EXPORT DRIVERS AND BARRIERS: EVIDENCE FROM GHANAIAN PHARMACEUTICAL MANUFACTURING FIRMS

Samuel Yaw Akomea, Kwame Nkrumah University of Science and Technology, Ghana
Olav Jull Sørensen, Aalborg University, Denmark
Kweku Amponsah-Efah, Amponsah-Efah Pharmaceutical Company Ltd., Ghana

ABSTRACT

The study is an exploratory study on the state of exports within the Ghanaian pharmaceutical manufacturing industry. Data was obtained from interviews of key managers involved in strategy formulation of 5 exporting pharmaceutical manufacturing companies in Ghana. The study revealed that out of 41 pharmaceutical manufacturing companies in Ghana, only 10 exported their products. Each respondent company indicated exporting less than 20% of total production output mainly to other West African countries. The most important reasons for exporting were to expand markets for their products to fulfil their vision of becoming global, to obtain foreign exchange and to achieve economies of scale. Major barriers faced were multiple product registrations across the West African Region. The companies hoped for more incentives from the Ghana government in the form of tax breaks and lower utility costs to allow expansion of export activities.

JEL: F18, F01, F14, L65, M16, M31, K23

KEYWORDS*:* Export Barriers, Pharmaceutical, Export Destination, Competition, Certification

INTRODUCTION

Pharmaceuticals are an essential part of healthcare delivery; used in prevention, treatment, cure, mitigation of diseases, as well as modification of other lifestyle conditions (Bumpas and Ekkehard, 2009). Drugs are usually the most critical inputs and most important cost driver in hospital management and other healthcare systems (Rodriguez-Monguio and Rovira, 2005; Smith *et al.*, 2009). The global market is highly polarized with Multinational Research-based Companies dominating the sector in terms of global sales and market capitalization, with production of high-value patented products. Nonetheless, some Indian and Chinese manufacturers are rising steadily, recording double-digit growth rates over previous years (Shen, 2008). Developing countries account for less than 1% of the global pharmaceutical market, and the proportion is much smaller for the African continent (Seiter, 2005). African countries are heavily reliant on imported pharmaceuticals, which are supplied mainly by generic companies based in China and India (Advani, 2009).

In spite of the overwhelming dominance of imported products on the continent, there is still a small section of the African pharmaceutical market that is served by local generic drug manufacturing companies, who usually do business on national scale in their home countries, sometimes only limited to particular regions (Seiter, 2005). A survey conducted on 46 Sub-Saharan African countries revealed about 37 countries had such industries and 9 countries had no production capacity at all (African Union Conference of Ministers of Health, 2007). Small developing countries with this kind of limited production capacity have to battle with stiff competition from imported drugs in the face of cost disadvantages attributed to limited volumes, insufficient purchasing power to secure good prices from raw material suppliers, bureaucratic hurdles, high taxes on imported production inputs, corruption, lack of access to financing, and other reasons related to the general business environment (Seiter, 2010). Morgan (1997) shows that when companies are confronted with the decision whether or not to export, they are

generally reluctant to decide in favor of exporting, often deciding to retain their non-exporting status due to perceptions about several export barriers or challenges, some of which Leonidou (2000) indicates could make the task of progressing in the exports difficult. In spite of numerous challenges manufactuirng companies in least developed nations have to face, there are still some Ghanaian Pharmaceutical Manufacturing Companies who have managed to exploit international markets through exports; raising several questions that need to be researched into. Even though the plethora of research on internationalization of Ghanaian Non-Traditional Exports (NTEs) have been conducted by the DANIDA Centre for International Business, and many other researchers, (Abor and Biekpe, 2006; Buatsi, 2002; Hinson and Sorensen, 2006; Kuada, 2005; Kuada and Sorensen, 2000; Wolf, 2007), none touched on exports of manufactured pharmaceutical products. Pharmaceuticals are products that are highly regulated in all countries; it is therefore imperative to investigate the peculiar challenges that confront manufacturers in the industry who have the zeal to export. The purpose of this paper is to analyze the drivers and barriers of Ghanaian pharmaceutical manufacturing companies that have been able to explore or exploit international markets. This will be a major incentive for companies that are contemplating to export as well as policy makers and regulators. The paper contributes to the literature on the pharmaceutical dimension of Ghana's non-traditional exports. The rest of the paper is organized into five sections; literature review, overview of the pharmaceutical manufacturing industry in Ghana, methodology, results and discussion and implication and conclusions.

LITERATURE REVIEW

Despite the prominent role of foreign direct investment for opening up new country markets and tapping into cheap production sites, exporting activities remain an essential element of international trade (Ling-yee and Ogunmokun, 2001). Nelson (2000) defines exporting as a universal business tactic that permits manufacturers and service companies in one nation to sell their products across borders to a foreign country. Joshi (2005) breaks down the word presenting a conceptual meaning as having to "ship" the goods and services out of the "port" of a country, hence the word 'ex-port'. Hill (2003) explains exporting as the simplest way for a business to legally enter a foreign market, and further indicates that the most important distinction from other similar modes of internationalization would be the fact that the company produces all its goods in its home country, and sends it across borders to a foreign country. The concept of exporting being defined in terms of shipping goods overseas into a foreign country has also been repeated by several others (Bertrand, 1989; Morgan, 1997; Dosoglu-Guner, 1999), and is adopted as the working definition for exports for the purpose of this research. Per this definition, all goods are manufactured in Ghana and sold or marketed in foreign countries.

The Organization for Economic Co-operation and Development (OECD) (2009) indicate that the reason that is deemed most important to each firm for exporting may be unique to the firm, and would be largely influenced by the internal and external environment of the firm (OECD, 2009). Cohen *et al.* (2005) and Anderson (2010) have both asserted that the Trade Related Aspects of Intellectual Property Rights (TRIPS) agreement creates an opportunity for local pharmaceutical manufacturers to export their products to other least developed nations. On 30 August 2003, two compulsory licensing provisions (Articles 31[f] and [h]) of the TRIPS agreement were waived and by this waiver, the governments of countries with "pharmaceutical manufacturing capacity" could establish compulsory licensing regimes authorizing companies, other than the patent holder, to manufacture lower-cost versions of patented pharmaceutical products for export to eligible importing member countries (WHO, 2005). The products could be exported to other least developed countries with insufficient or no manufacturing capacity for pharmaceutical products (Van Dyck, 2007). No African country has exploited this agreement to the full as yet (Anderson, 2010). Seiter (2010) suggests that pharmaceutical manufacturing companies could use donor-funded programs as a catalyst to export their products. Such funded programs usually require taking part in international bid, after meeting quality standards as part of the pre-qualification process (WHO, 2008). Most of such programs take care of marketing and distribution of the medicines to the customers and

consumers. Thus, the manufacturing company does not have to spend much on marketing and distribution, and has the chance to develop their products in external markets (Macher and Nickerson, 2006). The most notable donor funded programs include the Bill and Melinda Gates foundation's global fund for HIV/AIDs, Malaria, Tuberculosis and Reproductive health, the Global Drug Facility, United Nations Conference on Trade and Development (UNCTAD) and the The US President's Emergency Plan for AIDS Relief (PEPFAR) (Feuer, 2006; WHO, 2008).

