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THE IMPACT OF FEMALE ENTREPRENEURSHIP ON ECONOMIC GROWTH IN DEVELOPING AND DEVELOPED ECONOMIES

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ABSTRACT

Significance. The development of women's entrepreneurship is still a largely untapped potential for growth and prosperity. The economic role of women is crucial for growth and a more equitable distribution of wealth. Economic opportunities are much more important for women today than for the previous generation, especially for developing countries. In this regard, the impact of women's entrepreneurship on economic growth is an important area of research reflecting broader interests in gender equality, economic development and human resource optimization. Objectives. Analysis of the impact of women's entrepreneurship on the economies of developed and developing countries and the development of some recommendations for the development of women's entrepreneurship. Methods. For this study, the method of ordinary least squares (OLS) was used, which analyses the impact of women's entrepreneurship on economic growth in developed and developing countries in the period 2012-2022. Results. The under-development of women's entrepreneurship represents untapped potential for growth and prosperity in many countries. In this regard, there is an urgent need to create more favourable conditions for the development and strengthening of women's entrepreneurship, more thoughtful policies and decisive measures aimed at empowering women are crucial. The results obtained in the course of this study are important for the development of theoretical and methodological foundations for the study of women's entrepreneurship. The results of the study may be useful for women entrepreneurs, NGOs/NGOs, development institutions and government agencies.

Keywords: *women's entrepreneurship, entrepreneurial approach, human capital, economic growth, economic potential*

1. INTRODUCTION

Indeed, recently there has been a surge of interest around the world in the development of women's entrepreneurship and the study of policies to support women's participation in entrepreneurship. Moreover, the under-development of women's entrepreneurship represents untapped potential for growth and prosperity in many countries (Bandur, 2016). Through entrepreneurial activity, women create jobs, generate income, participate in the development of economic independence and contribute to sustainable development. While there is an urgent need to create a more enabling environment for the development and strengthening of women's entrepreneurship, more thoughtful policies and decisive measures aimed at empowering women are crucial.

Women's entrepreneurship is a complex phenomenon and faces a double challenge. On the one hand, entrepreneurship is a social phenomenon; on the other hand, gender is a social construct. Despite the progress made in the research of women entrepreneurs, they still depend on their male colleagues in terms of literature and, above all, on the models used to study them.

The ability of women to provide economic growth and jobs justifies research interest in this area. However, although their contribution to economic development has only recently been recognized and appreciated, women have always played an important economic role in society.

The purpose of this scientific work is to analyze the impact of women's entrepreneurship on the economies of developed and developing countries and to develop some recommendations for the development of women's entrepreneurship.

The central question of this study is: what is the impact of women's entrepreneurship on economic growth in developed and developing countries?

To answer this question, two hypotheses have been formulated related to the adoption of women's entrepreneurship as a vector of economic growth. These hypotheses will guide our analysis:

H1: The impact of women's entrepreneurship improves well-being and accelerates economic growth.

H2: The level of human capital contributes to the development of women's entrepreneurship.

2. LITERATURE REVIEW

The difficulty of this study lies in the fact that the topic of women's entrepreneurship does not have its own theoretical basis. Research on this topic has borrowed from traditional male-oriented business models. Moreover, most of the work is empirical in nature and does not address theoretical issues.

Interest in women entrepreneurs has continued to grow since the first studies were published in the 1970s, with a particular development in the early 1990s, due to the interest of the U.S. Secretary of Labor in barriers that prevent women from holding high responsible positions (Chatterjee at al., 2019).

In developing countries, women have always played a leading role in ensuring family stability and economic development. However, they are less involved in decision-making at the national level due to cultural and religious prejudices (Vlasenko, 2023). Because of these prejudices and cultural stereotypes, women are often perceived only as mothers and wives, and their functions are limited to domestic and reproductive activities (Koshulko, 2018). This deprives women of a sense of initiative and makes them dependent on men in developing societies.

In both developed and developing countries, much attention is paid to the relationship between the economic development of a country and women's entrepreneurship, especially in terms of its contribution to reducing poverty and inequality through job creation and, above all, to the empowerment of women. It is impossible to talk about the empowerment of women without also mentioning women's entrepreneurship, since they are inseparable. The contribution of women's entrepreneurship is becoming increasingly important for the economic development of many countries.

The economic and social crises caused by the Covid-19 pandemic have prompted the community of researchers, scientists, specialists and experts in the field of economics and management, crisis management and human resource management to call for the introduction of new strategies and mechanisms adapted to crisis conditions (Al-Ansi et al., 2022).

The Covid-19 pandemic has had a serious impact on women's entrepreneurship. The measures imposed by the State, including physical distancing, market closures and travel bans between

regions, applied to all companies, be they construction, beauty or training centres (Elam et al., 2021). Women working in the hospitality and tourism sectors have been hardest hit, as their activities have been curtailed or interrupted. However, thanks to the introduction of e-commerce through the creation of Facebook pages, websites or online sales platforms, some female managers and entrepreneurs have been able to continue running their businesses remotely. Women's entrepreneurship may even be one of the solutions to the current economic crisis.

