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Impact of Entrepreneurship on Exports in Developing Countries

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Abstract

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Keywords: Exports, Entrepreneurship, Fixed Effects, Generalized Method of Moments.

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Title

Impact of Entrepreneurship on Exports in Developing Countries

Abstract

Entrepreneurship plays an important role in shaping a country's economy, particularly in developing countries where it has an effect on export performance. Entrepreneurship fosters innovation, identifies new market opportunities, and improves productivity, which helps in expanding exports. This study investigates the impact of entrepreneurship on exports in developing countries. For this purpose, panel data has been taken from the year 2001 to 2020. Generalized method of moments (GMM), Fixed effect (FE), and First difference methods have been used to analyze the impact of entrepreneurship on exports. The empirical results reveal the significant and positive effects of entrepreneurship on exports in developing countries. However, in lower-middle-income countries, the results are mixed. For upper-middle-income countries, the results are positive and significant. The results of the study suggest that policymakers need to work on improvement and more investment in entrepreneurship in order to boost exports.

Keywords: Exports, Entrepreneurship, Fixed Effects, Generalized Method of Moments.

Contents

- Introduction
- Data and Methodology
- Results and Discussion
- Conclusion
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Introduction

Exports are important for economic growth. Exports contribute to the growth of domestic industries as well as increased productivity. Exporting businesses outperform nonexporting businesses; in particular, they have to be more productive, capital-intensive, innovative, and efficient.

Through Entrepreneurship, export is a key factor in a nation's GDP growth. Because it is primarily concerned with the country's production of products and services. As a result, it promotes the economy of the country by providing jobs and enhancing the country's foreign exchange as well as revenue generation. It is essentially a profit-making venture. Entrepreneurship increases the economic conditions of the people of the country. Entrepreneurship promotes the economic growth of the country through exports. It also increases the per capita income of the people and improves the people's living standards. Entrepreneurial goals should include talent development, new ideas, prior knowledge, and innovation, among others, in order to optimize the profitability of existing businesses. They may be able

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to contribute to the resolution of financial and social concerns. As a result, it is argued that the economy of a country's export, and entrepreneurial development are all intertwined. Similarly, an entrepreneur should be a self-motivated individual who consistently accepts risk-taking in order to fulfill his goals. He should be able to communicate effectively with others in a way that inspires and excites them. They are those with the power to create new jobs. As a result, great Entrepreneurs know how to inspire their workforce to support business growth. As a result, a country's economy is largely determined by the number of entrepreneurs present. However, additional policy and educational curriculum improvement are required to promote entrepreneurship in developing countries. At the same time, entrepreneurship in rural areas should be encouraged in order to address our country's unemployment crisis. Therefore, the focus of this study is on the role of entrepreneurship in a country's exports which in turn helps in economic growth.

In order to understand the importance of entrepreneurship, it is crucial to analyze the relationship between export success and entrepreneurship. In nearly every region of the world, economic growth is the most urgent issue. However, theoretical perspectives on the relationship between exports and growth might vary greatly.

According to accepted neoclassical theories, strong export growth and "outward orientation" are significant drivers of economic expansion.

Nowadays, as a result of population growth, societies and organizations are advancing quickly, and as a result, they are dealing with an increase in complexity. In a multidirectional interaction, entrepreneurship is essential for both the evolution of processes through innovation and improvement and as a driving force behind economic growth and development. One of the primary underlying philosophies in every nation in the current era can even be said to be the subject of entrepreneurship (Nahid, 2009).

To ensure that public policy is developed in order to achieve the maximum advantage, it is crucial to understand the consequences of globalization on economic performance, particularly the performance of enterprises in the globalized world. One possible advantage of globalization is a technique for increasing productivity by involvement in the global market through exports. The empirical and theoretical evidence seems to support the idea that pre-export performance differences are what provide exporting enterprises with a productivity advantage over non-exporting firms.

A lot of research studies have been done on the entrepreneurship's effects on exports. According to researchers, mixed conclusions have been made regarding the entrepreneurship impacts on exports. Most of the results indicate a significant positive relationship between entrepreneurship and exports.

According to Thompson (1999), all organizations (public, private, nonprofit, etc.) of any size need and require entrepreneurship activity (large, medium, and small). Additionally, export is a vital instrument for nations in achieving their objectives for prosperity and economic growth. Some nations support increased exports since doing so improves the balance of payment, employment rate, and standard of living.