Leonidou, *et al*., (2002) posit that in a context where domestic markets are limited, successful firm growth will as a matter of necessity need to be linked to exporting. Anderson (2010) relates this point specifically to local pharmaceutical manufacturing industries asserting that most of them face the threat of extinction, unless they are able to export. It has also been suggested that one way indigenous manfuacturing companies can counter the effects of imports from China and India and remain competitive is to increase intra-regional trade (Macher and Nickerson, 2006; McGuire, *et al*., 2007). Seiter (2005) suggests that intra-regional trade would also allow the companies to make use of the overcapacity that exists in generic product manufacture all over the world.

Distribution refers to all the various channels the goods would have to move through in order to reach the final consumer (Scarborough, 2005). Regardless of the mode used, Chambers and Shaw (2008) indicate that the most crucial step in setting up a distribution network is establishing good relationships with all members, especially through personal connections. Some of the key players in the distribution network include sales representative or commissioned sales agents, wholesalers and retailers. Sales Representatives use the company's product literature and samples to present the product to potential buyers, usually on commission basis, assuming no risk or responsibility and being under contract for a definite period of time (Zuckerman & Biederman, 2000). They may work for more than one firm, but generally they do not handle competing products. Commissioned sales representatives rarely stock products, but orders are usually relayed to the home office and the agent earns a commission or percentage after the customer pays the exporting company.

Nelson (2000) indicates that commissioned agents are generally quite effective when selling high-volume, low-priced consumer goods, although they may be able to undercut distributor prices because they are not charged mark-ups for shipping and other costs. Hessels and Terjesen, (2007) as well as GFP, (2005) caution that the balance of power between exporter and agent intermediaries can be dramatically tilted in favour of the agent, especially if the exporter is selling a product without wide brand-name recognition. Zuckerman and Biederman (1998) suggest that one way of managing is for exporters not to forward all their business to one agent. In addition, all terms and conditions in any contracts must be carefully spelt out under the guidance of an attorney familiar with the laws of that particular country.
Wholesale distributors purchase the merchandise from the manufacturing company and resell at a profit, usually carrying inventory of products so that orders from customers in the foreign country can be supplied immediately. Wholesalers are the most important intermediaries linking manufactures to pharmacists, hospitals and self-dispensing doctors, and are often an important determinant of export success (Morse, 2003; Minh and Kien, 2004; CBI, 2010; Seiter, 2010).

Many companies begin export activities haphazardly, without a good strategy borne from careful planning, market research, and screening markets or options for market entry (Zuckerman and Biederman, 1998). UNCTAD (2004) indicates that one key determinant of export success is the formulation of a good export strategy based on accurate information and proper assessment, which increases the chances that the best options will be chosen, that resources will be used effectively and that efforts will consequently be carried through to completion. Chambers and Shaw (2008) find that having a clear, comprehensive export plan, which covers the products to be selected, countries targeted, customer profile, special challenges pertaining to each market (eg. competition, cultural differences import controls, etc), strategies to address challenges, pricing, export management and operations, personnel and resources, timeframes,

evaluation of results is an important determinant of export success. Muhammed and Hassan (2009) report of Shoham (1996)'s general definition of export performance as the result of a firm's actions in the export markets, and the subsequent classification of more than 50 different dimensions of export performance into two main groups: subjective and objective measures. Leonidou *et al.* (2002) however suggests that the *sales volume, market share, and profit contribution from export activities* are mostly used as the measure of export performance.

Suarez-Ortega (2003) defines export barriers as internal and external factors that dissuade the firm from exporting or hinder its exporting activities. It has been well documented how removal of trade barriers contribute to export success of most industries in different parts of the world (Leonidou, 2000; Easterly and Reshef, 2010; CBI, 2010). Export barriers have been classified from different perspectives, but one major and widely used classification is into *internal barriers* and *external barriers*, with the internal barriers involving organizational resources and capabilities and the external barriers pertaining to country-level barriers (Leonidou 2000; Tesfom and Lutz, 2006).

As nations progressively reduce import duties, non-tariff barriers assume greater importance (Scarborough, 2005). According to Easterly and Reshef (2010), non-tariff barriers are more important determinants of export success for indigenous African companies than tariff barriers. Kaplan and Laign (2005), Seiter (2010) and Anderson (2010) all agree that government procurement policies in most African countries that usually favour domestic producers and severely restrict purchases of imported goods by government agencies also act as strong export barriers for pharmaceutical manufacturing companies. (McCabe, 2009) indicates that official prices for pharmaceuticals could be export barriers in some African countries. Leonidou (2000) uses results obtained from two studies in Cyprus to show other major barriers to exporters including, competition in foreign markets, high risks and costs in selling abroad, and lack of assistance by home governments. In their study of SMEs in the EU, before and after EU harmonisation, Yamin, *et al.*, (2007) indicated that export managers felt the harmonization had reduced the export barriers and provided greater incentive to export. Elbadawi *et al*. (2006), Edwards and Alves (2006), as well as Iwanow & Kirkpatrick, (2007) found that manufacturing exports are limited by declining investment in transport infrastructure, and that improving the quality of domestic transportation infrastructure and the reliability of transport services might improve export performance.

