AN ANALYSIS OF THE EFFECTS OF COMPETITIVE INTELLIGENCE PRACTICES ON THE PERFORMANCE OF PHARMACEUTICAL COMPANIES IN NAIROBI

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ABSTRACT

The relevance of monitoring, understanding and responding to competitors has long been recognized as a significant aspect of marketing activity. Yet analysis of the competitive environment seems often to be subordinated as greater emphasis is placed on understanding consumers. Clearly important though customers are, they should not dominate marketing strategy and planning. Competition in the Kenyan Pharmaceutical Industry continually work to drive down the rate of return on capital invested. The pharmaceutical companies have thus resulted in making use of various competitive intelligence aspects to ensure profitability. The study generally sought to analyze the effects of competitive intelligence practices on the performance of pharmaceutical companies in Nairobi. Specifically, the study sought to establish the effect of product intelligence strategies, new markets intelligence, technology intelligence, strategic alliance intelligence and on the performance of pharmaceutical companies in Nairobi. The study adopted a descriptive survey design. The method is chosen since it is more precise and accurate since it involves description of events in a carefully planned way and also portrays the characteristics of a population fully. The study targeted managers of pharmaceutical distribution companies in Nairobi. For the smaller firms, the target respondents were the owners/managers or the superintending pharmacists or their designate. In larger corporations, the managers at the time being in charge of distribution, their equivalents or their designate was targeted. From the population sampling frame the required number of subjects/ respondents was selected through stratified proportionate random sampling technique based on whether they bare wholesalers, manufacturer or retailers. Primary data was obtained through use of questionnaires. Quantitative data collected using a questionnaire was analyzed by the use of descriptive statistics while the qualitative data was analyzed using content analysis. In addition, the researcher conducted a multiple regression analysis so as to determine the relationship between the company's profitability and the four competitive intelligence practices. This research helped the companies to remain competitive and profitable amidst the current stiff competition witnessed in the pharmaceutical sector. The study found that the company employed new market intelligence as a competitive intelligence. Product intelligence influenced the performance of the company to a great extent. The company initiated activities to obtain information on technology advancement in the industry to a very great extent. Mergers in the industry and strategic alliance enhanced the performance of the company to a very great extent. The study concludes that the company employed new market intelligence as a competitive intelligence. Product intelligence influenced the performance of the company to a great extent. The company initiated activities to obtain information on process automation in the firm, interconnected technology in the company, integrated systems in the industry and new software in the industry. Joint

venture in the industry and acquisitions in the industry enhanced the performance of the company. The study recommends pharmaceutical companies to employ new market intelligence. The study recommends the managers in pharmaceutical companies to adopt product diversification intelligence. The company should initiate activities to obtain information on technology advancement in the industry. They need to form mergers so as to enhance the performance of the company.

Key Words: *product intelligence, new markets, technology, strategic alliance*

INTRODUCTION

In today's fast-paced, high technology business environment, technological advances, competitor actions and inactions, customer and supplier intentions and behaviors, legislative activity and a host of other activities compete for a manager's attention on a daily basis. A manager's ability to master all of the possible consequences of these activities will directly affect the development and quality of a firm's business and corporate level strategies. The key to any successful strategy is the ability to identify, develop and sustain a competitive advantage vis-à-vis to their competitors (Korany, 2007). Competitive Intelligence is the action of gathering, analyzing, and applying information about products, domain constituents, customers, and competitors for the short term and long term planning needs of an organization (Cobb, 2003). Competitive Intelligence (CI) is both a process and a product (Korany, 2007). A more focused definition of CI regards it as the organizational function responsible for the early identification of risks and opportunities in the market before they become obvious (Trim, 2004). Companies with using competitive intelligence and analysis of competitor's strengths and weaknesses are able to predict opportunities of market development and having better performance rather than competitors (Cobb, 2003). The pharmaceutical business has undergone a lot of changes that have affected the state of competition in the industry. Market liberalization, decline in the level of availability of medicines in the public facilities, cost-sharing in healthcare, entry of more players particularly the amendment of the legal framework to allow persons with diploma in pharmacy to open outlets, an explosion in the number of training institutions offering pharmacy courses , higher literacy levels and patient awareness, easy access to information on the internet, etc have affected the health seeking behavior and demand practices as well as the supply level of pharmaceuticals. According to the Kenya National Pharmaceutical Policy (KNPP) 2010, pharmaceutical trade is highly commercialized and globalized; bringing with it increasingly complex issues such as trade liberalization, intellectual property, standardization, harmonization and collaboration; and information management. Nairobi has the highest concentration of pharmaceutical human resource and the major wholesale level distributors. A good number of wholesalers also sell medicines on retail basis. The high concentration and thus the resultant competition among pharmaceutical companies in Nairobi are factors that the business owners and managers cannot

