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Analyzing Performance of Exporters in Dubai an Emerging Economy

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The paper used contingency framework to investigate demand and supply factors to model prototype SME exporters in Dubai a fast emerging economy in the Middle East. Multinomial logit was used for identifying the factors that discriminate three types of exporters: increasing, erratic and decreasing exporters. Specifically Global demand market (GM) factors such as networking and foreign market opportunities; and Export entrepreneurial orientation (EO) factors such as Proactiveness, Innovativeness, Rewards and Resources appeared to be significant factors that discriminate erratic exports from the increasing exports.

Key words: Exports, International Business, Export growth, Discrete choice model, Strategy, Multinomial logit, Contingency framework.

JEL Classification: C51, F23, F43, N75, O24

1. Introduction

Export behavior and performance are generally explained by five categories of variables: (i) Organizational characteristics, such as firm size or products (e.g. Katsikeas and Morgan, 1994); (ii) Decision makers' characteristics (e.g. Stottinger and Schlegelmilch, 1998); (iii) Export marketing policies and efforts (e.g. Katsikeas et al., 1995); (iv) Competitive advantages / disadvantages of the firm (e.g. Li and Cavusgil, 2000; Shoham et al., 2002); and finally (v) Characteristics of the decision makers' environment (e.g. Stewart and McAuley, 2000). Out of the above categories, the area that has been less studied specifically in emerging markets is about the characteristics of the decision makers' environment. Several researchers highlight the potential for research studies that consider the exporter's contextual - including environmental - situations (Yeoh and Jeong, 1995; Young, 1995; Robertson and Chetty, 2000).

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The current study therefore identifies the set of factors that characterizes the export-led company's contextual situation and set them apart from those that are not as successful in exporting. Available statistics indicate that the UAE currently has one of the fastest growing economies in the world. Recent data by the UAE Ministry of Economy and Planning shows that nominal GDP rose in 2006 by 23 percent. Besides being a fast emerging economy[1]., Dubai is also an interesting case for a couple of reasons viz., the emirate's gradual shift in orientation from oil to non-oil international trade and the relatively small local market size that renders the trade activities vital to the survival and growth of emirate's many small and medium enterprises (SMEs). The paper is organized into five sections. Section 2 discusses the theoretical constructs and develops a contingency framework followed by literature review. Section 3 discusses the methodology. Section four presents the findings and discusses the results of the multinomial logit - a discrete choice model, while the final section draws relevant conclusions, including implications, directions for future research and limitations.

2. Theoretical Constructs of Export Orientation

In this paper, the following theoretical constructs are relevant.

The Export-Entrepreneurial Orientation Construct

Export-entrepreneurship is viewed as the process by which individuals, either on their own or inside organizations, engage in proactive and aggressive pursuit of export-related product-market innovations and opportunities with no regard to the environmental disincentives which they face (Miller, 1983; Stevenson et al., 1989). Zahra and Neubaum (1998, p. 124) define entrepreneurial orientation (EO) as "the sum total of a firm's radical innovation, proactive strategic action, and risk taking activities that are manifested in its support of projects with uncertain outcomes". Samiee et al.(1993), discussed exporting as innovative behavior and developed an empirically valid taxonomy (high/low innovative exporters), based on the export innovation construct. Yeoh and Jeong (1995) have included the key dimensions of entrepreneurial orientation in their operationalization of a firm's strategic posture. According to these authors (p. 99), "a firm's strategic posture can be established, on the basis of entrepreneurial orientation, along a continuum ranging from conservative to entrepreneurial".

Firm Characteristics

Studies on firm-level entrepreneurship have found an array of micro-level (management) practices relevant to the success of innovative ventures. Kuratko et al., (1990) have consolidated these into three viz., management support for entrepreneurship (including risk-taking behavior); organization structure and rewards; and resource availability. Empirical exporting evidence strongly suggests the importance of management support - commitment, perceptions, and

attitude - for positive export behavior (Aaby and Slater, 1989; Cavusgil and Zou, 1994). There appears to be no real differences between the foregoing and the critical success factors for managing entrepreneurship in SMEs: providing leadership and vision, building entrepreneurial teams; providing the appropriate organization structure; planning for change, ensuring things happen, and acquiring skills, and resources (Carson et al., 1995); the use of incentive schemes and idea champions (Thom, 1990); appointing capable coordinators for specific innovative tasks and using outside help, usually on a part-time basis (Hyvarinen, 1990).

Firm Competencies

Empirical studies in exporting and entrepreneurship have also underscored the importance of firm competencies. Aaby and Slater (1989, p. 21) stated that "competencies are probably more important than firm characteristics". The specific dimensions of firm competency which, on balance, have been empirically supported include technology intensity, R&D, market research (Samiee et al., 1993), product development /quality (Tesar and Tarleton, 1982), distribution / channel relationships (Styles and Ambler, 1994), and export cooperation and networking (Hansen et al., 1994). The last mentioned area of competency (developing and maintaining mutually beneficial relationships with network partners) is, indeed, becoming increasingly important in the literature (see e.g. Coviello and Munro, 1997). Several exporting studies have found a much higher propensity to export among firms with formal market planning or export exploration procedures (e.g. Diamantopoulos and Inglis, 1988). Networking arrangements, whether in the form of export consortia (Fletcher and Wheeler, 1989), entrepreneurial networks (Carson et al., 1995), and international ethnic ties (Zafarullah et al., 1998), have been shown to mitigate, for the SME, some of the size and experience-related difficulties associated with export venturing.

