

Utilising Online and Offline Information in Export: The Case of Firms Operating in Ghana's Non-Traditional Export Sector

Robert Ebo Hinson
University of Ghana

Information is useful for enhancing the success of export firms operating on the advantaged and disadvantaged end of the global digital divide; in developed and developing economy contexts. As part of a larger e-readiness survey of Ghana's non-traditional export sector, this study aims at identifying the nature of information which players in Ghana's export sector need to enhance export-competitiveness. This study focuses on players in a horticultural export cluster comprising non-traditional export firms, export logistics providers, financial institutions, export associations, government/regulatory agencies and export-related NGOs. The type of information respondents found most essential are those related to market and production. NTE firms regularly receive information on payment, demand trend and orders. Overall, respondents do not often share market, technical and logistics information with representatives of firms in the same line of business as theirs. At the micro-level of Ghana's non-traditional export sector, e-business could be used as a tool for better acquisition, storage, sharing and utilisation of information. Strategies for enhancing the e-efficacies of export industry players are discussed in the paper. This paper presents a modest contribution to the export firm-electronic business/information management literature from a developing economy context.

INTRODUCTION

Information is increasingly becoming a key source of strategic advantage for non-traditional export firms operating in a globalised economy. In an electronic age, where information can be transmitted within and across organisations at lightning speed, organisations that can tap into the most relevant sources of information in a timely manner can gain an edge over competitors who might not have the same capabilities. The resource-based view of the firm, for instance, posits that firms possessing resources that are valuable, rare, immutable and substitutable can achieve sustainable competitive advantage by implementing value-creating strategies which cannot easily be copied by competitors (Barney, 1999; Conner and Prahalad, 1996). Information acquisition and management could clearly be a source of competitive advantage, especially in environments where general information and acquisition skills are not well-developed and also, in high-velocity markets (Eisenhardt and Martin, 2000). In fact, from a dynamic capabilities (an extension of the resource-based view) perspective Eisenhardt and Martin (2000), posit that dynamic capacities necessarily rely much less on existing knowledge and much more on rapidly creating new, situation-specific knowledge. New, situation-specific knowledge can only be created through the consistent acquisition of various types of knowledge to facilitate the implementation of critical organisational decisions. Crick et al (1994) have also suggested that in order to gain

competitive advantage, exporters need specific market knowledge and posit that one of the key barriers to growth of SMEs is the absence of knowledge.

Excellent information is also needed for facilities management in a firm's infrastructure in (human resources management- motivation, monitoring and evaluation of staff performance, (b) technology management - management of e-business and other information and communication technologies and in (c) procurement- the purchasing and supply decisions of a firm. Additionally (Bhatt and Emdad, 2001) hypothesize that in a digital/e-commerce age, as majority of firms are planning to conduct their business electronically; "information" becomes the main medium through which business transactions are exchanged. Bhatt and Emdad (2001) further speculate that in e-commerce, information is not viewed as a by-product of the strategic activities performed around the physical value chain; rather it begins to play a strategic role in itself. This sort of thinking is reflected in the "virtual" (online) value chain (Rayport and Sviokla, 1995) proposition that conjectures that the virtual value chain comprises "gathering, organising, selecting, synthesising and distributing of information". Bhatt and Emdad (2001) note again that while the virtual value chain activities provide information access to customers, suppliers, and manufacturers and make a large part of the transactions transparent, physical value chain activities make it possible for them to be realised by fulfilling customer orders and assembling final products and services. Irrespective of whether a company operates a physical or virtual value chain or operates an integrated value chain (physical and virtual), the over-riding importance of information has been clearly established. Given the utmost importance of information for organisational success, this paper seeks to generate preliminary understanding of patterns of on-line and off-line information use amongst selected players in Ghana's export sector. In the following, an 'online' (virtual) source of information, is defined as one from which information is acquired via the internet whereas the 'offline' (brick-and-mortar) information source, is one from which the acquisition of information does not require the use of the internet. Other strategic perspectives that lend credence to the importance of information for organisational survival include the concept of the value chain (Porter, 1985). The value chain proposes that businesses comprise a series of activities by which value is created. The value chain is an organising tool for firms operating in domestic and international markets and encompasses the following five activities:

- i. Inbound logistics
- ii. Operations
- iii. Outbound logistics
- iv. Marketing and Sales
- v. Service

The value chain also acknowledges the importance of support activities of a firm's infrastructure, human resources management, technology development and procurement as key support activities in the value-creation efforts of organisations. In each of the core and support activities captured in the value chain framework, the importance of information is clear. In respect of in-bound logistics, for example, information about the cheapest sources of raw materials is critical to lowering of costs in the production of goods and services. Operations are better-facilitated where there is smooth information flow between several firms' actors and departments and this will have an effect on timely distribution (outbound logistics), better segmentation, targeting, positioning and selling activities (marketing and sales) and ultimately, assist in rendering excellent customer care (service) to both internal and external customer audiences. The objectives of this paper are to:

- i. determine the types of information that players in Ghana's export sector need to achieve success in an electronic age.
- ii. ascertain the kind of information that players in Ghana's export sector regularly receive from their clients, and the sources of information relevant to the NTEs.

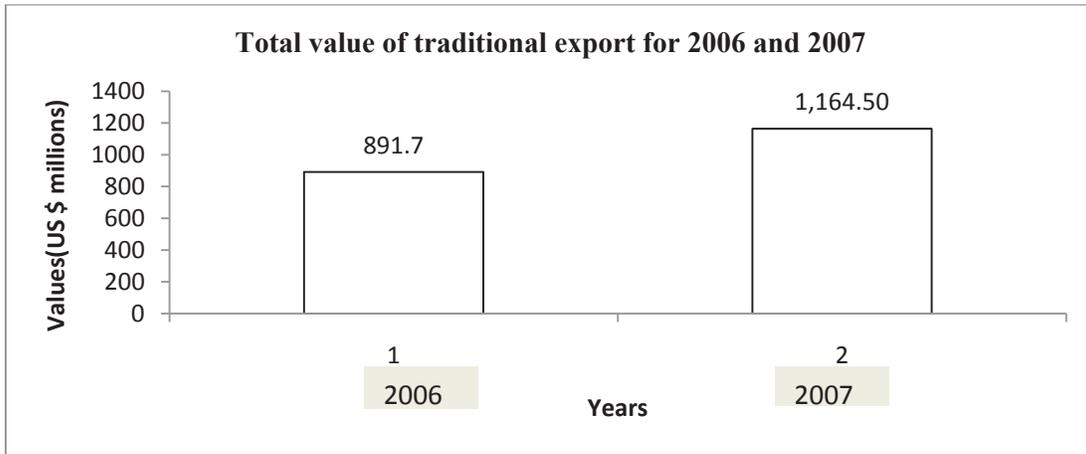
This paper is set out as follows: the initial section focuses on information as a strategic resource and highlights the objectives of the study. The second section of the paper focuses on overview of Ghana's export sector. The third section of the paper showcases the conceptual framework adopted for this study whilst the fourth segment of the paper describes the methodological approach adopted for the study. The fifth section of the paper showcases the presentation and discussion of the study findings whilst the last section of the paper dwells on the managerial implications of the study findings.