miss to notice in this sector. Therefore, these companies need to strategize in order to remain relevant in business lest they are pushed out of business.

STATEMENT OF THE PROBLEM AND CONCEPTUALIZATION

The relevance of monitoring, understanding and responding to competitors has long been recognized as a significant aspect of marketing activity. Yet analysis of the competitive environment seems often to be subordinated as greater emphasis is placed on understanding consumers. Clearly important though customers are, they should not dominate marketing strategy and planning (Korany, 2007). Competition in the Kenyan Pharmaceutical Industry continually work to drive down the rate of return on capital invested. The pharmaceutical companies have thus resulted in making use of various competitive intelligence aspects to ensure profitability. Studies on competitive intelligence are generally limited. Although there are an expanding number of studies concerning the use of strategic information systems (Korany, 2007), environmental uncertainty (Baars and Kemper, 2008), for CI activities, none have addressed its organizational impact in an empirical study. In Kenya, various studies have been done on competitive intelligence. Muiva (2001) conducted a survey on the use of competitive intelligence systems in the Kenyan banking Industry, Kipkorir (2001) researched on competitive intelligence practices by FM radio stations operating in Kenya while Mugo (2010) did an investigation into competitive intelligence practices for greater profitability of firms in the banking industry case of Equity Bank. These studies were however done on different institutions other than Pharmaceutical Industry. This is despite the fact that the pharmaceutical sector in Kenya is facing many challenges posed by the competitive environment in the industry. Despite the adoption of this competitive intelligence there is no study that has been done on pharmaceutical industry to date. This study therefore sought to carry out an analysis of the effects of competitive intelligence practices on the performance of the pharmaceutical companies in Nairobi. The study generally sought to analyze the effects of competitive intelligence practices on the performance of pharmaceutical companies in Nairobi.

SPECIFIC OBJECTIVES OF THE STUDY

1. To establish the effect of product intelligence strategies on the performance of pharmaceutical companies in Nairobi
2. To analyze the effects of new markets intelligence on the performance of pharmaceutical companies in Nairobi
3. To determine the effects of technology intelligence on the performance of pharmaceutical companies in Nairobi
4. To establish the effect of strategic alliance intelligence on the performance of pharmaceutical companies in Nairobi

This study focused on independent variables such as: product intelligence, of new markets, technology, strategic alliance and how they relate to the dependent variable which is performance of pharmaceutical companies in Nairobi. The study used the below conceptual framework to explain the relationship between the dependent and independent variables.