Culture in this context plays a crucial role in learning and decision-making, and, consequently, in management. Marsan & Sey (2021) investigated a specific aspect of management, namely human resource management; agreeing with the data available in the literature on gender diversity, as well as on motivation, character traits, human and financial capital and performance, the author concluded that the way of doing business also depends on the gender of the entrepreneur. However, it is important to distinguish between entrepreneurship and leadership (Puška et al., 2020). It has been found that women delegate more authority than men and prefer more active leadership; this management style also depends on culture.

Some studies show that female entrepreneurs set the same goals for high profitability and growth as men (Chikh-Amnache & Mekhzoumi, 2023). Some authors go so far as to establish that the survival rate of women-owned companies is higher (Vracheva & Stoyneva, 2020) and that the growth prospects for both companies are very similar and even slightly higher for women (Franzke et al., 2022).

Burga et al. (2021) assessed the impact of women's entrepreneurship on economic growth in Benue State, Nigeria, and found that women's entrepreneurship in the Nigerian state of Benue is currently unable to stimulate economic growth. Al-Qahtani et al. (2022) explored the impact of empowerment on Pakistan's economic development; her work shows that countries that do not prioritize women's empowerment will maintain lower economic growth rates. Deepa et al. (2022) concluded that women's entrepreneurship contributes to economic growth in developed and developing countries.

According to Ojediran, & Anderson (2020), research on women's entrepreneurship has been conducted mainly in developed countries and, to a lesser extent, in developing countries such as Cameroon. Most entrepreneurship research focuses on men.

Several studies have shown that giving women the opportunity to start their own business will have a positive impact on society in general and on the family in particular (Sallah & Caesar, 2020). Sajjad et al. (2020) argue that income generation will allow women not only to participate in household expenses (Wang & Hu, 2024), but also to be able to meet their own needs, in exchange for which men exchange some of their decision-making powers (Andrejić & Pajić, 2023).

Vial & Richomme-Huet (2017) conducted a study in France of female managers of small and medium-sized enterprises with employees from 10 to 250 people. The aim was to provide an overview of the place of women in the management of these enterprises. The study conducted a statistical analysis of the data of 483 SME managers collected during the Ariane study. The analysis was carried out on the basis of a telephone questionnaire using scales of measurement verified in the literature. Both authors organized the collected data on two topics: on the one hand, a description of the female leader, her access method and profile; and on the other hand, their goals, management style and investments in the network of women leaders. The study concluded that French society is resisting change (gender inequality persists in many areas), but significant progress has been made in the management of SMEs; in addition, it turned out that 35% of female executives integrate their spouses into the company, while only 24% of companies run by men have spouses.

Similarly, UNEP (2020) conducted a study on women's entrepreneurship in Morocco, focusing on the entrepreneurial environment and its contribution to economic and social development. The study attempts to describe and analyze the experience of women entrepreneurs in Morocco who work in a very difficult, if not hostile, socio-economic and cultural context. The study is based on the results of a survey conducted with a representative sample of 300 women entrepreneurs and showed that women's businesses have limited access to information about sources, price fluctuations, market needs, business opportunities, taxation, legalization, subsidies or subsidy programs. It is difficult for these enterprises to cope with strong competition and a hostile environment. In addition, due to the insufficient training they employ, women entrepreneurs tend to have great difficulty accessing appropriate sources of finance, and finally, it has been found that only a few women entrepreneurs are well versed in supply chain, manufacturing/processing and marketing.

World Bank Group (2020) analyzed the role of women entrepreneurs in poverty reduction in Kenya. Based on a 15% sample selected from a target group of 664 women entrepreneurs, data was collected through interviews with 26 women entrepreneurs and a questionnaire was distributed. Using a qualitative and quantitative data processing approach supported by SPSS software, the study concluded that women entrepreneurs play an important role in poverty reduction in Kenya. In particular, the study showed that there was a significant improvement in the economic and social status of women who worked in small and medium-sized enterprises selling shoes and clothing, as well as porcelain and sculpture. Finally, the study also revealed indicators of poverty reduction in society, such as the ability to meet basic needs, the ability to pay for children's education, have a high standard of living and easy access to healthcare.

UN Women (2022) conducted a study of the determining factors of women's entrepreneurship in the city of Bukavu. Combining qualitative (interviews with 30 women) and quantitative (questionnaires) approaches, the study aimed to identify the main factors that encourage women in Bukavu to become entrepreneurs. Data collected from a sample of 213 female entrepreneurs after processing using SPSS version 16.0, factor analysis, content analysis and multiple regression using the ANOVA test revealed various independent variables such as the age of the entrepreneur, marital status, number of children, level of education, experience, motivation, goals and occupation of the parents. The average age of women entrepreneurs was 39.6 years, while 53.09% of them are married and have an average of four children; the average age of children is at least 13 years.

Along with this important study was OECD (2021), who studied women's entrepreneurship in 34 countries, focusing on the relationship between women's entrepreneurship and the level of per capita income (GDP) in countries using GEM data. This study shows that the level of GDP per capita has a significant relationship with the differences between men and women in their entrepreneurial behavior, which leads to the conclusion that women's entrepreneurship is often entrepreneurship by necessity. However, individual perceptions also play an important role, while individual demographic and economic circumstances are relatively unimportant.