AN OVERVIEW OF GHANA'S EXPORT SECTOR

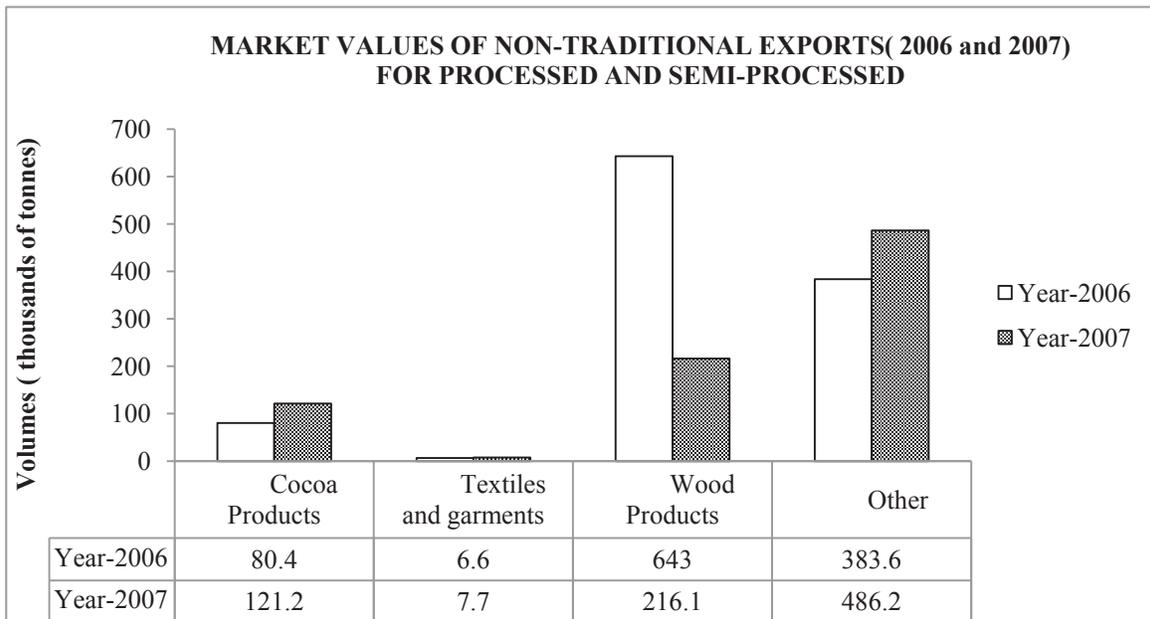
The Ghanaian economy has recorded significantly positive performance in most years of this decade. It has received several awards from institutions like the World Bank commending it for the clear economic strides it is making. In a bid to enhance Ghana's economic fortunes, the government is concentrated on improving the competitiveness of Ghana's non-traditional export sector through several interventionist approaches. The non-traditional export sector encompasses all export products apart from Ghana's four main traditional exporters - gold, cocoa, timber and electricity. In 1995, the legislation on exporting and importing was enacted under Article 503, which broadened the export base of non-traditional commodities. The Act increased the number of commodities classified as *Non-traditional exports* to include: agricultural products such as fruits, vegetables, roots/tubers/plantains; horticultural exports, processed and semi-processed products and others as presented in Table 1. This study draws its sample mainly from the horticultural non-traditional export sector. Working through key regulatory agencies like the Ministry of Trade, Private Sector Development and President's Special Initiatives, the Ministry of Agriculture and the Ghana Export Promotion Council, there have been several initiatives aimed at boosting the productivity of Ghana's non-traditional export (NTE) sector. In this new millennium, the Ministry of Agriculture has run projects with the assistance of the IICD (Canadian development agency); on improving Internet use propensities of Ghanaian non-traditional export firms. The Ghana Export Promotion Council (GEPC) has established a web portal to improve the e-commerce capacity of Ghanaian NTEs. An article on the GEPC web portal (www.gepcghana.com) states that "as a response to the emergence of new information and communication technologies and the resultant re-definition of the role of trade information services, the Ghana Export Trade Information Centre (GETIC) was set up in November 2005 to assist exporters make strategic decisions. The services available at GETIC for NTEs include product and market information, an electronic trade library, Internet access, electronic registration of exporters and email broadcast and replies. At GETIC, exporters are registered online and the profiles of exporters who register with GEPC are automatically incorporated in GEPC's electronic directory at www.gepcghana.com.

Another article entitled "availability of ITC's online tools for market research analysis" on the GEPC web portal describes three key services exporters registered with the GEPC can access. These services include Trade Map, Product Map, and Market Access Map. Trade Map provides online access to a database on product trade flows and market access barriers for international business development. Trade Map operates in a web-based interactive environment and presents indications on export performance, international demand, alternative markets and the role of competitors from both the product and country perspective. Product Map consists of 72 web-based portals, each focusing on a particular industry and presenting international trade data and market analysis tools for organisations active in international trade. Market Access Map is an interactive database on tariffs and market access measures allowing users to analyse the protection measures of any geographical grouping and sectoral aggregation. It contains market access conditions applied at the bilateral level by 170 importing countries to the products exported by more than 200 countries and territories. The volume of Ghana's NTEs has increased from 2 million dollars in 2006 (www.myjoyonline.com), and according to an article entitled "\$1 billion projected that earnings from Ghana's NTE sector will transverse the 1 billion dollar mark by the end of 2007. This projection became reality as presented in Graphs.

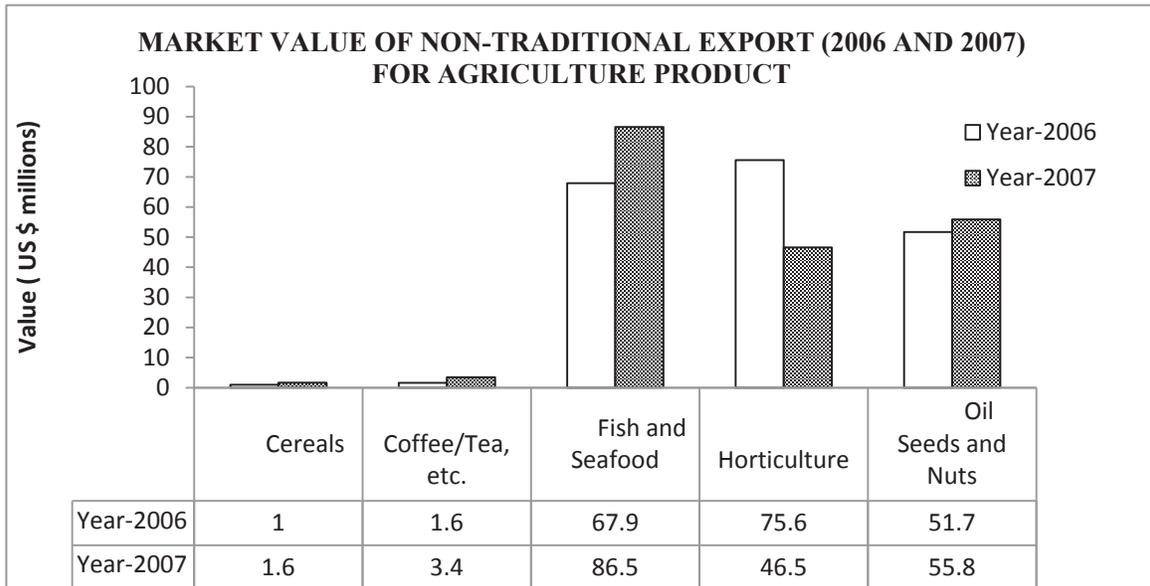
GRAPH 1
MARKET VALUE OF NON-TRADITIONAL EXPORTS (2006/2007)



GRAPH 2



GRAPH 3



Source: Ghana Export Promotion Council

The total market value of NTEs grew from a value of \$891.7m in 2006 to \$1,164.5m in 2007 representing a percentage increase of 25% as shown in graph 1. Processed and semi-processed and agricultural products were the main exports. Wood products which were a leading contributor to the semi-processed and processed component of NTEs decreased in tonnage from 643,000 tonnes in 2006 to 216,100 tonnes in 2007 although it recorded an increase of about 18% in market value (graph 2). Horticultural products recorded a decrease in market value between 2006 and 2007 from \$75.6m to \$46.5m. The handicrafts sub-sector also recorded a 16% decrease in market value.

Unlike the values of traditional agricultural exports, the unit values of NTEs have held up fairly well during the past decade. In 2003, total world trade of NTEs was worth US\$15.5 billion. In the same year, developing countries combined share of exports increased 56 per cent, assisted by strong growth of trade vegetables. The very large dominant suppliers of NTEs are either from Latin America or Asia. Only three African countries hold more than 3 per cent market share in any product. Cote d'Ivoire and Ghana, with 17 per cent and 3.8 per cent share respectively (www.fao.org). The volume of Ghana's non-traditional exports has increased from 2 million dollars in 1984 to 892 export revenue target for 2007" on (www.myjoyonline.com) the Executive Director of GEPC. The NTE sector in Ghana is a major economic priority and information (especially electronic) acquisition and usage issues are becoming paramount because of market access and penetration, organisational effectiveness, electronic readiness and product development/quality standards. As part of improving the innovation climate in Ghana's export sector, the Trade and Investment Programme for a Competitive Export Economy (TIPCEE) seeks, in addition to catching up with current industry practices, to develop a culture of innovation within the horticultural industry cluster.

