International Food and Agribusiness Management Review
Volume 16, Issue 4, 2013

Opportunities and Constraints for Small Agricultural Exporters in Egypt

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Abstract

This study analyzed specialist small- and medium-sized agricultural export firms in Egypt in order to identify perceived opportunities and barriers regarding present and future export activities. The results indicate that these firms have to deal with stiff foreign competition in terms of price and quality criteria, while lacking relevant knowledge and information on how to deal with these challenges. The firms that perceived most future opportunities from exports were identified as using e.g. digital information sources and were able to source products from export-committed domestic farmers.

Keywords: agricultural exports, Egypt, non-tariff barriers, ordered probit model

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Introduction

The rising number of globally operating multinational firms in agribusiness should not be allowed to mask the fact that Small and Medium-sized Firms[1] (SMFs) are still of great importance to both developed and developing economies (Tambunan 2009). In Egypt, SMFs represent at least 90 per cent of total enterprises and constitute more than 99 per cent of all non-agricultural private enterprises (El-Hawary 2010). The contribution by SMFs to Egyptian exports has doubled during the past decade (CAPMAS, 2013); however, the total contribution is still no higher than 10%.

Agriculture in Egypt currently makes up 14 per cent of GDP and 55 per cent of national income (CAPMAS, 2012). Agricultural exports accounted for more than 60 per cent of Egypt's total exports until the 1980s (Hassanain 2004), but have been declining ever since. In the year 2010, SMFs in Egypt accounted for about 15-20% of all Egyptian exports of agricultural products (EDSEB, 2010).

Clearly, in the presence of increasing returns to scale, the role of SMFs must be viewed critically with respect to Egypt's international competitiveness. Rutherford (2008) indicates that Egypt's private sector is dominated by only a few large firms, with close ties to the state. In other words, when comparing the export performance of small and large firms in Egypt, it has to be carefully determined why an exporting firm is large in the first place and if this is the outcome of scale economies or due to other factors.

In this context, a number of studies demonstrate that on average, firm size is not a barrier to export, which implies that scale effects do not play a major role (Zucchella 2001, Moen 1999, Bonaccorsi 1992). Fliess and Busquets (2006) and Langes and Montgomery (2005) point out that the increase in global trade along with a removal of trade barriers, a fall in transportation and information costs and the emergence of new markets in developing countries have all contributed to increased opportunities for SMFs to export. Based on this evidence, SMFs can play a significant role in the export process, provided that they are placed in an enabling environment and are provided with proper incentive schemes (MoF, 2005). The Egyptian government has implemented a number of strategies to promote and develop agricultural export activities, with special attention to the role of SMFs. These strategies include the Strategy for Agricultural Development till 2017 and the Strategy for Sustainable Agricultural Development towards 2030. With respect to SMFs, the strategies highlight the importance of supporting small farmers' associations, particularly in the field of agricultural marketing, promoting agricultural small- and medium-size processing and exporting firms, and increasing the abilities of SMFs to participate in the processing and exportation of their products.

However, despite these attempts to promote both SMFs and agricultural exports, Egyptian SMFs are generally viewed as underperforming in (agricultural) exporting (MoF, 2004). Furthermore, Hamdy (2009) shows that agricultural exports by SMFs in particular have been characterized by fluctuations in quantity and value over time. Elasrag (2012) argues that the political development

[1] The Egyptian Ministry of Trade and Industry uses the EU definition according to which an SMF has up to 50 employees. This definition is also used in this study.

initiatives are unlikely to motivate more agricultural firms to export, since many SMFs would effectively be unable to benefit from them. Said (2006) found that agricultural SMFs in Egypt perceive profits from exporting to be lower and exporting to be more complicated and more risky than is reported by larger firms. Abu Hatab et al. (2007) found that the majority of agricultural SMFs, when confronted with the decision to export, often decide not to do so. Lall (2002) identified three sets of competitive challenges that SMFs face: 1) Being small imposes disadvantages in activities where the risks are high and technology is fast-paced and relies on enormous investments; 2) large firms are generally favoured with access to inputs including credit, labour, infrastructure and technology and market information, where SMFs face segmented factor markets; and 3) policies and institutions can be biased against SMEs, since large firms with resources and connections can manipulate bureaucrats to exploit the system (Syed and Abdullah 2009; Lall *ibid*).

Several studies have focused on export barriers faced by firms in different sectors and countries (Haahti et al. 2005, Sousa et al. 2008). However, empirical research specifically investigating export barriers faced by firms in developing countries is less common (Tesform and Lutz 2006, Al-Hazaimeh et al. 2011). Moreover, most of these studies focus on non-agricultural exporting firms, with little attention given to firms mainly exporting primary agricultural commodities (Kazem and Heijden 2006).

In summary, the existing evidence suggests that SMFs play an important role for the Egyptian economy, but that their potential to engage in export activities may partly suffer from dominance by large firms. In addition, the export performance of SMFs may be hindered by the presence of various structural barriers. The aim of the present study was therefore to determine whether, and under what conditions, small and medium- sized agricultural export firms (SMAEFs) in Egypt are prepared to capture potential export opportunities, and to identify what they perceive to be the main obstacles to success at present. In investigating this research question, we adopted two novel approaches. First, unlike the bulk of the relevant literature, we focused specifically on SMFs operating within the agricultural export sector in Egypt and sought to identify major constraints currently encountered by these firms. Second, we analysed how these constraints influence export growth and profit opportunities for Egyptian SMAEFs in the agricultural sector.

We based our analysis on a recent survey that we conducted with specialist SMAEFs in Egypt. This paper is organized as follows: in the next section, we review the literature on export constraints relevant for SMFs in developing countries, which allowed us to formulate relevant survey questions and hypotheses for our analysis. The following section introduces the survey design, the sample of specialist exporters and the data collection process. The results section provides a descriptive analysis using the dataset collected and the determinants of export growth and profitability in Egyptian SMAEFs are then determined according to an ordered probit regression approach. The final section discusses the findings of our study.

Export Constraints for SMFs in Developing Countries: A Review of Literature

Exports play a fundamental role for economic growth because they stimulate domestic production and increase the supply of foreign exchange (Koksal 2008). At the individual firm level, exports are vital for business development, competitiveness and increased market share.

Given these evident contributing factors, a large body of economic literature has attempted to formulate a model for firms' export behaviour (e.g. Abby and Slater, 1989). Issues addressed in these studies have been reviewed e.g. by Sousa et al. (2008). Table 1 synthesizes the findings reported in this literature, based on which we identified the main reasons why SMFs in developing countries refrain from export activities.

Table 1. Major barriers to export by SMEs in developing countries according to the literature

Barrier to Export	Examples	Sources
Competition in International Markets	• Competition between different exporters, mainly in terms of prices, product quality and standards, and promotional efforts.	Naidu and Rao (1993); Wolff and Timothy (2000); Mittlestaedt, Harben and Ward (2003).
Financial and Macroeconomic Constraints	• Liquidity constraints at the firm level.	Holtz-Eakin, Joulfaian and Rosen (1994); Blanchflower and Oswald (1998).
	• Inability to obtain financial services for export deals.	Fraser (2005); Irwin and Scott (2010).
	• Inability to access hedging instruments or options and insurance markets.	Cressy and Toivanen (2001); Tesfom and Lutz (2006).
	• Impact of high interest rates, as well as exchange rate fluctuations.	Doroodian (1999); Dekle and Heajin (2007); Briggs (2007).
Administrative Barriers and Foreign Standards	• Legislative and regulatory variables and standard specifications.	Swinnen and Vandemoortele (2011);
	• High export taxes, bureaucratic documentation requirements and a multiplicity of points and authorities for export inspection and supervision.	Crick and Czinkota (1995); Lee and Griffith (2004).
	• Stringent standards in import markets and requirements for market access.	Arteaga-Ortiz and Fernández-Ortiz (2010); Koksal and Kettaneh (2011).
	• Preferential treatment and discrimination against some exporters due to Regional Trade Agreements.	Julian (2003); Martina and Martin (2008).
Domestic Institutional Constraints	• Absence of comprehensive databases on export procedures and regulations.	Li (2004).
	• Lack of information on foreign market demands.	Christos et al (2008); Okpara and Kumbiadis (2008).
	• Poor institutional capacity to foster the organisation and networking of farmers and related export firms.	Burgess and Oldenboom (1997); Hotniar et al. (2009).
Lack of Human Resources	• Perception of exporting by managers as 'risky' due to the high transaction cost of selling abroad, and due to risks of payment default.	Bonaccorsi (1992); Christos, Konstadinos and George (2008).
	• Lack of skilled labour and inefficient personnel for technical export operations.	Javalgi et al. (2000); Mittelstaedt et al. (2003).
	• Lack of commitment by local suppliers and insufficient production capabilities.	Hult et al. (2003); Ibeh (2004).
Physical Infrastructure	• Transportation costs, unavailability of equipped transportation means, internet and telecommunication availability, and inadequate storage facilities for perishable agricultural products.	Kaleka and Katsikeas (1995); Morgan (1997).