Environmental Moderators Between Export Entrepreneurial Orientation And Export Behavior

Eshghi (1992) has contended that managerial attitudes toward exporting, and actual exporting behavior, do not necessarily have to be consistent, and that certain facilitating/moderating conditions or situational factors make such inconsistencies not only possible but also quite likely. Similarly, Yeoh and Jeong (1995) have argued that the relationship between entrepreneurial orientation and export performance may not be a direct one. Their contingency framework built around Covin and Slevin's earlier work in 1989, and Kevin’s (2003) work in Nigeria suggest that the positive association between entrepreneurial orientation (EO) and export performance is moderated by the EO's fit with such other contextual variables as organizational and environmental factors.

The moderating factors considered important in this paper relate to the firms' external environment, local and global. Export behavior researchers have

conceptualized the external environment as comprising "push" (e.g. home market adversity, domestic recession/ saturation) and "pull" factors (e.g. foreign market opportunities - Rao et al., 1990). They have also associated it with a variety of exporting barriers, including poor marketing infrastructure, government barriers, political climate (Bodur, 1986). In investigating the environment-entrepreneurship interface, the contingency framework contends that entrepreneurs can consciously select strategies, which optimize the characteristics of a given environment. Entrepreneurial performance, therefore, is dependent on the interaction between strategy and environment (Miles and Snow, 1978). This latter viewpoint further suggests that conservative and entrepreneurial firms manifest quite different characteristics in coping with their environments (Morris and Lewis, 1995). As Yeoh and Jeong (1995, pp. 103-104) concluded, "entrepreneurial orientation may be particularly beneficial to small exporting firms in hostile environments".

The Case For Contingency Framework For Explaining Export Behavior In Dubai

With these theoretical constructs, the fundamental challenge facing researchers in the export field is that of "linking external environmental variables to aspects of firm behavior, modeling the effects of rational versus behavioral approaches from different discipline roots, including organizational buying behavior and entrepreneurship, economics, and international business" (Young,1995, p. 14). Reid (1983) has proposed a contingency view of internationalization, a position which is reflected by the emphasis of Yeoh and Jeong (1995, p. 108) on "contingent linkages and interrelationships." Samiee et al. (1993) stress the exporters' contextual situation; and Leonidou (1995a, p. 34) puts- forth recommendations on managerial and environmental factors. A similar trend towards multi-disciplinary and contingent linkages is increasingly being pursued in entrepreneurship research. Kollermeier (1992, p. 37), for example, found Gartner's (1985) multi-dimensional framework very useful in his study of "greening entrepreneurship" in the transiting ex-GDR economy. These discussions suggests a convergence in the exporting and entrepreneurship literatures, at least, with respect to the increasing realization of the potential of multi-dimensional, contingency integrated frameworks in improving understanding of the export venturing process.

Figure 1. Contingency framework for determining exporter performance

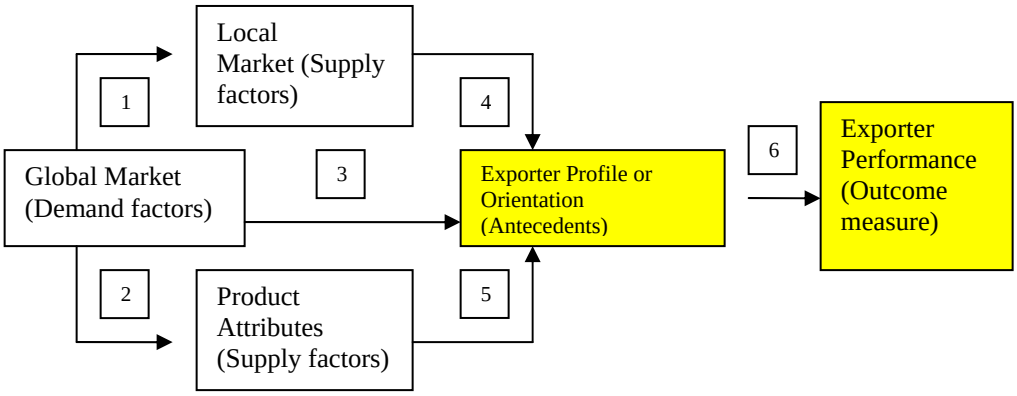

Figure.1 illustrates the conceptual framework proposed in this paper. This contingency framework in the context of a developing economy is very important because key determinants help an export firm's performance. There has been a considerable lack of research in this area for couple of reasons. First, empirical studies treating the export performance of the firm have virtually included most of the firm's export expansion determinants, and investigated their effect on the export venture performance. Second, the literature in both fields (i.e., determinants of the firms' internationalization and factors affecting the firms' performance) is considerably fragmented. There is a need for an integrative approach to build a consistent conceptual framework as well as to bridge the gap between the two research streams. The uniqueness of the framework also lies in the fact that it integrates the demand and supply relationships with the external and internal environments of the export firms in an emerging economy which is currently scarcely researched.

In the framework the explanatory variables for modeling international trade linkages are grouped into following four categories:

(i) Demand factor constructs: These include global market variables and describe demand side factors reflecting aggregate demand, international competition, international trade agreement etc.

(ii) Supply factor constructs: These include local market characteristics and product attributes. Local market supply characteristics specifically describe among others, the strategic location, comparative advantages regarding raw materials, financial resources, infrastructure, and technology level, level of local competition, niche markets, clustering, cooperation and integration, rules and regulations. Product attributes describe supply characteristics in which the country specializes, the extent to which the specific country diversifies product

and process standards, innovation involved, supply channels, technology utilization, productivity and cost of production.

(iii) Orientation of export firm's behavioral constructs: These include exporter's profile, the firm's strategy to export, targeted products and markets, forms of cooperation and resource allocation.