Markets for Ghana's Non-Traditional Exports

Of the over 2 million Ghanaians who live abroad, European Union has the largest metropolitan area followed by Africa and USA. Over half a million Ghanaians reside in the Ivory Coast (www.ghanaweb.com/Ghana) homepage/foreign affairs/gh_abroad; owusu-frimpong et al, 2007). The statistics on the direction of trade shows that while trade with Western Europe (Netherlands, UK, France, Italy, Spain and Germany) and USA remains dominant; trade with the Economic Community of West

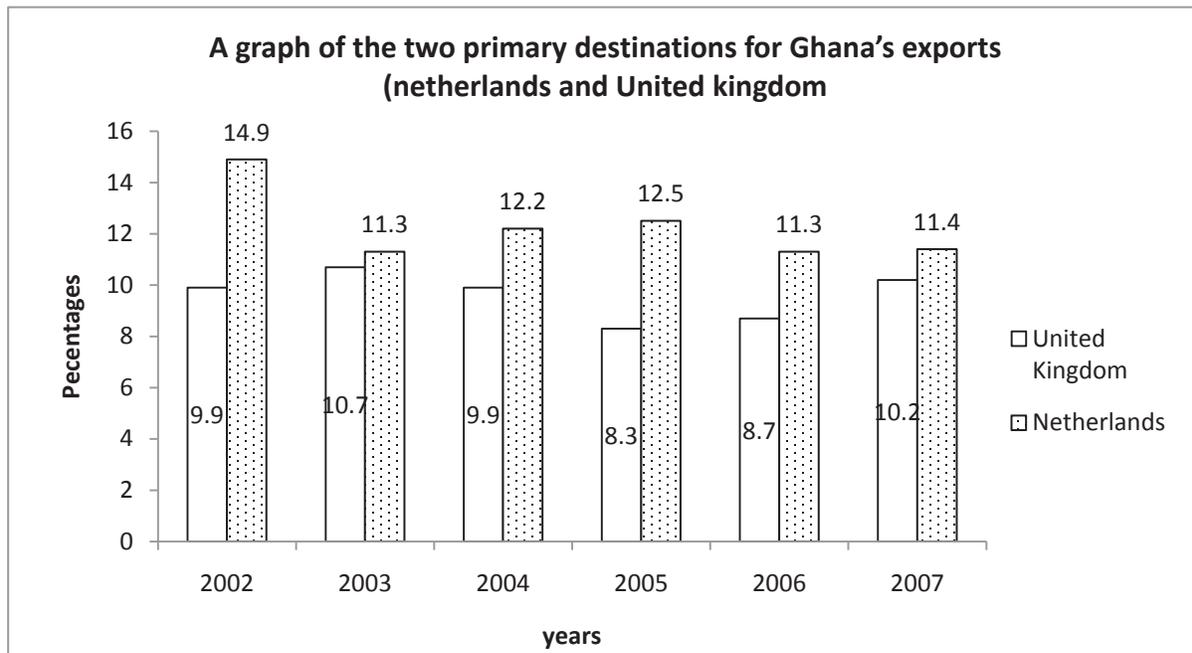
Africa (ECOWAS) countries is becoming increasingly significant.

TABLE 1
VALUE OF GHANA'S EXPORTS BY MAJOR DESTINATIONS (US \$MILLION)

COUNTRY	2002	2003	2004	2005	2006	2007
United Kingdom	164.2 (9.9)	212.8 (10.7)	227.0 (9.9)	196.1 (8.3)	246.2 (8.7)	159.7 (10.2)
Nigeria	80.3 (4.8)	20.4 (1.0)	26.5 (1.2)	33.7 (1.4)	41.6 (1.5)	27.4 (1.8)
USA	116.9 (7.0)	84.9 (4.3)	145.3 (6.4)	157.6 (6.7)	190.6 (6.7)	92.3 (5.9)
Germany	109.3 (6.6)	123.6 (6.2)	103.1 (4.5)	105.1 (4.4)	109.2 (3.8)	72.0 (4.6)
Spain	60.6 (3.6)	75.0 (3.8)	65.3 (2.9)	508.0 (2.5)	161.7 (5.7)	46.7 (3.0)
Japan	62.9 (3.8)	104.5 (5.3)	95.4 (4.2)	70.4 (3.0)	73.0 (2.6)	55.5 (3.6)
Netherlands	246.9 (14.9)	224.9 (11.3)	279.2 (12.2)	295.8 (12.5)	320.6 (11.3)	178.2 (11.4)
France	96.5 (5.8)	151.0 (7.6)	155.6 (6.8)	133.4 (5.6)	125.1 (4.4)	81.0 (5.2)
Belgium	73.6 (4.4)	71.4 (3.6)	106.9 (4.7)	136.1 (5.8)	146.6 (5.2)	77.4 (5.0)
Italy	69.1 (4.2)	91.6 (4.6)	81.6 (3.6)	87.2 (3.7)	80.5 (2.8)	38.6 (2.5)
Others (include ECOWAS)	581.8 (35.0)	826.5 (41.6)	998.6 (43.7)	1090.5 (46.1)	1345.5 (47.4)	730.7 (46.9)
Total	1662.0 (100.0)	1986.6 (100.0)	2284.5 (100.0)	2363.9 (100.0)	2840.6 (100.0)	1559.5 (100.0)

Source: IMF, Direction of Trade Statistics Yearbook, December 2007

GRAPH 4



*Up to second quarter of 2007. Figures in parenthesis show the percentage share of the country in Ghana's imports. Shares may not add up to 100 due to rounding. The two primary destinations for Ghana's exports as of 2nd quarter 2007 were the Netherlands and United Kingdom both recording 11.4% and 10.2% respectively (as shown graph 4). Both countries were Ghana's leading export destinations in 2006 as they together recorded a 20% receipt of Ghana's exports. They had increased this percentage to 21.6% as of 2nd quarter 2007.

The import of the former is that the introduction of new concepts and technology must be carried out through export industry associations and institutional support agencies. This study is positioned to do a first-level investigation of how players in Ghana's export are handling offline and online information in a bid to enhance their organizational efficacy.

Of the seven member associations that form the FAGE, HAG has the highest number of members of thirty-six, followed by SPEG with twenty-six. VEPEAG and DAMFA had the lowest number of members with 12 and * respectively.

INFORMATION AND EXPORTING: A THEORETICAL FRAMEWORK

Whilst a foundation has been laid for understanding information as a strategic resource in the first section of this paper, the focus now is on understanding information as an export development tool. Prior to advancing substantive discussion on the subject, however, it is important to note that scholarly investigations regarding information acquisition and use in exporting have been captured in international marketing journals (Toften and Olsen 2003; Toften 2005), logistics journals (Richey and Myers 2001) and small business and enterprise development journals (Chaudhry and Crick, 1998). Whilst these subject areas do not represent the fullest spectrum of conceptual areas, information for export development is appealing; it gives an indication of the multi-faceted, conceptual appeal of information for export development. Toften (2005) working with players from the Norwegian seafood industry tested the empirical relationships between export market information use and export knowledge and performance. Toften (2005) found that instrumental use of information positively affects both export knowledge and performance and suggested that for success in export markets, export industry players must make a commitment to systematically generating, disseminating, and responding to export market information. In

an earlier study, (Toften and Olsen, 2003) sought to generate insights into how export market knowledge integrates with export market information use and affects export performance. It is clear that pressures of globalisation and the increasing internationalisation of firms, has led to the generation of scholarly interest in the issue of export information use. Contributors to this area in the pre-millennium have included the work of (McAuley, 1993; Chaudhry and Crick, 1998; and Evirgen et al, 1993). Post-millennium scholarly contributions to the information for export development literature have included contributions from (Vyas and Souchon, 2003; and Williams, 2003). Research on information for export use has also focused on antecedents to information acquisition (Yeoh, 2000; Walters 1996), dimensions of export information use; spanning instrumental use (Souchon and Diamantopolous, 1999), symbolic non-use (Souchon and Diamantopolous, 1997), social use (Menon and Varadarajan, 1992) and haphazard use (Glazer et al, 1992). Yeoh (2005) provides a synthesis as presented in Table 2 on information acquisition sources amongst export firms.

In all these contributions to the information for export development literature, contributions from developing country perspectives have tended to be rather parsimonious. This is strange given that several developing economies (like Ghana) have clearly signaled at a national policy level that they are pursuing an export-led economic agenda. Further, from a conceptual standpoint, few studies have concentrated on the filtering out of brick-and-mortar/offline information sources from virtual/online information sources in respect of export development. This paper sets out to ascertain information acquisition and use idiosyncrasies amongst selected players in Ghana's export sector; drawing a distinction between online and offline information sources.