Overview of the Pharmaceutical Manufacturing Industry of Ghana

The Pharmaceutical Manufacturing Industry of Ghana dates back to Pre-Independence years; the first companies were Major and Co, Starwin, and Pharco Laboratories, followed by quite a number of firms, many owned by expatriates including Kingsway Chemists, Netherlands African Manufacturing Company (NAMCO), Danish African Manufacturing Company (DANAFCO), Pfizer, J.L. Morrison and Co., Ghana Drug House Production, Empire Pharmaceuticals, Phemeco, among others. The companies mainly produced tablets, liquid products, ointments and creams for local consumption. Most of the companies folded up, mainly due to the political and economic instability of the last quarter of the 20th century, although some went down as a result of poor succession management, and the inability to adapt to changing times. As at 2012, unpublished records of the pharmaceutical Manufacturing Association of Ghana (PMAG) indicate the sector has about 41 companies, the PMAG considering approximately 20 of them as being "active" manufacturers. The PMAG estimates the sector employs about 5000 people, and supplies an estimated 30 percent of Ghana's total pharmaceutical consumption (also estimated at US$500m). Most manufacturers focus on producing basic Over-The-Counter Drugs, as well as a few prescription-only medications. None of the companies has World Health Organization Pre-Qualification (WHO-PQ) certification.

Phyto-Riker Ghana Limited was established in 1962 as a State-owned Ghana Industrial Holding Corporation (GIHOC), beginning production operations in 1967. However in 1998, the state-owned

GIHOC Pharmaceuticals was acquired by Bermuda-based Phyto-Riker Pharmaceuticals Inc, through a competitive privatization process. The new owners also divested their ownership in 2005, which resulted in Trans-Africa Pharmaceuticals Ltd (TAPCO) acquiring majority shares of 65%, Overseas Private Investment Corporation (OPIC) acquiring 25% shares, and the Government of Ghana retaining 10% shares. The Company is Good Manufacturing Practice (GMP) and ISO 9001-2000 certified, and produces a wide range of essential drugs mainly tablets and oral liquids for use in Ghana and the entire West Africa Sub-Region. (Phyto-Riker Pharmaceuticals Ltd, 2011)

Danadams Pharmaceuticals Limited is a subsidiary of Danpong Group of Companies. The parent company, was established in 1989, but entered into a joint venture with Adams Pharmaceutical Company Limited of China, leading to the construction of a four-million-dollar pharmaceutical manufacturing plant known as Danadams Pharmaceutical Industry Ghana Limited (Danadams). In June 2006, Danpong Group acquired all the shares of the joint venture company, making it a wholly-Ghanaian-owned company. The Company's core business is the manufacture of antiretroviral, anti-malaria, anti-tuberculosis, analgesics and other drugs used for the treatment of opportunistic infections in HIV/AIDS patients. Danadams is currently the only pharmaceutical company producing Antiretroviral Drugs (ARVs) in Ghana and one of just three in West Africa. (Danadams Pharmaceuticals Limited, 2012)

Ernest Chemists Limited started business in 1986 as a sole proprietorship and in 1993 became a limited liability. The company has three business structures; trading, manufacturing and export, operating an extensive network of distribution channels throughout the country. The company began manufacturing operations in 2001 and produces tablets, powders, capsules, oral liquids and suspensions, and medicines for external use over a wide range of therapeutic areas. On single shift basis, the manufacturing plant has the capacity to produce 400 million tablets, 100 million capsules, 300,000 litres or 3,200,000 bottles of oral liquids and 750,000 bottles of dry powder for reconstitution per annum (Ernest Chemists Ltd, 2012).

Intravenous Infusions Limited: The company was established in December 1969 and is located at Effiduasi near Koforidua, and is currently one of only two companies with a manufacturing plant registered by the Food and Drugs Board Ghana for production of Intravenous Infusions, and Small Volume Injections. The company's vision is to be the leading manufacturer and supplier of pharmaceutical and medical products in Africa in the 21st century. Although currently privately owned, the company hopes to restructure towards public listing on the Ghana Stock Exchange in the short term, and to attain ISO 9000 quality standards.

LaGray Chemical Company Limited was incorporated in 2001 but began manufacturing operations in 2007. The company is the only one in West Africa manufacturing Active Pharmaceutical Ingredients (APIs) and designed as a fully integrated company. The company manufactures creams, ointments, tablets, capsules and dry powders for suspension for treatment of infectious diseases including malaria, fungal infections and respiratory tract infections. (LaGray Chemical Company, Official Website). This paper is organized into five sections. The next section reviews the relevant literature on exporting in general and pharmaceuticals exporting in particular. Section three outlines the methodology of the study and limitations of the study. Section four presents and discusses the findings of the study. The final section presents conclusions and implications; we also proffer some suggestions to stakeholders.

METHODOLOGY

This section presents the method which was used in arriving at the finding presented in the next section. This qualitative study utilized the case study approach, focusing on five companies in the pharmaceutical manufacturing industry in Ghana from March to June 2012. Out of the 41 manufacturing companies on the list of Pharmaceutical Manufacturers' Association of Ghana (PMAG), only 10 companies had indicated that they exported their finished products. The 10 companies therefore represented the

population of exporting firms in Ghana. As a small population, we attempted to use the 100 percent as sample but only five were willing to co-operate. The key informant technique, by which people with specialized knowledge about the issue in question are selected for interview, is mainly used in Purposive Sampling (Jankowicz, 2002). By this principle, it was considered that the best respondents to obtain information from would be people in top management positions who were directly involved with strategy formulation regarding export operations in the companies. The final respondents were in the following positions: two Chief Executives, Sales Manager, Marketing Manager and International Business Managers.

Another interview was conducted with the executive secretary of the Pharmaceutical Manufacturers' Association of Ghana (PMAG). Information sought from the Association was on the history of the pharmaceutical manufacturing industry in Ghana, the past and current operations of the manufacturers, the outlook for the industry, and the supportive role of the government for pharmaceutical manufacturing companies. Two interview guides were prepared for the research – one targeted at the manufacturing companies, and the other for the PMAG. The interview guide incorporated both open and close ended questions. Open ended questions were mainly probing, and allowed respondents enough breath to expatiate on points or to correct certain contexts. The close ended questions utilized lists, weighted ranking, quantification, and simple forced-choice 'yes/no' type options. These "forced-choice options" were added to break the monotony of having all open questions, making the discussions more interesting. Nonetheless, all close-ended questions had space for additional comments. Because the research was mainly qualitative, several measures were taken to ensure that responses obtained were valid and reliable. Firstly, responses were obtained from experienced and knowledgeable people.

All respondents interviewed were in senior management positions in their companies, and were directly involved in strategy formulation for exports. Thus, it was considered that the responses they would give to the interviews would be accurate and credible. The questions designed focused on problems best explored by qualitative analytical methods rather than by looking for statistical patterns. Nonetheless, since the five companies used had characteristics that represented almost all the different segments that could typically be encountered in the pharmaceutical manufacturing industry, the findings would have a broader significance than the individual cases from which information were gathered.