Source. Authors' presentation based on the literature review.

In summary, the literature provides ample evidence as to how export barriers prevent SMFs from capturing export opportunities. With respect to Egyptian SMFs engaged in agricultural exports, it

is not clear how important these constraints appear relative to each other, so a specific objective of our survey was to identify these barriers precisely.

Survey Design and Method of Analysis

A questionnaire[2] was developed in order to survey the export behaviour of SMAEFs in Egypt. The sample of firms surveyed consisted of all specialist firms registered in Egypt for export of agricultural products. We focused only on those firms that definitely consider exporting to be their core activity. By not including SMFs with a focus on domestic marketing, we avoided the potentially confounding effect of heterogeneous firm strategies. Furthermore, as explained in the previous section, the institutional environment in Egypt did not allow us to conclude that large firms are more successful exporters *per se* due to economic scale effects (e.g. Rutherford 2008). Therefore, we excluded large firms from the survey so that we could measure the opportunities and constraints perceived by firms committed to exports, but not likely to be benefiting from specific institutional advantages.

Thus, our sample is defined as the 181 firms officially registered in Egypt as SMFs (with less than 50 employees) and specialist export firms, i.e. they were officially licensed as export-orientated firms and their main occupation are exports of agricultural products.

In the survey, the export managers, founders of the firms and individuals who make decisions or play a leading role regarding export decisions were asked to complete the questionnaire, as they were expected to have the experience and perspectives necessary to provide practical information about their firm's exports of agricultural commodities. The questionnaire included structured and open-ended questions as the instrument for collecting information from the respondents. Compared with our previous experience in the field, gathering data on profits, revenue, income and other related data has proved to be a very challenging endeavour in Egypt. For prevailing political and cultural reasons, the respondents tended to have doubts about the interviewer's true identity and hidden intentions, regardless of the fact that the objectives of the study were clearly explained. Therefore, questions regarding export quantities or profits from exports could only be recorded as a set of categorical variables.

The overall objective of the interviews was to obtain the following specific information: 1) Characteristics of the firms and their experience and specialisation in the export business, 2) export volumes and the main destinations of their commodities, 3) the criteria used for selecting import markets, 4) sources on which firms rely to access information on export opportunities, 5) major perceived obstacles and problems encountered in foreign import markets, 6) the support provided by the Egyptian export authorities to cope with these constraints and promote firms' export and marketing abilities, and 7) the interviewees' views on how to develop the agricultural export sector and promote an export-friendly environment for SMAEFs in Egypt.

A pre-test was conducted and the final version of the questionnaire was sent out in March 2011. The firms' representatives were first telephoned to inform them about the survey and to request

[2] The questionnaire is available upon request from the corresponding author.

their participation. The objectives of the study and the ethical rules were explained at this time. Upon receiving consent, the questionnaire was mailed to the appropriate individual, who was also requested to sign a consent form. Due to the low efficiency of the mail service in Egypt, some questionnaires were not successfully delivered to the firms. Some participants asked for fax copies during the telephone conversation and, upon request, the authors also delivered forms in person. After two weeks, a follow-up phone call was made. After four weeks, the questionnaires were collected in person. Of the 181 registered firms contacted, 87 firm owners and export representatives agreed to participate. The 94 non-responding firms included those downsizing or retiring and firms with which contact could not be established.

Of the 87 SMAEFs that agreed to participate, 41 did not return the questionnaire, provided incomplete answers or did not respond to all sections of the questionnaire. We have no evidence of systematic effects behind this but do not consider it unusual, given that even some of the firms that returned the questionnaire mentioned difficulties in handling export-related paperwork, so for some firms the questionnaire may just have added to the paperwork burden. However, we cannot rule out the possibility that the failure to complete the questionnaire was simply a random omission for various internal company reasons.

In total, 46 questionnaires were completed correctly and returned. Thus, our sample corresponded to approx. 25 per cent of the total population of target firms in Egypt. A common problem encountered in surveys of small business owners is the low response rate to mail surveys (Dennis 2003). In fact, our response rate can be considered satisfactory when compared with that in similar studies of smaller-sized firms. For instance, the response rate was 20.5 per cent in Fletcher (2001), 24 per cent in Pope (2002), 30% in Maria et al. (2007), and 17% in Koksal and Kettaneh (2011).

Descriptive Survey Results

Profile of the Responding Firms

Within our sample of SMAEFs in Egypt, 59 per cent of the firms had export experience exceeding 10 years, but only 13 per cent had exported for more than 20 years (Figure 1). About 41 per cent of the sample comprised firms that were relatively new to the export business, with less than 10 years in export activities.

The size distribution of firms in the sample, expressed in terms of number of employees, is summarized in Figure 2. One fifth of the firms were characterized by a relatively small number of employees (less than 20). However, almost all firms rely on other, smaller firms and agencies to which they outsource or subcontract specific services, or from where temporary workers are employed during peak export seasons. These temporary employees ended up being reported in the survey but the firms in the largest size category in Figure 2 (more than 50 employees) are still officially classed as SMFs by the Egyptian authorities (with up to 50 employees and therefore were included in our survey) because some of their workers are temporary.

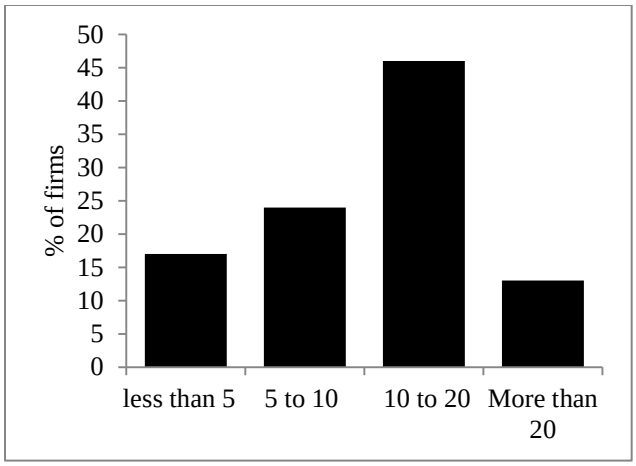

Figure 1. Firms' experience (years) in the agricultural export business.

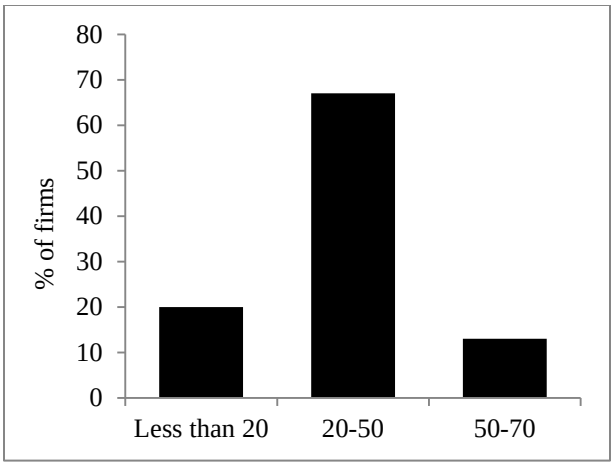

Figure 2. Number of employees in the companies according to survey results.