Entrepreneurs, nascent exporters, experienced exporter, multi-national firms and all manner of firms engaged in internationalisation activity; all need information to improve their international business practices. Walters (1993) notes that near virgin exporters often cite uncertainty stemming from lack of knowledge as a major obstacle to exporting success. Cooper et al (1995) note that novice entrepreneurs tend to search for more information than entrepreneurs with more business experience. Chaudry and Crick (1998) citing Diamantopoulos et al (1990) and Schlegelmilch et al (1993) note that large companies tend to conduct marketing research because they are more likely to be able to devote resources (in terms of personnel and finance) to export information-gathering activities in comparison to smaller firms. Information is clearly crucial to all firms irrespective of where they are in their internationalisation or exporting process. Information and exporting research has been conducted through the lenses of internationalisation (Johanson and Vahlne, 1997), rational utilisation (Feldman and March, 1981), power (Beyer and Trice, 1982), information use theory (Rosenbaum, 1996), decision-making (Moorman et al. 1992), social cognition and learning theory (Schmidt and Spreng 1996) and organisational responsiveness (Bettis-Outland, 1999). This paper opts for the strategic choice perspective which posits that the analysis of firm strategy "must recognise the exercise of choice by organisational decision-makers.

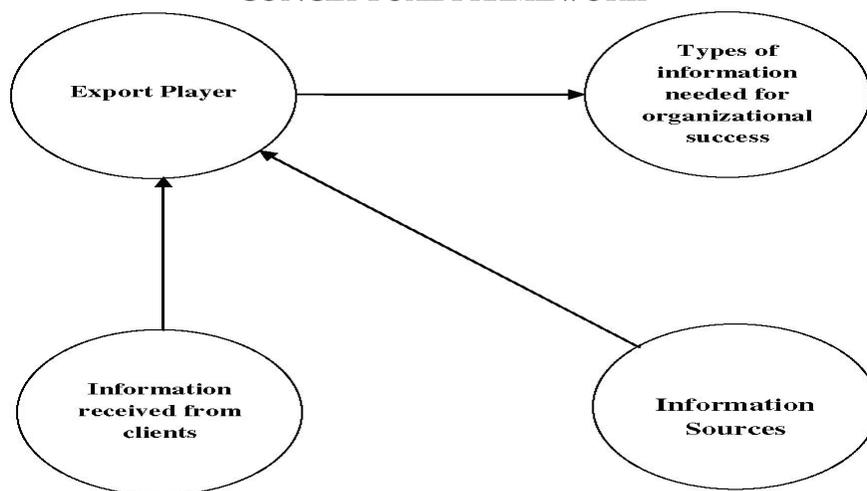
TABLE 2
INFORMATION ACQUISITION SOURCES AMONGST EXPORT FIRMS

Study	Type of information source	Conclusions
Kotabe and Czinkota (1992)	State government promotion programs	The gap analysis found that a wide discrepancy exists between local firms' assistance needs and the public provider's provision of assistance. While logistics, legal procedure, and foreign market intelligence are major problematic areas for exporters, public agencies focused half of their export assistance efforts on sales promotion. The gap analysis also suggests that more assistance effort should be directed to those firms in their early stages of internationalisation.
McAuley (1993)	Personal versus impersonal sources	The five most important information sources sought by exporting companies are: (1) personal contact overseas; (2) overseas agent; (3) trade fairs; (4) overseas subsidiary company; and (5) overseas company office.
Walters (1996)	Experiential versus external sources	Experiential knowledge was valued less highly than expected. Personal contacts were viewed as more important information sources. Sources which are accessible and inexpensive such as the Export Council, were also used more frequently.
Souchon and Diamantopoulos (1997)	Export marketing research Export assistance Export market intelligence	Both export marketing research and export market intelligence was much more likely to be stored for future use and/or used immediately. Export assistance was mostly stored for future use.
Hart and Tzokas (1999)	Informal versus formal information sources	Informal research activities such as customer visits, exhibitions and competitor visits are significantly, if not rather weakly, related to the export-to-sales ratio. The more formal research activities, comprising of surveys, seminars, and test marketing are significantly related to export sales and export profits.
Leonidou and Adams-Florou (1999)	Personal versus impersonal sources	Exporters tend to rely more on personal than impersonal sources of information. The three most important impersonal sources, ranked in terms of their importance, are foreign customers, personal contacts, and managerial visits abroad.
Yeoh (2000)	Personal sources Quasi-governmental sources Documented sources	Personal and quasi-governmental sources were relied on to a greater extent by global start-ups, whereas documented sources were used less frequently. Firms with a strong entrepreneurial orientation tended to rely more on personal information and quasi-government sources and relied less on documented sources.

The boundaries between an organisation and its environment are defined, in large degree, by the kinds of relationships which its decision-makers choose to enter" (Child 1972). The strategic choice perspective has its roots within the social action approach in Sociology (Weber, 1978) and strategic management theory to advance the view that managerial action can impact upon performance (Child et al, 2003). Whilst the strategic choice perspective is not a new theoretical approach (Child, 1974; Miles and Snow,

1978, Whittington 1988), it could represent an important contribution in this paper, to the extent that it is being applied to a developing economy context and also to export information usage. Child et al (2003) argue that the strategic choice perspective makes a range of actions available to managers who must take cognisance of an environmental strategy; involving the choosing of product/market domains in which the organisation will participate. Organisational strategy then, involves selecting the structures and resource allocations to be adopted within chosen domains. Choosing the most appropriate online and offline information sources by players in Ghana's export sector is one of the options available in respect of organisational strategy. Eisenhardt and Schoonhoven (1990) have argued that firm growth analysis must begin with the role of the organisational decision-maker; the desire of top managers to undertake a strategy of growth and their ability to make strategic choices. The conceptual framework presented in Figure 1, developed from strategic choice thinking, underpins the research investigations for this study.

**FIGURE 1
CONCEPTUAL FRAMEWORK**



Source: Authors' own conceptualisation

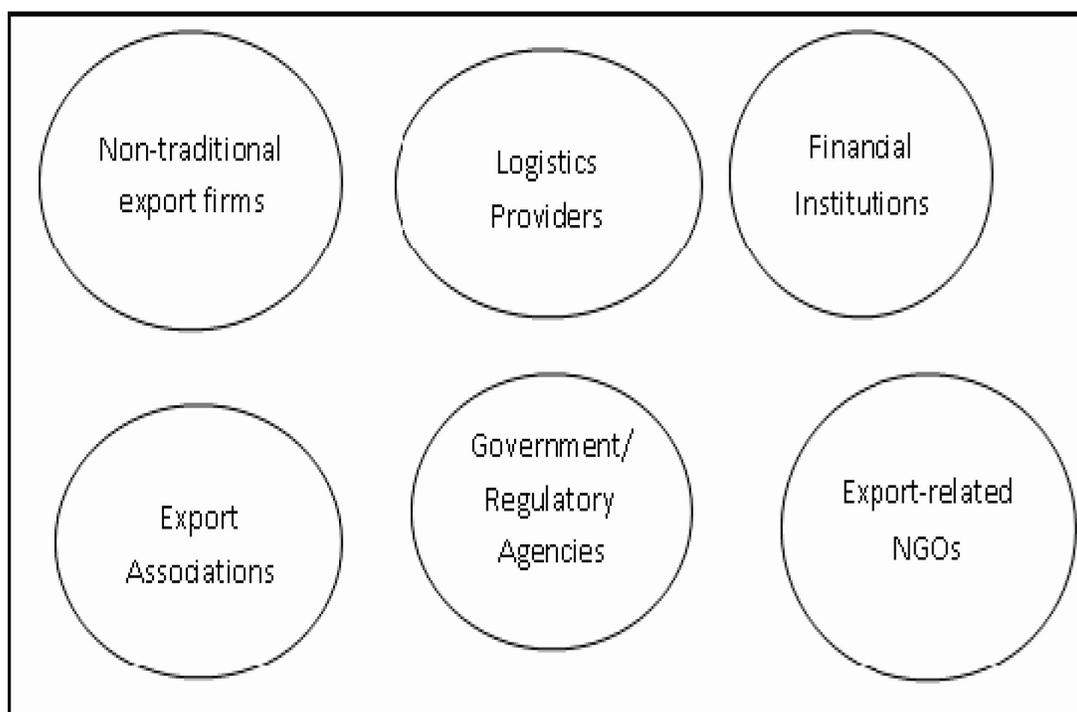
The strategic choice perspective argues that organisational members take actions to adapt to their environment. The perspective focuses attention on individuals and groups within organisations to explain organisational processes (Judge and Zeithaml, 1992). There is a presumption that organisational actors possess the discretion to act on their own free will (Hambrick and Finkelstein, 1987). Flowing from the strategic choice thinking, we delineate a strategic cluster (export associations, firms, NGOs, government/regulatory agencies, logistics providers and financial institutions) and try to understand their information use and acquisition idiosyncrasies in their quest to improve their respective organisational fortunes and the competitiveness of the export sector as a whole. Specifically, we delve into information needed for organisational success, information sources and information received from clients. Key linkages between these information pillars will eventually be based on our eventual empirical evidence.

