Export Orientation among New Ventures and Economic Growth

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ABSTRACT AND KEYWORDS	
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Export Orientation among New Ventures and Economic Growth

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Abstract:

While it is generally acknowledged that entrepreneurship as well as export activity may both be important strategies for achieving national economic growth, it has remained unclear how *export activity among new ventures* is related to economic growth. This paper investigates whether the presence of export-oriented entrepreneurs is a more important determinant of economic growth than entrepreneurial activity in general. We focus on the national or macro-level and use data from the Global Entrepreneurship Monitor for a sample of 36 countries. An important advantage of using the macro-level is that indirect effects of exporting entrepreneurs that reach further than the performance of these firms themselves (e.g. spillovers) are captured in the analysis. To our knowledge, no attempt has been made thus far to link international activity of early-stage ventures to macro-economic outcomes. Our results suggest that export-oriented entrepreneurship is indeed more important for achieving high economic growth rates than entrepreneurial activity in general. This suggests that international activity by small and new firms strongly contributes to higher levels of competition and, consequently, to the emergence of highly dynamic economies and higher levels of economic growth.

1. Introduction

It is generally acknowledged that export is an important strategy for achieving economic growth. This is true for developed as well as developing countries. Both enterprises and nations gain from exporting (Almeida Couto et al., 2006). For example, enterprises may benefit from exporting activity, because exports contribute to business growth (Zahra et al., 1997). Also, the importance of exports for national economies has been emphasized in previous research. For example it has been argued that exporting firms are more productive than non-exporting firms (Girma et al., 2004). However, previous research with respect to the importance of export for national economies has strongly focused on established corporations and large multinational enterprises. Less attention has been paid to the role of start-ups in international markets (Audretsch & Thurik, 2000). In this study we attempt to address this gap by examining whether export orientation of new ventures makes a significant contribution to national economic growth.

Besides export activity, entrepreneurship is also considered an important mechanism of economic development (Schumpeter 1934; Wennekers and Thurik 1999; Baumol 2002) and for developing competitive economies (Hawkins, 1993). For example, entrepreneurs may contribute to economic growth because they are important for introducing or generating innovations (Autio, 1994; Acs and Audretsch, 2003). In particular, entrepreneurs contribute to a process of variety and selection where many individual entrepreneurs pursue an observed market opportunity and try to economically exploit a new idea. However, due to an increased uncertainty in the global knowledge economy, it is not clear a priori which of these different new ideas are economically viable (Audretsch and Thurik, 2000). Only after setting up a new business, entrepreneurs find out what consumers prefer and hence, whether their new ideas are economically viable. Most of these new ideas will not be economically viable but some of them will be. The successful ideas often turn into innovations. When there are more entrepreneurs pursuing new ideas, the level of competition is higher and the process of variety (i.e. a large number of different new ideas being pursued) and selection will be more intense. From an economy-wide point of view this higher intensity increases the probability of actual innovations taking place (i.e. of economically viable ideas being 'selected' through the market). Several studies confirm a positive impact of entrepreneurship on national economic growth for developed countries (see e.g. van Stel, 2006).

Within the field of entrepreneurship there is increased attention for the topic of "international entrepreneurship". International entrepreneurship concentrates, among others, on studying firms that are involved in international activity from inception or shortly thereafter. Such firms are commonly referred to as 'born globals' (Rennie, 1993; Knight & Cavusgil, 1996), 'international new ventures' (Oviatt & McDougall, 1994) or 'global start-ups' (Universiteit Twente & Universidad Miguel Hernández de Elche, 2005). There is evidence that the number of born globals or international new ventures is increasing (Oviatt & McDougall, 1994). Born global firms are thought to be of importance in terms of innovation and employment (Moen, 2002). However, only a few empirical studies have investigated the effect of export on business performance among new ventures (Bloodgood et al., 1996; McDougall & Oviatt, 1996; Zahra et al. 2000). Furthermore, whereas it is generally acknowledged that internationally oriented new ventures are important in terms of economic growth (Moen, 2002) to our knowledge, this link has not been investigated empirically. We aim to extend the literature on new venture export activity and growth by focusing on the country level. In particular the present paper builds on the assumption that exporting entrepreneurs develop specific skills (including innovative skills) through their export activity and, consequently, a high number of exporting entrepreneurs may be even more conducive to the process of variety and selection described above, compared to high numbers of domestically operating entrepreneurs. In other words, high

numbers of exporting entrepreneurs may have a particularly strong impact on competition, innovation and economic growth.