Thus, if we talk about the latest research in this area, then based on the accumulated knowledge about women's entrepreneurship, various studies point to many shortcomings. For example, Satpayeva et al. (2020) suggests methodological flaws, but also that some of the topics discussed require further explanation. Further research may clarify the role that women can play in wealth creation, the place of women in society and the motivation of women to participate in society, as well as identify the characteristics of women's entrepreneurship and the difficulties that women face when starting a business.

In this study, women's entrepreneurship is seen as a source of growth, jobs and innovation. In both developed and developing countries, women's entrepreneurship is considered by govern-

ments, analysts and investors as one of the driving forces of development and a source of employment, and it is given special attention in all economic and social policies. Entrepreneurship, or microenterprise, which is more prominent in the informal sector of developing countries, includes all types of economic activities that can solve the problem of access to employment in these countries in situations of formal employment shortage.

3. 3. METHODOLOGY

3. 1. DATA SOURCES AND MODEL SPECIFICATION

3. 1. 1. DATA SOURCES

The data used in this study comes from secondary and multiple sources. Information on GDP per capita, women's school enrolment rate, fertility rate, women's representation in parliament, and women's entrepreneurship is taken from the World Bank's World Development Indicators 2023 database provided by the World Bank Online (WDI, 2023), and covers the period from 2012 to 2022. The missing data is supplemented by data available in the UNDP 2022 database, CEMAC, UNESCO, and the University of Sherbrooke website.

3. 1. 2. MODEL SPECIFICATION

To estimate the impact of women's entrepreneurship on economic growth in developed and developing countries, we used Solow's (Hagemann, 2009) growth model and Barro's (1990) model. Thus, the Cobb-Douglas model of technological progress can be written as follows:

$$Y = F(K, H, AL) \quad (1)$$

where Y is the total income, K is the stock of physical capital, L is the amount of labour (assimilated or assumed proportional to the population), H is the stock of human capital, and A is the measure of neutral technological progress, in Harrod's sense.

The assumption of constant return makes it possible to write this ratio by expressing the values "per effective unit of labour", i.e.:

$$y = f(k,h) \quad (2)$$

Where is

$$y = \frac{Y}{AL}, k = \frac{K}{AL}, h = \frac{H}{AL} \quad (3)$$

Returning to the model of Noori et al. (2020), we tested at a linear regression model in which the dependent variable is GDP per capita and the rest are exogenous. The choice of this model is due to its structure, which is saturated with several variables that reflect the economic, political, social, and institutional characteristics of the country. In addition, the study was conducted in both developed and developing countries, considering its specificity in terms of data. The general structure of the model we have chosen is as follows:

$$\text{Ln GDP / capita} = f(\text{cte, TFER, PFP, ENTF, KHU, INTF}) \quad (4)$$

which, in its linear formulation, is written as:

$$\text{LnGDP/capita} = \beta_0 + \beta_1 \text{LnTFER}_t + \beta_2 \text{LnPFP}_t + \beta_3 \text{LnENTF}_t + \beta_4 \text{LnKHU}_t + \beta_5 \text{LnINTF}_t + e_t \quad (5)$$

- where Ln is the natural logarithm; t-index indicates time; β_0- constant $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$
- e_t: Error;
- GDP: Annual economic growth rate in %;

- TFER: Fertility rate, %;
- PFP: Proportion of women in parliament;
- ENTF: Women's entrepreneurship;
- KHU: Rate of female participation in the business sector;
- INT: Internet usage as % of GDP.

Equation (4) reflects the cointegration relationship, while equation (5) below reflects the existence of an error-correcting mechanism:

$$\Delta \ln GDP/capita = d_0 + d_1 \Delta \ln TFER_t + d_2 \Delta \ln PFP_t + d_3 \Delta \ln ENTF_t + d_4 \Delta \ln KHU_t + d_5 \Delta \ln INT_t + a_6 \Delta \hat{e}t - 1 + \varepsilon_t \quad (6)$$

Where is a parameter that shows the long-term equilibrium return of the endogenous variable. It must be significantly different from zero to confirm the existence of an error correction mechanism.

Δ is the primary difference of each variable to which it is assigned, êt-1 is the value of the period lag error term, and the error term satisfies the classical assumptions. To determine the characteristics of the time series, various tests need to be run. The stationarity of the series is a fundamental hypothesis in the application of OLS; cointegration provides a solid theoretical basis for dynamic modelling and allows for coherent identification of long-term properties of the time series. We will test for stationarity, cointegration, and residuals using tests for normality, heteroscedasticity, autocorrelation, and significance

The influence of all of the above factors on GDP is determined for developing and developed countries in order to identify the differences in the constructed model.

3. 2. DESCRIPTION OF VARIABLES

3. 2. 1. ENDOGENOUS VARIABILITY

In order to measure the impact of women's entrepreneurship on economic growth, we will use GDP per capita as the dependent variable, as it is the most widely used indicator of economic activity. It should have a positive sign.