METHODOLOGY

A quantitative research design is employed to investigate the research issues in this paper. The research was conducted as part of an e-readiness survey of Ghana's non-traditional export by the Federation of Association of Ghanaian Exporters (FAGE) under the auspices of the Trade and Investment Program for a Competitive Export Economy (TIPCEE). TIPCEE is a United States Agency for International Development (USAID) sponsored trade assistance program geared at achieving exponential growth in the sales of export in the five-year (2004-2009) lifespan of the project. TIPCEE aims at

increasing the competitiveness (TIPCEE semi-annual report 2007) of Ghana's private sector in regional and international markets by building private-sector capacity at the individual farm and firm level and at the same time develop cluster competitiveness within the private sector. The objective is not only the sustainability of new practices, but in the end sustainability of the innovation process itself – to recognise market and industry changes and quickly adapt to meet demand in the spirit of building an innovative climate in the export industry cluster. Built-on electronic organisational orientation, this e-business readiness survey was launched. This survey was meant to identify gaps in the electronic business orientation of the horticultural export cluster diagram presented in Figure 2, and a road map drawn to assist in improving the e-business orientation of players in the cluster.

FIGURE 2
HORTICULTURAL EXPORT CLUSTER



Source: Authors' own model

For the purposes of conducting this e-readiness survey, a Canadian e-commerce expert was contracted, who assisted in the formulation of the e-readiness questionnaire. The questionnaire was aimed at key constituents of Ghana's horticultural export cluster. These key constituents were the NTEs themselves, export logistics providers, financial institutions, export associations and export-related Non-Governmental Organisations (NGOs). These six constituents were key to the functioning of horticultural export clusters in Ghana. The e-readiness questionnaire had a section that elicited general background information on the firm answering the questionnaire, the next section focuses on computer technology and use, the third on phone services and use and the fourth on fax usage. The next section focuses on eliciting data on themes ranging from information devices, software usage, internet access and use, email access and use, information networks and information typologies. The data was collected via two main routes. The first route was the invitation of key personnel (informants) from the companies targeted for the research to the conference room of the Federation of Associations of Ghanaian Exporters and then, personal contacts were also made on the company premises of the companies involved in the research. In all, 15 respondents in each of the six-cluster constituent categories were contacted. We delineated and received varied response degrees from each category. A sample of 56 players in the non-traditional export

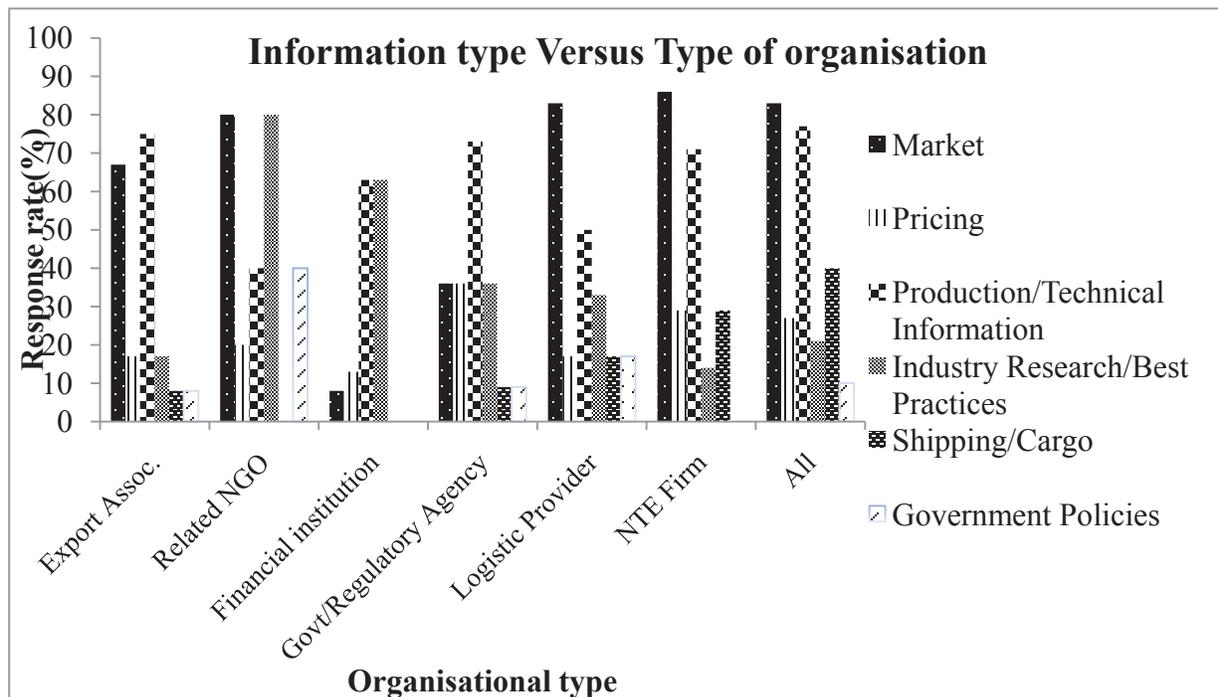
industry was involved in this study. Responses to items on the instrument were provided by officers in decision making positions in these organisations. The 56 valid responses were received from the initial target of 90 firms representing a response rate of 62 per cent. The authors of this paper have a relationship with FAGE and therefore, were given access to the questionnaires after the data had been received. Responses were first analysed across categories and then by categories of respondents' organisations for comparisons. After the data was received, it was coded, entered and analysed using SPSS 13. The data is presented by means of simple descriptive statistics. The next section introduces the presentation and discussion of our study findings.

DISCUSSION OF FINDINGS

Information Types

Respondents were asked for the type of information they needed to achieve success in their organisations. Responses given concerned information relating to the market, pricing, production/technical/administration, research/best practices, shipping/cargo and government policy. Evidence in Graph 5 shows that, by far, the most needed types of information are those related to the market and production/technical. 83 per cent of all respondents mentioned the need for market-related information. This is followed by production/technical information representing 77% of all respondents, shipping and cargo (40%), pricing (27%), industry research/ best practices (21%) and government policies (10%) respectively.

GRAPH 5
INFORMATION NEEDED FOR SUCCESS



**Options are not mutually exclusive, multiple responses possible.

Market information is mostly needed by NTE firms (86%); this is followed by logistics provider (83%), export related NGO (80%), export association (67%), government/regulatory agency and financial institutions respectively. Production /technical information is mostly needed by export associations (75%); this followed by government/ regulatory agency (73%), NTE firm (71%), financial institution

(63%), Logistics provider (50%), and export related NGO (40%) respectively. Shipping and cargo information is mostly needed by NTE firms (29%); this followed by Logistics provider (17%), government/regulatory agency (9%) and export association (8%) respectively. Pricing information is mostly needed by government/regulatory agency (36%); this followed by NTE firm (29%), Export related NGO (20%), Logistics provider (17%), export associations (17%), and financial institutions (13%) respectively. Industry research/best practices information is mostly needed by export related NGO (80%); this followed by financial information (63%), government/regulatory agency (36%), logistics provider (33%), export associations (17%), and NTE firm (14%) respectively. Government policies information is mostly needed by export related NGOs (40%); this followed by logistics provider (17%), government/regulatory agencies (9%) and export associations (8%) respectively.