To summarize, in studying the relationship between entrepreneurial activity and growth we expect that in particular export-oriented entrepreneurship will make an important contribution to economic growth. Therefore, we will investigate in this paper whether the presence of export-oriented entrepreneurship makes a more important contribution to national economic growth than entrepreneurial activity in general. This issue is of specific interest to policy-makers since governments in many countries have developed programs that focus on the promotion of export activity.

The paper is structured as follows. Section 2 presents a review of the literature on the link between export and entrepreneurship on the one hand and economic growth on the other hand. In Section 3 we will present the data and research method used for the empirical analysis and in Section 4 we present the results of our empirical analysis of the association of the presence of export-oriented entrepreneurs and national economic growth. Finally, in Section 5 we discuss the outcomes and conclusions.

2. Theoretical background

In research there has been an increased focus over the past 15 years on international operations of new ventures (Oviatt & McDougall, 1994). Bloodgood et al. (1996) state that there are two main reasons for why new ventures may seek international presence. The first is that industry conditions may require an international presence to be competitive. The second is that a venture may seek a presence in international markets because it possesses unique resources on which it may capitalize (e.g. management experience in global markets or technological capabilities).

International activities of new ventures, such as born globals (Rennie, 1993; Knight and Cavusgil, 1996) or international new ventures (Oviatt & McDougall, 1994) are studied within the field of international entrepreneurship. McDougall & Oviatt (2000) have classified international entrepreneurship as a new emergent field of study. They define international entrepreneurship as: " (…) a combination of innovative, pro-active, and risk seeking behaviour that crosses national borders and is intended to create value in organizations" (McDougall & Oviatt, 2000: 903).

Within the field of international entrepreneurship, the internationalisation of firms is characterized as "a rapid process of international expansion from inception, using a range of market entry modes in multiple markets" (Jones & Coviello, 2005). However, export activity is the most common mode of foreign operation among new ventures (Zahra et al., 1997). Export activities are considered to be the first and most common step in a firm's international expansion (Young et al., 1988). Therefore, the focus in this study is on export activity of early-stage entrepreneurs and not on other modes of internationalization. One reason why exporting is an important means for international expansion among newly established firms is that export does not require major capital investments (Erramilli & D'Souza, 1993; Root, 1994) and has lower commercial and financial risk as compared to for example foreign direct investment (Jaffe & Pasternak, 1994). Even though small and new firms are increasingly involved in international markets (e.g. Oviatt & McDougall, 1994) small exporters still account only for a minor share of total exports in many developed and developing countries (Jaffe & Pasternak, 1994).

The study of internationalization of new ventures crosses the field of international business and the field of entrepreneurship. On the one hand, research in international business, that tended to mainly focus on large established multinational companies, is broadening its scope and increasingly incorporating entrepreneurial firms (McDougall & Oviatt, 2000). International entrepreneurship is highlighted as an important emerging research area in the field of international business (Wright & Ricks,

1994). On the other hand, following the increasing number of new venture firms that are internationalizing their business activities early in their life cycles (Oviatt & McDougall, 1994; Zahra et al., 2000), international activities are of increasing interest to researchers in entrepreneurship (McDougall & Oviatt, 2000).

Exporting activity is of importance for both enterprises and nations (Lages & Montgomery, 2004; Almeida Couto et al., 2006). The merits of export at the firm level are well reported in literature. For example, it is widely acknowledged in literature that exports are important for expanding sales, achieving business growth and for improving financial performance (Edmunds & Khoury, 1986; Daniels & Bracker, 1989; Zahra et al., 1997). At the firm level exports may also contribute to innovation, enhancement of managerial skills, diversification of business risks, the extension of the life cycles of products and absorbing excess capacity (Daniels & Bracker, 1989; Katsikeas et al., 2000; Lages & Montgomery, 2004). Furthermore, through market diversification, exporting provides an opportunity for firms to become less dependent on the domestic market. Also firms may gain experience from export activity, which may lead them to explore new foreign markets and get involved in other forms of internationalization, such as licensing, joint ventures or direct investment abroad (Lages & Montgomery, 2004).