3. 2. 2. EXOGENOUS VARIABLES

Women's entrepreneurship (ENTF) is measured by the number of startups. Various studies analysing the relationship between entrepreneurship and economic growth have yielded mixed conclusions that do not allow for a clear link between entrepreneurship and economic growth.

Technological change and innovation have become key determinants of economic performance, touching all spheres of society. Therefore, the sign is expected to be positive.

Fertility rate: The fertility rate is a statistical indicator that measures the tendency of a population to naturally increase or decrease. The birth rate depends on the fertility rate, and is used to calculate the natural variability of the population.

Proportion of women in parliament: This variable measures the presence of women in parliament in order to represent and defend their interests; its sign is ambiguous because the proportion is not well defined.

Once the different variables have been identified, we will present their abbreviations and expected characteristics in Tables 1 and 2, respectively.

Table 1. List of variables

Variables	Reduce	Measurement
Entrepreneurial Level	ENTF	Number of newly established businesses
Gross Domestic Product/Per Capita	GDP/capita	(GDPt - PIBt-1)/ PIBt-1
Women in Entrepreneurship, %	KHU	Female participation rate in the business sector
Technological Knowledge	INT	Share of Internet users in the population
Proportion of women in Parliament	PFP	% in percentage)
Fertility rate	TFER	% (%)

Source: by authors

Table 2. Expected Signs

Influence of X on Y	GDP
ENTF	+/-
KHU	+/-
INT	+/-
PFP	+/-
TFER	+/-

Source: by authors

4. RESULTS OF THE STUDY

First, we will check the stationarity of the series used, to avoid false regressions. This will allow us to evaluate the long-term and short-term model and, finally, present and analyse the results.

4. 1. STATIONARITY TEST RESULTS

The results of the single root test using DFA and PP are summarised in Table 3 below.

Table 3. Stationarity test results

Variables	In the level		Difference 1		Difference 2		Conclusion
	ADF	PP	ADF	PP	ADF	PP	
ENTF	-4,182	-11,493	/	/	/	/	I(0)
GDP/capita population	-1,929	-1,056	-2.668S	-2.274	/	/	I(1)
KHU	-2,951	-2,067	-2,427	-2,449	/	/	I(1)
INT	-0,334	-0,334	-4,412	-2,001	/	/	I(1)
TFER	0,478	-8,529	-2,286	/	/	/	I(0) I(1)
PFP	-1,532	-1,532	- 2,792	- 2,792	/	/	I(1)

Source: calculated by authors: Steady-state variables at: a=1%; b= 5%; c= 10%

The test includes: intersection, trend and constant.

The test results show that the variables are integrated in the first order, with the exception of the

ENTF, which is integrated in the zero order. In other words, integral variables of order 1 are not stationary at that level, but stationary at the first difference.

As a result, we can move on to cointegration between combinations of stationary series, while presenting long-term and short-term results.

4. 2. PRESENTATION AND ANALYSIS OF THE RESULTS OF COINTEGRATION

As a result of linear regression using MS Excel, data on variable statistics were obtained (for developed and developing countries).

Table 4. Correlation matrix for developed countries

	ENTF	TFER	GDP	KHU	INT	PFP	GDP/capita
ENTF	1	-0,514	-0,152	0,310	0,859	0,795	0,663
TFER	-0,514	1	0,210	0,451	-0,122	0,018	-0,462
GDP	-0,152	0,210	1	0,451	0,071	0,148	0,376
KHU	0,310	0,451	0,451	1	0,639	0,743	0,237
INT	0,859	-0,122	0,071	0,639	1	0,904	0,626
PFP	0,795	0,018	0,148	0,743	0,904	1	0,421
GDP/capita	0,663	-0,462	0,376	0,237	0,626	0,421	1

Source: calculated by authors

Based on the matrix, a strong positive correlation can be observed between GDP per capita and ENTF and INT.

Statistical indicators are presented in Table 5.

Table 5. Statistics for developed countries

Observations	11
Sum of weights	11
DF	4
R^2	0,968
Adjusted R^2	0,919
MSE	446236,826
RMSE	668,010
MAPE	0,799
DW	2,468
Cp	7,000
AIC	145,967
SBC	148,752
PC	0,145