RESULTS AND DISCUSSION

This section presents the findings of the study conducted on five exporting pharmaceutical manufacturing companies, in relation to the purpose of the study. The discussion essentially screens responses for similarities or differences and where specific details are identified, they are highlighted. From the interviews, it was revealed that three of the companies studied had been exporting for less than five years, one had been exporting between five and ten years and the last had been exporting for almost two decades. All five companies indicated that the export drive had been continuous since it began.

Drivers of Exporting

The major reasons that inform the decision to export tend to have a strong impact on the level of commitment given to the export drive, the level of resources dedicated, the mode of entry used, and the resulting outcome. For instance, companies that see exporting as a major contributor to company revenue tend to devote more resources, including time, human resources and attention to it (Nelson, 2000). On the other hand, a company that exports only as a secondary activity, possibly to dispose of surplus production or offset seasonal variations in the home country may not devote as much resources (US Department of Commerce, 1998). Respondents were therefore asked to rank up to five major reasons why their companies entered the international markets on a weighted scale; 5 to the most important reason and 1 to the least important reason. The measures were adapted from various authors in the international

marketing literature. Table 1 below presents the mean scores of respondent firms as to the reasons why they engage in exporting.

Table 1: Major Drivers of Companies' Decision to Export

Motivation	Mean Score	Standard Deviation	Variance
Market Expansion	4.80	0.4472	0.200
Fulfilling Company Vision	3.40	1.5165	2.300
Foreign Exchange	3.25	0.5000	0.250
Export incentives	2.50	2.1213	4.500
Economies of Scale	2.20	0.4472	0.200
Specific Demand	1.50	0.7071	0.500
Following Customers	1.00	-	-
Risk Diversification	1.08	-	-
Following Competitors	0.00	-	-
Resource Utilization	0.00	-	-
Market Saturation	0.00	-	-
Unplanned Reasons	0.00	-	-

This table depicts the mean scores, standard deviation and variance of the reasons why Ghanaian pharmaceutical manufacturing firms export; the most important reasons being market expansion and fulfilment of company vision.

From the interviews, the most important reason given for exporting was market expansion or find new markets for their products. The point scored a perfect 4.8 out of 5.0 with a standard deviation of 0.4472, meaning there was unanimity in reason from each of the respondents. All the companies interviewed had been manufacturing and marketing their products in Ghana for several years before export operations began. Some of the products had been carefully developed into strong brands in Ghana with a lot of knowledge and experience gained. Thus all five companies believed they possessed some form of leverage which could give them an advantage in developing other markets so as to enjoy scale economies.

The priority placed on this reason is in consonance with the findings of Reich (1990) that several successful pharmaceutical exporting countries have typically followed a pattern of first developing products for the domestic market under government policies of protection from international competition, before moving into the "low-end" of foreign markets with relatively inexpensive but good quality products, based on the foundation of solid domestic sales. Kotler and Armstrong (2008) corroborate this by indicating that the market development approach usually presents less risk than product development. Most of the respondents believed due to the similarities in the demographics and economic conditions of most West African countries, exploiting those markets through exports promised a great chance of success. Although they hoped to expand their markets, none of the managers felt the market in Ghana was saturated.

For Phyto-Riker pharmaceuticals, the need to embark on exports was to make use of the benefits of the Free Zones arrangement of the government of Ghana in return of incentives such as 10-year tax holiday. Because the company registered on the Free Zones, they were expected to sell not less than 70% of their total production output outside the country. The company thus scored highly for the reason of exporting to make use of government incentives, although the reason could not be sustained about 15 years down the line. The four other companies, however, saw no significant incentives that could have pushed them into exporting giving the point a low scoring, which accounts for the high standard deviation.

The products that were mainly on their export list included Antibiotics, Antihypertensive, Diabetes Medicines, and some Analgesics. Companies that had Anti-malarial and Anti-retroviral as their main export products confirmed that the level of demand had reduced significantly since the policy change to Artemisinin-based Combination Therapies (ACTs), and the inception of the donor funded programs for certain therapeutic areas. This confirms the findings that with most countries signing on to and benefiting

from international donor funded programs, buyers are obliged to shift from products that do not have WHO/Prequalification status (WIPO, 2000; WHO, 2005; Anderson, 2010). This factor is therefore becoming a very important one in product selection. None of the companies reported the need to make any significant modifications to products to fit the export market. This was mainly because requirements for most of the National Drug Regulatory Authorities (NDRAs) in the different countries are similar to that for the Ghana Food and Drugs Board (Anderson 2010), aided by the fact that generic drugs are strictly supposed to be the same or equivalent to the corresponding innovator drug.

All five companies exported through distribution agents and intermediaries who represented them in the foreign countries. The agents were mainly well-established pharmaceutical wholesalers, who had extensive distribution networks in the foreign countries. Some of the companies had exclusivity deals with some of the agents for specific product lines. The companies decided to use these distribution modes mainly because they preferred not to carry too many export overheads, especially in the initial stages of the export, they wish to learn from the locals, findings consistent with Centre for Promotion of Imports (CBI) (2009). The main modes of transportation used were sea and air, subcontracted to logistics companies. None of the companies considered road transportation as a good means for exporting pharmaceuticals from Ghana, considering it too risky. Customers in almost all the countries were mainly wholesale outlets, governments, and institutional buyers. All five companies used sales representatives who are mainly pharmacists specialized in product marketing and who mainly go round to promote the products with medical doctors, or other institutional buyers such as health ministries and medical stores of government hospitals. These findings are in consonance with the assertion that for small to medium sized companies, indirect exporting is a better option (Zuckerman and Biederman 1998) and the CBI (2009) survey that also indicated that developing-country exporters of generic markets to the EU mainly used the "specialized pharmaceutical channel" consisting of wholesalers, pharmacies, hospitals and self-dispensing doctors.

Main Export Destinations

The country (or the market) selected for export is one of the most important decisions made, virtually all other effects and outcomes depend on the market selected (GFP, 2005; USITC, 2010). Companies choose which market is most easily explored, and offers the greatest potential for success. Figure 1 below presents West Africa as the main export destination of the companies studied. However, at the time of data collection in mid 2012, none of the firms exported to Guinea, Guinea Bissau, Cape Verde, Mali, Mauritania and Niger. As was expected, the modal destinations were West African Countries. Only one company had exported to a country outside West Africa.