Structure of Exports

Around half the firms surveyed reported moderate or high export growth and gains over the previous five-year period, while the other half reported low rates of export growth and revenue from their export business (Figure 3). In terms of annual sales to foreign markets, the study failed to obtain reliable information from the respondents, who in most cases did not give an answer at all or indicated that it is difficult to provide specific values or figures on sales. In addition, the majority of respondents mentioned that their exports fluctuate to a great degree from year to year, and sometimes decline from a peak in one year to almost zero in the next. The respondents attributed this to changes in domestic agricultural production and in demand at the export destinations. Some respondents also stated that their export patterns shifted from a certain commodity to another based on the available opportunities, the export prices and the expected revenue. According to the respondents, these factors are very volatile and their agricultural exports respond accordingly to the ensuing trends. Furthermore, some exporting companies considered such information confidential, or the person who completed the questionnaire was not allowed to provide information on export values.

The agricultural products exported most frequently by the firms surveyed are shown in Figure 4. This figure shows that exports were dominated by horticultural products: 66% of the firms in the sample stated to export potatoes, followed by oranges (62%), onions (59%), green beans (55%), garlic (48%), strawberries (41%), and fresh grapes (34%). Around 31 per cent of the firms were involved in exporting rice, while only 15 per cent had experience of exporting cotton. Thus the exports of SMAEFs surveyed are mainly primary commodities, mostly exported as fresh unprocessed products.

Furthermore, our survey revealed that the Arabian market was the most popular destination for the firms surveyed, absorbing in total about half the total exports by those firms. This can be explained by the historical, cultural and economic ties between Egypt and other Arab states and their geographical proximity.

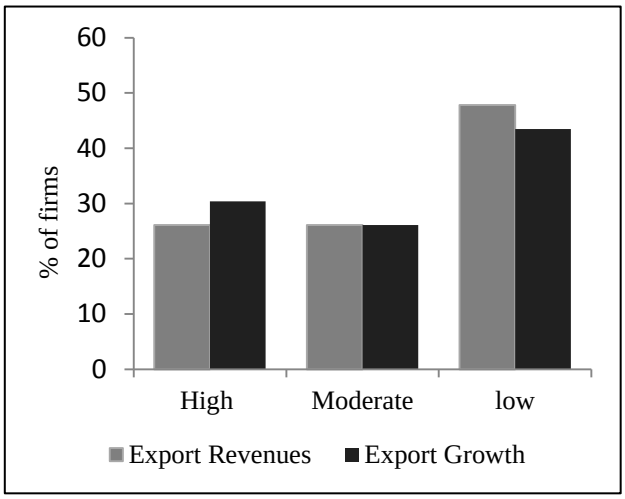

Figure 3. Firms' perceived growth & revenue from agricultural export

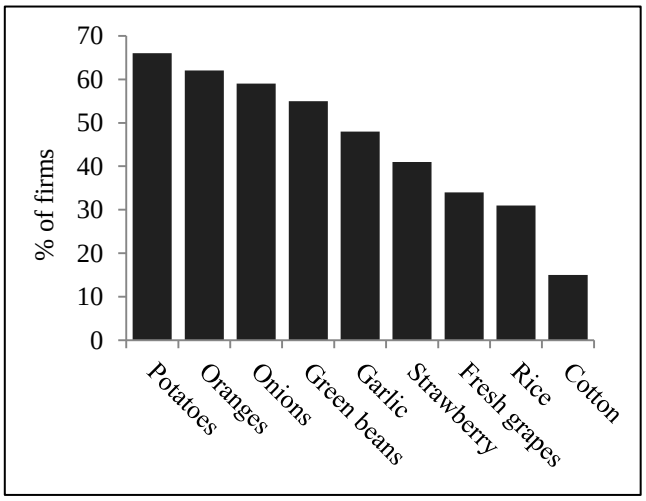

Figure 4. Major agricultural exports of the firms within the survey

European markets ranked second for agricultural exports from the firms surveyed, with about 39.4 per cent. Within this region, Italy, Greece, Spain, the UK, Germany and France are key partners. The remaining 10 per cent of exports were divided equally between the Asian and North American markets, while other regions of the world together accounted for only a minor proportion. Markets in sub-Saharan Africa played only a marginal role as regards agricultural exports by the firms surveyed. These results indicate a notable degree of concentration on rather few markets.

Factors Influencing SMAEFs' Selection of Export Destinations

The criteria on which firms in the survey rely when selecting their foreign target markets are shown in Figure 5. Survey respondents were asked to rank the seven criteria "profitability", "size of the destination market", "previous experience of that market", "level of quality standards", "geographical location", "political stability" and "existence of Regional Trade Agreements (RTAs)" according to their perceived importance.

The relative frequency (vertical axis in Figure 5) of the ratings given by the respondents to each of the seven criteria indicated that: About 35 per cent of respondents ranked profitability measures as the most important criterion when selecting an export market, 30 per cent ranked it as the second most important and 10 per cent as the third most important criterion.
Thus, for 75 per cent of respondents in the sample, profitability measures were one of the three most important criteria for selecting an export market.

These results are in line with El-Miniawy and Gouell (1994), who showed that Egyptian exporters seem to focus mainly on profit maximisation and pay less attention to maintaining their position and the stability of their products on the import markets.

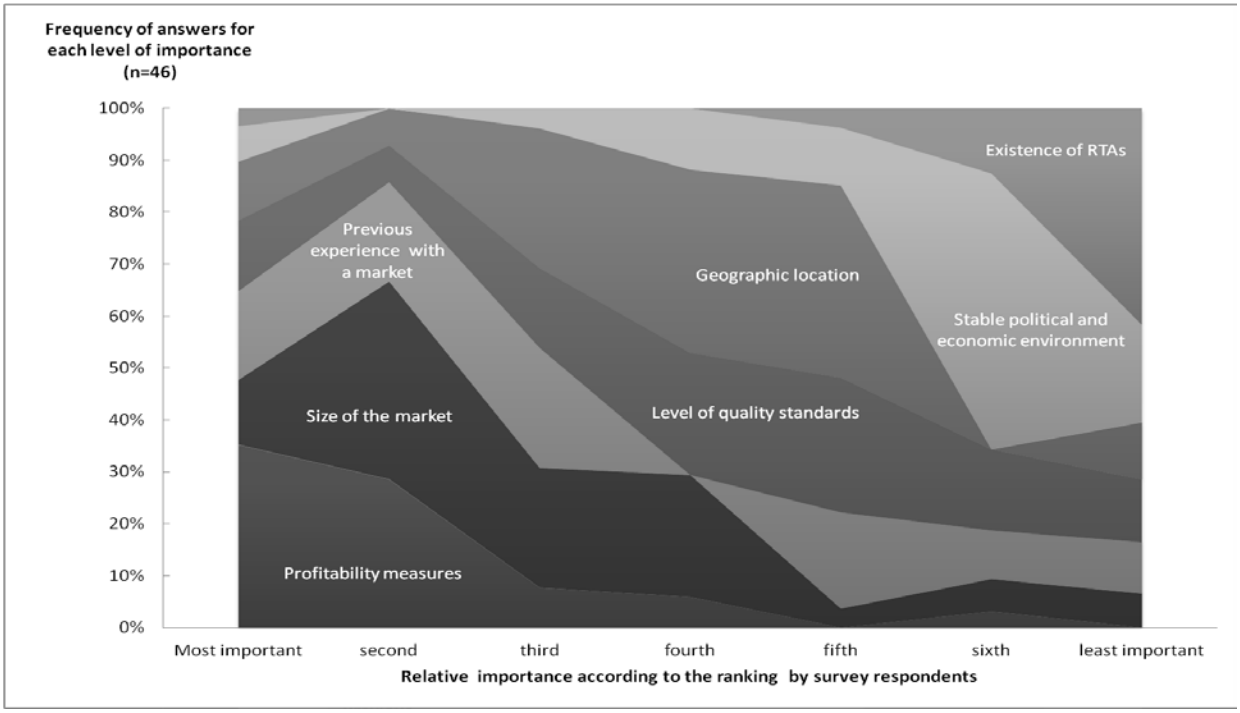

Figure 5. Factors influencing the selection of export destination markets, according to the respondents.

