MARKET ORIENTATION AND FIRM PERFORMANCE IN GHANA’S PHARMACEUTICAL INDUSTRY

S. Y. Akomea¹ and J. K. G. Yeboah²

¹Department of Marketing and Corporate Strategy, School of Business, KNUST, Kumasi, Ghana
²Department of Business Administration, Methodist University College, Accra, Ghana

ABSTRACT
The study examined the relationship between market orientation and performance in the pharmaceutical industry in Ghana. The study employed both quantitative and qualitative research techniques. A semi-structured questionnaire was designed and distributed to firms in the pharmaceutical sector notably, manufacturers, wholesalers, prescription-only-medicine firms (POM) and over-the-counter shops (OTC). It was established that whereas an earlier study in 2001, found market orientation in the pharmaceutical industry in Ghana to be low (35%), the current study found that due to improved microeconomic indicators, market orientation in the industry has grown significantly to over 50%. The findings of the study also indicate a significant relationship between market orientation and performance of firms in the pharmaceutical industry, and further indicate that, the practice of market orientation in the various categories of the sector differs with an increase in size and organizational commitments of the firms involved. This study extends understanding of market orientation into a pharmaceutical setting and is one of the few studies on market orientation in the pharmaceutical sector emanating from a developing economy context and in a multi-strata approach.

Keywords: Market Orientation, Performance of Pharmaceutical firms, Environmental Moderators, Antecedents, Ghana

INTRODUCTION
Market orientation has attracted a lot of interest among both academics and industrial practitioners. For many years research on market orientation has shaped academic thinking (Desphande and Farley, 1998). As the new century rolls out, it appears that turbulent competitive conditions will continue. Consequently, many academics and practitioners continue to forward the concept of market orientation as a potential saviour for stressed organizations (Foreman, 1997; Harris and Piercy, 1997; Hurley and Hult, 1998). Undeniably, considerable evidence exists to suggest that a market oriented organization experiences superior performance and improved levels of employee satisfaction, team spirit and commitment (Ruekert, 1992; Jaworski and Kohli, 1993; Slater and Narver, 1994).
In the Ghanaian context, there have been previous empirical studies of market orientation and firm performance by other researchers in different sectors, eg. Hinson et al. (2008), Kuada and Buatsi (2005), and Akomea (2001). Despite significant advances in the development of market orientation theory, there is still a void in the literature with respect to the implementation of a market orientation and for that matter the pharmaceutical sector. This indicates the importance of the strategic marketing construct for further empirical investigations.

Market orientation as a strategic construct is important for the profitable management of firms’ worldwide philosophy in the health sector. It is also useful for core medical facilities like hospitals, clinics, laboratories; and pharmaceutical entities like local drug manufacturing companies, multinational companies like Pfizer, Johnsons etc. and various types of pharmaceutical firms.

Small firms operating in Ghana’s pharmaceutical sector might deem it unnecessary to be market-oriented and thus do not need to adopt the concept, for they assume market orientation as something applicable to the larger manufacturing and distribution companies in the sector.

Okoroafo and Torkonoo (1995) observed that there has been an intense transformation in the environment in which business activities are conducted. During the immediate post-independence era, the Ghanaian industrial sector was dominated by state-owned enterprises. Consequently, the state protected such companies in terms of import controls, exchange rate restrictions and price controls among others. This trend changed during the military regimes in the mid-70s with the introduction of the Prices and Income Board which controlled the prices of goods nationwide thereby making the business environment to be characterised by limited competition. This further reduced the performance of marketing activities in Ghanaian firms as a result of the fact that products were manufactured and sold regardless of their compatibility with customer needs (Appiah-Adu, 1999).