Entrepreneurship increases job creation and improves competitiveness (Zahra, 1991; Davey, Hannon & Penaluna, 2016) which is an engine for exports. There is literature explaining the process of enterprise creation, which is rich in studies that have concentrated on the psychological and demographic features of individual entrepreneurs, in terms of the elements that affect susceptibility to successful entrepreneurship. Later scholars, such as Specht, began to shift their focus from individual character traits as variables influencing entrepreneurial activity to the expenses of starting a business. The elements that influence the establishment of organizational structure at a more aggregated or national level are the focus of modern studies (Specht, 2003).

This study focuses on the impact of entrepreneurship on exports in developing countries. However, as is well known, all countries differ in many ways. It is difficult to compare and judge the economic situations in Europe and Africa. Many researchers analyze the classification of countries in terms of economic progress, distinguishing between developed and developing states, in such instances. The existing study analysis is the result of research into the motivations for entrepreneurship in developing countries. There are a variety of explanations for this decision. The lack of entrepreneurial sector trends is the primary reason for this sort of country's selection. Every year in developing countries, the number of people considering starting their own business varies based on the country's economic conditions at the time. In many developing countries, whether in Africa, Asia, or South America, agriculture is the primary source of income for many people. As a result, tracking the increase in the entrepreneurial activity index is quite challenging. However, in addition to unforeseeable circumstances, it is possible to evaluate aspects that do not change significantly from year to year to

determine what can affect entrepreneurial activity motivation.

The literature on entrepreneurship on exports is comprehensive, however, according to our knowledge, no study obtains the entrepreneurship impact on exports in developing countries. This study fills a gap in the literature. In this study, it is found that entrepreneurship significantly impacts exports in developing countries.

The rest of the paper is structured as follows: Section 2 presents a review of the literature on the topic. Section 3 provides data and methodology. Section 4 presents and discusses the results. Section 5 concludes.

Literature Review

The relationship between entrepreneurship and export performance has become a key research area. Entrepreneurship and market orientation both are interlinked and necessary for organizational culture or capabilities that contribute to economic activities.

Hessels and Stel (2009) examine the link between new venture creation activity and the rate of economic growth in 34 selected countries from 2002 to 2008. By applying the OLS methodology, the study finds a positive impact of entrepreneurial activities on economic development. Moreover, this positive impact is more in early-stage enterprises of high-income countries than low income. Using data from 64 nations during the 2006–2013 period, Sun (2017) analyzes the effects of export-oriented entrepreneurship on the economic development of the country. In the sample, there are 28 developing nations and 36 developed countries. The data was collected from the Global Competitiveness Report, the (GEM) project, the World Bank, and the International Monetary Fund (IMF). The study uses random and fixed effects. According to the data, higher total entrepreneurial activity (TEA) is linked to higher economic growth in developed nations but not in developing nations. Joo et al. (2020) analyze the impact of entrepreneurship of start-ups on exports when the closure rate of a business is higher than the business start-up rate in Korea. Data was used for the seven-year period from 2012 to 2019.

Data from the Global Entrepreneurship Monitor project and the Spanish Institute of Statistics were used by Pernia et al. (2011) in order to assess the effects of export-focused entrepreneurship on regional growth for 17 Spanish areas between 2003 and 2009. The fixed effects linear model's findings demonstrate that locations with a larger rate of population increase and with a focus on export-oriented business have stronger GDP growth. This link is particularly noticeable since business operations serve a much bigger volume of overseas clients.

The effects of entrepreneurial orientation (EO) characteristics on the export performance of the garment sector are investigated by Hossain et al. (2021). Utilizing the primary data of 339 using the partial least squares (PLS-SEM) method, their study examines the effects of EO dimensions on export performance. The study applies the Smart partial least squares (PLS) to analyze data and produce measurement and structural models. By applying smart PLS methodology. Results revealed that innovativeness and pro-activeness emphatically and significantly affect trade performance, but the risk-taking measurement is found insignificant.

Robb et al. (2020) analyze entrepreneurial multi-dimensional classification. Their data was based on 204 South African exporting SMEs. The results show that only a few numbers of EO observations significantly improved SME export performance. Focusing on the functions of each EO component offers the chance for improved efficiency when SMEs do international commerce since it helps SMEs improve their total exporting performance. SMEs are frequently constrained by resource shortages. Lekovic et al. (2018) Analyze the export factors -minded entrepreneurs from the Southeast European region. The research sample was constructed using GEM (n.d.)- Global Individual Level Data, which included 12027 respondents from six Southeast European countries, 645 of which were export-centric entrepreneurs. The findings of the study demonstrated a significant link between entrepreneurial orientation, entrepreneurial KSAs, innovation, and new technology and internationalization activity.