Size of the import market (having a well-established market and a large population familiar with Egyptian agricultural products) was the next most important criterion. Previous experience of the import market came third but with a much more even distribution, indicating that this criterion is only important to some exporters. The relatively high ranking given to this criterion by some firms is explained by the geographical distribution of Egyptian agricultural exports, as prolonged experience among Egyptian exporters of the Arabian market (as a result of cultural and historical ties) and the European market (as a result of past colonial ties and strong political and economic relations) have led to concentration of Egypt's agricultural exports in these two regions (Abu Hatab 2011).

Geographical location, as a proxy for transportation costs, was a criterion of secondary importance. It was certainly relevant, but not as frequently mentioned among the top three as the criteria listed above. The level of quality standards was most important for some firms, but of moderate importance for most. Finally, economic and political stability and the existence of an RTA between Egypt and the importing country were identified as rather less important by almost all respondents (Figure 5).

Major Sources of Information about the Export Opportunities in the Foreign Markets

The sources of information that the surveyed firms rely on to learn about export opportunities in foreign markets are listed in Table 2. Surprisingly, no firm mentioned the role of the Egyptian Commercial Services (commercial offices as part of Egyptian embassies abroad) and the Export Development Centre in this respect. One firm's representative indicated that the government

used to provide promotional and export assistance schemes in the past, but that these efforts had recently declined. According to statements by survey respondents, these programmes have been ineffective overall with respect to the promotion of exports. However, many companies believe that the help of export authorities is important, especially during the first steps into the export business.

As Table 2 suggests, the firms surveyed rely heavily on their individual capabilities and past experiences, as well as on announcements by importers about actual demand (62.1 per cent). Participation in fairs and exhibitions also seemed to be important (48.3 per cent) as were trade visits (44.8 per cent). Export associations also provide exporters with important information about the demand on foreign markets, with more than half the firms investigated citing UPEHC as a source of information.

Table 2. Sources of information about the export opportunities on foreign markets, according to respondents

Sources of Information	**% of Firms**
Announcements and calls by importers	62.1
Participation in fairs and exhibitions	48.3
Union of Producers and Exporters of Horticultural Crops (UPEHC)	55.2
Business trips and visits	44.8
Foreign trade points	37.9
Internet (e-commerce)	17.2
General Organisation for International Exhibitions and Fairs	6.9
Egyptian Commercial Services	0
Export Development Centre	0
Supreme Council for Export	0
Other government agencies	0

Source: Own presentation based on survey results.

Modern means of trade and e-commerce do not seem to be recognized or adopted by Egyptian agricultural exporters, while only 17.2 per cent of the firms employed the internet in seeking export opportunities for their agricultural commodities.

Perceived Obstacles and Constraints to Agricultural Exports

A total of 54 potential export constraints were presented to respondents as part of the survey[3]. Their responses to these 54 potential constraints were then grouped into the categories portrayed in Figure 6; these categories had been developed based on the literature review (compare Table 1). The vertical axis in Figure 6 displays the frequency with which the individual problems in each category were mentioned by the respondents, as a proportion of the sum of all problems mentioned. Perceived constraints are summarized below under the corresponding groupings:

[3] A complete list is available from the authors upon request.

i) Perceived Competition within International Export Markets

Most respondents agreed that the international market for agricultural products is highly competitive and that Egypt's agricultural commodities face strong competition, especially from Middle Eastern and North Africa exporters. They also believe that in order to cope with this competition, products have to be introduced at lower prices and better quality, and Egyptian agricultural products often lack both. Moreover, 62 per cent believed there was preferential treatment for other competitors in the importing markets, due to the existence of regional trade agreements. Accordingly, 79 per cent of the firms considered lack of competitive prices in comparison to competitors as the greatest challenge to access foreign markets. Better packaging and labelling by other competitors was also perceived as an important barrier to exports, with 76 per cent of the firms agreeing that packaging and labels perform an important role in international marketing communications. The firms surveyed mentioned two main challenges they face when dealing with the domestic agricultural sector. The first is inefficient production capabilities (mentioned by 62 per cent), reflecting existing agricultural production techniques and the importance of modernisation of agricultural systems in order to increase production and improve productivity. The second issue is the lack of commitment by local suppliers to their obligations to deliver the contracted quantities (mentioned by 59 per cent), which was explained by instability in agricultural production and the growing domestic demand.

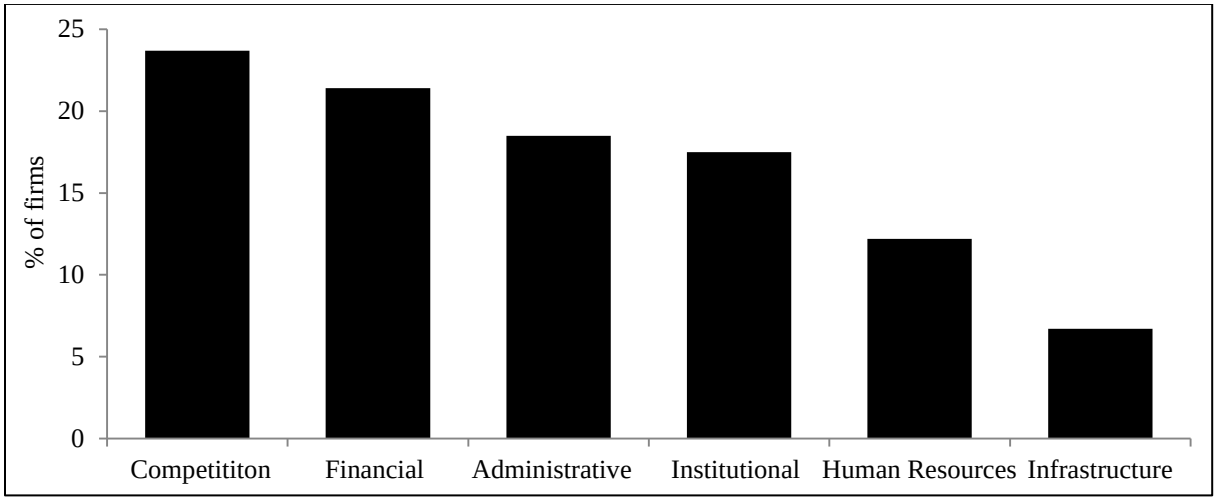

Figure 6. Relative perceived importance of the main categories of export barriers, according to the respondents.

ii) Perceived Financial Constraints

The SMAEFs in the sample operated with relatively small amounts of liquidity, which made it difficult for them to fund unexpected costs of exportation, e.g. fines for breaking export rules (this is very common due to information scarcity or lack of consultation) and exchange rate disparities. Specifically, 85 per cent of firms indicated that the difficulty in expanding their export business is due to a lack of capital, whereas 81 per cent of companies blamed the high cost of access to credit and export loans and the unwillingness of banks to serve SMFs. These financial problems were compounded by perceived inefficient performance of banks and other

loan-giving institutions, with 79 per cent of the firms surveyed referring to the inability of local banks to cope with international business and 84 per cent describing export credit schemes as poorly operated or underfunded. In all, 69 per cent of the sample firms perceived exporting as appealing, but also a high-risk activity compared with domestic sales, whereas 74 per cent had concerns about customers defaulting on payment when selling abroad.