As was expected, the companies indicated exporting to West Africa mainly due to the nearness of the markets. Additionally the ECOWAS integration and free trade agreements among the countries make exporting to these countries cheaper. Each company interviewed saw Francophone West Africa, as well as Nigeria as the destinations that offer the greatest prospects. The francophone countries were cited because the level of their domestic pharmaceutical manufacturing industries is way underdeveloped compared to what is found in Ghana. Thus, most of the Francophone countries relied on imports especially from France. Prices for pharmaceuticals are also regulated by government and were reported to be significantly higher than what is obtained in Ghana. The common currency of the francophone region also made trading in those regions much easier for the companies. Nigeria was also a preferred destination for most of the companies for the simple reason of their market size. In West Africa, Nigeria is the single country with the highest number of pharmaceutical manufacturing facilities (Africa Union Conference of Ministers of Health, 2007). However, most of the companies believed that the facilities they have in Ghana compare favourably with what is in Nigeria. Thus, they could really compete and tap into the market.

Figure 1: Export Markets of Ghanaian Pharmaceuticals

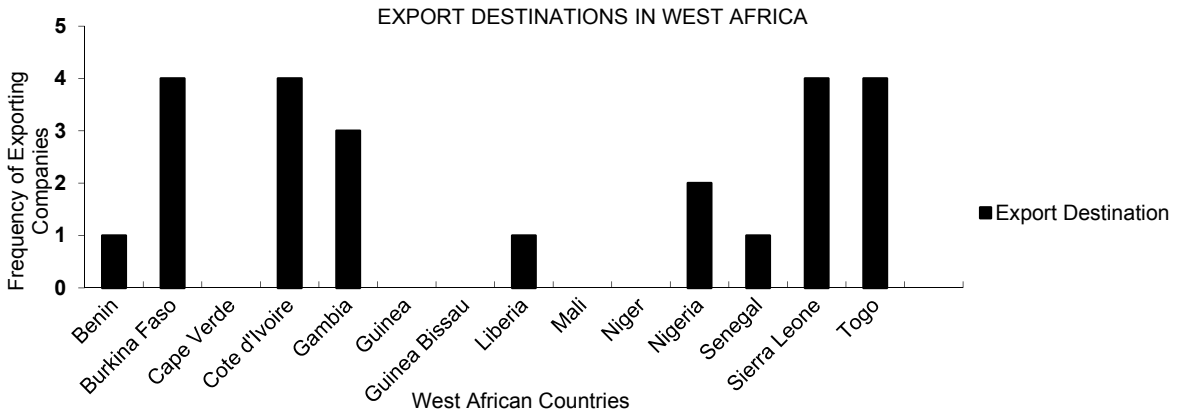

Figure 1 above shows the export markets of Ghanaian pharmaceutical manufacturing firms. The main markets are Burkina Faso, Cote d'Ivoire, Sierra Leone, Togo and Nigeria all in West Africa.

Sierra Leone, Gambia, Liberia and Senegal were listed as some of the easiest destinations for pharmaceutical products to be exported to. The companies indicated that the National Drug Law Enforcement Agency (NDLEA) in Sierra Leone had an agreement with the FDB Ghana which made registrations much easier. In addition, they do not have any strong local pharmaceutical manufacturing companies and thus offered good prospects. These findings agree with CBI (2009) indicating that subsequent to trade liberalization in the European Union, intra-EU imports accounted for more than 80% of total EU imports of pharmaceuticals. None of the companies interviewed had ever exported to North America, Europe, or any other developed country, and as expected, these areas were listed as the destinations with the greatest challenges. The major reason given was due to the manufacturing standards required by Strict Regulatory Agencies (SRAs) without which it is impossible to break into such markets. Although the regulatory standards of the South American and the Asian Regions are not as stringent, these markets did not appeal to any of the companies either.

Export Barriers

The study sought to find out the major barriers to the manufacturing firms' export activities. These were grouped into external and internal barriers as classified by Leonidou (2000). Table 2 presents data on respondents' rating of non-tariff barriers that impair export of finished manufactured pharmaceutical products in the West African sub-region. It emerged that product registration is the most common barrier all respondents agreed on that. The external barriers selected included mainly non-tariff barriers such as product registration requirements, clearing and administrative procedures, challenges with infrastructure, foreign market competition, patent laws, product counterfeiting and perceptions about Ghana. Internal challenges selected included financial challenges, challenges with human resource and technical expertise, and challenges with production and technology. Respondents were asked to grade the degree of intensity of the various barriers on a five-point Likert scale. Table 2 depicts the average rating of the export barriers and their respective relative standard deviation.

The most significant barrier to exports for the companies was product registration procedures across different countries. All companies complained about the duplication of processes and the long lag times and delays associated with getting a product registered. Each company agreed that this was a main reason why they could not market all items on their product line. Particular mention was made of Nigeria and Cote d'Ivoire, which presented the greatest challenges of product registration in West Africa. This confirmed the findings of Shen (2008), Smith *et al.* (2009), Sidibe (2010), and Seiter (2010) that product

registration requirements pose the greatest challenge to pharmaceutical exporting. The next highest ranking external barrier was price-based competition in the export destinations. Most companies indicated that the high costs of manufacturing in Ghana made their products more expensive than their competitors, mainly Indian and Chinese generics manufacturers. Thus, it posed a significant challenge to their export activities, although not as highly as they consider the product registration challenges. The third highest ranking external barrier to exporting was the challenges with infrastructure, mainly transportation.

Table 2: External Barriers to Exports

BARRIER	Average Rating (5)	Average Rating	Relative S.D. (%)
Product Registration	4.8	96%	11
Foreign Market Competition	3.0	60%	33
Challenges with Infrastructure	3.0	60%	24
Administrative Challenges	2.8	56%	29
Bans or Embargos	2.8	56%	27
Tariff Barriers	2.4	48%	23
Manufacturing Standards	1.6	32%	52
Local content laws	1.4	28%	37
Perceptions about Ghana	1.4	28%	37
Patent laws & counterfeiting	1.0	20%	0

The table shows the major barriers that inhibit the exporting activities of Ghanaian manufacturing pharmaceutical companies. Product registration stands out as the major barrier to exports of pharmaceutical products.