(iv) Outcome measures: These include the exporter's behavior which is measured through the growth of export revenues. Among the difficulties of measuring export behavior is the fact that, export behavior research generally encompasses firms at different levels of the export development process, including pre-export, initial, and advanced (Leonidou and Katsikeas, 1996). Three broad dimensions to export behavior measurement have, thus, been used in this paper. The first dimension refers to firms with declining exports, the second dimension refers to firms with erratic exports, and the third dimension refers to firms with increasing exports[2]. These three categorizations arguably approximate the qualitative and quantitative dimensions of measurement of export behavior.

In contingency theory terms, the environmental factors viz., global and local markets besides products attributes are contingency variables, which are usually exogenous to the organization or manager; firm's antecedents depicts export-entrepreneurial orientation which is the response variable; while the outcomes are behavioral variables or dependent measures, which reflect varying results of the interaction between the response variables and contingency variables (Zeithaml et al., 1988). The position taken in this paper is that the nature of the firm's operating environment moderates the relationship between the firm's export-entrepreneurial orientation and its export venture creation. The global and local factors constitute exporter's constraints and opportunities as well as major characteristics of the exporter's profile. As illustrated in Figure.1, these global market characteristics directly impact on local market attributes (relationship 1), on specialization of countries in goods and services with specific product attributes (relationship 2), and finally determine to a certain extent, the behavior and orientation of the exporter, resulting in a set of exporter profiles (relationship 3). Besides demand side factors, local market (relationship 4) and attributes of traded goods and services (relationship 5) reflect supply side factors and have their own direct impact on firm's export orientation.

These characteristics determine the profile (or orientation/antecedents) of exporting company and explain the causal relationship denoted (6) in Figure 1. The relevancy of this causal relationship explicitly lies in inferring best practices and drawing conclusions for micro economic policies. Therefore in the context of Dubai, the pertinent research questions are: (1) Which factors and characteristics determine an export-led company? (2) What determines a successful export marketing strategy for a company? and (3) what are the policy implications at the micro level?

3. Methodology

We adopt the discrete choice multinomial logit (MNL) to model the decision making environment of Dubai exporters. The MNL procedure was preferred to the linear regression and discriminant methods adopted by earlier studies (including Kevin and Young, 2001), for four main reasons: (i) the dependent (three-categories of export-entrepreneurial orientation (EO)) variable is categorical and discrete in nature (Decreasing EO firms are codes as 0; Erratic EO firms are coded as 1; and Increasing EO firms are coded as 2); (ii) probability values in discriminant analysis fall outside 0 and 1 range; (iii) since the three export categories are independent from each other, MNL assumption of independence of irrelevant alternatives (IIA) is not violated thus, MNL model estimates are robust, and (iv) MNL methodology richly captures behavioral aspects of decision makers (see Ben and Lerman (1985) for more business applications).

During the early months of 2004, a cross-sectional stratified sample survey was undertaken among a population of Dubai export firms based on total value and the frequency of shipments made in all years during 2000 to 2003. These sample firms met a range of criteria that were checked from the Certificates of Origin Data Base maintained by Dubai Chamber of Commerce and Industry (DCCI): (i) exported in 2000 through 2003, (ii) located in Dubai emirate, (iii) listed in DCCI membership Data Base, (iv) varied export behavior – decreasing, erratic and increasing exports during 2000-2003. The survey questionnaire covered global, local, product and export-orientation factors depicted under the framework in Figure.1. A total of 206 exporting firms responded in two batches, with a response rate of 41 percent, which is considered quite reasonable. One hundred and ninety two sample firms provided complete information. This included 26% increasing export growth firms, 62% erratic export growth firms, and 12% decreasing export growth firms based on their export performance during 2000-03. Thirteen sample firms (7%) was retained as holdout sample for validation of the empirical model.

Profile of Exporters

Table 1 Profile of exporters in the sample

Characteristics	Declining exporters	Erratic exporters	Increasing exporters
Organizational structure	Mid-small and Entrepreneurial	Mid-small and Small	Mid-small, Small, Medium and Large
Average Paid-up Equity Capital (Million Dirham[3])	9.6 ($2.6M) (Low)	15.9 ($4.3M) (Medium)	34.1 (($9.3M) (Large)
Average number of employees	23 (Small)	57 (Large)	46 (Medium)
Average net income in 2003 (Million Dirham)	13.9 ($3.8M) (Low)	39.7 ($10.8M) (Large)	38.1 ($10.4M) (Moderate)
Variation (σ) in net income (Million Dirham)	21.7 ($5.9M) (Low)	113.5 ($30.9M) (High)	65.8 ($17.9M) (Moderate)
Geometric mean share of exports in total sales (%)	49.3 (Low)	65.3 (Moderate)	66.9 (High)
Geometric mean share of export profit in total profit (%)	40.7 (Low)	58.6 (High)	55.3 (Moderate)
Geometric mean number of shipments	83.3 (Low)	176.3 (Moderate)	253.2 (High)
Geometric mean value of shipments (Million Dirham)	9.9 ($2.7M) (Low)	33 ($8.99M) (High)	21.5 ($5.86M) (Moderate)
Geometric mean number of countries where shipped	4 (Low)	8 (Moderate)	9 (High)
Geometric mean annual export growth rate (%)	-39.2 (Low)	41.62 (Moderate)	99.8 (High)

