45	49.32
Education	Degree	10.13
	Postgraduate	89.86

Source: Created by the researcher

Data Analysis

The data were collected, tabulated, and evaluated with Jamovi 1.1.2.0 statistical tools, which included descriptive and inferential statistics.

Mean and Standard Deviation: It is observed from Table 2 that strategic intelligence (SI) has a mean value of 3.56 and the standard deviation is 0.905. The mean value for business performance is 3.95 and the standard deviation is 0.891.

Table No 2: Descriptive Statistics

	N	Mean	Std. Deviation
SI	148	3.56	0.905
BP	148	3.95	0.891

Source: Created by the researcher

Correlation Analysis: Analysis of Table 3 shows that the relationship between business performance (BP) and strategic intelligence (SI) of the selected Indian pharmaceutical

industries is significant. There is a positive and significant correlation between business performance (BP) and strategic intelligence (SI) at a 1 percent level of significance.

Table No 3: Correlation between Strategic Intelligence and Business Performance

		SI	BP
SI	Pearson Correlation	1	0.768**
	Sig. (2-tailed)		0.000
	N	148	148
BP	Pearson Correlation	0.768**	1
	Sig. (2-tailed)	0.000	
	N	148	148
** Correlation is significant at the 0.01 level (2-tailed)			

Source: Created by the researcher

Regression Analysis: Data was analyzed by conducting a simple regression analysis where the variables were standardized. 'F' ratio was also estimated for analysis of variance (ANOVA). The hypothesis was tested with the student's t-test to check the impact of independent variables on the dependent variables.

Table 4 presents the results of the regression model which is the estimation of the impact of strategic intelligence (SI) on business performance (BP) of Indian pharmaceutical industries. The R square is notable with a value of (0.590). Therefore, the regression equation's determination power is indicated to be 59 percent. This elucidates that strategic intelligence accounts for 59 percent variation in business performance for the selected Indian Pharmaceutical industries. The remaining 41 percent of business performance is not explained in the model. The predictions' standard error is 0.64213512, which is less than one. At a 1 percent level of significance, the F-ratio (ANOVA) of 210.504 is statistically significant. As a result, the model, as estimated by the enter process, is satisfactory.

Table No 4: Model Summary

Model	R	R Square	Adjusted R Square	Std-Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	0.768[a]	0.590	0.588	0.64213512	0.590	210.504	1	146	0.000
a. Predictors: (Constant), SI									

Source: Created by the researcher

The independent variable, strategic intelligence, in the model explains 59 percent of the difference in the dependent variable, business performance, according to the study. It means that other factors not included in the process are responsible for 41 percent of the variance. The coefficient of determination is also known as R-square. Its value ranges from 0 to 150. The regression model obtained using the enter method is fine, as evidenced by the positive value of adjusted R-square (0.588).

Table No 5: ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	86.799	1	86.799	210.504	0.000[a]
	Residual	60.201	146	0.412		
	Total	147.000	147			
a. Predictors: (Constant), SI						
b. Dependent Variable: BP						

Source: Created by the researcher

The value of F is 210.50 at $p < 0.01$, which is important, according to the ANOVA Table 5. It means that the p-value of the overall F-test is important, indicating that the regression model can better predict the response variable than the response mean. It also demonstrates that the p-value of the overall F-test is at a significance level, implying that the R-squared value is substantially different from zero.

Regression Model: BP = 1.069E-15 + (0.768) SI

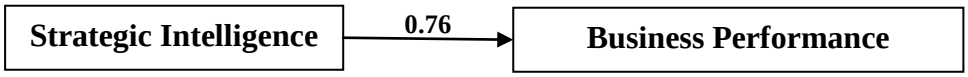
From Table 6 it can be observed that the intercept is statistically significant and very small.

Table No 6: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.069E-15	0.053		0.000	1.000
	SI	0.768	0.053	0.768	14.509	0.000
a. Dependent Variable: BP						

Source: Created by the researcher

This infers that there is no ambit for autonomous business performance. The results validate the value of R-square in the model. Therefore, in conclusion, it may be stated that strategic intelligence benefits the pharmaceutical companies' ability to conduct business (Figure 2).



Hypothesis Testing

It is found from Table 6 that hypothesis H_{01} is accepted, i.e. strategic intelligence and business performance are positively correlated, and strategic intelligence has a statistically significant impact on the business performance of Indian pharmaceutical industries.

Conclusion

In all aspects of management and the foundation of organizational strategies, we should affirm that strategic intelligence has an important role. However the application of strategic intelligence is not challenging; the theory is not very old and not well understood, concerning the dedication and effort requires, and how to use it most effectively. However, if the organization uses intelligence to support organizational operations and decisions, it is central to effective planning, requiring a relatively limited effort. With all the conventional dependency, any attempt to streamline the strategic analysis into a very linear process and dependent on a specific method would simply not work. Effective integration of strategic intelligence is necessary to boost the pharmaceutical industry's ability to develop and build wealth. Given its significance, like a driver's head, managers should look for an opportunity to improve business performance and value creation.

Limitations

Only middle-level managers were polled, and senior-level executives from Indian pharmaceutical companies were excluded. A double source approach may be used in future studies. Furthermore, the author's ability to generalize his findings is limited by his attention to only 15 Indian pharmaceutical industries.

Implications

The author suggests that a data center or repository be established to store useful data/information that can be used by senior managers to make strategic decisions.

Originality

This paper fills a void in the strategic management literature in the pharmaceutical industry, where empirical researches on the impact of strategic intelligence on business performance have been scarce.

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