It is also believed that *newly established firms* may benefit from exporting in terms of improving a new venture's competitive and financial performance (Zahra et al., 1997). However, research on international activities of new ventures has focused mainly on antecedents of early-stage international activity in trying to explain the emergence of these internationally oriented new firms or the early internationalisation of firms. Only a few empirical studies have focused on identifying economic contributions of early-stage firms in terms of growth and profitability (Bloodgood et al., 1996; McDougall & Oviatt, 1996; Zahra et al. 2000). These studies find only weak evidence of a link between internationalization and performance. For example Bloodgood et al. (1996) that focus on 61 high-potential new ventures in the U.S., found that internationalization was significantly, but only marginally, related to earnings after two years, and was not related to sales growth. McDougall & Oviatt (1996) found, for their sample of 62 U.S. new venture manufacturers in the computer and communications equipment industries, that higher levels of export sales were related to higher relative market share two years later, but they did not find evidence of a direct significant relation between percentage of foreign sales and subsequent return on investment. Because of this weak empirical foundation more research is needed on the direct as well as indirect effects of new ventures' international operations on economic performance (Zahra et al., 2000).

Furthermore, export activity may not only generate financial benefits for the firm, but is likely to result in increased knowledge and higher human capital levels, also for small and new firms (Lu & Beamish, 2001). For example, in case of entry into foreign markets firms often have to develop new resources and capabilities since the knowledge and capabilities that the firm has developed for the local or national market are often not suitable to operations abroad (Lu & Beamish, 2001). Export may also result in the accumulation of knowledge of foreign markets and in the development of new organizational capabilities through the accumulation of experience abroad (Johanson & Vahlne, 1977).

When many new firms engage in export activity, the chance that the knowledge gained through this activity spills over to other firms may be considered relatively high. The reason for this is that small and new firms have a lot of business contacts with other firms (for instance through cooperation or through buyer-supplier relations) which may lead to exchange of knowledge. Via these so-called spillovers knowledge may accumulate not only at the firm level (i.e. the exporting firm) but also at the aggregate level (i.e. the firm population in general).

We intend to contribute to the empirical literature on new ventures' export activity and growth by focusing on the macro- or national level. An important advantage of using the macro-level is that indi-

rect effects of exporting entrepreneurs that reach further than the performance of these firms themselves are captured in the analysis. In particular economy-wide effects of innovations made by exporting firms (e.g. knowledge spillovers) are taken into account. To our knowledge, no attempt has been made thus far to link international activity of early-stage ventures to macro-economic outcomes.

At the national level, and specifically from the point of view of national governments, exporting activity is crucial because it contributes to economic development of nations (Lages & Montgomery, 2004). For example, exports have a positive impact on the national amount of foreign exchange reserves and on national prosperity, and contributes to the development of national industries, to improved productivity and to the creation of employment. The importance of exports for national economies has been emphasized in previous research (Girma et al., 2004). However, previous research regarding to the importance of export for national economies has strongly focused on established corporations and large multinational enterprises and less attention has been paid to the role of newly established firms (Audretsch & Thurik, 2000). Whereas it is generally acknowledged that international orientation among new ventures is important in terms of economic growth (Moen, 2002), to our knowledge, this link has not been investigated empirically. This may partly be due to the lack of data concerning export activity of new firms at the country level. In order to contribute to this gap in research, the focus in this study will be on investigating the link between firm-level export activity of new ventures and economic growth.

Some previous empirical studies have found evidence of an impact of entrepreneurship on economic growth (e.g. van Stel, 2006). We expect that in particular export-oriented entrepreneurship makes a significant contribution to national economic growth. As argued in the Introduction, this is related to (assumed) higher skill levels of exporting entrepreneurs, thereby contributing to more intense levels of competition in the economy and increasing the innovative capacity of economies (see also Hessels, 2007, for empirical evidence of the link between export activity of small firms and innovation). In combining the potential benefits of export activity for new ventures (e.g. in terms of financial gains or competence development) and the potential for knowledge spillovers to the rest of the economy, we hypothesize that export activity among new ventures is more positively related to national economic growth than entrepreneurial activity in general. Furthermore, we expect that the relationship between export orientation among new ventures and economic growth may differ for different groups of countries along their level of economic development. Therefore, we will investigate in this paper whether the presence of export-oriented entrepreneurship is a more important determinant of national economic growth than entrepreneurial activity in general, taking into account a country's level of economic development. This will be explained further in the next section.