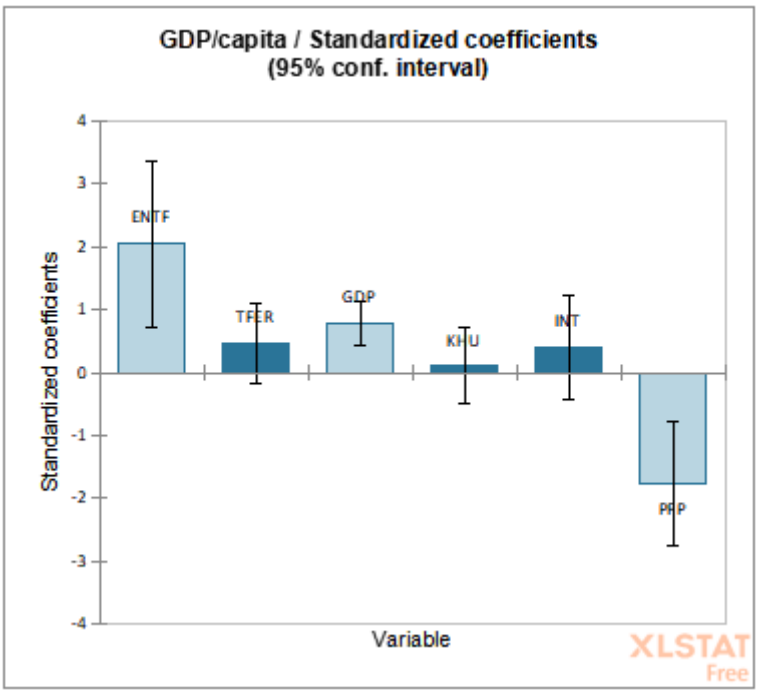
Source: calculated by authors

The coefficient of determination for developed countries ($R^2 = 0.968$) shows that the variables in the model explain 96.8% of GDP per capita. Another important point is the value of the adjusted coefficient of determination. Indeed, for the design specification, the adjusted R^2 (0.919) is greater than 90%. This means that the determinants we have chosen are relevant. They accounted for almost 91.9% of the economic growth of developed and developing countries from

2012 to 2022, the period covered by this study.

Analysis of the correlogram (Figure 1) shows that the remnants of the long-term model are not autocorrelated, since the probability of the test (the Leung-Box test) for delay 9 is 0.405 greater than 5%, so the white noise residue hypothesis is accepted.

Figure 1. Correlogram for developed countries



Source: calculated by authors

The parameters of the model are presented in Table 6.

Table 6. Model parameters for developed countries

Source	Value	Standard error	t	Pr > |t|	Lower bound (95%)	Upper bound (95%)	p-values signification codes
Intercept	-53295,569	28993,129	-1,838	0,140	-133793,400	27202,261	°
ENTF	9,277	2,148	4,318	0,012	3,312	15,242	*
TFER	33237,835	16352,866	2,033	0,112	-12164,998	78640,668	°
GDP	308,735	49,621	6,222	0,003	170,965	446,506	**
KHU	90,476	201,342	0,449	0,676	-468,539	649,491	°
INT	1513,682	1140,654	1,327	0,255	-1653,280	4680,644	°
PFP	-1039,454	208,142	-4,994	0,008	-1617,348	-461,560	**
Signification codes: 0 < *** < 0.001 < ** < 0.01 < * < 0.05 <. < 0.1 < ° < 1							

Source: calculated by authors

Based on individual relevance, we can argue that women's entrepreneurship, fertility rates, and technological knowledge largely explain long-term economic growth in developed countries. The model of linear regression is as follows:

$$\begin{aligned} GDP/capita = {} & -53295{,}5693667501 + 9{,}27675724284005 * ENTF + 33237{,}8351581379 \\ & * TFER + 308{,}735259587714 * GDP + 90{,}4759232118197 * KHU \\ & + 1513{,}68201126223 * INT - 1039{,}4538258125 * PFP \end{aligned}$$

Table 7 shows the standardised coefficients.

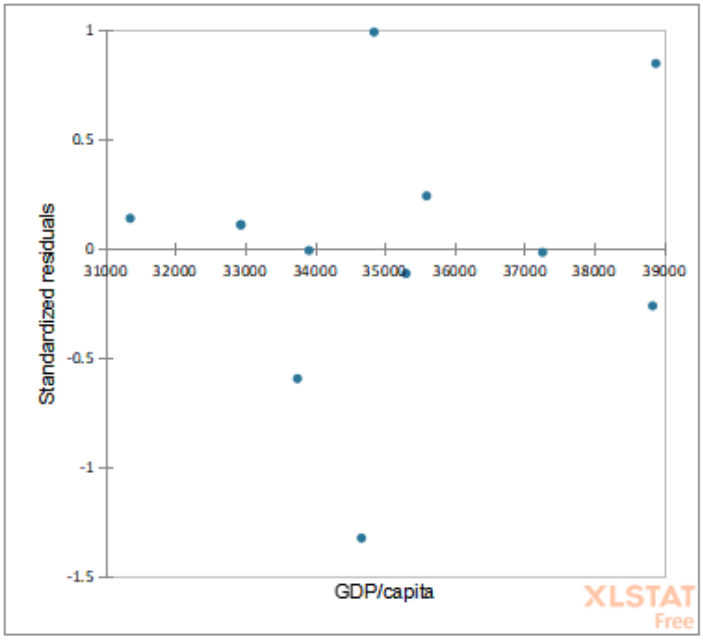
Table 7. Standardised odds for developed countries

Source	Value	Standard error	t	Pr > |t|	Lower bound (95%)	Upper bound (95%)	p-values signification codes
ENTF	2,050	0,475	4,318	0,012	0,732	3,368	°
TFER	0,465	0,229	2,033	0,112	-0,170	1,100	*
GDP	0,779	0,125	6,222	0,003	0,431	1,126	°
KHU	0,098	0,218	0,449	0,676	-0,506	0,702	**
INT	0,397	0,299	1,327	0,255	-0,434	1,229	°
PFP	-1,763	0,353	-4,994	0,008	-2,744	-0,783	°
Signification codes: 0 < *** < 0.001 < ** < 0.01 < * < 0.05 <. < 0.1 < ° < 1							