The health policy, launched in 2007 places national efforts within the global context of health development and aims at providing a comprehensive and holistic framework that builds on progress made in previous years. It places health at the centre of socio-economic development and presents a clear shift in the role of health in the national and international development framework. This is because apart from being a fundamental human right, health is also a key driver of development and economic growth. In line with this, a series of activities have been outlined in the Health Service Programme of work for 2007-2011 dubbed, the ‘Five-year programme of work (5YPOW) intended to build upon the principles of primary health care and general health systems development. The specific health objectives of Vision 2020 are as follows:

- Significant reduction in the rates of infant, child and maternal mortality rates
- Effective control of risk factors that expose individuals to major communicable disease
- Increased access to health services especially in rural areas
- Establishment of a health system effectively reoriented towards delivery of public health services
- Effective and efficient management of the health system strengthened.

The work of Jaworski and Kohli (1993) has inspired a substantial body of literature on market orientation, but most replications of their original framework have been in developed countries (Kuada and Buatsi, 2005). It is against this background that the current study referred to this framework and tested its significance in the developing country’s context. A vast majority of the stream concerning market orientation consequences have concentrated on
Market orientation and firm performance...  

The relationship with business performance (Narver and Slater, 1990; Jaworski and Kohli, 1993; Slater and Narver, 1994; Matsuno and Mentzer 2000; Pelham, 2000). This thus makes available the existence of abundant studies on the market orientation construct in the available literature (Kohli and Jaworski, 1990; Narver and Slater, 1990; Ruekert, 1992; Jaworski and Kohli, 1993; Diamantopoulos and Hart, 1993; Greenley, 1995; Pitt et al. 1996).

Kohli and Jaworski (1990), concluded that, market orientation is generally related to business performance under certain conditions. The authors used firm performance indicators such as ROI, profits, sales volumes, market share and sales growth. According to Kohli and Jaworski, (1990), a market orientation requires the commitment of company resources. The orientation is useful only if the benefits it affords exceed the cost of those resources. Consequently, under conditions of limited competition, stable market preferences, technologically turbulent industries, and booming economies, market orientation may not relate strongly to business performance. The linkage between market orientation and performance is based on the logic that a market orientation would translate into better meeting customer needs, which in turn, would result into better customer response, which would reflect in better organizational performance.

In summary, owing to the variations in characteristics of categories of firms in the pharmaceutical sector, we can anticipate substantial differences in top management characteristics and organizational factors included in this study with respect to the various categorizations. Therefore, Ghanaian pharmaceutical industry can be considered a productive ground for a healthy test of Kohli and Jaworski (1990) and Jaworski and Kohli’s (1993) entire market orientation model. Thus, we replicate the hypotheses in the model as follows:

H1: In Ghana’s pharmaceutical industry, the greater the degree of market orientation, the higher the business performance of companies

H2: In Ghana’s pharmaceutical industry, the greater top management’s emphasis on market orientation, the greater the market orientation of companies

H3: In Ghana’s pharmaceutical industry, the greater the risk aversion of top management, the lesser the degree of market orientation of companies

H4: In Ghana’s pharmaceutical industry, the greater the interdepartmental conflict, the lower the degree of market orientation of companies

H5: In Ghana’s pharmaceutical industry, the greater the interdepartmental connectedness, the greater the degree of market orientation of companies

H6: In Ghana’s pharmaceutical industry, the greater the formalization, the lower the degree of market orientation of the companies

This study replicates the market orientation model of Kohli and Jaworski (1990) and Jaworski and Kohli (1993) using pharmaceutical firms in Ghana.

The market orientation instrument employed by the study was based on the one developed by Jaworski and Kohli (1993) which the authors term “antecedents” and “consequences.” Modifications were however made to take into account the specific characteristics of the Ghanaian business culture. For the purposes of this study, the antecedents tested included; top management emphasis on market orientation, top management attitude towards risk aversion, interdepartmental connectedness, interdepartmental conflict, and formalization. On the consequences, the study focused on business performance and used the variables; profitability, sales growth, new product success and return-
on-investment as performance indicators. The main focus of this study is to examine the appreciation of market orientation in the pharmaceutical industry and the nature of such relationships with respect to the antecedents, environmental factors and consequences compared to the expected values itemized on the questionnaire.