3. Methodology

3.1 Data and sample

Data on entrepreneurial activity and export-oriented entrepreneurship are taken from the the Global Entrepreneurship Monitor (GEM). We use a sample of 36 countries participating in GEM in 2002. The GEM is a world-wide research project aimed at describing and analyzing entrepreneurial activity and the institutional conditions to which this is subjected in a large number of countries. Data is collected through adult population surveys that are conducted in participating countries. In all participating countries representative samples of randomly selected adults (at least 2,000 per country) are surveyed each year. The GEM project offers comparable data across countries, since entrepreneurial activity is consistently measured in a harmonized way across a large number of countries (Reynolds et al., 2005).

Within the framework of GEM a TEA (Total early-stage Entrepreneurial Activity) index has been developed in order to measure early-stage entrepreneurial activity. The TEA is a combination of nascent entrepreneurs (those currently involved in concrete activities to start up a new business) and owners of young businesses (those currently owning a business that is less than 42 months old).

Whereas a large number of organization publish international comparative export data such as the WTO, OECD, UN (Commodity Trade Statistics Database-COMTRADE) and Eurostat, there are no official international comparative export statistics relating to exports by small and new firms. In this respect the Global Entrepreneurship Monitor initiative fills an important gap by providing a harmonized measure for export orientation of entrepreneurs across countries.

In the current study we investigate whether the presence of export-oriented entrepreneurs is a more important determinant of national economic growth than entrepreneurial activity in general. Our empirical analysis builds on a previous article by van Stel et al. (2005) in which it is investigated whether Total early-stage Entrepreneurial Activity (TEA) -as defined below- influences GDP growth for a sample of 36 countries. The authors find that the TEA indeed affects economic growth but that the influence depends on the level of economic development. In particular the contribution to economic growth is found to be stronger for more highly developed countries, as compared to developing countries. The authors argue that this may be related to higher human capital levels of entrepreneurs in higher developed countries.

In the current paper we will perform a similar regression analysis but next to the general TEA, we will also use the TEA export rate, the TEA medium export rate and the TEA high export rate as independent variables and compare their impact on economic growth with the impact of the general TEA index. The data and model used in this study are described below.

Next to data on early-stage entrepreneurial activity (TEA) and early-stage export activity (TEA export) from the GEM we also use data from secondary sources on GDP growth, per capita income, and the growth competitiveness index (GCI). The sources and definitions of all variables we use are described below.

3.2 Measures

Total early-stage Entrepreneurial Activity (TEA)
TEA is defined as the percentage of adult population that is either actively involved in starting a new venture or is the owner/manager of a business that is less than 42 months old. Data on total early-stage entrepreneurial activity are taken from the GEM Adult Population Survey for 2002.

Total early-stage Export Activity (TEA Export)
The TEA export rate is defined as the percentage of adult population that is either actively involved in starting a new venture or is the owner/manager of a business that is less than 42 months old, and has customers abroad. In our analysis we distinguish between medium export rate (1-25% of customers live abroad) and TEA high export rate (26 100% of customers live abroad). Data on early-stage export activity is also taken from the GEM Adult Population Survey 2002.

Growth of GDP (ΔGDP)
Real GDP growth rates are taken from the IMF World Economic Outlook database of the International Monetary Fund, version September 2005.

Per capita income (GNIC)

Gross national income per capita 2001 is expressed in (thousands of) purchasing power parities per US$, and these data are taken from the 2002 World Development Indicators database of the World Bank.

Growth Competitiveness Index (GCI)
Data on the GCI 2001 are taken from page 32 of The Global Competitiveness Report 2001–2002. The GCI is constituted of the following three main factors assessing a country's potential for economic growth: the quality of the macro-economic environment, the state of the public institutions and the level of technology. For further details about this index we refer to McArthur and Sachs (2002).

4. Analysis

We investigate whether export-oriented entrepreneurship may be considered a determinant of economic growth, next to technology, public institutions and the macroeconomic environment (which are captured in a combined way by the GCI). As both entrepreneurship and the factors underlying the GCI are assumed to be structural characteristics of an economy, we do not want to explain short term economic growth but rather growth in the medium term. Therefore we choose average annual real GDP growth over a period of four years (2002–2005) as the dependent variable in this study. Following van Stel et al. (2005) we use (the log of) initial income level of countries, to correct for catch-up effects, and lagged growth of GDP, to correct for reversed causality effects, as additional control variables.