Table 1 shows that declining exporters were more entrepreneurial in their organizational structure, operated with lower capital base (average 9.6 Million Dirham) ($2.6 Million)), had lower manpower resources (average 23 employees), recorded lower number of export shipments (average 83) and registered low exports value (average 9.9 Million Dirham for a year ($2.7 Million)). Their average net income was low at 14 Million Dirham ($3.8 Million) compared to an average of 38 Million Dirham ($10.35 Million) for increasing exporters. Erratic exporters operated with: medium capital base (average 15.9 Million Dirham ($4.3 Million)); relatively larger manpower resources (average 57 employees); moderate (average 176) export shipments to eight countries, and experienced high exports volume (average 33 Million Dirham ($8.99 Million)). Interestingly the erratic exporters registered an average higher net income of 40 Million Dirham ($10.8 Million) compared to increasing exporters. Their average net income was highly variable (standard deviation of 113.5 Million Dirham ($30.9 Million)) compared to increasing exporters (a moderate variability of 66 Million Dirham ($17.9 Million)) and declining exporters (a lower variability of 22 Million Dirham ($5.9 Million)). Thus, the erratic exporters appeared to be aggressive in their exports, had higher market intensity and ventured wider varieties of export activities.Increasing exporters operated with: clear organizational structure; relatively larger capital base (average 34.1 Million Dirham ($9.3 Million)); higher average number of shipments (253); relatively medium manpower resources (average 46 employees compared to erratic exporters); higher average annual export growth rate (99.8%); higher average share of exports (average 67%) in total sales, and shipped to more than nine countries. But the geometric average value of each shipment was lower (21.5 Million Dirham ($5.86 Million)) compared to erratic and declining exporters. However, increasing exporters experienced

lower share of export profit (average 55%) in total profit compared to erratic exporters (average 58%).

Table 2 Description of Explanatory Variables Influencing Export Performance

Code	Variables' description	Linkage to Figure 1	Significant Elasticity Coefficients[1]	
	GLOBAL MARKET (GM) DEMAND FACTORS		**Erratic Export Firms**	**Increasing Export Firms**
X_{18}	Geometric mean of export sales during 2000-03	GM		
X_7	Long-term contract - trade relationship of the firm with the customers	GM - Networking	- 0.112***	0.468***
X_8	Association agreement -trade relationship of the firm with the customers	GM - Networking	0.075***	- 0.312***
X_9	Informal agreement - trade relationship of the firm with the customers	GM - Networking	- 0.089*	0.441***
X_{16}	Require information on trade regulations and procedures in other countries	GM – Foreign market opportunity (Pull)		
X_{17}	Require information on international tenders and procurements	GM – Foreign market opportunity (Pull)		-0.283*
	LOCAL MARKET (LM) SUPPLY FACTORS			
X_{14}	Difficulty in getting credit – firm's major constraint in increasing exports	LM – Adversity, Hostility (Push)		
X_{15}	Tariff and non-tariff trade restrictions –firm's constraints in increasing exports	LM – Adversity, Hostility (Push)		
	PRODUCT ATTRIBUTES (PA) SUPPLY FACTOR			
X_{20}	Geometric mean value of exports (Million Dirham) exported during 2000-03	PA		
	EXPORTER ORIENTATION (EO)/ ANTECEDENTS			
X_6	MOU- trade relationship of the firm with the customers	EO – Proactiveness	0.062**	
X_3	Number of marketing representatives in MENA region	EO – Proactiveness & Innovativeness	0.096***	-0.355*
X_4	Number of marketing representatives in Sub-Saharan African region	EO – Proactiveness & Innovativeness		
X_{12}	The firm identifies, accesses and develops market through attending trade fairs, conferences and seminars	EO – Proactiveness & Innovativeness		
X_5	Percentage share of profit from exports in total profits of the firm	EO – Risk taking		
X_1	Proportion of Managers and executives to total employees	EO – Risk taking & Innovativeness		
X_{19}	Geometric mean of number of countries exported during 2000-03	EO-Market intensity		
X_2	Number of Managers and executives who have been in the firm in the same position for > 3 years	EO – Rewards & resource availability	0.106**	
X_{10}	Delivering the product in time - competitive advantage of the firm	EO – Competitive aggressiveness	0.153**	-0.650***
X_{11}	Possessing efficient information system - competitive advantage of the firm	EO – Proactiveness & Innovativeness	0.109***	-0.378***
X_{13}	The firm sets up distribution facilities in export markets	EO – Firm competency	- 0.109***	0.518***
	EXPORTER PERFORMANCE			
Y	Categories of exporters: Decreasing (0); Erratic (1); and Increasing (2) based on geometric mean of export growth rates during 2000-03.	Performance outcome measure (Dependent variable)		

*** Statistical significance at α 0.001; ** Statistical significance at α 0.01 to 0.03; * Statistical significance at α 0.05

[1] Marginal impact of declining exporting firms are not reported here since none of the explanatory factors were significant

Table 2 summarizes the variables used in the multinomial logit (MNL) model[4] estimation. The independent variables in MNL model are linked to four categories of factors under the framework depicted in Figure 1. The multinomial logit model (MNL) is of the following form:

$$\textbf{(1) Probability } (Y_i = j) = \frac{e^{\beta' X_j}}{\sum_{k=0}^{2} e^{\beta' X_k}} \textbf{, where j = 0, 1 and 2}$$

The right hand side variables in equation 1 are regressors X which are the independent factors listed in Table 2. The maximum likelihood logistic coefficients (β) explain the impact of each of the independent factors based on the conditional probability of improving the behavior of export firms. As the β coefficients in MNL model are difficult to interpret, we focus our discussion in the paper on marginal effects[5] and the factors' elasticity coefficients in Table 3. The shaded areas represent statistically significant test-statistics and indicate high degree of reliability of the model.

4. Findings and Discussion

Pseudo-R^2 of the MNL model is 33.48% which indicates that the MNL model reasonably fits the behavior of exporters under the contingency framework, considering the cross-sectional data from survey responses. The model also correctly classifies 74.3% of the sample of exporters which is quite acceptable.