Garcia's (2015) analysis investigates the causes and effects of export entrepreneurship using a resource-based perspective and contingency methodology. The empirical research is based on a conceptual model based on 212 Spanish exporting companies' multi-sectoral samples. The findings show that export entrepreneurship is significantly influenced by internal elements such as managerial commitment to export, resources for expertise, and organizational structure.

Karimi et al. (2013) analyzed the effect of entrepreneurship on the export performance of dates, and 85 of the exporters and entrepreneurs of date were chosen for this study using a straightforward random sample procedure. According to the findings, entrepreneurship and all of its dimensions except aggressive competition have a positive and significant impact on the export of dates. The importance of this

paper is the Due to the fact that dates are a crucial commodity in Iran's agriculture and have a distinctive rank and position among our nation's non-oil exports, entrepreneurship is instrumental in the success of the date export industry in Iran.

By surveying 195 SMEs in Uganda, Ahimbisibwe and Abaho (2013) investigated the conceptual feasibility of looking at the potential relationship between export performance and EEO as dimensional zed under innovativeness, proactiveness, and risk orientation. The results showed that EEO dimensions are significant predictors of export performance and that SMEs in Uganda have significantly high levels of EEO.

Using data from Chilean companies, Alvarez (2004) examines variations in company exporter performance for small- and medium-sized enterprises (SMEs). Find out the success of export SMEs is significantly impacted by increased innovation in global business operations and the use of export promotion programs. Trade missions and trade displays do not affect the likelihood of trading indefinitely, but exporter committees seem to have a favorable and considerable impact. The most speculative and experimental export-boundary research suggests an integrative categorization of such obstacles and carries out an observational comparison of their identification in order for the classification to be broadly recognized and applied in subsequent export-boundary studies. This study confirmed the four hypothesized determinants of export obstacles, such as knowledge, resources, process, and external hurdles, using a population of 2,590 enterprises (478 replies) and structural equations. The findings of this study may enhance government export incentive programs in addition to having indirect consequences for managers and export managers of businesses looking to start or increase their export activity (Arteaga-Ortiz and Fernandez-Ortiz., 2010).

Alexandrova (2004) used survey data gathered from interviews with Bulgarian micro-firm entrepreneurs to analyze the effect of the business environment on entrepreneurial orientation in a transition economy. There are five involved traits. Risk-taking, initiative, creativity, independence, and fierce competition were employed to operationalize entrepreneurial attitudes. The findings show that SMS's development policy formulation should target the improvement of the business environment and the creation of much more stable and favorable circumstances for small companies amid the ongoing market transition.

In a sample of 169 U.S. manufacturing enterprises, Bruce and Allen (1999) investigate the connection between corporation business enterprise focus and five particular essential management practices. Incorporating scanning intensity planning horizon locus of arranging and control attributes is one of the five strategic management approaches. The analysis's results showed a significant link between the strength of intrapreneurship, the adaptability of scanning planning, the location of arrangement, and important controls.

Boso et al. (2013) conducted an analysis of the effectiveness and advantages of the entrepreneurial approach. EO and a focus on the market Findings from primary data gathered from entrepreneurial industries operating in Ghana show that EO and MO differ in various degrees of social and professional network linkages and complement one another. This is particularly true when social and professional network linkages are strong since the performance advantages of EO and MO alignment are highest.

In their study of the relationship between marketing strategy and performance results when used in export operations, Cavusgil and Zou (1994) examined the theoretical framework of export marketing strategy and performance and put it to the test using route analysis. Identify the management dedication and international expertise of an export marketing strategy business as the primary predictors of export performance. Internal (firm and item characteristics) and external (industry and export market characteristics) elements have an influence on the trade marketing process.

Chen et al. (2012) look at data showing how networking and business introductions are related to market-driven and marketing-driven strategies independently. Examine the impact of these two introductions on organizational performance further. Based on research done by a Taiwanese electronics company. And discover that interactions and entrepreneurial orientations enhance an organization's capacity for exploitation and exploration, which in turn helps the organization perform better.