iii) Administrative Barriers and Foreign Standards

Apparently confusing regulations and import procedures in the target market were viewed by 59 per cent of the respondents as a major barrier. These included unnecessary export documentation requirements (mentioned by 77 per cent), the enforcement of high export taxes (82 per cent), the inefficient export risk guarantee schemes (74 per cent), and the lack of attractive export incentives and subsidy programmes (78 per cent). Furthermore, 86 per cent of firms agreed that the involvement of many different ministries and the multiplicity of export inspection and supervision authorities represented a fundamental obstacle to agricultural exports from Egypt. The departments involved have often failed to harmonize their actions with stakeholders and exporting firms, which has created contradictions. For instance, some outdated export laws and regulations are not in accordance with current domestic and international practice (according to 65 per cent of respondents). Restrictive standards within the import markets, especially in the EU, along with high import tariffs and Egyptian export fees were considered to be problematic by 66 and 52 per cent of the respondents, respectively.

iv) Institutional Constraints

The survey responses reflected firms' unfamiliarity with export assistance schemes introduced by government institutions (69 per cent of respondents). Export expansion and training services seem to be ineffective or unrecognized by exporters, as 59 per cent of the SMAEFs surveyed lacked familiarity in legal matters related to export procedures and regulations. For the majority of exporters (82 per cent), the absence of a comprehensive database on export procedures and regulations is an essential barrier to expanding their business, while 65 per cent indicated a lack of knowledge regarding demands by foreign markets. Poor institutional capacity to foster the organisation of farmers and exporters and corruption and red tape in export authorities were mentioned as critical barriers by more than 70 per cent of the firms investigated.

v) Human Resources Constraints: Know-how, Commitment and Information Management

Human resources seem to be another major constraint on agricultural exports in Egypt, with 72 per cent of firms mentioning lack of skilled labour for export, technical activities and, more specifically, post-harvest operations. More than two-thirds of the firms investigated stressed the difficulty in finding trained personnel to manage international trade activities.

vi) Physical Infrastructure

Inadequate storage space and lack of refrigerated areas for perishable goods were perceived as important problems by 68 per cent of the agricultural exporters who completed the survey.

Moreover, high transportation and shipping costs and the unavailability of equipped transportation were mentioned as major infrastructural barriers.

Determinants of Export Growth and Profitability

Descriptive analysis of the survey results showed the absolute and relative importance of export constraints as perceived by SMAEFs in Egypt. The results obtained are broadly in line with the literature on SMF export performance in developing countries in general. We now turn to the analysis of perceived opportunities from exporting, as stated by the respondents to our survey. Rather than asking hypothetical questions about the future, we assumed that the stated level of each firm's export growth and export profitability during the past five years gave an indication of the relative magnitude and direction of opportunities from exporting.

Table 3. Descriptive Statistics on the Dependent Variables

Dependent Variable	Mean	STD	Max.	Min.	Mode
Export growth over the last five years	2.833	1.239	5	1	3
Profits from export activity	2.741	1.206	5	1	2

Source. Authors' own calculations.

Each dependent variable was measured according to a five-point Likert scale (Table 3). In this part of the empirical analysis, we examined how the previously discussed constraints to exports affected the stated level of these dependent variables.

Given the confidentiality that the firms assigned to information about economic performance (see description of survey design), the five-point Likert scale can be viewed as an approximation of the 'true' underlying, yet unobservable, continuous distribution of these variables. Therefore, our method of analysis had to account for the fact that the 'true' value of each of the two dependent variables remained unobserved, but was approximated through the observed categorical responses on the Likert scale. Hence, we employed an ordered probit model and used the previously discussed constraints as sets of explanatory variables. Using an ordered probit model (along with ordered logit models) is a well-established estimation approach if the dependent variable y is discrete while the order of discrete categories has a meaningful interpretation such as "increasing order of answers" or, in our case, Likert categories 1 to 5 implying subsequently higher levels of recent export growth or profits from exports.

Our regression model thus took the general form, with x representing explanatory variables, β the corresponding estimated coefficients and ε a stochastic error term: $y^* = x'\beta+\varepsilon$. However, the variable y_i^* represents only the 'true' level of profit from exports and export growth as could be found e.g. in each firm's accounts, while owing to the confidentiality issue this information unfortunately remained unobservable for the $i=1,\ldots,n$ observations. Instead, our observed counterpart of y_i^* was a corresponding discrete variable, y_i, which is based on the Likert-scale answers.

In general, the ordered probit model applies to surveys in which the dependent variable represents an ordinal ranking (as in our case: y= Likert category 1 < y= Likert category 2), while

the multinomial probit does not restrict the discrete outcomes to be ordered (e.g. *y*= "wheat" versus *y*= "maize", etc. would be sufficient for a multi-nominal but not for an ordered approach). The ordered probit model can thus be viewed as a more restrictive multinomial model that better exploits the information contained in an ordered categorical dependent variable than the conventional multi-nominal model would do. Ordered probit models can either be estimated based on Maximum Likelihood, as used here, or through Bayesian methods. The probabilities, which enter the log likelihood function, can be stated as follows (Greene and Hensher 2008):

$$P(y_i=j) = P(y_i^* \text{ falls within the } j^{th} \text{ category of } y_i)$$

The ordered probit approach estimates the empirical effect of each explanatory variable on the probability of a firm's export growth (or profit) falling into one of the observed *j*=1,...,5 (Likert) categories of the observed dependent variable *y* (which is used as an approximation of the unobserved 'true' *y**). A disadvantage of the ordered probit approach is that marginal effects on *y* of a 1-unit change in *x* are not directly given by the estimated coefficients. Therefore, neither the sign nor the magnitude of the estimated β receives a direct interpretation. Instead, marginal (also known as "partial") effects have to be calculated separately for each of the *j* categories (Greene and Hensher, 2008) according to the first-order partial derivatives:

$$\frac{\partial P(y_i=j|x)}{\partial x}$$

Tables 4a and Table 5a present the estimates from our ordered probit models after elimination of non-significant variables; all these explanatory variables have been formed based on answers to questions in our survey. The corresponding calculated marginal effects are presented in Tables 4b and 5b. These marginal effects state that a 1-unit change in each explanatory variable will determine the change in the probability of the unobserved y_i* falling within any of the *j* categories of each of the two dependent variables *y*. In our case, *j=1,...,5* represented the five categories of the Likert scale used in the questionnaire (first row of Tables 4b and 5b). Furthermore, the estimated cut-off points (μ) and the intercept represented the four estimated breaks of the 'true' but unobserved variables y_i* between the five categories. Intuitively, these cut-off points can be viewed as an empirical indication of the extent to which the Likert scale failed to reflect existing but unobserved clusters in the underlying variable y_i*. However, according to Greene and Hensher (2008, section 5.5.3), the estimated cut-off points in ordered probit models should not be interpreted too strictly.

All three model selection criteria (last row of Tables 4a and 5a) indicated that "Profits from exports" were slightly better explained by the explanatory variables than "Export growth over the last five years". However, our focus was not primarily on explaining all variability in the dependent variables, but rather on identification of those explanatory variables that had a statistically different from zero effect on each respective *y*. Given the difficulties in data collection we experienced and the likely presence of heterogeneity in the data for which we were unable to control, we considered McFadden Pseudo R-squared values of 0.39 and 0.33 as rather satisfactory fits of the ordered probit models to our data.