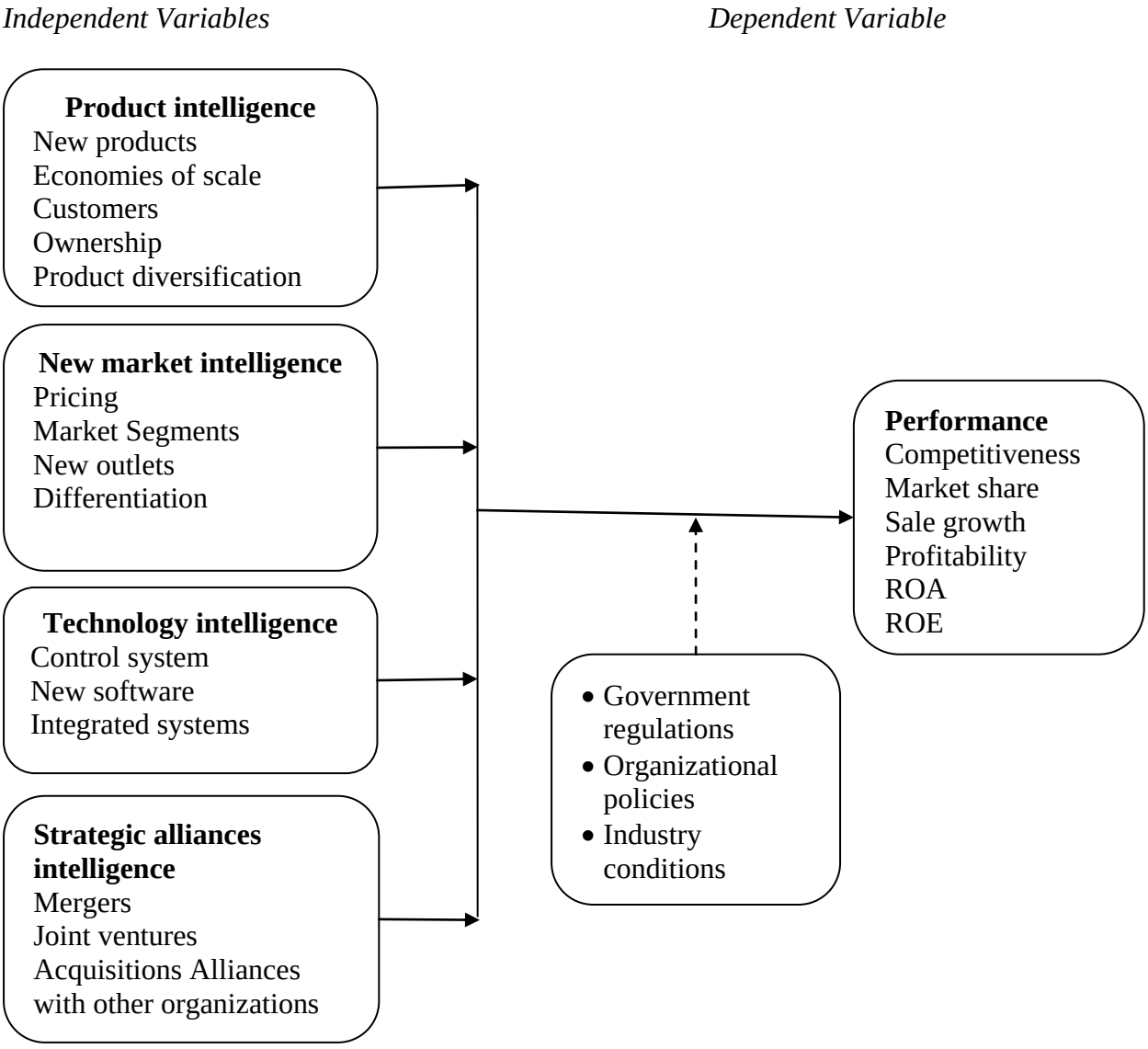

Figure 1: Conceptual Framework

RESEARCH METHODOLOGY

Research Design

The study adopted a descriptive survey design. Descriptive research design is designed to provide further insight into the research problem by describing the variables of interest. A descriptive study is concerned with determining the frequency with which something occurs or the relationship between variables (Bryman and Bell, 2003). This was appropriate since the study seeks to describe the characteristics of certain groups, estimate the proportion of people who have certain characteristics and make predictions thus it combines the present view with the future. A descriptive survey design was able to produce statistical information about aspects of the competitive strategies. The method is chosen since it is more precise and accurate since it involves description of events in a carefully planned way (Babbie, 2004). This research design also portrays the characteristics of a population fully (Chandran, 2004). The research design was both quantitative and qualitative.

Study Population

Target population of this study was pharmaceutical distributors in Nairobi. There were two groups categorized as those who are purely wholesaling and those who are in retail business. Both groups are important because they play a critical role in the pharmaceutical distribution chain. The study targeted managers of pharmaceutical distribution companies in Nairobi. For the smaller firms, the target respondents were the owners/managers or the superintending pharmacists or their designate. The study applied stratified sampling method. The various strata are determined from companies in the pharmaceutical industry specializing in manufacturing, wholesaling and retailing (Pharmacy and Poisons Board, 2011).