Using data from 170 domestic Austrian exporters to Central and Eastern Europe, Muecke et al. (2015) study how market- and entrepreneurial-oriented behavior influences business performance in developing countries. The outcomes show that entrepreneurial as well as market-oriented methods have significantly and favorably affected success in developing markets. Guth and Ginsberg (1990) examine how five bundles of characteristics are shared by different types of corporate entrepreneurial

and individual managers' business growth and Schumpeterian or industry, leadership, and how each bundle can exist in a single industry at various points in time as the common characteristics change their relative importance. A sample of 10 enterprises in 4 European industries is investigated with regard to both internal and external change catalysts. We give an empirical foundation to show that there is a significant relationship between individual entrepreneurship, renewal, and Schumpeterian entrepreneurship by looking at the unique situation of revitalized frame-breakers and comparing their development to others.

Lee et al. (2020) examine that structure has both direct and indirect effects on an organization's proclivity for entrepreneurship and market orientation. The results show the advantages and disadvantages of geographical market variety in relation to the effect that a number of export destinations have on a company's export performance. We provide a method for incorporating the advantages and disadvantages of market variety based on the entry fees and financial risk reduction models. According to the findings, export performance rises when market variety rises because exporters may diversify and lower financial risks in export markets. However, there is no development in their connection. Due to the high level of market variety, entry costs rise when they reach their peak, outweighing the advantages and finally causing a decline in export performance. Therefore, there is an inverted U-shaped link between export performance and market variety.

Matsuno et al. (2002) examine the structural impacts on business performance, both direct and indirect, of entrepreneurial predisposition and market orientation. The findings suggest that entrepreneurial proclivity not only positively influences market orientation directly but also positively influences it indirectly by reducing departmentalization. Additionally, discovered that the effect of entrepreneurial proclivity on performance is beneficial when market orientation is involved, but negative or insignificant when it is not.

An entrepreneurial mindset is one of the few areas in entrepreneurship study where a comprehensive body of knowledge is growing and has received substantial conceptual and empirical attention EO. Therefore, the time is right to analyze all of the available documentation and assess how it relates to the link between EO and trade execution. Going beyond qualitative assessment, a meta-analysis was included to examine the size of the EO performance link and to investigate any modifiers that could have an impact on it. Investigations of 53 samples from 51 firms with a total N of 14259 companies revealed a weak association between EO and execution (r=.242) that is strongly influenced by the operationalization of important concepts in various cultural settings (Rauch et al.2009).

Ajayi (2016) analyzed 500 registered agricultural SMEs from (NEPC). A cross-sectional survey method and questionnaire-based Performa were used on behalf of the previous study. The result indicates that institutional environment factors can be influenced less by entrepreneurial orientation and network capability of Nigerian agricultural SMEs' export performance.

Data and Methodology

The study employs a panel data set for the period from 2001 to 2020 of developing countries in our study. Due to the unavailability of data from all developing countries, only 39 countries have been chosen to investigate. The secondary data taken for the estimation of results is from 2001 to 2020.

Export data are taken from the data set of World Development Indicators (WDI) for the period 2001 to 2020.

The data on Entrepreneurship in developing countries is extracted from the Global Entrepreneurship Monitor (GEM) for the period 2001-2020. Entrepreneurship has an effect on the nation's social and economic systems. The use of entrepreneurship's fundamental principles results in the eradication of a number of societal problems, such as joblessness and low income. It also opens the potential of producing new items with a different functional focus, which in turn results in the formation of an advantageous business and investment climate for the local or national economy.

The data for control variables such as Innovation, GDP growth, Labor force, foreign direct investment (FDI) inflows, and exchange rate are collected from World Development Indicators (n.d.) for the period 2001-2020

The econometric examination starts with the Generalized Method of Moments (GMM) model. Modern econometric methods have been used to investigate the link between variables. We use three models in this paper. The first model is GMM. The second is the fixed-effect model (FE) and the last one is the First Difference model (FD). GMM is more effective than maximum likelihood (ML), but less reliable since it bases its assumptions on certain moments rather than the whole distribution of the

random variables. In addition, it takes the lagged variables as instruments and thus takes the problem of endogeneity into account.