Most of the companies indicated that transporting by road to other West African destinations was subject to several delays and risks, which made it very difficult for them. Particular mention was made for countries with no sea ports, such as Burkina Faso and Mali. Thus, some of the companies resort to the relatively more expensive air transportation. Next were Administrative challenges; defined to include shipping and clearing procedures, as well as the export procedures that are required. As indicated by Reich (1990) and Shinozaki (1997) some of the tactics used include confiscation of product based on brand names, instant re-classifications of previously approved products as dangerous or narcotics at the ports, and requirements for re-testing of products to confirm their certificates of analysis, while the products waited at the port. The companies indicated that in West Africa, Nigeria had a number of therapeutic products reserved for local production, which served as a barrier to their exports.

Respondent companies confirmed that although product manufacturing standards were the main barriers to accessing donor-funded products and developed markets, it was not considered a significant barrier to their export operations in West Africa, thus the point generally had a low score. However, at least two of the companies indicated that plans were far advanced to obtain WHO-PQ certification for some of the dosage forms, to be able to access such funds. A key problem for pharmaceutical manufacturers is product counterfeiting, which could seriously dent the reputation of an entire exporting industry, as happened in 2009 to Indian Exporters, when National Agency for Food and Drug Administration and Control (NAFDAC) (Nigeria) busted a ring of companies that had been shipping large consignments of fake anti-malarial generic drugs from China with made-in-India labels to West African Countries (Advani 2009). However, on their part, each company was careful to follow the right registration procedures with the local NDRA and some companies went a step further and registered some of their brand names and designs as trademarks with the registrar generals departments of the various countries they exported to. Some countries have requirements of local content even for the import of pharmaceuticals (MOITI, 2011). In Mexico for example, exporting companies are required to associate with locally based pharmaceutical manufacturing companies or laboratories with "significant" facilities in Mexico. The local firm would thus act as a "guarantor" with the local authorities in particular with regard to manufacturing practices, registration, quality control etc. (MOITI, 2011).

In Table 3, we summarise the most influential drivers and barriers affecting Ghanaian pharmaceutical manufacturing exporting companies. Most of these factors are external to the firms. The major internal barrier the companies indicated affected their export operations was lack of access to affordable financing; however this was not comparable to product registration as a barrier. Each company felt they had enough knowledge of production and exporting to manage their export operations, and did not consider challenges with production technology as very serious ones. The table also presented the top five markets that Ghanaian pharmaceutical manufacturers patronize. Table 3 below shows the summary of drivers, barriers and top five markets of Ghanaian pharmaceutical manufacturing exporters.

Table 3: Summary of Drivers, Barriers and top Export Markets

Drivers	Mean	Barriers	Mean	Top Markets	Mean
Market Expansion	4.80	Product Registration	4.8	Burkina Faso	4.0
Fulfilling Company Vision	3.40	Foreign Market Competition	3.0	Cote d'Ivoire	4.0
Foreign Exchange	3.25	Challenges with Infrastructure	3.0	Sierra Leone	4.0
Export incentives	2.50	Administrative Challenges	2.8	Togo	4.0
Economies of Scale	2.20	Bans or Embargos	2.8	Gambia	3.0

This table summarises the top export drivers and barriers that affect Ghanaian pharmaceutical manufacturers; it also depicts the major export destinations of these exporters. Almost 80% of respondents patronize these markets.

Export Needs

Research findings revealed that most of the companies interviewed had not exploited any government grants geared towards exports. All the companies were aware of the Export Development and Agriculture Investment Fund (EDAIF), but none had actually been able to exploit it. One company commented that the fund was difficult to access mainly because of the bureaucratic processes and long lag times that follow application, causing most of the companies to utilize internally generated funds and commercial loans for their export financing.

McCabe (2009) reports that 66 of the 200 basic materials required for production are exempt from value-added tax (12.5 percent) and the NHIS levy (2.5 percent). However, the companies felt those tax incentives were not enough, compared to what their Asian counterparts could receive as incentives from their governments. One company commented that in India, pharmaceutical companies enjoy full tax refund and rebated tax credit for shipments above certain quantum for export of drugs as an incentive which contributes to their being more competitive. The Global Investment House (2007) also reports that the decision by the Jordanian government not to tax profits derived from exports from Jordan before the year 2008, was a major cause of many pharmaceutical companies expanding both their export and domestic operations. Some of these incentives could be introduced in Ghana to encourage exports. Ghanaian government missions abroad could also offer a great deal of assistance to exporters.

The main area exporters felt the mission could help was with trade shows and promotions. The backing of the foreign missions in such shows adds some credibility to the exporting companies (High Commission of India, 2006). Of particular significance some of the interviewees mentioned the Ghanaian mission in Namibia, and Sierra Leone who had organized and invited some of the companies to such shows, and they hoped especially the trade missions in francophone West Africa and Nigeria could do more in that area. The companies together with the Pharmaceutical Manufacturers Association of Ghana agree that, one area government could step in to expedite the attainment of WHO-PQ status by most of the companies, was with the provision of a Bio-equivalence Centre. Bio-equivalence is one of the main tests that are conducted to demonstrate that generic medicines have the same or similar activity as innovator medicines.

Although the companies agreed training of their staff and development of human resource mainly rests with the individual companies, they all agreed that government could provide industry-specific skilled higher education. One of the respondents noted that industry was gradually relying on expertise from countries like India. The Indian government established over 21 different National Institutes for Pharmaceutical Education and Research, which have contributed tremendously to the competitive advantage of the sector in human resource for pharmaceuticals (Ernst & Young, 2010). They agreed that specific industry-targeted training would be of significant help. The most important area the companies wished ECOWAS could do well in was with harmonization of registration procedures for drugs, which could cut down on the long delays in obtaining approvals for products. Harmonization at regional and ultimately continental level would give a level playing field, with the possibility to compete and market products across the whole of Africa and beyond (Sidibe, 2010).

CONCLUDING COMMENTS

Pharmaceutical manufacturers in Ghana; a developing country, have good excuses not to export; however, few of the firms have braced the odds to do so. Even though there are about 40 pharmaceutical manufacturers in the Ghana, only about 10 of these firms export finished products to other markets; mainly within ECOWAS. The purpose of this paper was to analyze the drivers and barriers of Ghanaian pharmaceutical manufacturing companies that have been able to explore or exploit international markets. In this study we investigated thoroughly the factors that drive the local pharmaceutical firms into the international market as well as the barriers hindering their export activities. The study also covered mode of entry, distribution approaches, and export destinations among other factors. This qualitative study interviewed Export Managers of 5 out of the 10 pharmaceutical manufacturers that export to some West African countries. The study revealed that almost all the firms that export are in search of wider markets; other factors that motivate firms to export are fulfilment of company vision and the quest for foreign exchange to import manufacturing inputs. In terms of distribution, all the companies use well-established local agents. However, major barriers include difficulty in product registration on foreign markets, foreign market competition; lack of export infrastructure; bureaucratic procedures and non-attainment of WHO-pre-qualification which allows firms to export to emerging or developed economies. Major limitation encountered was the unwillingness of some pharmaceutical manufacturing that export to take part in the study leading to a small sample size. It is evident from the study that products from pharmaceutical manufacturers; mainly China and India are gradually taking over the ECOWAS markets on cost leadership bases. Future research must be directed at strategies for competing alongside the presence of products from the BRICS; there probably will be the need for niche creation and networking approach to product distribution.