Sampling Procedure

From the population sampling frame the required number of subjects/ respondents was selected through stratified proportionate random sampling technique based on whether they are wholesalers or retailers. Stratified proportionate random sampling technique is considered the most appropriate in order to produce estimates of overall population parameters with greater precision and ensure a more representative sample is derived from a relatively homogeneous population. Statistically, in order for generalization to take place, a sample of at least 30 must exist; samples of about 30% of a population was considered reliable (Mutai, 2001) and so a population of 224 respondents was chosen using simple random sampling.

Data Collection

Primary data was obtained through use of questionnaires. This method has been chosen since it provided an efficient way of collecting responses from the large sample that is anticipated. The questionnaires were delivered by hand and picked later. Where considered necessary,

Interviewer-administered Questionnaires were used and the interviewers physically met respondents and ask the questions face to face then record the responses on the basis of each respondent's answers. Records of past events may also be reviewed to compile evidence of competitive strategies that have been observed. According to Somekh, and Cathy (2005) validity is the degree by which the sample of test items represents the content the test is designed to measure. Content validity which is employed by this study is a measure of the degree to which data collected using a particular instrument represents a specific domain or content of a particular concept. Expert opinion was requested to comment on the representativeness and suitability of questions and give suggestions of corrections to be made to the structure of the research tools. To establish the validity of the research instrument the researcher sought opinions of experts in the field of study especially the lecturers in the department of business administration. This helped to improve the content validity of the data that was collected. It facilitated the necessary revision and modification of the research instrument thereby enhancing validity.

Data Analysis

Reliability is increased by including many similar items on a measure, by testing a diverse sample of individuals and by using uniform testing procedures. The researcher intended to select a pilot group of 15 individuals from the target population to test the reliability of the research instruments. In order to test the reliability of the instruments, internal consistency techniques was applied using Cronbach's Alpha. The alpha value ranges between 0 and 1 with reliability increasing with the increase in value. Coefficient of 0.6-0.7 is a commonly accepted rule of thumb that indicates acceptable reliability and 0.8 or higher indicated good reliability (Mugenda, 2008). The pilot data was not be included in the actual study. All the variables were found to be reliable as their reliability values were above 0.7. The results of the study were both qualitative and quantitative. Quantitative data collected using a questionnaire was analyzed by the use of descriptive statistics employing the Statistical Package for Social Sciences (SPSS V 21.0) and presented through frequencies, percentages, means and standard deviations. The information was displayed by use of tables, bar charts and pie charts and in prose-form.

The regression equation ($\mathbf{Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon}$): Whereby Y represents the Company's performance, β_0 is the Constant Term, β_1, β_2, β_3, and β_4 are Beta coefficients for the independent variables. X1 represents the market intelligence, X2 is product intelligence, X3 the technology intelligence, X4 the strategic alliance intelligence while ε represents the Error term.

RESEARCH RESULTS

The study targeted 224 respondents in collecting data with regard to effects of competitive intelligence practices on the performance of pharmaceutical companies in Nairobi. From the study, 200 respondents out of the 224 sample respondents filled-in and returned the questionnaires making a response rate of 89.3%. This reasonable response rate was achieved

after the researcher made personal calls and physical visits to remind the respondent to fill-in and return the questionnaires.

New Market Intelligence

The study sought to find out if the company employed new market intelligence as a competitive intelligence. From the findings, 90% of the respondents indicated that the company employed new market intelligence as a competitive intelligence while 10% indicated that the company did not employ new market intelligence as a competitive intelligence. The respondents were requested to indicate whether the new market intelligence applied in the company concentrated on these 4Ps (price, place, promotional and product) of the marketing mix.