Table 3 Marginal Effects on Probability and Elasticity from Multinomial Logit (MNL) Model

	Behavior of erratic exporters			Behavior of increasing exporters		
Variable	**Coefficient**	**t-stats**	**Elasticity**	**Coefficient**	**t-stats**	**Elasticity**
Constant	-0.0471	-.343		-.0745	-.600	
X_1	-0.0008	-.674	-.052	.0012	1.090	.333
X_2	0.0489	2.321*	.106	-.0307	-1.580	-.279
X_3	0.0343	2.622**	.096	-.0302	-2.440**	-.355
X_4	-0.0333	-1.641	-.039	.0248	1.305	.123
X_5	0.0020	1.611	.144	-.0013	-1.136	-.401
X_6	0.1709	1.950*	.062	-.1431	-1.696	-.220
X_7	-0.2173	-2.673**	-.112	.2152	2.793**	.468
X_8	0.3746	2.900**	.075	-.3692	-2.859**	-.312
X_9	-0.1809	-2.338**	-.089	.2117	2.936**	.441
X_{10}	0.1906	2.549**	.153	-.1922	-2.697**	-.649
X_{11}	0.3108	3.235**	.109	-.2559	-2.779**	-.378
X_{12}	0.0177	.215	.016	.0318	.418	.118
X_{13}	-0.2301	-2.661**	-.109	.2599	3.204**	.518
X_{14}	0.1514	1.866	.066	-.1179	-1.523	-.217
X_{15}	-0.1643	-.743	-.017	.1141	1.485	.127
X_{16}	-0.0745	-.882	-.050	.0439	.542	.125
X_{17}	0.1311	1.583	.057	-.1535	-1.942*	-.283
X_{18}	-0.0002	-1.210	-.052	.0002	1.277	.203
X_{19}	0.0045	.551	.044	.0012	.163	.050
X_{20}	0.0007	.697	.027	-.0004	-.496	-.071

** Significant at 1%; * Significant at 5%

Firms with Erratic Export Growth

The following factors are statistically significant and have positive influence on the behavior of erratic exporters in Dubai:

(a) Export orientation (EO): Retaining one additional experienced manager (X_2) results in a 0.05 percent increase in the conditional probability of growth in exports. The factor elasticity effect implies that one percent increase in rewards and resources availability of experienced manpower results in 0.11% increase in the exports growth.

(b) EO – innovativeness: Allocating one additional marketing agent to MENA region (X_3) increases the conditional probability of erratic exports by 0.03

percent. The factor elasticity of 0.1 implies that a one percent increase in allocation of marketing agents in MENA region results in a 0.1 percent increase in exports growth.

(c) EO – Proactiveness: Proactive action by erratic exporters by undertaking trade relationship with customers through one additional MOU (X_6) increases the conditional probability of exports growth by 0.17 percent. The magnitude of factor elasticity is around 0.06 signifying that, 1% increase in such proactive steps could increase exports growth by 0.06 percent.

(d) EO - Competitive aggressiveness: An additional one unit of effort in timely delivery of products (X_{10}), is associated with a 0.19 percent increase in the conditional probability of exports growth. The factor elasticity is around 0.15. Time management is very important in cross-border deals and activities. Since timely delivery of products is the competitive advantage of these firms, aggressively exploiting this competitive advantage helps in sustained growth in exports.

(e) A similar positive effect is seen in the case of other export orientation factors such as proactiveness and innovativeness represented by access to efficient information systems (X_{11}). Easy access to efficient information system reduces search costs, transaction costs and improves the quality of information for the export operations. These erratic export firms could continue to exploit their competitive advantages in these areas to further expand and sustain their exports. The results in (d) and (e) are consistent with Porter (1990) that, competitive advantage is created not inherited; once a competitive advantage is achieved, the firm can sustain this edge only through unrelenting improvement.

(f) Global market factor: Entering into agreement through letters for sustained networking (X_8) results in increased exports. One additional unit of such sustained networking effort results in an increase in the conditional probability of exports growth by 0.37 percent. The magnitude of factor elasticity is around 0.08. Of all the 6 positive factors discussed above, global market factors viz., networking represented by trade relationship with customers through agreement letters (X_8) and access to information system (X_{11}) have the greatest positive marginal impact on the behavior of these exporters.

The following factors are statistically significant and have <u>negative</u> influence on the exports in Dubai:

(g) Global market factors: A one unit reduction in trade relationship through long-term contracts (X_7) and informal agreements (X_9) results in a 0.22 percent and 0.18 percent increase in the conditional probability of exports growth. The factors' elasticities are 0.11 and 0.08 implying that 1 percent reduction in networking efforts through long-term contract and informal trade relationships increase the probability of erratic exports by 0.11 percent and 0.08 percent respectively. The

results in c, f & g above imply that these firms could increase dependence on long-term contracts and informal agreements to reduce frequency of erratic exports. Informal arrangements are acceptable for firms dealing with low value exports. However, when high value deals are encountered, informal agreements tend to cause business conflict and moral hazards. Therefore, such high value deals could be done by these erratic exporters through formal agreements such as long-term trade contracts, as they bring mutual trust between the erratic exporters and its customers and there is transparency in the deal. These long-term trade relationships have lasting implications for the erratic exporters to sustain their export growth. On the other hand, agreement letters and MOUs although are economical, tend to be less formal and short-term trade relationships, which might not result in sustained export growth.

(h) EO - firm competency: A reduction of one inefficient distributional channel (X_{13}) results in a 0.23 percent increase in the conditional probability of exports suggesting that, these erratic firms could restructure their existing (probably less efficient) distribution channels in export markets to sustain export growth and to decrease frequency of erratic exports. The factor elasticity is 0.11 signifying that 1 percent reduction in inefficient distribution channels results in 0.11 percent improvement in export behavior of these erratic firms.