**METHODOLOGY**

With an adoption of an exploratory approach, the study analyses the relationship between market orientation and performance in the pharmaceutical firms in Ghana. The study extended its findings to investigate the levels of market orientation as practiced by the various categories identified in the pharmaceutical sector.

Since the sector was categorized into manufacturers, wholesalers, prescription-only-medicine shops (POMs) and over-the-counter shops (OTCs), data was collected by distributing 220 questionnaires to firms in all the categories of the sector. These were located within the Accra and Tema Metropolis in the capital city of Ghana. Out of the 220 questionnaires, 186 representing 71% were actually used in the data analysis. This by constitution included 9 manufacturing firms, 21 wholesalers, 64 (POM) firms and 57 OTC firms. In this study a higher response rate, accuracy and completeness of response was reasonably achieved by the help of the Ghana Pharmacy Council, a body that regulates all pharmaceutical institutions. This helped to produce a list of all registered pharmaceutical companies. The questionnaire was personally administered to all firms that agreed to respond. Also standardized item scales from

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*Fig. 1: The framework of the study: Adapted from Jaworski and Kohli (1993)*
several market orientation research instruments were adopted and integrated into the questionnaire. With the replication of the Kohli and Jaworski (1990), and Jaworski and Kohli (1993) market orientation model, all the 6 constructs which have a total of 93 items were adopted.

The study employed both quantitative and qualitative approaches. A survey was conducted through the use of cross-sectional data. The suitability of using the survey strategy in this study was to help the researcher identify and explain statistically the factors that explain the level of practice of market orientation by the various categories of firms in the pharmaceutical industry. Consequently, semi-structured questionnaires which are normally used in exploratory research studies was designed and distributed randomly among top management of firms in the pharmaceutical industry in Ghana.

The study also used correlation and the standard multiple regression as the main analytical instruments in analyzing the empirical data. The combination of these two analytical tools was found convenient because the researchers believed that the strengths of one of these analytical tools would take care of the weaknesses in the other. It was also expected that the integration of these analytical instruments would help make data presentation self explanatory.

To begin with, the mean and standard deviations of the various groups under the study were computed using all variables included in the study. This was to ascertain the average scores of the main antecedent variables (Top Management Emphasis, Top Management Risk Aversion, Interdepartmental Connectedness, Interdepartmental Conflict and Formalisation, Centralization and Reward systems).

RESULTS AND DISCUSSIONS

The study unearthed that 37.75% of the firms participating in the survey could be classified as over-the-counter (retail) firms or licensed chemical shops (with employee size between 1 and 5), 42.4% of the firms could be classified as prescription-only-medicine (retail) firms (with employee size of 5-15), 13.9% represented wholesalers (with employee size of 15-50) and 5.95% representing manufacturers (with employee size of more than 50). The large employee end exhibited in retail pharmaceutical companies was as a result of the fact that the employees of some firms work on rotational (shift) basis especially for firms that operate day and night (24-hour service). For the avoidance of doubt, the firms that were sampled for the study had all been registered by the Pharmacy Council of Ghana. Again, it was evident that almost all the manufacturing companies further engage in forward integration by establishing either wholesale or retail outlets. Notably among this list are Ernest Chemist Limited, Kinapharma Limited, Ayrton Drugs, M & G Pharmaceuticals, Osons Chemists, Dan Adams Pharmaceuticals, Starwins Pharmaceuticals and Kojach Pharmacy. Some of the prominent wholesalers included East Cantonments Pharmaceuticals, Bedita Pharmaceuticals and Benswett Limited.