With effect to effects of new markets intelligence on the performance of pharmaceutical companies in Nairobi. Market intelligence (MI) is industry-targeted intelligence that is developed on real-time (dynamic) aspects of competitive events taking place among the 4Ps of the marketing mix (pricing, place, promotion, and product) in the product or service marketplace in order to better understand the attractiveness of the market (Fleisher, 2003). The company had initiated activities to obtain information on industry promotion, industry place/ market segments, industry product differentiation and industry pricing.

Product Intelligence

This applies in competitive intelligence which is influenced by where one stands within the product life cycle. When new products are under development and not yet marketed, competitive intelligence will focus on the marketplace (Fleisher, 2003). The study requested the respondents to indicate their agreement level to product diversification intelligence leads to lower costs of production. From the findings, 65% of the respondents agreed that product diversification intelligence leads to lower costs of production, 20% strongly agreed, 10% were neutral, 3% disagreed and 2% strongly disagreed.

The study established that product diversification intelligence leads to lower costs of production thus influencing the performance of the company. Early studies have argued that product intelligence was valuable from a conceptual perspective; increasing levels of product intelligence should have a positive influence on performance due to economies of scope and scale, market power effects, risk reduction effects, and learning effects (Park, 2002). The company initiated activities to obtain information on product diversification and new products.

Technology Intelligence

The study sought to find out the extent that technology intelligence influenced the performance of the company. From the findings, 50% of the respondents indicated that technology intelligence influenced the performance of the company to a great extent, 25% of the respondents

indicated that technology intelligence influenced the performance of the company to very great extent, 20% of the respondents indicated that technology intelligence influenced the performance of the company to moderate extent, 4% of the respondents indicated that technology intelligence influenced the performance of the company to low extent and 1% of the respondents indicated that technology intelligence influenced the performance of the company to very low extent.

Rycroft and Kash (1999) claim that competitive intelligence requires a process of co-evolution between technology and cultural perspectives. Technology intelligence influences the performance of the company. Hammer (1990) stresses that organizations should obliterate rather than automate believing that technology is often introduced for technology's sake without contributing to the overall effectiveness of the operation. The company initiated activities to obtain information on technology advancement in the industry to a very great extent.

Strategic Alliances Intelligence

Burgers *et al*. (1993) defined a strategic alliance as a long-term, explicit contractual agreement pertaining to an exchange and/or combination of some, but not all, of a firm's resources with one or more other firms. The study sought to find out the type of internal organizational uncertainty that was reduced through strategic alliances at the company. From the findings, 75% of the respondents indicated that the type of internal organizational uncertainty that was reduced through strategic alliances at the company was operational uncertainty and 25% of the respondents indicated that the type of internal organizational uncertainty that was reduced through strategic alliances at the company was scarcity of resources.

The study found that the type of internal organizational uncertainty that was reduced through strategic alliances at the company was operational uncertainty. According to Burgers *et al*. (1993) strategic alliances are formed as a mechanism for reducing uncertainty for parties of the alliance. The benefits of strategic alliances can be divided into two general categories: those that come about through the reduction of external environmental uncertainty and those that exist through the reduction of internal organizational uncertainty.

REGRESSION ANALYSIS

In addition, the researcher conducted a linear regression analysis so as to test relationship among variables (independent) on the performance of pharmaceutical companies in Nairobi. The researcher applied R to code, enter and compute the measurements of the linear regressions for the study. Coefficient of determination explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the percentage of variation in the dependent variable (performance of pharmaceutical companies in Nairobi) that is explained by all the four independent variables (product intelligence, new market intelligence, technology intelligence and strategic alliances intelligence). The four independent variables that

were studied, explain only 85.4% of the performance of pharmaceutical companies in Nairobi as represented by the R2. This therefore means that other factors not studied in this research contribute 14.6% of the performance of pharmaceutical companies in Nairobi. Therefore, further research should be conducted to investigate the other factors (14.6%) that affect performance of pharmaceutical companies in Nairobi.

Table 1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.924[a]	.854	.516	.419

The significance value is 0.002 which is less that 0.05 thus the model is statistically significance in predicting performance of pharmaceutical companies in Nairobi. The F critical at 5% level of significance was 2.43. Since F calculated is greater than the F critical (value = 51.455), this shows that the overall model was significant.