Firms with Increasing Export Growth

Interestingly, most of the factors that have positive influence on the erratic exports (Table 3) evidenced significant negative and larger impact on increasing exports as discussed below:

(a) EO - proactiveness and innovativeness: The model suggests decreasing marketing agents in Middle East and North African (MENA) region (X_3). The factor elasticity is around 0.35 implying that 1 percent decrease in marketing agents in MENA improves the exports by 0.35 percent. The proactive and innovative strategy for these increasing exporters is to reduce redundancy in human resources by reallocating their marketing agents from MENA region to other potential regions.

(b) EO – Proactiveness and innovativeness: One unit decline in time required for delivery (X_{10}) and efficient information system (X_{11}) results in 0.19 to 0.25 percent increase in the conditional probability of increased exports respectively. The marginal elasticities are .65 and 0.38 respectively which are of high magnitude compared to erratic exporters. These results signify that increasing exporters could make efficient use of existing information systems which are probably currently under-utilized. It is plausible that, these firms are not only specialized but also diversified in their export activities, and they need more time and effort to learn to efficiently use information systems for timely delivery of their services in the light of the fast changing technological developments taking place locally and globally. Thus, more time devoted to this factor helps to consolidate their EO

which improves their competitiveness in the long run, for registering superior export performance.

(c) Global market factors - foreign market opportunity (pull factor) – represented by access to information on international tenders and procurements (X_{17}): Although this variable represents a foreign market opportunity, we can also think about this as Government factor. Negative sign on the marginal effect implies non-availability of this facility currently from the Government, which acts as a constraint for these exporters. Relaxing this constraint by a one percent additional support from the Government in provision of this trade information, is associated with a 0.15 percent increase in the conditional probability of exports growth[6]. The factor elasticity is 0.28 implying that a one percent relaxation (or decline) of this constraint, results in 0.28 percent improvement in increased exports. The Government thus could institute a mechanism to provide genuine information on international tenders and procurements to reduce the search costs that leads to increased foreign market opportunity for export firms.

(d) Global market factor-Networking: A one percent decrease in networking or trade relationship through entering into agreement letters (X_8) with customers increases the conditional probability of increased exports by 0.36 percent. The magnitude of factor elasticity is around 0.31 signifying that, 1% decrease in such informal short-term agreements increases performance of increasing export firms by 0.31 percent. The implication is that such networks through informal agreement letters are ineffective and are not proving useful for sustained exports. Of all the factors discussed above, the greatest negative marginal impact was evidenced by competitive aggressiveness (X_{10}) signaling the fact that exports could be further improved through concentrating on timely delivery of the product to the customers.

The following factors have larger and statistically significant <u>positive</u> effect on the probability of increased exports:

(a) Global factors – networking: Each unit increase in trade relationship with customers through long-term contracts (X_7) and through informal agreement (X_9) is associated with a 0.21 percent increase in the conditional probability of increased exports. The magnitude of demand elasticity is quite large i.e., 0.47 and 0.44 respectively (compared to erratic exporters) implying that, the firms with increasing growth behavior could further improve their exports by exploiting these networking demand factors. Since the activities are specialized and diversified, these exporters favor long-term contracts for undertaking specialized export activities, while agreement letters and informal arrangements are favored in the short-term. Clearly networking has two aspects: breadth and depth.

(b) EO - firm competency: A one unit change in firm's competency through setting up additional distributional channels in export markets (X_{13}) increases the conditional probability of increased exports by 0.26 percent. The factor elasticity

is 0.52 which is highest among the positive factors considered so far. This signifies that the strategy of expanding distribution channels in export markets substantially improves the exports.

Firms with Declining Export Growth

As expected, none of the explanatory factors were statistically significant in explaining the behavior of declining exporters (these results are available from the authors and not reported here due to space limitations). These firms had weak organizational structure, weak human resources support, weak capital base and weak export orientation as evidenced in Table.1. Statistically significant results are summarized in the last two columns in Table 2.

Correct Classification Percentage

Of the 111 erratic exporters in the sample, the model correctly classified 100 firms resulting in correct classification of 90%. Of the 47 increasing exporters, the model correctly classified 24 firms resulting in correct classification of 51%. Of the 21 declining exporters, the model correctly classified 9 firms resulting in correct classification of 43%. In the aggregate, the model correctly classified 133 exporters out of 179 resulting in correct classification of 74.3%. The model is this considered reliable due to relatively higher correct classification besides higher log-likelihood ratio and significant Chi-square statistics[7]. The model was validated using a holdout sample of 13 sample firms[8].

5. Summary, Conclusion and Policy Implications

This paper produces relevant insights by integrating concepts from the entrepreneurship and contingency literatures to explain export venture creation of firms in Dubai – an emerging economy. The study highlighted the criticality of the firm's export-entrepreneurial orientation level in the process, and identified key characteristics and competencies of decision makers associated with export entrepreneurial firms. Multinomial logit (MNL) a discrete choice model methodology was applied to 179 sample exporters in Dubai, to capture the behavioral elements of the decision making process of the exporters. The empirical results show significant differences across erratic and increasing exporters and lend support to the set of demand and supply factors in the contingency framework depicted in Figure 1.

Specifically Global market (GM) factors such as networking and foreign market opportunities; and Export entrepreneurial orientation (EO) factors such as Proactiveness, Innovativeness, Rewards and Resources appeared to be significant factors that discriminate erratic exports from the increasing exports. The magnitude and statistical significance of elasticity coefficients of increasing

exporters was substantially larger than those of erratic exporters. This signifies the relatively higher sensitivity of increasing exporters to one percent change in the demand factors and EO factors. The coefficients on these factors switched signs between the two categories of firms thus signifying the degree of discrimination that is captured in the framework. Further, local market factors and product attributes were found to be less significant determinants to categorize the erratic and increasing exporters. Strangely, none of the factors were found to be significant in explaining the behavior of the decreasing export firms. The study findings in Dubai context are summarized below with implications stated in the parenthesis:

Erratic Exporters

The erratic exporters can significantly reduce their erratic export behavior by: actively developing networking relationship through long-term contracts and informal agreements; and reducing competitive aggressiveness through reduction of less efficient distribution channels in export markets; (**Implication:** These erratic exporters need to explore alternative distribution facilities and go for partnership arrangements in potential markets to lessen their erratic behavior in exports).