Top Management Emphasis on Market Orientation

H2: The outcome of our study suggests that there was a significant positive correlation between top management emphasis and overall market orientation ($r = .466$, $p <.045$). From the analysis in Table 1, H2 was supported, which explains that the more emphasis placed on customers by management, the more market-oriented the firm becomes. In the retail sector in Ghana, because most of the shops are owned by individual pharmacists and entrepreneurs, decision on market orientation originates from proprietors and the other employees see those decisions as instructions to be followed. This could be usual for sole proprietorship operations where the “owner is the company.” However in the manufacturing sector, the picture was different. The difference stems from the fact that most of the companies have hierarchical structures and take decisions as a team. Sometimes, they employ the services of technocrats.
and Business Advisory Consultants to draw their marketing plans for them. In such cases, the report of the consultant when adopted becomes strategic. Top management gives the concept a boost by making resources available for the implementation to become a reality. The study supports the empirical findings of Zairi (1999) who found out that top management who believe in market orientation lay emphasis on its implementation, they use their professional acumen to move the company towards market orientation. This result is also consistent with the findings of Winston and Dadzie (2002) who conducted similar studies in Nigeria and Kenya. The outcome was that, top managers’ emphasis on market orientation has the strongest influence on the development of market orientation after the presence of international firms and private firms. Top management emphasis is significantly related to overall market orientation \( (\beta = 2.021, p = 0.045) \). This provides support for the propositions of Jaworski and Kohli (1993) and is in agreement with their findings. Top management emphasis plays a crucial role in the development of market orientation. The development of the market orientation should commence with sound resolve, communication and commitment from the CEO. Hypothesis 2 is therefore supported.

**Top Management Risk Aversion**

H3: Top management risk aversion, however, correlated negatively but significantly with market orientation \( (r = -0.295, p < 0.001) \). This implies that the more the risk aversion demonstrated by top management, the less market oriented the firm becomes. Thus, risk aversion as a single variable made a unique contribution \( (\beta = -3.327) \) in explaining the firms’ level of market orientation. This makes top management’s degree of risk aversion although inversely related, very significant in establishing the level of market orientation in the pharmaceutical sector. However, the Ghanaian situation is consistent with the views of Kohli and Jaworski, (1990) who argue that it is only when top management demonstrates a willingness to take risks and accept occasional failures as being normal, that junior managers and other employees are more likely to propose and introduce new ideas and offerings in response to changes in customer needs.

**Interdepartmental Conflict**

H4: Interdepartmental conflict correlated significantly with market orientation \( (r = -0.295, p < 0.001) \). The relationship observed was negative, indicating that high interdepartmental conflict lead to low market orientation by firms whilst low interdepartmental conflicts enable firms to concentrate on delivering superior

### Table 1: Antecedents to Market Orientation

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient (r)</th>
<th>( \beta )-statistic</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top Management Emphasis</td>
<td>0.466</td>
<td>2.021</td>
<td>0.045</td>
</tr>
<tr>
<td>Top Management Risk Aversion</td>
<td>-0.295</td>
<td>-3.327</td>
<td>0.001</td>
</tr>
<tr>
<td>Interdepartmental Connectedness</td>
<td>-0.295</td>
<td>0.786</td>
<td>0.001</td>
</tr>
<tr>
<td>Interdepartmental Conflict</td>
<td>-0.092</td>
<td>-4.617</td>
<td>0.000</td>
</tr>
<tr>
<td>Formalization</td>
<td>-0.451</td>
<td>-0.617</td>
<td>0.000</td>
</tr>
<tr>
<td>R-square</td>
<td>0.358</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>F-statistic</td>
<td>22.399</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Prob. (F-statistic)</td>
<td>0.0001</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
value for customer. Conflicts among departments in the sectors of the pharmaceutical sector with little interdependence may increase productivity whereas in situations where departments are interdependent, such as the manufacturing firms, conflicts become dysfunctional and decrease communication and mutual problem solving, thus hindering the implementation of market orientation. Kohli and Jaworski (1990) found support in the literature (Deshpande and Zaltman, 1982; Argyris, 1965) for the hypothesis that low levels of concern for ideas of other departments (including individuals within the department) and the lack of interdepartmental connectedness hampered the dissemination of market intelligence among departments and impeded overall market responsiveness of the firm (Kohli and Jaworski, 1990).