Source: calculated by authors

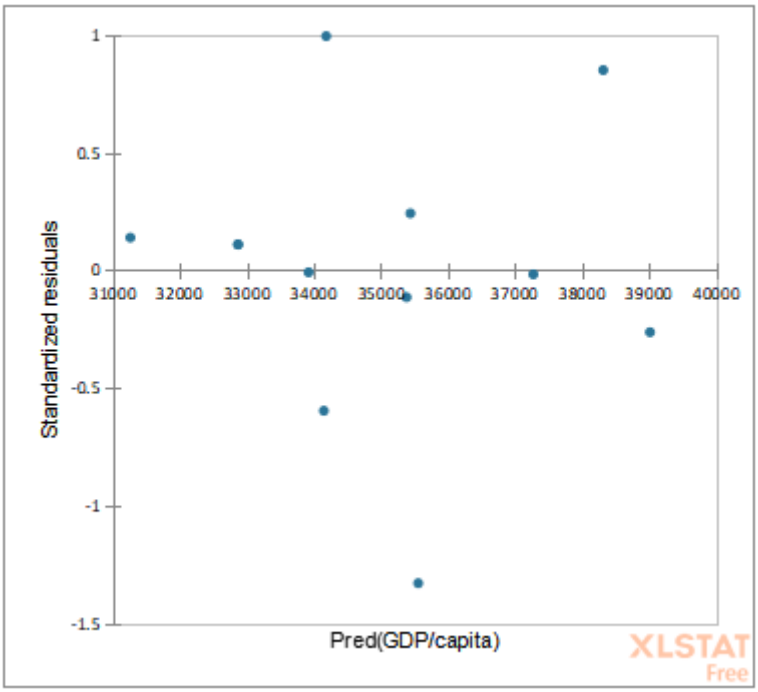
Graphs showing the influence of parameters on GDP per capita are presented in the figures below.