Following van Stel et al. (2005), we allow for the possibility of different effects of highly developed and developing countries. In addition we also test whether the effect of TEA is different for transition countries.[1] TEA rates may reflect different types of entrepreneurs in countries with different development levels. In particular human capital levels may differ between higher and lower developed countries, implying different impacts on economic growth. This is tested by defining separate TEA variables for different groups of countries (rich versus poor; highly developed versus transition versus developing). Our model is represented by Equations (1) and (2). These equations are estimated separately by OLS. The hypothesis of a more positive effect for rich countries corresponds to coefficient b_1 (b_2) being larger than coefficient c_1 (c_2). Furthermore, the hypothesis that export-oriented entrepreneurs contribute more to national economic growth than entrepreneurs in general corresponds to b_2 (c_2) being larger than b_1 (c_1).

(1) $\Delta GDP_{it} = a + b_1 \, TEA^{rich}_{i,t-1} + c_1 \, TEA^{poor}_{i,t-1} + d \log(GNIC_{i,t-1}) + e \, GCI_{i,t-1} + f \, \Delta GDP_{i,t-1} + \varepsilon_{it}$

(2) $\Delta GDP_{it} = a + b_2 \, TEA\_export^{rich}_{i,t-1} + c_2 \, TEA\_export^{poor}_{i,t-1} + d \log(GNIC_{i,t-1})$
       $+ e \, GCI_{i,t-1} + f \, \Delta GDP_{i,t-1} + \varepsilon_{it}$

To illustrate the data at hand, Table 1 provides the TEA rates and the TEA medium export and high export rates in 2002 as well as the average annual growth rates of GDP over the period 2002-2005.

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[1] The 36 countries in our sample are: Argentina[D], Australia, Belgium, Brazil[D], Canada, Chile[D], China[T], Taiwan, Denmark, Finland, France, Germany, Hong Kong, Hungary[T], Iceland, India[D], Ireland, Israel, Italy, Japan, Korea, Mexico[D], Netherlands, New Zealand, Norway, Poland[T], Russia[T], Singapore, Slovenia[T], South Africa[D], Spain, Sweden, Switzerland, Thailand[D], United Kingdom and United States. Mark [D] indicates developing country while mark [T] indicates a transition country. In the categorisation rich versus poor, eleven of the twelve countries marked as [D] or [T] are classified as (relatively) poor, the exception being Slovenia.

Table 1: Entrepreneurial activity rates (2002) and GDP growth rates for 36 countries

	TEA rate	TEA medium export rate (1-25% foreign customers)	TEA high export rate (>25% foreign customers)	Average GDP growth rate 2002-2005 (%)
Argentina	14.15	0.00	1.82	3.60
Australia	8.68	3.29	0.76	3.18
Belgium	2.99	1.33	0.88	1.53
Brazil	13.53	0.50	0.28	2.65
Canada	8.82	4.23	1.86	2.73
Chile	15.68	4.95	2.86	4.48
China	12.34	3.37	0.92	9.08
Denmark	6.53	1.82	1.12	1.45
Finland	4.56	2.19	1.33	2.50
France	3.20	1.64	0.71	1.43
Germany	5.16	3.62	0.95	0.58
Hong Kong	3.44	1.17	1.17	4.88
Hungary	6.64	1.25	0.51	3.50
Iceland	11.32	5.54	1.81	3.28
India	17.88	0.08	0.17	6.63
Ireland	9.14	4.57	2.00	5.00
Israel	7.06	2.03	1.04	2.28
Italy	5.90	1.36	0.81	0.48
Japan	1.81	0.31	0.05	1.45
Korea	14.52	5.21	2.01	4.63
Mexico	12.40	1.59	1.91	2.40
Netherlands	4.62	1.46	0.78	0.60
New Zealand	14.01	5.84	3.08	3.85
Norway	8.69	3.16	1.71	1.88
Poland	4.44	0.99	0.21	3.40
Russia	2.52	0.11	0.34	6.18
Singapore	5.91	2.08	1.49	4.23
Slovenia	4.63	1.78	1.13	3.58
South Africa	6.54	0.97	1.01	3.60
Spain	4.59	1.66	0.64	2.98
Sweden	4.00	0.99	0.75	2.43
Switzerland	7.13	2.83	2.12	0.60
Taiwan	4.27	0.90	0.70	4.08
Thailand	18.90	4.57	1.52	5.45
United Kingdom	5.37	1.67	0.83	2.40
United States	10.51	1.65	0.50	3.00
Mean	*8.11*	*2.24*	*1.16*	*3.22*
Standard deviation	*4.59*	*1.64*	*0.73*	*1.84*

Sources: GEM and IMF.