Model 1

$$InExports_{it} = \beta 1 lnEntrepreneurship_{it} + \beta 2\ lnInnovation_{it} + \beta 3\ lnFDI\ Inflows_{it} + \beta 4\ lnGDP\ Growth_{it} + \beta 5 lnLabor\ Force_{it} + \beta 6 lnExchange\ rate_{it} + \mu_{it}$$

After the GMM Model, the fixed effect (FE) model is employed. FE investigates the relationship between the variables within an entity. Indeed, each country has unique characteristics that might have an impact on the variables. The use of FE assumes that an individual's specificities may bias the predictor or outcome variables and that must be accounted for. Fixed effects are used when the error term is correlated with the independent variables. This method is employed in panel data analysis to control for unobserved variables that could bias the results, ensuring that the observed relationships between the variables of interest are not confounded by these unobserved, time-invariant factors.

Model 2

$$InExports_{it} = \beta 1 lnEntrepreneurship_{it} + \beta 2\ lnInnovation_{it} + \beta 3\ lnFDI\ Inflows_{it} + \beta 4\ lnGDP\ Growth_{it} + \beta 5 lnLabor\ Force_{it} + \beta 6 lnExchange\ rate_{it} + \alpha_i + \gamma_t + \mu_{it}$$

Where α_i is country fixed effects and γ_t is time-fixed effects to capture time trends.

The third model used in this study is the first difference model. With panel data, the issue of missing variables is addressed by the first difference (FD) estimator. It may be more effective than the traditional fixed effects in some circumstances.

Model 3

$$\Delta InExport_{it} = \Delta\beta 1 lnEntrepreneurship_{it} + \Delta\beta 2\ lnInnovation_{it} + \Delta\beta 3\ lnFDI\ Inflows_{it} + \Delta\beta 4\ lnGDP\ Growth_{it} + \Delta\beta 5 lnLabor\ Force_{it} + \Delta\beta 6 lnExchange\ rate_{it} + \Delta\mu_{it}$$

Results and Discussion

The descriptive statistics are presented in Table 1.

Table 1

Descriptive statistics (2001-2020)

Variables	Mean	Median	Std. dev	Min	Max
Export	3.426	3.384	0.519	2.111	4.748
Entrepreneurship	2.332	2.833	1.957	-5.003	5.269
Innovation	1.976	3.025	2.647	-5.003	5.295
Labor Force	2.294	2.272	1.746	-2.398	6.684
GDP growth	1.387	1.688	1.042	-3.111	2.792
Exchange rate	3.325	2.239	2.780	-0.333	10.052
FDI inflows	1.267	1.283	0.778	-2.240	3.473

The estimation results using all of our econometric methodologies for developing countries are presented in Table 2.

Table 2

Entrepreneurship impact on exports in developing countries

	GMM	Fixed effect	First difference
	(1)	(2)	(3)
Entrepreneurship	0.014***	0.038***	0.024**
	(0.006)	(0.005)	(0.010)
Innovation	0.003	-0.008***	0.011*
	(0.004)	(0.003)	(0.007)

	GMM	Fixed effect	First difference
	(1)	(2)	(3)
FDI Inflows	0.027***	0.025*	-0.001
	(0.003)	(0.013)	(0.008)
GDP Growth	0.041***	0.043***	0.024***
	(0.002)	(0.010)	(0.004)
Labor Force	-0.121***	-0.858***	-0.086
	(0.030)	(0.108)	(0.165)
Exchange Rate	0.012	0.045*	0.167***
	(0.037)	(0.028)	(0.042)
Constant	NA	5.079***	-0.006
		(0.250)	(0.005)
AR (1)	0.000	NA	NA
AR (2)	0.441	NA	NA
Sargan (p-value)	0.316	NA	NA
R^2	NA	0.874	0.066
No. of Observations	683	761	722
No. of countries	39	39	39

****, **, * denote level of significance at: ***p<0.01, **p<0.05, and *p<0.1*

The results exhibit that entrepreneurship has a positive significant impact on Export in developing countries. In column (1) according to the GMM estimation results if there is a 1 percent increase in entrepreneurship the export would increase by 0.014 percent. GMM results show that the effect of entrepreneurship on exports is positive and highly significant at 1% in developing countries. In developing nations, higher rates of entrepreneurial activity are linked to faster rates of economic growth. It is apparent that the export orientation of entrepreneurial activity is more important for growth than overall entrepreneurial activity. In market economies, entrepreneurs are necessary because they can act as the wheels of the developing nation's economy. They encourage new employment by producing new goods and services, which eventually promotes exports and in turn economic growth. Entrepreneurship creates lots of new chances and jobs. In order to transform unskilled workers into skilled ones, entrepreneurship develops a large number of entry-level positions. Furthermore, it prepares and transfers experienced personnel to big enterprises. The increase in the total employment of developing countries largely depends on the increase in entrepreneurship.