Increasing Exporters

Increasing export-entrepreneurial firms could significantly increase their exports by: (a) better performance on a range of competitive factors, including developing new markets, (b) developing new products and distribution networks, innovation and technology, and (c) usage of export information sources. Due to turbulent export markets, these exporters (with sufficient number of marketing agents and representatives in their export destinations) will be better off with a continuous evaluation and revision of export strategies. For example, once a target market share is achieved in a certain market, formal long-term relationships and professional networks to maintain trade relations and distribution channels are to be in place before reallocating marketing resources to new market destinations. (**Implication**: With the ongoing technological development in Dubai, increasing exporters could maintain sustained long-term trade relationships through effective marketing communication and IT tools).

Declining Exporters

Declining exporters in Dubai demonstrated lower level of export entrepreneurial orientation because of which none of the factors could significantly explain their export behavior. (**Implication**: These firms could carefully review its export markets and strategies such as diversifying the export basket and using more direct and aggressive promotion tools. Especially in the context of the constraints of poor financial resources and inadequate information systems, these exporters in Dubai might need to consider alliances and cooperation with affiliates,

consolidating through mergers with other exporters besides enhancing their IT capabilities and expanding capital market facilities).

Future Research and Limitations

The contingency framework proposed in this paper could stimulate further research effort by integrating other concepts not discussed in this paper such as inward-outward network links, and external environmental moderators in the context of developing economy. The first limitation is the relatively low sample size, which narrowed the choice of analytical tools in testing the proposed framework. Future studies could obtain larger samples, to enable a more rigorous test of the proposed framework, preferably through MNL together with Neural Network Modeling. The second limitation is the impact of the Internet (and related communication platforms) on international business venturing. Little is known about this new medium/business model, with its blurring of boundaries between domestic and international companies in developing economies. Further research could address this limitation.

Endnotes:

[1] The Swiss Institute for Business Cycle Research placed the UAE the first in the Arab World (21st overall) in its Kolf's globalization index that covered 123 advanced and developing countries and their performance in a selected list of business and economics field during the period from 1970 to 2003. The Economic Freedom Index of the Heritage Foundation and the Wall Street Journal placed the UAE second in the Arab World in its assessment of other business related criteria (http://www.uaeinteract.com/economicdevelopment under Global indices and E-rankings).

The World Economic Forum (www.weforum.org/en) in its latest competitiveness rankings reported that, the UAE falls into Stage 3 (Innovation driven) of economic development (along with US, UK and Japan in this group) and is the highest ranked Arab country in the list of the 40-most advanced innovation-driven economies in the world during 2005 and 2006. According to this report, the UAE has undergone a remarkable economic transformation in the past decade by registering high growth rates through the persistent pursuit of reforms aimed at economic liberalization and diversification. Dubai pioneered the creation of dynamic free-trade zones in the early 1980s, setting an example in good public management for others to follow. Today the country is focused on developing world-class services in the areas of logistics (World Port, Dubai Port and Dubai Airport), international financial centers, health care infrastructure, and ICT among others.

Explicitly, the export decision environment in this study is a result of a new emerged business environment which consists of new international players, new competitive measures such as conformity to international quality standard requirements, business sophistication which includes factors such as local suppliers, production process sophistication, control of international distribution, willingness to delegate authority, nature of competitive advantage and value chain presence. Some of these factors are identified as export environmental variables. The export decision environment is therefore changed and draws researchers' attention. Further, Dubai's Development Model is replicable, imitable and applicable by other economies in the region with ease. This is because Dubai is a trend setter in most of the business innovations in the Arab Region since the culture, diversity, economic condition, resource base, education level, infrastructural development, and the sincere desire for the common economic Gulf Cooperation Council (GCC) Union on the lines of EU (European Union) exist among six GCC member countries. Thus, the findings of this study are equally applicable to similar economies in the Arab GCC in particular and other small diversified economies in general. Further, Dubai's economy in general and its international trade in particular are amongst the least researched worldwide. This contribution attempts to add to the

literature, to encourage similar research in surrounding markets, and to link the Dubai case study to international discussion.

[2] In this study, the variability of export behavior is measured through coefficient of variation (CV) of frequency of shipment and value of shipment during 2000-2003, which formed the basis for categorizing the three type of companies viz., Decreasing, Erratic and Increasing. This information is provided by the Certificates of Origin register maintained by DCCI which registers details of the exporting firm and related shipment. This register is being combined with the membership Data Base to generate required set of variables needed for this study. Decreasing exporters refer to those exporters whose trend in export performance was negative during 2000-2003. Erratic exporters refer to those exporters whose trend in export growth was erratic during 2000-2003 with very high growth in one year followed by low or negative growth in the next year and the like. Such exporters registered a high degree of variability in their exports across the years. Increasing exporters on the other hand, consistently showed positive export growth across the years during 2000-2003. The year 2000-2003 was selected for the study since complete data were available for these export firms from the DCCI membership directory. See also Appendix-1.

[3] Dirham is the currency of United Arab Emirates which includes Dubai emirate. IUS$ = 3.67 Dirham

[4] One of the unanimous referees suggested usage of factor analysis. However, Kaiser-Meyer-Olkin measure of sampling adequacy was close to 0.5 which indicates that the factor analysis was not appropriate. Further, the correlation coefficient across the independent variables was less than +/- 0.3 & insignificant. Thus multi-collinearity was not a concern in modeling.