5. Results

The results of our empirical exercises are in Tables 2-4. In Table 2 the regression results of the impact of the general TEA index are presented (see Equation 1), while Tables 3, 4 and 5 show the results using the TEA export rate, TEA medium export rate and TEA high export rate as main independent variables (see Equation 2).

Table 2: Explaining economic growth from TEA rate; N=36.

TEA	Model 1	Model 2	Model 3
Constant	19.6 **	26.1 **	22.2 **
	(4.2)	(3.0)	(2.5)
TEA	.047		
	(0.8)		
TEA rich		.087 *	
		(1.8)	
TEA poor		-.005	
		(0.1)	
TEA highly developed			.11 **
			(2.2)
TEA transition			.19
			(1.4)
TEA developing			.023
			(0.2)
log (GNIC)	-2.2 **	-2.8 **	-2.4 **
	(2.8)	(2.7)	(2.6)
GCI	.62	.64	.63
	(0.7)	(0.8)	(0.7)
lagged gdp growth	.37 **	.30 **	.22
	(2.9)	(2.1)	(1.2)
R^2	0.626	0.636	0.662
adjusted R^2	0.577	0.576	0.592

Absolute heteroskedasticity-consistent *t*-values are between brackets. Dependent variable is average annual growth of GDP over the period 2002-2005. TEA is Total Entrepreneurial Activity rate (*Global Entrepreneurship Monitor*); GCI is growth competitiveness index 2001 (*Growth Competitiveness Report*); GNIC is per capita income of 2001; Lagged GDP growth is average annual growth of GDP over the period 1998-2001.

* Significant at a 0.10 level.

** Siginificant at a 0.05 level

Table 3: Explaining economic growth from TEA export rate (1-100% of customers from abroad); N=36

TEA export	Model 1	Model 2	Model 3
Constant	22.3 **	22.1 **	22.3 **
	(6.2)	(4.4)	(6.0)
TEA_export	.13 *		
	(1.8)		
TEA_export *rich*		.13	
		(1.6)	
TEA_export *poor*		.14	
		(1.0)	
TEA_export *highly developed*			.16 *
			(1.9)
TEA_export *transition*			.47 **
			(2.1)
TEA_export *developing*			.10
			(0.9)
log (GNIC)	-2.4 **	-2.4 **	-2.4 **
	(3.5)	(3.0)	(3.6)
GCI	.54	.54	.66
	(0.6)	(0.6)	(0.7)
lagged gdp growth	.33 **	.33 **	.24
	(2.6)	(2.4)	(1.3)
R^2	0.639	0.639	0.658
adjusted R^2	0.592	0.578	0.587

Absolute heteroskedasticity-consistent *t*-values are between brackets. Dependent variable is average annual growth of GDP over the period 2002-2005. TEA is Total Entrepreneurial Activity rate (*Global Entrepreneurship Monitor*); GCI is growth competitiveness index 2001 (*Growth Competitiveness Report*); GNIC is per capita income of 2001; Lagged GDP growth is average annual growth of GDP over the period 1998-2001.

* Significant at a 0.10 level.

** Siginificant at a 0.05 level

Table 4: Explaining economic growth from TEA medium export rate (1-25% of customers from abroad); N=36

TEA medium export	Model 1	Model 2	Model 3
Constant	22.3 **	21.8 **	21.9 **
	(6.3)	(4.3)	(5.5)
TEA_medium export	.17 *		
	(1.7)		
TEA_medium export *rich*		.16	
		(1.3)	
TEA_medium export *poor*		.20	
		(1.1)	
TEA_medium export *highly developed*			.19
			(1.5)
TEA_medium export *transition*			.56 *
			(1.7)
TEA_medium export *developing*			.14
			(0.8)
log (GNIC)	-2.4 **	-2.3 **	-2.4 **
	(3.5)	(3.0)	(3.4)
GCI	.53	.51	.61
	(0.6)	(0.6)	(0.7)
lagged gdp growth	.32 **	.33 **	.25
	(2.5)	(2.3)	(1.3)
R^2	0.636	0.637	0.650
adjusted R^2	0.589	0.576	0.578

Absolute heteroskedasticity-consistent *t*-values are between brackets. Dependent variable is average annual growth of GDP over the period 2002-2005. TEA is Total Entrepreneurial Activity rate (*Global Entrepreneurship Monitor*); GCI is growth competitiveness index 2001 (*Growth Competitiveness Report*); GNIC is per capita income of 2001; Lagged GDP growth is average annual growth of GDP over the period 1998-2001.