The Sargan test examines the viability of over-identifying restrictions and is based on the supposition that model parameters are identified by limits on the coefficients. By creating a quadratic form based on the cross-product of the residuals and exogenous factors, the test statistic may be calculated using the residuals from instrumental variables' regression. The Sargan test's null hypothesis is that the Instruments are all exogenous (Ho). The p-value of the Sargan test of over-identifying restrictions must be greater than 10% the p-value of the Hansen statistic should be as high as possible. However, Roodman (2006) states that a Sargan p-value of more than 0.25 is advised. In this study, Hansen's p-value is 0.316. This leads us to accept the null hypothesis that over-identifying restrictions are valid.

The Arellano-Bond test is a correlation analysis based on the estimated residuals. The usual coefficient covariance matrix is used by default for the computation. The Variance-Covariance Matrix (vcov) argument can be used to provide a reliable estimation for this covariance matrix. When estimating dynamic models involving panel data, the Arellano-Bond estimator is a generalized method of moment estimation. The initial difference equations and levels are both present in the GMM-SYS estimator. In place of the typical first difference GMM estimator, it offers an alternative. In this study, the AR_1 p-value is 0.000 and the AR_2 p-value is 0.441. There is the absence of second-order serial correlation that renders the estimations valid.

Innovation and exchange rate impact on export according to GMM results is positive but insignificant. All other variables have statistically significant and positive effects on exports in developing countries. Specifically, FE FDI inflows show a positive significant impact on exports. This suggests that the governments of developing countries need to encourage foreign

investors to invest in host countries in order to boost exports.

In column (2) the fixed effect (FE) model results exhibit that entrepreneurship has a positive significant impact on exports. If there is a 10 percent increase in entrepreneurship there will be a 0.388 percent increase in exports in developing countries However, Innovation and the labor force have a negative impact on exports in developing countries. All other variables are also statistically significant and have expected signs. Entrepreneurship has a positive impact on exports in developing countries which means if entrepreneurship increases, the exports in developing countries also increase.

In column (3) the first difference (FD) model results show that entrepreneurship also positive and significant impact on exports in developing countries and innovation, exchange rate, and GDP growth results in the first difference model are also positive. Innovation is significant at 10% and exchange rate and GDP growth are significant at 1 %.

If there is a 1 percent increase in entrepreneurship, the export would increase by 0.024 percent and if there is a 1 percent increase in innovation the export would increase by 0.011 percent. According to the first difference model results, FDI inflow impact on export is negative but insignificant. However, GDP growth and exchange rate have a significant positive impact on exports in developing countries.

Our next step is to analyze the impact of entrepreneurship on exports in low and lower-middle-income countries. The results are shown in Table 3.

Table 3

Estimation of the entrepreneurship impact on exports in Low, lower-middle-income countries

Dependent Variable	Exports		
	GMM	Fixed effect	First difference
	(1)	(2)	(3)
Entrepreneurship	0.032	0.052***	0.017
	(0.032)	(0.007)	(0.015)
Innovation	-0.008	-0.018***	0.017*
	(0.023)	(0.005)	(0.011)
FDI Inflows	0.001	0.061*	-0.003
	(0.011)	(0.018)	(0.011)
GDP Growth	0.029	0.083***	0.022***
	(0.037)	(0.018)	(0.008)
Labor Force	-0.127	-0.656***	-0.345
	(0.346)	(0.234)	(0.273)
Exchange Rate	0.095	0.069*	-0.039
	(0.143)	(.053)	(0.073)
Constant	NA	4.431***	-0.011
		(0.550)	(0.009)
			4)
AR_1	-3.921	NA	NA
AR_2	0.049	NA	NA
Hansen	0.333	NA	NA
R^2	NA	0.856	0.042
Observations	338	376	357
No. of countries	19	19	19

****, ** and * denote significance: ***p<0.01, **p<0.05, *p<0.1*

In column (2), the fixed effects (FE) model results show that entrepreneurship has a significant impact on exports in low and lower-middle-income countries, and innovation impacts on exports are negative and significant. However other variables, FDI inflows, and GDP growth also impact exports positively and significantly. GDP growth is significant at 1%.