Interdepartmental Connectedness

H5: Another interesting revelation the research came out with was that interdepartmental connectedness was found to have a negative relationship with market orientation. Thus, the level of market orientation of a firm is independent of the extent of interdepartmental connectedness within that firm ($r = -.295$, $p < .001$). This has come as a result of the fact that, until recently, pharmaceutical firms did not operate with departments; hence the impact seems not to have been realized by respondents. Furthermore, there is a low level of information dissemination in the distribution category because in most cases management considers the ‘non-professional’ employees as ‘mere’ assistants who should not be given the independence to run the shops. Also, drugs are highly regulated and firms can easily be sanctioned if they act contrary to the regulations. For this reason, important and professional information is kept.

Subordinate empowerment is therefore non-existent. The pharmaceutical situation is therefore at variance with the (Dobni and Luffman, 2003) study which found out that interdepartmental connectedness fosters interdependency within company and encourages employees to act in a concerted manner in the processes of knowledge generation and knowledge utilization.

Formalization

H6: Data presented further revealed a negative relationship between formalization and market orientation ($r = -.451$, $p < .001$). The relationship was significant indicating that the relationship between formalization and market orientation of firms are reliable. In this respect, formalization made insignificant contributions in explaining the firms’ level of market orientation. In this regard, formalization was a deviation from the expected results. With the view that formalization is the strict adherence to rules and regulations in an organizational set up, it could be inferred that the lack of significance is attributed to the lack of existing formalized structures in the pharmaceutical industry until recently. The study is, however, consistent with the study by Deshpande and Zaltman (1982) which argued that formalization had opposite effects on market orientation.

Overall Market Orientation and Performance

Overall market orientation has been correlated with business performance taking into account the four different categories of pharmaceutical operations in the sub-sector in Ghana; namely, Manufacturing, wholesale, prescription-only-service operators and over-the-counter service operators.

Degree of Market Orientation (Manufacturers)

H1: It emerged that a combination of all the antecedents of market orientation could correlate significantly with market orientation [$R^2 = .709$; $p < .001$]. It was observed that formalization and interdepartmental connectedness could not correlate significantly with market orientation, unlike the other antecedents. There was a significant positive correlation between top management emphasis and overall market orientation. This explains that the more emphasis placed on customers by management of large
manufacturers in the industry, the more market-oriented the firms become. In the same way, top management risk aversion correlated negatively and significantly with market orientation. This implies that the more the risk averse top management is, the less market oriented manufacturing pharmaceutical outlets become. On the other hand, firms that take calculated risks in the course of delighting customers succeed at concentrating all efforts on the customers, hence are more market oriented. Interdepartmental conflict correlated significantly with market orientation. The positive relationship observed implies that within the manufacturing pharmaceutical units, low interdepartmental conflicts lead to high market orientation by firms whilst high interdepartmental conflicts lead to low market orientation by these firms. In conclusion, in the manufacturing sector, H1, H2, H3 and H4 were supported.

**Degree of Market Orientation (Wholesalers)**

Results presented indicate that the level of market orientation of the wholesalers of pharmaceutical products is dependent on the antecedents of market orientation. A significant positive relationship was observed \[R^2 = .781; p<.0001\]. Of all the antecedents of market orientation, only formalization could not correlate significantly with market orientation; implying that the level of market orientation of wholesaling pharmaceutical firms is independent of the degree of formalization of these firms. Thus with the exception of H6, all the hypotheses were supported.

**Degree of Market Orientation (Prescription-Only-Medicines)**

Results presented indicate that although the antecedents of market orientation could collectively correlate positively with the dependent variable (market orientation), the relationship was not significant \[R^2 = 0.922; p=0.001\]. This implies that the level of market orientation of the prescription only category is independent of the proposed antecedents of market orientation as espoused in the theoretical framework of this research.