* Significant at a 0.10 level.

** Siginificant at a 0.05 level

Table 5: Explaining economic growth from TEA high export rate (26-100% of customers from abroad); N=36

TEA high export	Model 1	Model 2	Model 3
Constant	22.2 **	23.0 **	23.4 **
	(5.7)	(4.3)	(5.6)
TEA_high export	.36		
	(1.4)		
TEA_ high export *rich*		.42 *	
		(1.7)	
TEA_ high export *poor*		.30	
		(0.7)	
TEA_ high export *highly developed*			.53 *
			(1.8)
TEA_ high export *transition*			1.80 **
			(2.0)
TEA_ high export *developing*			.26
			(0.7)
log (GNIC)	-2.5 **	-2.5 **	-2.7 **
	(3.4)	(3.1)	(3.7)
GCI	.65	.64	.88
	(0.8)	(0.7)	(1.0)
lagged gdp growth	.36 **	.35 **	.24
	(2.9)	(2.5)	(1.4)
R^2	0.637	0.637	0.666
adjusted R^2	0.590	0.577	0.597

Absolute heteroskedasticity-consistent *t*-values are between brackets. Dependent variable is average annual growth of GDP over the period 2002-2005. TEA is Total Entrepreneurial Activity rate (*Global Entrepreneurship Monitor*); GCI is growth competitiveness index 2001 (*Growth Competitiveness Report*); GNIC is per capita income of 2001; Lagged GDP growth is average annual growth of GDP over the period 1998-2001.

* Significant at a 0.10 level.

** Siginificant at a 0.05 level

The Tables 2-5 reveal as hypothesized, that the presence of export-oriented entrepreneurs indeed seems to be more important for achieving GDP growth than entrepreneurship in general. Comparing the coefficients of the various TEA rates across the tables, we see that in each of the three model variants the impact of TEA Export is higher compared to the impact of TEA in general. For instance, the TEA rate has a coefficient of 0.047 (Table 2), while the coefficients of the TEA export rate, the TEA medium export rate and the TEA high export rate are 0.13, 0.17 and 0.36, respectively. The measures for TEA export also display higher t-values as compared to TEA in general.[2]

As indicated before, an important element in our analysis is to distinguish between different groups of countries. Table 2 confirms, in accordance with earlier findings of van Stel et al. (2005), that it is important to distinguish between different groups of countries along their level of economic development in investigating the relationship between entrepreneurship and economic growth. For example, the table reveals that for rich countries the impact of entrepreneurial activity is significantly positive, whereas the impact for poor countries is effectively zero.[3] Looking at the results for our export variables (Tables 3-5) a first finding is that having more entrepreneurs with export orientation seems to be important in highly developed as well as in transition countries. The effect is strongest for transition economies. The magnitude and the statistical significance of the estimated coefficient as well as the t-values indicate a stronger impact for transition economies compared to highly developed or developing countries (see Tables 3-5). In transition countries the TEA high export rate shows the strongest positive association with GDP Growth (Table 5), but the TEA medium export rate is also significant positive related to GDP growth (Table 4).

For highly developed countries we find a significant positive association for high export involvement of entrepreneurs with economic growth but no evidence of an impact for medium export involvement. It seems that only a substantial amount of export activity by entrepreneurs contributes to macro-economic growth. This could mean that exporting entrepreneurs have to pass a threshold level of export activity in order to actually increase their human capital levels (e.g. by learning from the experience gained abroad) so that they contribute to growth.

Finally, we find no evidence of an impact of new ventures export activity on GDP growth in developing countries. Van Stel et al. (2005) find no impact of entrepreneurship in general on economic growth in developing economies. For these economies we also find no evidence that export-oriented entrepreneurs, contribute to economic growth. It may be that human capital levels of entrepreneurs in these countries are too low.