When analysed from a value chain perspective, it would seem that most important bits of information needed for export success by NTEs relate to inbound and outbound logistics (production/technical information) and marketing/sales and customer service (market). In an electronic age, therefore, the adoption of an e-business posture could mean that the Internet could deliver specific information benefits for the strengthening of the inbound/outbound logistics and marketing/sales/service functional areas in a Ghanaian non-traditional exporting firm. In respect of inbound/outbound logistics, e-business can deliver the following specific benefits:

- (a) ascertaining international quality standards (e.g. EU fruit/horticultural export standards) so that non-traditional export products (e.g. pineapples and cashew nuts) can be produced and prepared to meet the standards required in the markets they are being exported to;
- (b) the comparison of prices from potential suppliers of raw material for the export operations irrespective of the geographical location of these potential suppliers;
- (c) e-mail can facilitate the receipt of export orders and serve as a channel of providing continuous information to prospective clients about the state of their export orders;
- (d) e-mail also facilitates the quick outsourcing of business to other local NTEs in cases where export orders received by a particular NTE, are too large to be filled by that particular NTE. E-business could, therefore, eventually facilitate the formation of clusters of NTEs that produce similar products and take on larger orders as an export firm cluster than they could as individual NTEs.

In respect of sales/marketing/service provision in an NTE seeking export success, an electronic posture could yield the following specific benefits:

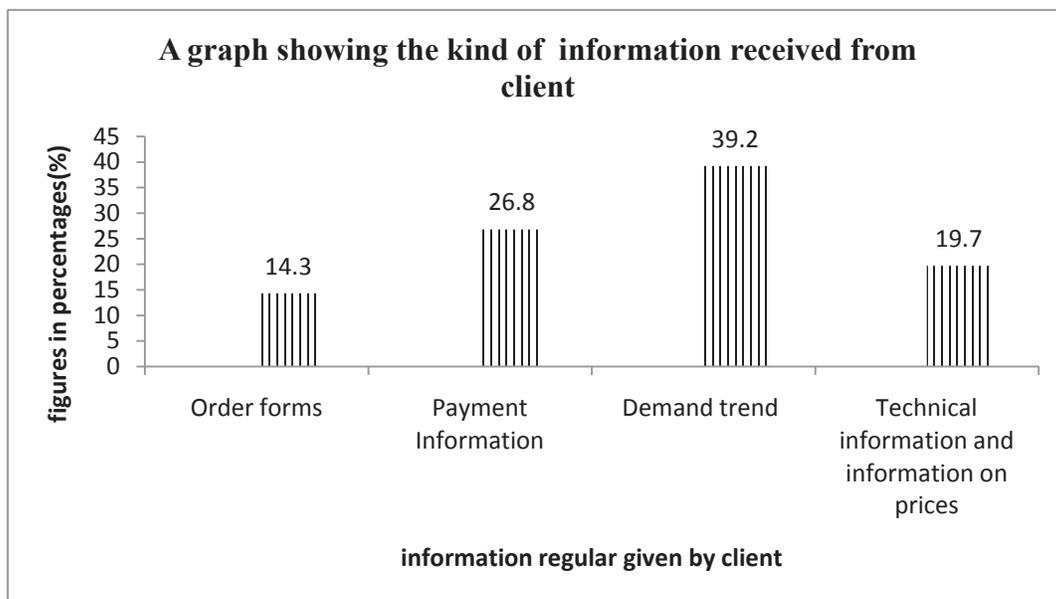
- (a) The crafting and deployment of a website that announces the company to an international market and acts as a customer prospecting tool and also signals to all stakeholders in the NTEs business network, that it is a serious international company. Swash (1998) notes that “on the Internet, it is possible not only for the large multi-national companies to have a web presence, but for much smaller companies too”. A website that is dynamic could also mean that prospective clients could leave export requests on the website; have access to a Frequently Asked questions (FAQ) portion of the website, where preliminary enquiries about the NTE and its products have been pre-answered; and can therefore be easily accessed. A website could also mean that the corporate e-mail address of the NTE can be configured to receive regular market updates from international/local organisations like the International Trade Centre, the FAGE, Federation of International Trade Associations (FITA) and Export Ghana; the web portal of the Ghana Export Promotion Council. Under the trade news from GEPC section of the Ghana Export Promotion Council website (www.gepcghana.com) for example, there is a listed article on the list of trade fairs for 2008. This type of information could be invaluable for the sales and marketing function of a Ghanaian/developing economy NTE. FITA also passes along regular market related information as evidenced by the September 26, 2007 edition of their bi-weekly newsletter service which had articles spanning a feature on Morocco as a gateway for trade to Europe, Africa, and the Middle East, and a guide to doing business internationally (www.fita.org).

(b) An electronic posture could also mean that the Internet can be utilised as a potent research tool and for gathering competitor intelligence of both local and international NTEs. Market demand is ultimately influenced by the number of actors in any given international market and the respective market shares controlled by each of these market actors. Knowledge of competitor activity, changing market demand patterns (e.g. the new demand for European market for MD II pineapples) and research for enhancing sales and marketing activity could all be the result of having an e-business orientation in the way Ghanaian NTEs acquire process and use information.

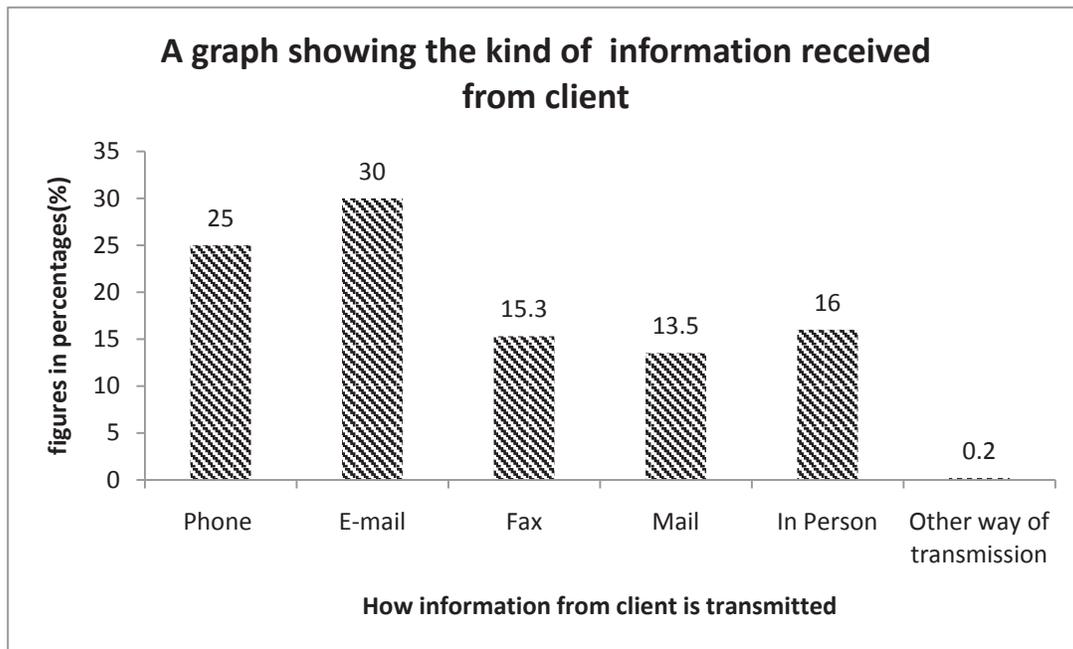
Information Received Regularly by Clients

Government/regulatory agencies regularly receive information on quality, technical data and prices while export associations receive information on demand trends. This information is transmitted by clients through a combination of online and offline modes. Evidence in Graph 6 reveals that 39.2 per cent of respondents consider trends on demand for products as the most common kind of information, followed by 26.8 per cent who consider payment information to be important, order forms by 14.3 per cent, and others concerning quality, customer service, technical information and information on prices representing 19.7 per cent. On how information from clients is transmitted, further evidence in Graph 7 reveals that respondents use a combination of online and offline modes. Majority (30 per cent) of respondents stated the use of online- E-mail, followed by offline methods of phone-25 per cent, fax-15.3 per cent, postal mail-13.5 per cent and personal delivery- 16 per cent. Thus, a prospective client who might even be able to send electronic purchase orders by e-mail, may find that when it comes to payment, they may have to use offline methods like phone, fax and bank electronic transfers.