Table 4a. Ordered Probit Model *y*="Profits from export activities"

	Coeff.	Std. error	|b/St.Er.|	P[|Z|>z]	Mean (x)
Constant	8.086	2.484	3.255	0.0011	
Lack of attractive export incentives and subsidy schemes	-0.257	0.136	-1.880	0.0600	3.847
Risk of default on payment	0.252	0.178	1.412	0.1581	3.913
Difficulty in handling export documentation	-0.330	0.194	-1.700	0.0891	3.782
Absence of comprehensive database on export procedures/regulations	-0.325	0.147	-2.201	0.0277	3.543
Insufficient service from trades union and export associations	-0.366	0.175	-2.085	0.0371	3.717
Unwillingness of banks to serve SMFs	-0.649	0.229	-2.832	0.0046	4.043
Differences in product specifications on foreign markets	-0.324	0.170	-1.910	0.0561	3.652
Stringent standards & requirements for access to import markets	-0.269	0.159	-1.688	0.0914	3.826
Years involved in export activity	1.042	0.238	4.372	0.0000	2.543
μ(1)	1.811	0.297	6.083	0.0000	
μ(2)	3.454	0.314	10.98	0.0000	
μ(3)	4.855	0.452	10.71	0.0000	

Finite Sample AIC: 2.680; Restricted log likelihood: -70.38; McFadden Pseudo R-squared: 0.39

Table 4b. Marginal effects (*dy/dx*) in each category of *y*="Profits from export activities"

Likert category *j* from the answering scale:	**1 (low)**	**2**	**3**	**4**	**5 (high)**
Lack of attractive export incentives and subsidy schemes	0.010	0.086	-0.054	-0.040	-0.002
Risk of default on payment	-0.010	-0.085	0.053	0.039	0.002
Difficulty in handling export documentation	0.013	0.111	-0.070	-0.051	-0.003
Absence of comprehensive database on export procedures/ regulations	0.013	0.109	-0.069	-0.050	-0.003
Insufficient service from trades union and export associations	0.015	0.123	-0.078	-0.057	-0.003
Unwillingness of banks to serve SMFs	0.026	0.219	-0.138	-0.101	-0.006
Differences in product specifications on foreign markets	0.013	0.109	-0.069	-0.050	-0.003
Stringent standards and requirements for access to import markets	0.011	0.091	-0.057	-0.042	-0.002
Years involved in export activity	-0.042	-0.352	0.222	0.163	0.010

Source. Own calculations based on the ordered probit model results.

The results showed that in case of the dependent variable "Profits from export activities" (ordered model in Table 4a), almost all explanatory variables were statistically significant at the 90% level or better. Regarding the dependent variable "Export growth over the past five years", an only slightly different set of explanatory variables was identified as having most explanatory power, and all these variables were statistically significant at the 95% level or better.

Concerning the "Profits from export activities" (Table 4a), the estimated cut-off points μ and the intercept were all statistically significant and showed that *y* takes the Likert category 1 ($y_{i,j=1}$) if $0 < y_i^* \leq 1.811$ (consequently for all y_{ij}). Interestingly, the estimated intercept indicated that the highest category $y_{i,j=5}$ corresponded to an estimated 'true' $y_i^* > 8.086$. Thus, the underlying distribution of y^* was estimated to spread over a much wider range than the five-point Likert scale that respondents were allowed to use.

Calculated marginal effects based on the estimated coefficients in Table 4b should be interpreted as follows: a 1-unit change in "Lack of attractive export incentives and subsidy schemes" increased the probability of being in category $y_{i,j=1}$ (which corresponds to a low stated level of profits from exports) by 1.06%, while the perceived lack of attractive export incentives increased the probability of a firm being within the category of only moderately low export profits ($y_{i,j=2}$)

by 8.6%. Consequently, a lack of attractive export incentives lowered the probability of being in the category of firms with medium or high profits from exports. In this context, the number of years that a firm had already engaged in export activities significantly increased the probability of performing either at medium or moderate export profitability. However, changes in this variable did not seem to substantially affect the probability of being among the firms with the highest profits from exports (marginal effect only 0.01 for $y_{i,j=5}$).

Table 5a. Ordered Probit Model *y*="Export growth over last five years"

	Coeff.	**Std. Error**	**|b/St.Er.|**	**P[|Z|> z]**	**Mean ( )**
Constant	11.516	1.488	7.737	0.0000	
Inefficient export risk guarantee programmes	-0.694	0.195	-3.558	0.0004	2.957
Lack of commitment by local suppliers of produce	-0.337	0.149	-2.254	0.0242	2.022
Lack of familiarity of legal matters and export payment terms	-0.512	0.148	-3.453	0.0006	2.543
Absence of comprehensive database on export procedures/regulations	-0.301	0.134	-2.242	0.0249	2.543
Insufficient service from trades union and export associations	-0.400	0.174	-2.302	0.0213	2.717
Unwillingness of banks to serve SMFs	-0.565	0.209	-2.706	0.0068	3.043
Differences in product specifications on foreign markets	-0.429	0.166	-2.588	0.0097	2.652
Stringent standards and requirements on access to import markets	-0.308	0.159	-1.927	0.0539	2.826
μ(1)	1.410	0.260	5.413	0.0000	
μ(2)	2.827	0.275	10.274	0.0000	
μ(3)	3.970	0.386	10.288	0.0000	

Finite Sample AIC:2.81061; Restricted log likelihood: -71.4355; McFadden Pseudo R-squared: 0.33

Table 5b. Marginal effects (*dy/dx*) in each category of *y*="Export growth over last five years"

Likert category *j* from the answering scale:	**1 (low)**	**2**	**3**	**4**	**5 (high)**
Inefficient export risk guarantee programmes	0.047	0.201	-0.069	-0.147	-0.032
Lack of commitment by local suppliers of produce	0.023	0.098	-0.034	-0.071	-0.015
Lack of familiarity in legal matters and export payment terms	0.034	0.148	-0.051	-0.108	-0.023
Absence of comprehensive database on export procedures/regulations	0.020	0.087	-0.030	-0.064	-0.014
Insufficient service from trades union and export associations	0.027	0.116	-0.040	-0.085	-0.018
Unwillingness of banks to serve SMFs	0.038	0.163	-0.056	-0.119	-0.026
Differences in product specifications on foreign markets	0.029	0.124	-0.043	-0.091	-0.020
Stringent standards and requirements for access to import markets	0.021	0.089	-0.031	-0.065	-0.014

Source. Own calculations based on the ordered probit model results.

As regards the risk of default payment, we observed the opposite. Clearly, firms that export more should experience a higher default payment risk and therefore, the probability change to be within the category of high export profits was positive. Furthermore, if the risk of default payment is perceived to be higher, the exporting firm most likely experiences a medium level of export profits. This finding can be an indication that some firms certainly engage in export activities but, due to this risk, do not make use of the full market potential that is available to them. Alternatively, this group of firms may have trading partners with low financial reliability and, *ceteris paribus*, export profits are lower as well. Interestingly, all further determinants of

profits from exports basically determined the placement of the firms into two groups[4]: On the one hand, firms with rather low (Likert category 1 or 2) profits from exports were most likely to have difficulties in handling export regulations and the related paperwork. Moreover, those firms that lack sufficient access to the related information databases often have difficulties in coping with product standards and quality restrictions in foreign markets, and do not enjoy sufficient access to capital through local banks. On the other hand, all firms with medium or high export profitability apparently are more likely to cope with these challenges, as indicated by the negative signs that we found on these marginal effects (= negative effect on the probability to have stated answers in the highest categories).

Table 5a shows explanatory factors that determine the extent to which exports had grown during the past five years, as perceived by the person who completed the questionnaire. Again, precise interpretation of the significant constant and cut-off points is not recommended (Greene and Hensher 2008, section 5.5.3). The calculated marginal effects (Table 5b) based on the estimated probabilities and cut-off points from the ordered probit model in Table 5a revealed that firms could basically be distinguished into two categories: 1) The probability of having experienced low or limited export growth in the past was more likely if the respondent agreed with the corresponding explanatory variables (positive sign on the marginal effects for categories $y_{i,j=1}$ and $y_{i,j=2}$, respectively). 2) Respondents whose firms experienced moderate or strong export growth in the past were much more likely to either cope with the set of explanatory variables, or for unobserved reasons, did not seem to be constrained by them.

It is noteworthy that (in contrast to "Profits from export activities") the lack of commitment by local agricultural product suppliers turned out to be a distinct determinant of export growth in the past years. While this was apparently less important as a determinant for total profitability of exports, the option to source agricultural goods from suppliers with some commitment towards exporting had been a crucial determinant for recent growth.

Discussion

The aim of this study was to investigate whether and to what extent a sample of specialist small- and medium-sized agricultural export firms (SMAEFs) in Egypt feel ready to capture export opportunities, and the barriers they perceive when doing so.