In columns (1) and (3) results show that entrepreneurship has a positive but insignificant

impact on export in low and lower-middle-income countries. The reason for these results may be that in lower-middle-income countries, individuals' income levels are very low, and they are not able to start a new business. The second reason is that there is no advanced level of technology for entrepreneurship in lower-middle-income countries. Innovation's impact on export in low and lower-middle-income countries is negative and insignificant in column (1).

In column (3) innovation and GDP growth have a positive significant impact on export. Innovation is significant at 10% and GDP is significant at 1%. FDI inflows, labor force, and exchange rate also impact on export is positive and insignificant. Hansen's test result is 0.333.

Our next analysis concerns the impact of entrepreneurship on exports in upper-middle-income countries. The results are shown in table 4.

Table 4

Estimation of the entrepreneurship impact on exports in upper-middle-income countries

Dependent Variable	Exports		
	GMM	Fixed effect	First difference
	(1)	(2)	(3)
Entrepreneurship	0.000	0.019***	0.037***
	(0.044)	(0.007)	(0.015)
Innovation	0.040	0.001	0.001
	(0.031)	(0.005)	(0.009)
FDI Inflows	0.074***	-0.018	0.000
	(0.028)	(0.021)	(0.012)
GDP Growth	0.027*	0.025**	0.027***
	(0.019)	(0.011)	(0.004)
Labor Force	-0.226	-1.155***	-0.328*
	(0.358)	(0.126)	(0.197)
Exchange Rate	0.070	0.042*	0.307***
	(0.141)	0.032)	(0.048)
Constant	NA	5.714***	-0.004
		(0.265)	(0.006)
AR_1	-1.944	NA	NA
AR_2	0.071	NA	NA
Hansen	0.627	NA	NA
R^2	NA	0.905	0.167
Observations	345	385	365
Number of countries	20	20	20

****, ** and * denote significance: ***p<0.01, **p<0.05, *p<0.1*

The results show that FDI inflows and GDP growth have a positive impact on exports in upper-middle-income countries but in column (2) FE results show that entrepreneurship has a positive and significant impact on exports in upper-middle-income countries. If there is a 1 percent increase in entrepreneurship the exports would increase by 0.0196 percent. Entrepreneurship is significant at 1%. According to FE results GDP growth and exchange rate have also positive effects on exports in upper-middle-income countries. Innovation, labor force, and FDI inflows have insignificant impact on exports.

In column (3), the first difference model results show that entrepreneurship has also a positive impact on exports, consistent with FE model results. Entrepreneurship is significant at 1%. If entrepreneurship increases by 10% the exports increase in upper-middle-income countries by 0.374 percent. Innovation and FDI inflows play no significant role in boosting exports in upper-middle-income countries.

Conclusion

This study analyzed the impact of entrepreneurship on exports in developing countries. There have been many studies conducted on this topic for developed countries but not for developing countries. This study was useful to know the impact of entrepreneurship on

exports for developing countries. Panel data of 39 developing countries was taken for the period 2001-2020. The study applied the three econometric methodologies such generalized method of moments (GMM), the Fixed effect model (FE), and the First difference model on panel data in order to analyze the effects of entrepreneurship on exports.

The empirical findings of GMM, FE, and First difference demonstrate Entrepreneurship has a significant impact on exports in developing countries. However, in low and lower-middle-income countries only the FE model result is positive and significant. Further, FE and FD entrepreneurship results are significant for upper-middle-income countries. The study generally found that entrepreneurship has a positive impact on exports in developing countries.

The entrepreneurial sector is important to the development of the economy of any country. Export is an essential element to boost the economy, and both developed and developing nations are attempting to achieve this by implementing policies that lead to entrepreneurship and allow them to continuously increase their exports. Entrepreneurship is an important determinant of a country's exports and economic growth of a country.

In developing countries, the major issue is the entrepreneurial framework which seriously needs to be reformed. High levels of corruption and weak property rights are among the main issues for developing nations. Entrepreneurs should work hard and effectively so that exports and economic development are boosted. Export is the main source of increased economic development in the country.

Policymakers should take all the important steps to make institutions strong and effective so that entrepreneurs can feel that their investments are safe in the country. Entrepreneurship has to be supported and encouraged by policymakers in order for exports to grow and develop.

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