Figure 2. GDP per capita / standardised residuals for developed countries



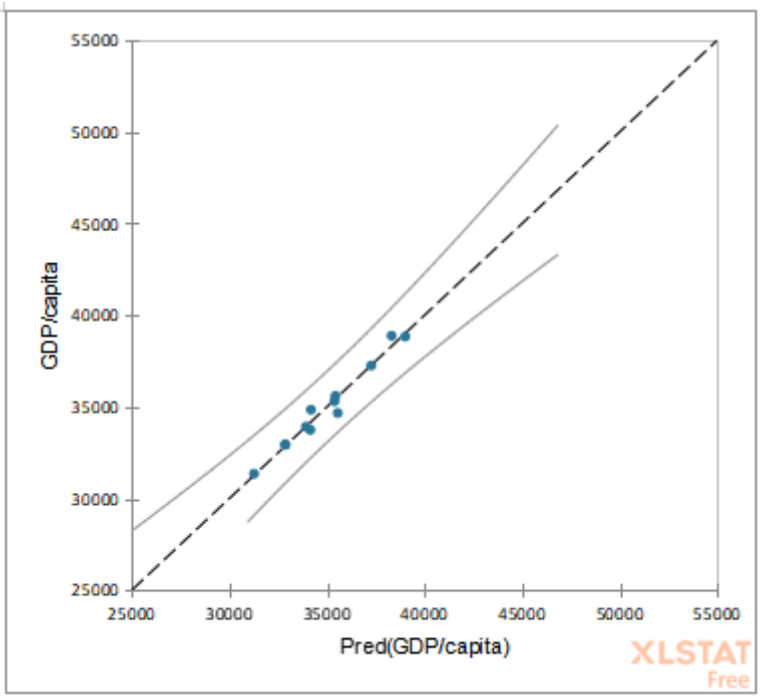
Source: calculated by authors

Figure 3. Predc (GDP/capita) / standardised residuals for developed countries



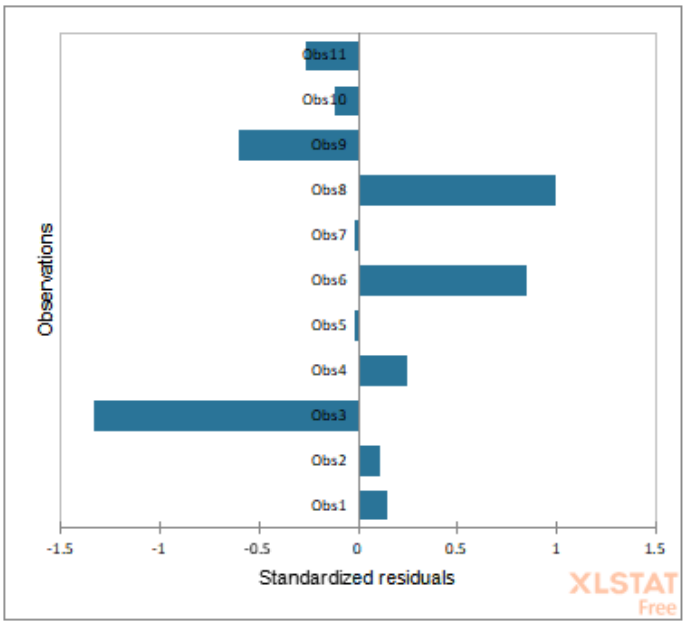
Source: calculated by authors

Figure 4. Pred (GDP percapita) – GDP per capita for developed countries



Source: calculated by authors

Figure 5. Standardised residuals / GDP per capita for developed countries



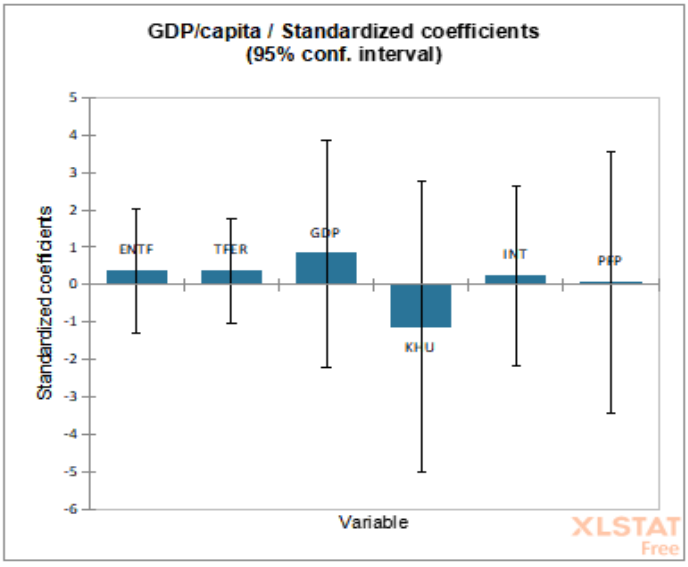
Source: calculated by authors

The female entrepreneurship coefficient is significant at the threshold of 5%, which means that any increase in women's entrepreneurship leads to an increase in economic growth of 0.005 percentage points. Women entrepreneurs and small business owners in developed countries are less successful in terms of expected revenue growth, profits, and the number of employees. The international situation caused by the Covid-19 pandemic has had a major impact on the sector, given the measures taken to mitigate this spread.

The coefficient of determination for developing countries ($R^2 = 0.620$) shows that the variables in the model explain 62.0% of GDP per capita. Another important point is the value of the adjusted coefficient of determination.

Analysis of the correlogram (Figure 6) shows that the remnants of the long-term model are not autocorrelated, since the probability of the test (the Leung-Box test) for delay 9 is 0.405 greater than 5%, so the white noise residue hypothesis is accepted.

Figure 6. Correlogram for developing countries



Source: calculated by authors

The parameters of the model are presented in Table 8.

Table 8. Model parameters for developing countries

Source	Value	Standard error	t	Pr > |t|	Lower bound (95%)	Upper bound (95%)	p-values signification codes
Intercept	25856,296	4640,480	5,572	**0,005**	12972,259	38740,333	°
ENTF	1,034	1,676	0,617	0,571	-3,619	5,686	*
TFER	1655,518	2329,082	0,711	0,516	-4811,049	8122,086	°
GDP	61,325	81,139	0,756	0,492	-163,953	286,603	**
KHU	-343,828	430,951	-0,798	0,470	-1540,340	852,683	°
INT	884,348	3240,316	0,273	0,798	-8112,211	9880,906	°
PFP	5,164	542,437	0,010	0,993	-1500,883	1511,210	**
Signification codes: 0 < *** < 0.001 < ** < 0.01 < * < 0.05 <. < 0.1 < ° < 1							

Source: calculated by authors

The model of linear regression is as follows:

$$\frac{\text{GDP}}{\text{capita}} = 25856{,}296 + 1{,}034 * \text{ENTF} + 1655{,}518 * \text{TFER} + 61{,}325 * \text{GDP} - 343{,}828 * \text{KHU} + 884{,}348 * \text{INT} + 5{,}164 * \text{PFP}$$

Based on individual relevance, we can argue that women's entrepreneurship, fertility rates, and technological knowledge largely explain long-term economic growth in developing countries.

5. DISCUSSION

The main purpose of this study was to assess the impact of women's entrepreneurship on economic growth. To measure these relationships, we used the OLS method. We found that women's entrepreneurship is dominated by the informal sector, which indirectly affects economic growth. In addition, women face various difficulties and limitations in running their business, and some factors limit their actions in terms of entrepreneurship. There is also a need for more targeted initiatives to support women entrepreneurs and women who want to start their own businesses.

At the theoretical level, this study presents a number of points of view that make it possible to understand the macroeconomic work related to women's entrepreneurship. The literature highlights the positive impact of entrepreneurship on socio-economic development. This research contributes to the creation of new literature, as well as sheds light on the concept of entrepreneurship (necessity and growth) and the problems that exist in the face of the current crisis.

There is no single model that can realistically represent the structure of the entire economy in all its complexity. Economic models are not the ultimate goal, but a set of tools that make it easier and more rigorous to forecast economic growth. It should be noted that statistics on most macroeconomic aggregates are recent and that where they exist, these variables are often of approximate quality. In this regard, the analysis presented here has some limitations regarding various points that require further study.