Our results confirm previous findings by Ghoneim (2000) that SMF exporters in Egypt mainly depend on personal contacts and international trade exhibitions. The SMFs in our sample largely relied on traditional and informal ways of establishing export contacts and when acquiring related market information. Furthermore, the low awareness among our survey respondents about the existence and role of the recently created RTAs points to the lack of knowledge among agricultural exporters about the export opportunities that these agreements may provide. It also indicates that there is potential miscommunication between the government agencies which signed these agreements and the exporters who are intended to benefit from them. However, our

[4] Note that similar conclusions would likely have been reached through e.g. a Principal Components Analysis. However, the sensitivity of such methods to small sample sizes constitutes an additional reason why we used the ordered probit approach.

survey also revealed that the institutional environment is not the only source of perceived barriers among small agricultural exporters in Egypt. Perceived barriers with respect to competition on foreign markets indicate several structural weaknesses among the agribusiness and the export-orientated SMAEFs in Egypt. These weaknesses can be summarized as: i) a limited ability to match quality criteria in foreign markets, ii) limited diversification of export destinations and therefore potential economic vulnerability to demand, price or exchange rate fluctuations, iii) lack of qualified personnel that can deal with new export opportunities, and iv) the failure of Egyptian growers to produce exportable quantities of the desired quality. In addition, v) most firms included in our survey seem to be relying on outdated communication techniques.

These results call for networking among Egyptian agricultural research institutions and among agricultural advisory services and farmers' associations to improve and support domestic vertical chain integration and to extend export-relevant information to agricultural producers and not only to export firms. Furthermore, some of our findings about perceived barriers still confirm findings reported in earlier studies: Inadequate post-harvest services, including poor packaging, were among the problems identified already about fifteen years ago by a World Bank (1995) study. In addition, failure to achieve the required high standards for products and to keep track of consumer needs was identified as impeding the ability of Egyptian exporters to enter foreign markets (World Bank, 1995). Siam (2002) pointed out the problem of Egyptian agricultural exports being concentrated in very few destination markets. This creates vulnerability to changes in demand for Egyptian agricultural exports and also leaves exporters vulnerable in the case of rapid changes in the political or economic situations of their key importing markets (Abu Hatab et al. 2010). Dogruel and Tekce (2010) investigated the export diversification in Egypt and selected MENA countries and concluded that a continuing focus on exporting primary agricultural products would lead to deteriorating terms of trade, rising income volatility and decreasing growth rates. Thus, our findings support these arguments that call for a diversification of export destinations.

The results from our ordered probit models suggest that the firms included in our sample will most likely be able to increase their profits from exports in the future if they are able to overcome the constraints described in the analysis and to handle the quality restrictions placed e.g. by the EU food quality and safety standards. A possible limitation of our study is that we did not include large exporting firms in the dataset and empirically test for differences regarding perceived export opportunities and constraints.

Based on our results, we concluded that small- and medium-sized agricultural export firms in Egypt could better utilize existing access to foreign markets. The creation of a comprehensive database on export procedures and regulations has in this context repeatedly been mentioned by our respondents and turned out in our ordered probit models to be a significant explanatory variable of export performance. Increased efficiency of agricultural exporters and producers could in turn improve and maintain Egypt's long-term position on global agricultural markets and perhaps directly contribute to poverty alleviation in rural areas where a large proportion of the workforce is employed in agriculture.

Conclusions

There is ample evidence that small- and medium-sized agricultural export firms could play an important role for Egypt's agricultural exports. The sample of specialist SMF agricultural exporters surveyed here reported barriers to exports that have partly already been present for years, if not decades. Yet, the firms surveyed that are successfully dealing with these barriers and could potentially be successful agricultural exporters in the future report an additional problem of a domestic agricultural supply sector that is partly incapable of complying with foreign quality standards at competitive prices. Therefore, one option for small and medium-sized agricultural export firms in Egypt would be to develop closer links and collaborations with farms and firms that supply them with export-quality agricultural products. An important component of such collaborations would be for the exporters to collect available digital information about prices and quality regulations in foreign markets more efficiently, and to share this information with producers.

Acknowledgements

We are grateful to Editors, Nicola Shadbolt, Peter Goldsmith and two anonymous referees for their comments and suggestions. In addition, we would like to thank Mary McAfee for editing our manuscript.

References

Abby, N., and S. Slater. 1989. Management influences on export performance: A review of empirical literature 1978–88. *International Marketing Review* 6(4): 7–26.

Abu Hatab, A. 2011. Determinants of Egyptian Agricultural Exports with Special Reference to the Potential Opportunities in the Chinese market. PhD diss., Northwest A&F University, Yangling, China.

Abu Hatab, A. Guilly A., R. Hefney and S. Abdefattah. 2007. Economic Study on Status Quo and Future of Egyptian Agricultural Exports: Implications under North Sinai Governorate. *Journal of Suez Canal University* 12(3): 87-104.

Abu Hatab, A., E. Romstad, and H. Xuexi. 2010. Determinants of Egyptian agricultural exports: A Gravity model approach, *Modern Economy* 1(1): 134-143.

Al-Hazaimeh, A., K. Al-Hyari, and M. Al-Nasour. 2011. Determinants of Aggregate Imports in Jordan: Empirical Evidence (1976-2008). *Journal of Economic Development, Management, IT, Finance and Marketing* 1(1): 18-38.

Arteaga-Ortiz, J., and R. Fernández-Ortiz. 2010. Why don't we use the same export barrier measurement scale? An empirical analysis in small and medium-sized enterprises. *Journal of Small Business Management* 48(1): 395-420.

Blanchflower, D. and A.J. Oswald. 1998. What makes an entrepreneur? *Journal of Labour Economics* 16(1): 26-60.

Bonaccorsi, A. 1992. On the relationship between firm size and export intensity. *Journal of International Business Studies* 23(4): 605-636.

Briggs, I.N. 2007. *Nigeria: mainstreaming trade policy into national development strategies*. African Trade Policy Centre (UN Economic Commission for Africa) Working paper No. 52, January 2007.

Burgess, S.M. and N. Oldenboom. 1997. South African and Singaporean exporters: their attitudes, information sources and export problems. *South African Journal of Business Management* 28 (1): 53-63.

CAPMAS. 2013. Central Agency for Public Mobility and Statistics (CAPMAS), Statistical Yearbook 2013, see: http://capmas.gov.eg/book.aspx .

CAPMAS. 2012. Central Agency for Public Mobility and Statistics (CAPMAS), Statistical Yearbook 2012, see: http://capmas.gov.eg/book.aspx .

Christos, K., M. Konstadinos, and C. George. 2008. Greek wine firms: determinants of export performance. *Agribusiness* 24(2): 275-297.

Cressy, R. and O. Toivanen. 2001. Is there adverse selection in the credit market? *Venture Capital* 3(3): 215-238.

Crick, D. and M.R. Czinkota. 1995. Export assistance: another look at whether we are supporting the best programmes. *International Marketing Review* 32(3): 61-72.

Dekle, R. and H.R. Heajin. 2007. Exchange rate fluctuations, financing constraints, hedging, and exports: evidence from firm level data. *Journal of International Financial Markets, Institutions and Money* 17(2): 437-451.

Dennis, W.J. 2003. Raising response rates in mail surveys of small business owners: results of an experiment. *Journal of Small Business Management* 41(3): 278-295.

Dogruel, A.S. and M. Tekce. 2010. Trade liberalization and export diversification in selected MENA countries. *Topics in Middle Eastern and African Economies* 13(1): 1-24

Doroodian, K. 1999. Does exchange rate volatility deter international trade in developing countries? *Journal of Asian Economics* 10(1): 465-474.

EDSEB. 2010. Export Development Bank of Egypt, *Annual Report*. Available at: http://www.edbebank.com/EN/FinancialInformation/Documents/EDBE_2010_ Arabic.pdf .

El-Miniawy A. and A. Gouell. 1994. Food and agricultural policies in Egypt. Available at: http://om.ciheam.org/om/pdf/c07/94400054.pdf [accessed March 17th, 2013].

Elasrag, H. 2012. *Policies to enhance competitiveness for exports of Egyptian small and medium-sized enterprises*. MPRA Paper No 44820, March 2013.