**GRAPH 6
KIND OF INFORMATION RECEIVED FROM CLIENTS**



GRAPH 7

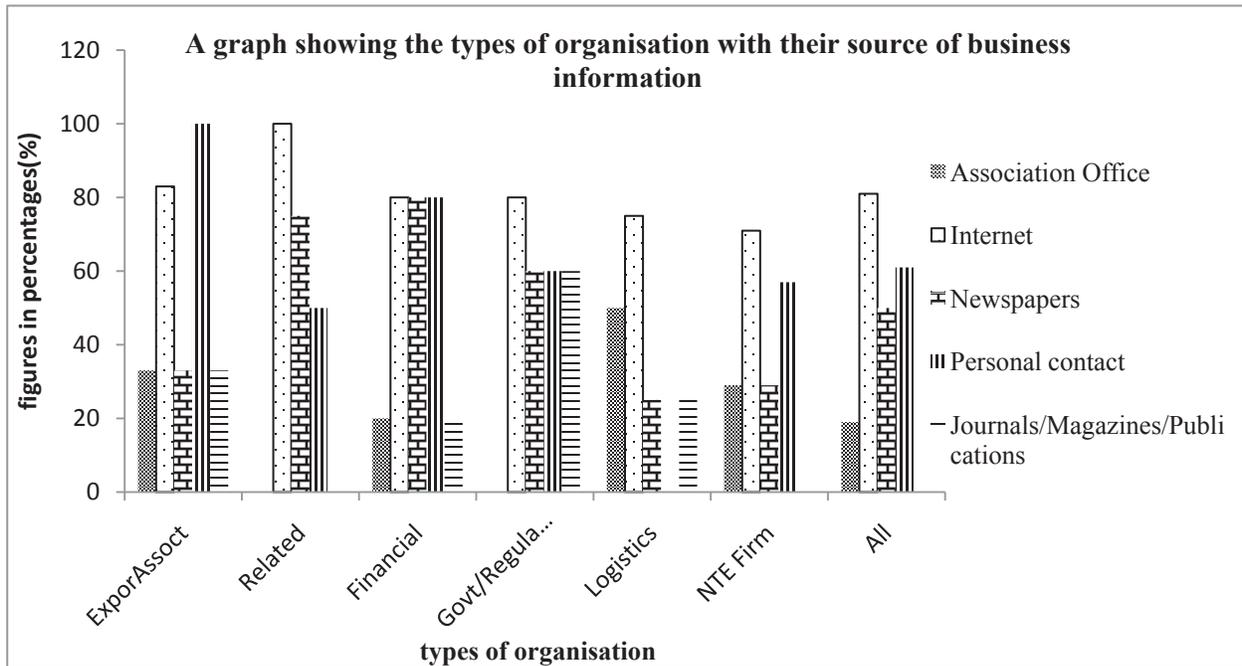


**Options are not mutually exclusive, multiple responses possible.

Further enquiries on the major sources of information by the respondents as presented in graph 8, reveals that 81 per cent of all respondents obtain information on line –via internet, followed by 61 per cent through personal contact. E-mail has been confirmed as a dominant application in the internet use regime of Ghanaian NTEs that supports the work of (Hinson, 2005).

Given the high incidence of e-mail as an information-receiving tool, it might be useful if appropriate training is administered to various players in Ghana’s export sector in observing internet etiquette, knowing how to e-mail information to suppliers, distributors, clients; newsgroups and other corporate entities that are critical to the survival of the export sector. E-mails must be checked for grammatical accuracy so that a negative impression of a non-traditional exporter, for example, is not created inadvertently. E-mails must be responded to promptly since international business partners are usually sourcing for the best export companies to supply them a variety of products; and therefore, any slackness in the timeliness of e-mail replies could lead to the loss of huge export orders.

GRAPH 8
SOURCE OF BUSINESS INFORMATION



Information of Shipping

Respondents were asked to indicate the importance of information on shipping and the results in Table 3 show that less than half i.e. 46 per cent indicated that information on shipping is relevant to their work. By type of organisation, 32.1 per cent of NTEs consider information on shipping is most relevant compared to 31.1 per cent of export logistics providers. Less than 13 per cent of respondents from the other organisations as export related NGOs and Export Associations said information on shipping is relevant to their work. Information on shipping is obtained mainly from shipping companies, their agents or the shippers’ council. Respondents contact airlines and shippers or their agents for information on freight availability. Contact is either made in person, telephone calls or by emails. Reservations are made either in person, by telephone, emails or faxes directly with shippers or through their agents. Respondents often combine these channels. Information on airline ship delays and cancellations are obtained from logistics providers (46%), clients (21%), suppliers (4%) and administration (21%).

TABLE E
INFORMATION ON SHIPPING

Organisation	% with Shipping Information Relevant	Source of Information on Shipping
NTE Firm	32.1	Shippers/their agents, producers, internet
Logistics Providers	31.1	Shippers/their agents, other partners
Government/regulatory agencies	13.5	Internet, shippers
Financial Institutions	9.4	Shippers/their agents
Export Related NGOs	7.5	Shippers Council
Export Association	6.4	Shippers/their agents
Total	100	

Information on Cargo Arrival and Departure Times for Airlines

Only 39 per cent of the respondents indicated that information on cargo arrival and departure times for airlines are relevant to their work. Sources for this information are airline companies or their agents and freight forwarders, comprising 91 per cent of sources mentioned. The rest are the Ghana Civil Aviation Authority and clients. Sources mentioned do not vary significantly by the type of organisation of respondents. 77 per cent of respondents said their sources are reliable. Respondents from organisations involved in provision of export logistics and NTE firms indicated they most needed information on cargo. Only 27 per cent of those in government/regulatory agencies, 20% in export related NGOs, 17 per cent in export associations and 13 per cent in financial institutions said information on cargo arrival and departure times are relevant to their work.

Information on Sea Freight Arrival and Departure Schedules

This type of information is relevant to the work of 39 per cent of all respondents. For NTE firm respondents, 86 per cent used information on sea freight arrival and departure schedules in their work. The others are 50 per cent for export logistics providers, 36 per cent for government/regulatory agencies, 20 per cent for export related NGOs, 13 per cent for financial institutions and 8percent for export association respondents. Sources mentioned for this type of information are shippers or their agents, freight forwarders and the Ghana Shippers' Council.

Membership of Associations and Subscription to Publications

Majority of respondents of about 70 per cent are members of one professional association or the other. Respondents from NTE firms were the most professionally affiliated with 93 per cent being members of professional associations. They are followed by respondents from logistics-provision firms with 83 per cent, government/regulatory agencies with 70 per cent, financial institutions with 60per cent, export associations with 50 percent and export related NGOs with 33 per cent. Associations mentioned by respondents include product associations (such as Horticultural Association of Ghana, various vegetable and fruit exporters associations), transport and logistics providers' associations (such as Chartered Institute of Logistics and Transport, Ship Owners' Association, Shippers' Council, etc), other business professional service associations (such as Chartered Institute of Insurance, Ghana Science Association, etc) and advocacy groups (such as Federation of Association of Ghanaian Exporters, Chamber of Commerce and Association of Ghana Industries).