6. Conclusion & Discussion

This paper investigates whether the presence of export-oriented entrepreneurs is a more important determinant of national economic growth than entrepreneurial activity in general. We also compare the extent of influence of export-oriented entrepreneurship on GDP growth for three groups of coun-

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[2] Please note that ideally - in order to test whether export-oriented entrepreneurship makes a more important contribution to economic growth than entrepreneurship in general - we would like to include the TEA and the TEA_export variables in one and the same model. Indeed we did perform exercises including TEA and TEA_export in a single model. The results of these analyses revealed that the magnitude of the regression coefficients is similar to the coefficients reported in Tables 2-5 for the separate models. However, because of multicollinearity t-values are lower in these single models. In fact, the correlation coefficients between TEA on the one hand and the various TEA_export variables on the other hand are above 0.6. Because of these multicollinearity problems, we have used separate models in our analysis. Nevertheless, since the magnitude of the regression coefficients when using a single model is comparable to using separate models, we feel that the results reported in Tables 2-5 are quite robust.
[3] Van Stel et al. (2005) refer to a possible lack of larger companies in these poorer countries as a possible explanation for the zero effect of entrepreneurial activity.

tries: highly developed economies, transition economies and developing economies. The distinction between these three groups of countries relates to the shift from the managed to the entrepreneurial economy (Audretsch and Thurik, 2001). In particular, the nature of entrepreneurship is likely to be different for higher and lower developed countries hence the impact on economic growth may also differ (van Stel et al., 2005).

For the groups of highly developed countries and transition countries we find that export-oriented entrepreneurship contributes more strongly to macro-economic growth than entrepreneurial activity in general. The effect is particularly strong for transition economies. The results of our study do not provide evidence of a relationship between new ventures' export orientation and economic growth for developing countries.

The findings of this study suggest that in developed countries high export orientation among new ventures contributes to economic growth. In developed countries, technologies are in general more widely available than in less developed countries and enterprises increasingly specialize in knowledge-based activities. Therefore, new ventures' foreign operations may be based on the presence of specific technological knowledge, skills and valuable resources that are available within the firm (e.g. Oviatt & McDougall, 1997). For these ventures international expansion is viable and sometimes even necessary for survival, and they are likely to display high international involvement. Furthermore, these ventures are likely to develop specific skills (including innovative skills) through their export activity, and may, therefore, have a particularly strong impact on economic growth. That we find no impact on economic growth for entrepreneurs' medium export orientation in developed economies may indicate that exporting entrepreneurs that start with moderate levels of exporting have to pass a threshold level of export activity, before they actually increase their human capital levels and other resources (e.g. by learning from the experience gained abroad, by getting access to knowledge and technology in foreign markets) so that they contribute to growth.

From a policy perspective our findings suggest that it may be beneficial for governments in developed economies to focus on stimulating high export ambitions among new ventures. Also, governments could introduce entrepreneurs' export growth possibilities and ambitions as a selection criterion in export promotion programs.

In our study we find a particular strong impact of export-oriented entrepreneurship on economic growth for transition economies. Transition economies have a highly educated labor force, a relatively low level of GDP, and a highly turbulent economy. One explanation for the relatively strong positive impact we find may be that especially the high degree of environmental dynamism in these countries positively affects the international orientation of new firms and the development of competences. Research suggests that environmental dynamism and the ensuing turbulence can stimulate or even push new ventures to internationalize their sales and to intensify their export activities (Andersson et al., 2004; McDougall et al., 1994; Oviatt & McDougall, 1994; Zahra et al., 1997). Our results suggest that in the kind of turbulent environment that is characteristic for transition economies exporting entrepreneurs may have a particularly strong impact on competition, innovation and consequently economic growth.

The results of our study reveal that export-oriented new ventures do not seem to make a significant contribution to economic growth in developing countries. Because of the relatively high rate of necessity entrepreneurship and because of the level of economic development in these countries, new entrepreneurs – also export-oriented entrepreneurs – will tend to have low levels of human capital and will mainly be active in low-technology and low value added economic activities, such as agriculture. This may result in a low level of benefits and development of skills and competences at the firm level (Zahra et al. 2000) and may consequently explain that these firms do not so much contribute to macro-economic growth. Our results underline the suggestions made by Wennekers et al. (2005) that, because of their stage of development, low-income countries should not have a strong

focus on the promotion of new business creation and that it may be more beneficial for these countries to foster the exploitation of scale economies, e.g. through foreign direct investment.

Limitations of this study include the small sample size and the focus on export orientation only and not on other modes of internationalization. Future research could benefit greatly from longitudinal data and from including other modes of internationalization.

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