REFERENCES

Abor, J. and Biekpe, N. (2006), "How are SMEs Financed? Evidence from the Ghanaian Non-Traditional Export Sector", *Government & Policy*, 24 (1): 71-81.

Advani, A. H. (2009). Chinese Firms Ship Fake Drugs With "Made In India" labels to West African Countries. *Business India, The Magazine of the Corporate World,* No. 821, pp. 28-30.

African Union Conference of Ministers of Health. (2007). Pharmaceutical Manufacturing Plan for Africa. *Third Session of the African Union Conference of Ministers of Health , April* (CAMH/MIN/8(III)), 1-8.

Anderson, T. (2010). Tide turns for drug manufacturing in Africa. *The Lancet ,* No. 375, pp. 1597-1598.

Bertrand, K. (1989). Scrambling for 1992. *Business Marketing ,* 74 (4):49-59.

Buatsi, S. N. (2002) "Financing Non-Traditional Exports in Ghana", *Journal of Business and Industrial Marketing,* 17, (6):501-522.

Bumpas, J., and Ekkehard, B. (2009). *A Study on Active Pharmaceutical Ingredient Manufacturing for Essential Medicines.* World Bank HNP Discussion Paper, 1-42

CBI. (2010). The Pharmaceutical Products market in the EU. *European Union Centre for the Promotion of Imports From Developing Countries: Market Survey , February*, 1-46.

Chambers, E. J., and Shaw, W. J. (2008). Reaching Out: Exploring SME Exporting Opportunities and Challenges. *Western Centre for Economic Research, Information Bulletin , April* (109), 1-65.

Cohen, J. C., Gyansa-Lutterodt, M., and Torpey, K. (2005). TRIPS, the Doha Declaration and Increasing access to medicines; Policy options for Ghana. *Globalization and Health*. *December.* 1-9

Danadams Pharmaceuticals Limited. (2011). Retrieved July 10, 2011, from Danadams Pharmaceuticals Ltd, Official Website: www.danadams.com

Dosoglu-Guner, B. (1999). "An Exploratory Study of the Export Intention of Firms: The Relevance of Organizational Culture". *Journal of Global Marketing ,* 12 (4):45-63.

Easterly, W., and Reshef, A. (2010). African Export Successes; Surprises, Stylized Facts, and Explanations. *National Bureau of Economic Research Working Paper Series. No. 16597.* December. 1-52

Edwards, L., and Alves, P. (2006). "South African Export Performance: Determinants of Export Supply". *South African Journal of Economics* , 74 (3):473-500.

Elbadawi, I., Mengistae, T., and Zeufack, A. (2006). "Market Access, Supplier Access, and Africa's Manufactured Exports: Firm-Level Analysis". *Journal of International Trade and Economic Development* , 15 (4):493-523.

Ernest Chemists Ltd. (2011). *Ernest Chemists Ltd, Official Website*. Retrieved Juy 20, 2011, from www.ernestchemists.com

Ernst & Young. (2010). *Pharmaceuticals, Market and Opportunities*. Report for India Brand Equity Foundation. 1-35

Feuer, C. (2006). *Tuberculosis Research and Development: A Critical Analysis*. Treatment Action Group. 1-42

GFP. (2005). *Enabling SMEs to Enter the International Supply Chain.* The World Bank Group: Global Facilitation Partnership for Transportation and Trade Explanatory Notes. June. 1-4.

Global Investment House. (2007). Jordan Pharmaceutical Sector: The Healing Touch of the Dead Sea. *Sector Research*, June, 1-107.

Hessels, J., and Terjesen, S. (2007, October). SME Choice of Direct and Indirect Export Modes; Resource Dependency and Institutional Theory Perspectives*. Scientific Analysis of Entrepreneurship and SMEs Working Paper H200712*. October. 1-42.

High Commission of India. (2006, March). *Market Survey: Export of Indian Pharmaceuticals to Namibia.* March. 1-58

Hill, C. W. (2003). *Intenational Business: Competing In The Global Marketplace.* New York, McGraw-Hill Irwin.

Hinson R. and Sørensen O. J. (2006) "E-Business and small Ghanaian Exporters: Preliminary micro firm explorations in the light of a digital divide", *Online Information Review* 30(2): 116-138

ITA. (2010). *Pharmaceutical Industry Profile.* International Trade Administration Office of Health and Consumer Goods Sector Notebook Project No ITA/310-R-97-005. Washington. July

Iwanow, T. and Kirkpatrick, C. (2007),. Trade Facilitation and Manufacturing Exports: Is Africa Different? A paper prepared for the 'Economic Development in Africa' Conference, March 2007. organized by the Centre for Study of African Economies, University of Oxford,

Jankowicz, A. D. (2002). *Business Research Projects* (3rd Edition ed.). Cornwall: Thomson Learning. 52-64.

Joshi, R. M. (2005). *International Marketing.* New York: Oxford University Press. 59-78.

Kaplan, W. and Laign, R. (2005). *Local Production of Pharmaceuticals: Industrial Policy and Access to Medicines.* World Bank HNP Discussion Paper. Washington DC, January, 1-40.

Kotler, P., and Armstrong, G. (2008). *Principles Of Marketing* (12th Edition ed.). New Jersey, Pearson Prentice Hall. 540-565.

Kuada, J. E. (2005),. *Managing the internationalization process in Ghana: Theories and Practices,* Adonis & Abbey Publishers Ltd, London, pp. 10-24

Kuada, J. and Sørensen, O. J., (2000) *Internationalization of Companies from Developing Countries,* New York : Routledge.

LaGray Chemical Company, Official Website. (n.d.). Retrieved July 15, 2011, from www.lagray.com

Leonidou, L. C. (2000). "Barriers to Export Management: An Organizational And Internationalization Analysis", *Journal Of International Management* , 6(2):121-148.