In this sector, all the hypotheses mentioned in the study were supported.

**Degree of Market Orientation (Over-the-Counter Service)**

Results presented indicate that although there was a positive correlation between the antecedents of market orientation collectively and market orientation within the licensed chemical outlets category, the relationship was not significant \[R^2 = .232; p=0.001\]. The implication is that the level of market orientation of licensed chemical outlets is independent of the antecedents of market orientation. In conclusion, all the hypotheses mentioned were not supported and that this specific category does not practice market orientation. In this sense, any practice of market orientation would be as a result of other (unexplained) factors.

**Overall Degree of Market Orientation and Performance**

Table 1 presented the individual constructs of market orientation from the Jaworski and Kohli (1993) model. Table 2 presents the regression of overall market orientation against business performance.

H1: Results presented in Table 2 show the relationship between market orientation and performance of players in the pharmaceutical industry in Ghana. It emerged that market orientation correlated significantly with overall firms’ performance \[R^2 = .291; p<0.0001\]. This implies that performance of pharmaceutical firms depend on the level of market orientation of these players. Thus, the more market oriented a firm or outlet is, the better the performance. This finding lends substantial support to the Dobni and Luffman, (2003) results, confirming that market orientation has a significantly positive effect on organizational performance. Therefore, H1 is supported. Presented above is the analysis of the relationship between the various performance variables (profitability, sales growth, new product success and return on investment) and the market orientation.
This study therefore is inconsistent with Akom- mea (2001) who concluded that the overall market orientation among the pharmaceutical manufacturers in Ghana was low, but consistent with his findings that pharmaceutical retailers in Ghana have high market orientation. In this study, the four categories of pharmaceutical dealers dealt with, makes it unique and no known studies by other authors precede this.

**CONCLUSION**

In the attempt to explore and assess the pharmaceutical industry appreciation of overall market orientation as well on the basis of the various categorizations, it was established that the overall market orientation in the pharmaceutical industry was significant and appreciably high (over 50%) contrary to earlier findings establishing it to be low (about 35%). The difference, however, was attributed to the increase in the level of competition in the industry as well as the effects of other macro environmental factors. Again it was identified that, the levels of practice of market orientation as experienced by the various firms in the industry with respect to their categories also differed.

Again, the impact of the antecedent to market orientation in the various categories also varied. It was thus established that, the size of the firms had impact on their levels of practice of market orientation and hence their levels of performance in the industry. This thus confirmed the findings which indicated a relationship between the level of practice of market orientation of firms and their size.

While a clear confirmation on the impact of market orientation on performance was established, it was realized that performance of firms in the industry increased in magnitude with an increase in size and managerial commitments of firms involved. Therefore whilst the OTC shops were the least in terms of the appreciation and adoption of market orientation, with an increase in magnitude of this practice with the size of firms, the manufacturing sector which happen to be the category with the largest employee size as well as with high managerial and financial commitment was the highest in the practice of market orientation.

### Table 2: Regression results showing the relationship between market orientation and performance

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient (r)</th>
<th>β-statistic</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Return on investment</td>
<td>.390</td>
<td>4.360</td>
<td>.000</td>
</tr>
<tr>
<td>New product success</td>
<td>.246</td>
<td>-5.763</td>
<td>.000</td>
</tr>
<tr>
<td>Profitability</td>
<td>.355</td>
<td>5.912</td>
<td>.000</td>
</tr>
<tr>
<td>Sales growth</td>
<td>.295</td>
<td>-1.437</td>
<td>.152</td>
</tr>
<tr>
<td>R-square</td>
<td>.291</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>F-statistic</td>
<td>20.726</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Prob. (F-statistic)</td>
<td>.0001</td>
<td>-</td>
<td>-</td>
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REFERENCES


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