Table 2: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	2.434	4	1.103	51.455	.002[a]
Residual	7.307	195	2.452		
Total	4.326	199			

The researcher conducted a linear regression analysis so as to determine the effect of the independent variables (new market intelligence, product intelligence, strategic alliances intelligence and technology intelligence) on the dependent variable (performance of pharmaceutical companies in Nairobi). As per the R generated table above, the equation ($\mathbf{Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon}$) becomes:

$$\mathbf{Y= 3.203 + 0.481X_1 + 0.736X_2 + 0.686\ X_3 + 0.814\ X_4}$$

Where:

Y is the dependent variable (performance of pharmaceutical companies in Nairobi)
X_1 is the Strategic alliances intelligence variable
X_2 is Technology intelligence variable
X_3 is Product intelligence
X_4 is New market intelligence

According to the regression equation established, taking all factors into account (Strategic alliances intelligence, Technology intelligence of staff, Product intelligence and innovation) constant at zero, performance of pharmaceutical companies in Nairobi will be 3.203. The data findings analyzed also shows that taking all other independent variables at zero, a unit increase in strategic alliances intelligence will lead to a 0.481 increase in performance of pharmaceutical companies in Nairobi; a unit increase in Technology intelligence of staff will lead to a 0.736 increase in performance of pharmaceutical companies in Nairobi, a unit increase in Product intelligence will lead to a 0.686 increase in performance of pharmaceutical companies in Nairobi, a unit increase in New market intelligence will lead to a 0.814 increase in performance of pharmaceutical companies in Nairobi. This infers that new market intelligence contributes more to the performance of pharmaceutical companies in Nairobi followed by the technology intelligence of staff, then product intelligence, with strategic alliances intelligence contributing the least. At 5% level of significance and 95% level of confidence, strategic alliances intelligence had a 0.031 level of significance; technology intelligence showed a 0.013 level of significance, product intelligence showed a 0.026 level of significance and new market intelligence showed a 0.004 level of significance; hence the most significant factor is new market intelligence.

Table 3: Coefficient of determination

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.203	1.036		0.842	0.247
	Strategic alliances intelligence	0.481	0.096	0.215	0.342	0.031
	technology intelligence	0.736	0.145	0.087	0.578	0.013
	Product intelligence	0.686	0.068	0.155	0.96	0.026
	new market intelligence	0.814	0.104	0.157	1.081	0.004

CONCLUSIONS

The study concludes that the company employed new market intelligence as a competitive intelligence. The company initiated activities to obtain information on industry promotion, industry place/ market segments, industry product differentiation and industry pricing to a great extent. The study concludes that product diversification intelligence leads to lower costs of production. Product intelligence influenced the performance of the company to a great extent. The company initiated activities to obtain information on product diversification and new

products. In addition, the company initiated activities to obtain information on customers and economies of scale. The study further concludes that technology intelligence influenced the performance of the company. The company initiated activities to obtain information on technology advancement in the industry. The company initiated activities to obtain information on process automation in the firm, interconnected technology in the company, integrated systems in the industry and new software in the industry.

Moreover, the study concludes that the type of internal organizational uncertainty that was reduced through strategic alliances at the company was operational uncertainty. Mergers in the industry and strategic alliance enhanced the performance of the company. Joint venture in the industry and acquisitions in the industry enhanced the performance of the company. Performance of the company had improved in competitiveness, sales growth, profitability, market share, corporate image and customer satisfaction.

RECOMMENDATIONS

The study recommends pharmaceutical companies to employ new market intelligence. The companies should initiate activities to obtain information on industry promotion, industry place/ market segments, industry product differentiation and industry pricing. The managers in pharmaceutical companies should adopt product diversification intelligence. This will help to lower costs of production thus improve performance of the company. Pharmaceutical companies should adopt technology intelligence. The company should initiate activities to obtain information on technology advancement in the industry. They need to put in place process automation, interconnected technology, integrated systems and new software in the companies. In addition, pharmaceutical companies should adopt strategic alliances. They need to form mergers so as to enhance the performance of the company. Joint venture in the industry and acquisitions in the industry should also be formed.

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