Leonidou, L. C., Katsikeas, C. S., and Samieec, S. (2002). "Marketing Strategy Determinants of Export Performance: A Meta-Analysis", *Journal of Business Research* ,55(4): 51-67.

Ling-Yee, L., and Ogunmokun, G. O. (2001) "Effect of export financing resources and supply-chain skills on export competitive advantages: implications for superior export performance", *Journal of World Business,* Vol. 36(3):260-279

Macher, J., and Nickerson, J. (2006). *Pharmaceutical Manufacturing Research Project; Final Benchmarking Report*, Olin School of Business, September, 1-475.

McCabe, A. (2009). Private Sector Pharmaceutical Supply and Distribution Chains; Ghana, Mali and Malawi. *The World Bank, Health Systems for Outcomes Publication 53107*. December, 1-67.

MOITI. (2011). *Mexican Pharmaceutical Industry.* Massachussettes Office of International Trade and Investment Sector publication, Massachussettes.

Morgan, R. E. (1997). Export Stimuli and Export Barriers: Evidence from Empirical Research Studies. *European Business Review*, 97 (2): 68-90.

Morse, H. M. (2003). "Product Market Definition In the The Pharmaceutical Industry" *Antitrust Law Journal* , 71(2):633-676.

Nelson, C. A. (2000). *Exporting, A Manager's Guide to the World Market.* London. International Thomson Business Press. 168-173.

OECD. (2009). *Top Barriers and Drivers to SME Internationalisation.* Report by the Organisation for Economic Co-operation and Development Working Party on SMEs and Entrepreneurship. 1-35

Phyto-riker Pharmaceuticals Ltd. (2010). Retrieved August 20, 2011, from Phytoriker Ghana Limited, Official Website: www.phytoriker.com

Reich, M. R. (1990). "Why the Japanese Don't Export More Pharmaceuticals: Health Policy as Industrial Policy", *California Management Review*, 32 (2): 124-145.

Rodriguez-Monguio, R., and Rovira, J. (2005). An Analysis of Pharmaceutical Lending By the World Bank*, World Bank HNP Discussion Paper 31510.* Washington DC., pp 1-41.

Scarborough, N. M. (2005). *Essentials of Entrepreneurship and Small Business Management* (6th Edition). England, Prentice Hall. 463-484.

Seiter, A. (2005). Pharmaceuticals, Local Manufacturing*. World Bank HNP Discussion Paper Brief Number 3. March. 1-6.*

Seiter, A. (2010). A Practical Approach to Pharmaceutical Policy, Directions in Development*. World Bank HNP Discussion Paper 55203.*

Shen, J. J. (2008). China's Rising Importance in Pharmaceuticals. *China Business Review*, May/June, 22-24.

Shoham, A. (1996). "Marketing-mix standardization: determinants of export performance". *Journal of Global Marketing*, 10 (2): 3-73.

Sidibe, M. (2010). Beautiful Music: Brining Africa's Drug Regulations In Harmony with Human Health, *Special Meeting of an Extended Technical Committee on the Pharmaceutical Manufacturing plan for Africa*. Pretoria. 1-5

Smith, R. D., Correa, C., & Oh, C. (2009). Trade, TRIPS and Pharmaceuticals. *Lancet ,* 373, 684-91.

Suarez-Ortega, S. (2003). Export Barriers: Insights from Small and Medium-sized Firms. *International Small Business Journal* , 21 (4): 403-419.

US Department of Commerce. (1998). *A Basic Guide To Exporting.* California. World Trade Press.

USITC. (2010). *Small and Medium Sized Enterprises: US and EU Export Activities, and Barriers and Opportunities Experienced by US Firms.* United States International Trade Commission Publication 4169, Investigation No. 332-509. July

Van Dyck, P. (2007). "Importing Western Style, Exporting Tragedy: Changes in Indian Patent Law and Their Impact on AIDS Treatment in Africa" *Northwestern Journal of Technology and Intellectual Property*, 6 (1): 138-151.

WHO. (2008). Access to Medicines. *Drug Information Journal , 19* (No. 4). 83-96.

WIPO. (2000). Patent Protection and Access to HIV/AIDS Pharmaceuticals In Sub-Saharan Africa.*Report Prepared for the World Intellectual Property Organization.*Washington DC. 1-100.

Wolf, S. (2007). Firm Characteristics of Non-traditional Exporters In Ghana. *The European Journal of Development Research ,* 19 (3): 391-411.

Yamin, M., Sinkovics, R. R., and Hadjielias, E. (2007). "EU Harmonization, Managerial Perceptions and SME Export Behavior",*Journal of Euromarketing* ,17 (1): 7-21.

Zuckerman, A., & Biederman, D. (1998). *Exporting And Importing, Negotiating Global Markets.* New York, a Division of American Management Association, pp 428-521

ACKNOWLEDGEMENTS

The authors are grateful to all firms that were used as respondents in the study. They are also grateful to other academics who gave their constructive inputs for improvement of this paper during a conference presentation in Denmark. Finally editors and reviewers who spent time in going through the paper and offering feedback.

BIOGRAPHY

Samuel Yaw Akomea is a lecturer in Marketing and International Business in the Department of Marketing and Corporate Strategy in the Kwame Nkrumah University of Science and Technology, Kumasi. He is also a legal practitioner and shows interests in international business, banking and SME-related research. He is currently pursuing PhD in International Business at the Aalborg University, Denmark and has been a member of Academy of International Business (AIB) since 2006. You can contact him via samakomea@yahoo.com.

Olav Jull Sorensen is a full professor in Marketing and International Business at the Centre for International Business, Aalborg University, Denmark. He has conducted extensive research in internationalization of Ghanaian business. Professor Sorensen was instrumental in the establishment of DANIDA Centre of International Business at the University of Ghana Business School and shows interest in innovative business systems, value chain and internationalization activities of firms. He serves on numerous academic and professional boards in Denmark. He can be contacted on ojs@business.aau.dk.

Kweku Amponsah-Efah, a graduate of KNUST is a pharmacist by profession and works full time as Operations Manager at the Amponsah-Efah Pharmaceutical Company Limited, Kumasi. Kweku also has an MBA in Strategic Management from the KNUST School of Business Kumasi. He shows interest in business growth and is planning to pursue a PhD programme that will bring him closer to academia. He can be contacted on kwekuefah@yahoo.com