FIGURE 3
GROUP MEMBERSHIPS AND SUBSCRIPTIONS

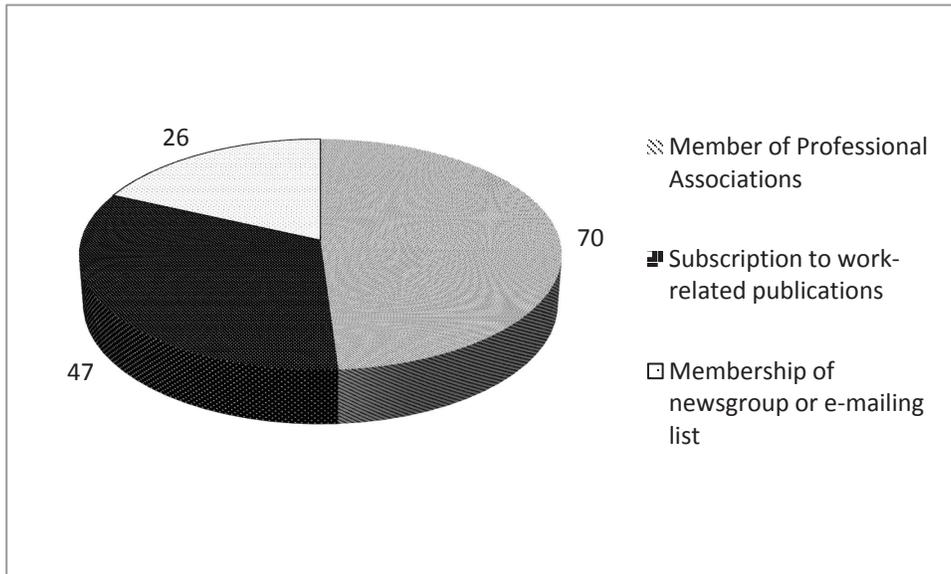
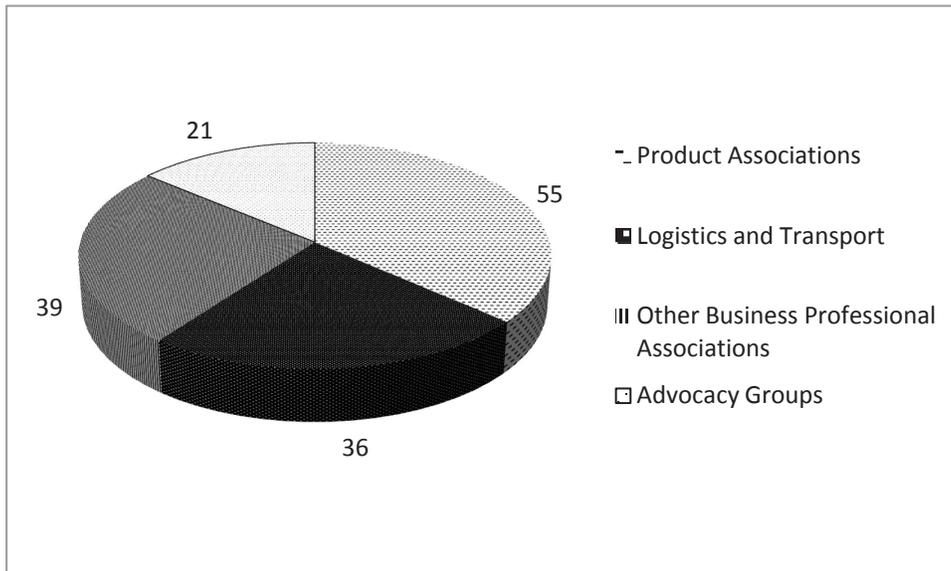
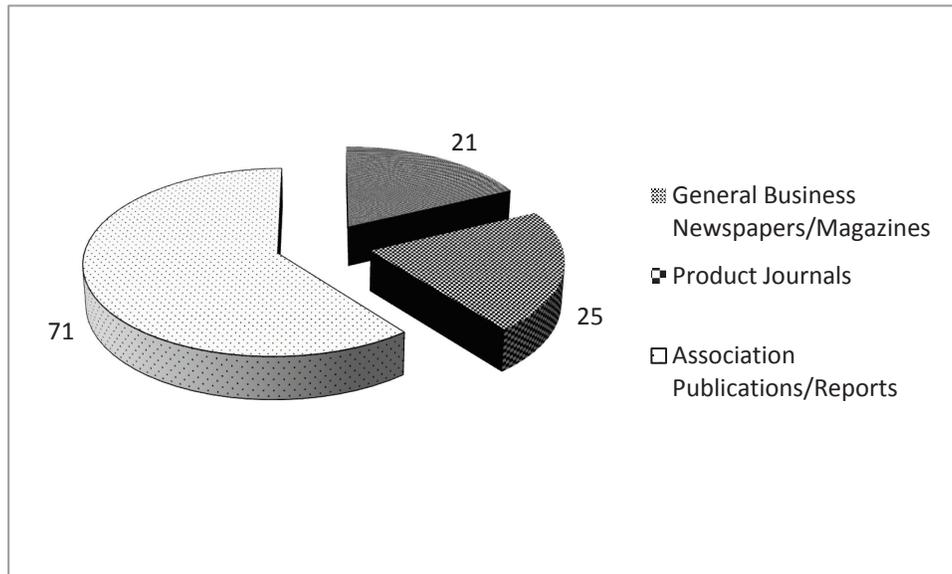


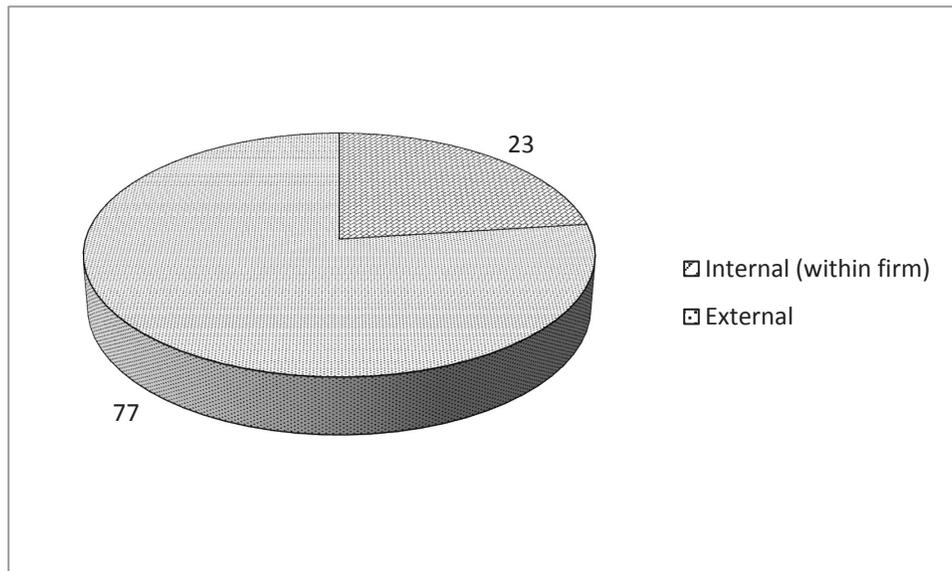
FIGURE 4
TYPE OF PROFESSIONAL ASSOCIATIONS



**FIGURE 5
PUBLICATIONS**



**FIGURE 6
NEWSGROUPS OR E-MAILING LISTS**



Less than half of respondents i.e. 47 per cent subscribe to work-related publications. Respondents from government/regulatory agencies and export-related NGOs were the most subscribed with 82 per cent and 80 per cent respectively. The other groups had percentage subscriptions below 45 per cent. Again, tests conducted did not confirm a significant association between subscription and respondents' organisations. Publications they subscribe to were categorised as general business newspapers/magazines (such as Business and Financial Times, Business Week, the Economist, etc), product journals (such as Eurofruit, Fresh Produce Journal, Fertiliser Week, Sea Food International, Shipping Index, etc) and association publications (CILT World, Ghana Science Association Journal, Telecom Today, Ghana

Shippers' Council Quarterly Report, Chamber of Commerce Magazine, etc).

Only about a quarter (26%) of the respondents were members of a newsgroup or e-mailing list. Though no significant associations exist between newsgroup membership and respondent's organisation, those from logistics provision firms reported the highest subscription of 50 per cent. The newsgroups or e-mailing lists mentioned were of two broad categories – internal (firm level) and external. Internal newsgroups or e-mailing lists related to staff, management or departmental communications while external ones related to communications from associations respondents subscribed to (such as the Ghana Science Association, West African Business Association, Africa Review, Fresh Plaza, Agribusiness and Banana Trade).

CONCLUSION AND IMPLICATIONS OF FINDINGS FOR PRACTICE

At the micro-level of Ghana's non-traditional export sector, e-business could be used as a tool for better acquisition, storage, sharing and utilisation of information that is crucial to horticultural export firm development and plausibly, to the local export community as a whole. Government/regulatory agencies should begin to better integrate e-business into their strategic plans so they can have well-designed ICT infrastructures, functional e-mail systems, create appropriate and relevant mailing lists; have well-articulated websites and partner with relevant international export promotion agencies so they can bring best practice electronic information management to local export context.

Export associations should begin to develop export clusters that are powered by superior information management capacities; driven by e-business. Export associations should also create the relevant e-business training regimes so that Ghanaian NTEs, particularly the horticultural sub-sector human resource, can be up-skilled. The Ghana Export Promotion Council, for instance, has with the help of the Commonwealth Secretariat, hired experts who are scheduled to "review GEPC's export training school and make recommendations on how it's capacity can be enhanced to meet the demands of the current export environment" (www.gepcghana.com). Any e-commerce/e-business training regime should definitely include the management of electronic resources for export advantage.

At the horticultural firm level of the NTE sector, key capabilities would have to be built up through the exercise of strategic choices aimed at:

- i. Moving beyond the e-mail stage of e-business endeavour
- ii. Reconstituting their strategic imperatives by matching the export information needs with the most cost-effective electronic modes of information acquisition.

Future research should focus on how better business partnerships and networks can be forged with Ghana's non-traditional export sector using a full complement of e-business technologies.

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