El-Hawary, D. 2010. Beyond the crisis: policies to support young enterprises. *Paper presented at 4th Meeting of the Working Group on SME Policy, Entrepreneurship and Human Capital Development*, Tunis, March 29-30.

Fletcher, R. 2001. A Holistic approach to internationalization. *International Business Review* 10(1): 25–49.

Fliess, B. and C. Busquets. 2006. The role of trade barriers in SME internationalisation. OECD Trade Policy Papers, 45, available at: http://www.oecd.org/tad/ntm/37872326.pdf.

Fraser, S. 2005. *Finance for small and medium sized enterprises: A report on the 2004 UK survey of SME finances*, Warwick Business School: Coventry.

Ghoneim, A.F. 2000. Antidumping under the GATT and the European Union rules: Prospects for the Egyptian-European Partnership Agreement. In The Egyptian Exports and the Challenges of the Twenty First Century. Edited by Heba Nassar and Alfons Naeim. Center of Economic and Financial Research and Studies, Cairo.

Greene, W.H. and D.A. Hensher. 2008. *Modeling ordered choices: A primer and recent developments*. Department of Economics (Leonard N. Stern School of Business, New York University) working Paper No 08-26, June 15th.

Haahti, A., V. Madupu, U. Yavas, and E. Babakus. 2005. Cooperative strategy, knowledge intensity and export performance of small and medium sized enterprises. *Journal of World Business*, 40 (2): 124–138.

Hamdy, A. 2009. Demand for Egyptian rice in foreign markets. *Egyptian Journal for Agricultural Economics* 19(3): 54-67.

Hassanain, K.A. 2004. *Competitiveness analysis of Egyptian agricultural sector*. Department of Economics (Cairo University) working paper No 14, April 2004.

Holtz-Eakin, D., D. Joulfaian, and H.S. Rosen. 1994. Entrepreneurial decisions and liquidity constraints. *Rand Journal of Economics* 25(1): 334–347.

Hotniar, S., A. Prihandoko, T. Dharma and K. Anacostia. 2009. Problems faced by small and medium business in exporting products. *Delhi Business Review* 10(2): 49-56.

Hult, G.T., C.C. Snow, and D. Kandemir. 2003. The role of entrepreneurship in building cultural competitiveness in different organizational types. *Journal of Management* 29(3):401 - 426.

Ibeh, K. 2004. Furthering export participation in less performing developing countries. *International Journal of Social Economics* 311(2): 94-110.

Irwin, D. and J.M. Scott. 2010. Barriers faced by SMEs in raising bank finance. *International Journal of Entrepreneurial Behaviour & Research* 16(3): 245–59.

Javalgi, R., S. White, S., and O. Lee. 2000. Firm characteristics influencing export propensity an empirical investigation by industry type. *Journal of Business Research* 47 (3): 217-228.

Julian, C.C. 2003. Export marketing performance: a study in Thailand firms. *Journal of Small Business Managemen*t 41(2): 213-222.

Kaleka, A. and C.S. Katsikeas. 1995. Exporting problems: the relevance of export development. *Journal of Marketing Management* 11(1): 499-515.

Kazem, A. and B. Heijden. 2006. Exporting firms' strategic choices: the case of Egyptian SMEs in the food industry. *SAM Advanced Management Journal* 71(3): 21-33.

Koksal, M.H. 2008. How export marketing research affects company export performance: evidence from Turkish companies. *Marketing Intelligent & planning Journal* 26(4): 416-430.

Koksal, M.H. and T. Kettaneh. 2011. Export problems experienced by high- and low-performing manufacturing companies: A comparative study. *Asia Pacific Journal of Marketing and Logistics* 23(1): 108-126.

Lall, S. 2000. Strengthening SME for international competitiveness. *Paper presented at the workshop on What Makes Your Firm Internationally Competitive*. Egyptian Centre for Economic Studies, Cairo: 6-8 March.

Langes, L.F. and D.B. Montgomery. 2005. Export performance as an antecedent of export commitment and marketing strategy adaption: evidence from small and medium-sized exporters. *European Journal of Marketing* 38(9/10): 1186-1214.

Lee, C. and D.A. Griffith. 2004. The marketing strategy-performance relationship in an export-driven developing economy. *Journal of international marketing Review* 21(3): 321-334.

Li, L. 2004. An examination of foreign market knowledge of exporting firms based in the People's Republic of China: Its determinants and effects on export intensity. *Industrial Marketing Management* 33(1): 561-72.

Maria, H., K. Soren and V. Vladimir. 2007. Small and medium-sized enterprises' internationalization and the influence of importing on exporting. *International Small Business Journal* 25(5): 459-477

Martina, B. and P. Martin. 2008. Creating opportunity for small-firm exporters through regional free trade agreements: a strategic perspective from New Zealand. *Australasian Journal of Regional Studies* 14(3): 275-285

Mittelstaedt, J.D., G.N. Harben and W.A. Ward. 2003. How small is too small? Firm size as a barrier to exporting from the United States. *Journal of Small Business Management* 41 (1): 68-84.

MoF (Egyptian Ministry of Finance). 2004. *Enhancing Competitiveness for M/SMEs in Egypt: General Framework and Action Plan*. August.

MoF (Egyptian Ministry of Finance). 2005. *An Export Strategy for Small and Medium Enterprises in Egypt*. October, 2005.

Moen, O. 1999. The relationship between firm size, competitive advantages and export performance revisited. *International Small Business Journal* 18(1): 53-72.

Morgan, R.E. 1997. Export stimuli and export barriers: evidence from empirical research studies. *European Business Review* 97(2): 68-79.

Naidu, G.M. and T.R. Rao. 1993. Public sector promotion of exports: a needs-based approach. *Journal of Business Research* 27(1): 85-101.

Okpara, J.O. and N. Kumbiadis. 2008. SMEs export orientation and performance: evidence from a developing economy. *International Review of Business Research Papers* 4(1): 109-119.

Pope, R.A. 2002. Why small firms export: another look. *Journal of Small Business Management* 40(1): 17-26.

Rutherford, B.K. 2008. *Egypt after Mubarak: liberalism, Islam, and democracy in the Arab world*. Princeton University Press: Princeton, NJ.

Said, M.A. 2006. Exportation possibilities of some vegetable crops in Egypt with reference to Fayoum Governorate. *Paper presented at the 14th conference of the Egyptian Association of Agricultural Economists,* 56-69, Cairo, September 21-22.

Siam, G. 2002. Egypt's case study: Agricultural sector model of Egypt. *Paper presented at the workshop on Agricultural Sector Models in the Méditerranean Region*, CIHEAM-Institut Méditerranean de Montpellier, Montpellier: France, October 10-11.

Sousa, C.M., F.J. Martinez-Lopez and F. Coelho. 2008. The determinants of export performance: a review of the research in the literature between 1998 and 2005. *International Journal of Management Review* 10(4): 343-374.

Swinnen, J. and T. Vandemoortele. 2011. Trade and the political economy of food standards. *Journal of Agricultural Economics* 62(2): 259–280.

Syed, M.Q. and M.N. Abdullah. 2009. Constraints to SMEs: A rotated factor analysis approach. *South Asian Studies* 24(2): 334 -350

Tambunan, T. 2009. *SMEs in Asian developing countries*. Palgrave Macmillan: London.

Tesfom, G. and C. Lutz. 2006. A Classification of export marketing problems of small and medium sized manufacturing firms in developing countries. *International Journal of Emerging Markets* 1(3): 262 – 281.

Wolff, J.A. and L.P. Timothy. 2000. Internationalization of small firms: An examination of export competitive patterns, firm's size, and export performance. *Journal of Small Business Management* 38(2): 34-47.

World Bank. 1995. *Claiming the future: choosing prosperity in the Middle East and North Africa*. Washington, DC, October 1995.

Zucchella, A. 2001. The internationalization of SMEs: Alternative hypotheses and empirical survey. In *Multinationals in a New Era*. Edited by Taggart, Berry and McDermott Basingstoke: Palgrave, 47-60.