[5] The marginal effect of the factors on the probabilities of the export behavior is given by the expression:

$$\textbf{(2)}\ \delta P_j / \delta X_i = P_j\,[\beta_j - \bar{\beta}]$$

[6] There is a need for concerted effort on the DCCI and Dubai Government to collect all the relevant information required by the exporters and provide them under one umbrella similar to the "single window system" prevailing in other developed and developing economies. Such an arrangement when readily provided through the Government Agencies enhances the quality of information, reduces the search and transaction cost, and reduces uncertainty in international markets for these (re) exporting firms. No doubt there are agencies like Tejari providing B2B type e-governance but they are not adequately meeting the requirements of the export firms.

[7] The researchers in the current study estimated about 15 models. Based on the asymptotic t-tests, high adjusted R^2, high log-likelihood ratio statistics and significant Chi-square statistics, the model discussed so far outperformed all other models.

[8] Model Validation**:** These 13 firms comprised of 13 percent declining export firms, 62 percent erratic export firms and 23 percent increasing export firms which is consistent with the proportion of three categories of 179 firms used in the study. The model correctly classified 5 out of the 13 firms yielding about 39 percent out of sample correct classification percentage, which is relatively lower compared to the higher percentage of 74 percent with in-sample. One of the reasons for this lower percentage in model validation is the dominance of prototype erratic exporters compared to other prototypes. The number of exporters could have been reduced to two categories viz., performing and non-performing in which case, a simple Logit choice model would have been appropriate. But the objective of this paper was to specifically analyze the growth behavior of the three categories of exporters. Further, these three categories are independent outcomes and MNL assumption of independence of irrelevant alternatives (IIA) is not violated.

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Appendix-1

Sampling Design

Since the study aims to identify the set of variables that would characterize the export-led companies and set them apart from those that are not as successful in exporting, adequate number of samples for each type of companies is required. For this purpose, a stratified design is used as explained below.

Exporting companies (without specific interest on SIC) are stratified according to their level of activities. Sampling strata are defined according to the combined values of the following two variables

Total value of shipments: in 2003 is used as a measure of level of activity of the company. The following categorization is applied:

Distribution of Companies

Total Value of Shipment (Dirham)	No. of Companies	%	% Share to Total Value
Less than 10 million	7,032	89.6	12.6
10 million to < 20 million	323	4.1	7.7
20 million to < 50 million	262	3.3	14.1
50 million and over	234	3.0	65.5
Total	**7,851**	**100.0**	**100.0**

Frequency of shipments made in 2003. The distribution of companies by is as follows:

Frequency of Shipments	No. of Companies	%
< 10	4,816	61.3
10 – 19	978	12.5
20 - 29	475	6.1
30 - 39	289	3.7
40 - 49	200	2.5
50 - 59	168	2.1
60 - 69	122	1.6
70 - 79	84	1.1

Frequency of Shipments	No. of Companies	%
80 - 89	83	1.1
90 - 99	65	0.8
100 - 199	265	3.4
200 - 299	122	1.6
300 - 399	46	0.6
400 - 499	33	0.4
≥500	105	1.3
Total	**7,851**	**100.0**

The variability of export performance is measured through coefficient of variation (CV) of frequency of shipment and value of shipment during 2000-2003 formed the basis for categorizing the three types of companies.

Stratum 1 (Certainty stratum): Since companies with total shipment value of at least 50 million account for more than 65 percent of total export value of Dubai and coefficient of variation of mean value of shipment is large (CV = 140 percent), these companies comprise the certainty stratum. In addition, companies with the highest level of activity (at least 500 shipments during the year) but whose total value of shipment is below 50 million are added into the stratum. By frequency of shipment, the latter group accounts for 40 percent of total shipments made during the year.

Stratum 2 (50 % sampling rate): Companies with total value of shipment of 20 million to less than 50 million comprise the second stratum where 50 percent sampling rate is applied. The stratum has a CV (for mean value of shipment) of 26 percent and a share of only 14 percent to total value of shipments. Companies with frequency of shipment of at least 100 but less than 500 are added into the stratum. By frequency of shipment, the latter group accounts for 30 percent of total shipments made during the year.

Stratum 3 (15 % sampling rate): Companies with total value of shipments of at least 10 million but less than 20 million comprise the third stratum, where CV (for mean value of shipment) is 20 percent, and which contribute about 8 percent to the total value of shipments. Companies with frequency of shipments of at least 50 to less than a hundred, but with shipment value of less than 10 million, are also included in the stratum. By frequency of shipment, the latter group accounts for 12 percent of total shipments made during the year.

Stratum 4 (2 % sampling rate): The sampling rate assigned to this stratum is guided by the observation that the companies belonging to the stratum account for more than 80 percent of the total but only 13 percent of the total value of shipment and 19 percent of the frequency of shipment, implying that either they trade on low value goods or they make small shipments.

Final sample sizes: A total of 730 companies are selected using the stratification rule and the sampling rates above. However, the number is later pruned down to 507. This is based on the need for complete set of information for 2000 to 2003 for the computation of annual growth for the period.

Questionnaire: Specific questions in the survey instrument were developed using the contingency framework depicted in Figure 1. The questionnaire design is unique in that it is in the form of a strategic audit of the company and industry and captures the essential elements of modern international trade theoretical framework purported by Porter (1988) on competitive Strategies: Techniques for analyzing industries and the competitors.

Responses: were received from 192 exporting firms in two batches. The response rate is 41 percent, which is considered quite reasonable. The first batch consists of 179 responses comprising of 21 firms with declining (re) export growth, 111 firms with erratic (re) export growth and 47 firms with increasing (re) export growth during 2000-03. The second batch of 13 responses was received by following-up with the companies after 4 weeks of sending the questionnaires. This second batch is kept as holdout sample for model validation.