In the course of the study, the authors concluded that the female entrepreneurship coefficient is significant at the threshold of 5%, which means that any increase in female entrepreneurship leads to an increase in economic growth by 0.005 percentage points. This result does not contradict the results of the literature review.

As for the birth rate, it is positive and significant in developed countries (Protsenko, 2023). This

result can be explained by the fact that an increase in the birth rate can have a beneficial effect on education, health care and the working-age population. On the other hand, technological knowledge is positive and significant, this can be explained by the convergence of all sectors of society towards the introduction of social networks and e-commerce.

Unfortunately, women entrepreneurs in developing countries often have very limited access to marketing networks, capital, loans and technical knowledge, which are crucial to improving the competitiveness of their enterprises. In this regard, policies specifically aimed at facilitating access to credit for small enterprises, the organization of exporters' associations and the provision of vocational training technical requirements for compliance with export markets (Radukic et al., 2019), all of which are likely to facilitate the transition of small and microenterprises to a more open market environment for both women and men.

In this regard, there is a need to provide women entrepreneurs with training cycles to improve their business management skills (Haque Mukit et al., 2020). Thus, the priority for women entrepreneurs is to remove obstacles to women's entrepreneurship, promote services to be financially inclusive and comply with trade policies. In addition, some facts point to the limitations of women's entrepreneurship:

- low mobility of women.
- legal and social barriers that limit women's work in general.
- the lack of skills, degrees, and professional training required by the market narrows their opportunities for economic independence.
- poorly developed women's entrepreneurial structure, especially for women who seek to create and run businesses in accordance with the World Bank report (2023).
- unequal access to entrepreneurial opportunities due to the uncompetitive business environment.

Indeed, private sector development should support women entrepreneurs and help them remove obstacles. However, most women in developing countries have microenterprises or small businesses operating mainly in the informal economy. They are almost invisible in large and medium-sized enterprises due to the many obstacles. However, some evidence suggests that women are represented in government institutions and that their leadership potential can develop rapidly. They also face administrative barriers and lack of information, which limit the development of enterprises and hinder the transition from the informal sector to the formal economy.

Thus, the under-development of women's entrepreneurship represents untapped potential for growth and prosperity in many countries. Through entrepreneurial activity, women create jobs, generate income, participate in the development of economic independence and contribute to sustainable development. While there is an urgent need to create a more enabling environment for the development and strengthening of women's entrepreneurship, more thoughtful policies and decisive measures aimed at empowering women are crucial. Thus, it is important to improve the following points: establishing a dialogue between the public and private sectors, improving access to credit and financial services for women's entrepreneurship, providing better public services to improve the competitive business climate, considering gender factors regarding access to information and markets.

As a result, women's entrepreneurship can become one of the main directions of economic development strategies. In order for women to succeed in business development, it is necessary to develop an implementation strategy and at the same time cope with regulatory constraints. Women's entrepreneurship is a key element in strengthening women's economic independence and promoting gender equality in developed and developing countries.

6. CONCLUSION

Currently, women head a third of all formal economy enterprises worldwide. However, most companies operating in developing countries and countries with economies in transition are very small or microenterprises with limited growth potential. In addition to the underrepresentation of women in companies of any size, the larger the company, the less likely it is to be headed by a woman. Social attitudes and social norms prevent some women from even considering starting a business, while systemic obstacles force many women entrepreneurs to remain employed by very small businesses operating in the informal economy. This situation not only limits their ability to earn income for themselves and their families, but also limits their real potential to contribute to socio-economic development, job creation and environmental protection.

Removing barriers such as discriminatory property and inheritance laws, customary law, lack of access to formal financial institutions, and time constraints related to family and household responsibilities could provide more opportunities for sustainable female-led enterprises to grow.

In this way, it would promote women's empowerment and gender equality, as well as job creation. Investing in women is one of the most effective ways to ensure equality and promote inclusive and sustainable economic growth. Investments made in women-oriented programs can have serious development implications, as women tend to spend more of their income on health, education, and the well-being of their families and communities than women people. While targeted measures can simultaneously reduce the gender gap, it is also important to eliminate discriminatory aspects of economic and social policies, programmes and practices that may hinder women's full participation in the economy and society.

In conclusion, it should be noted that this work is only the beginning of a long research process and that several areas of future research, including regional ones, are possible.

REFERENCES

Al-Ansi, N., Uddin, B., & Alhrabi, A. (2022). Factors of Identity Loss in Buraydah City Saudi Arabia. *Journal of Urban Development and Management*, 1(2), 102-114. https://doi.org/10.56578/judm010203

Al-Qahtani, M., Zguir, M., Ari, I., & Koç, M. (2022). Female entrepreneurship for sustainable economy and development – challenges, drivers, and suggested policies for resource-rich countries. *Sustainability*, 14(20). https://doi.org/10.3390/su142013412

Andrejić, M. & Pajić, V. (2023). Optimizing Personnel Selection in Transportation: An Application of the BWM-CoCoSo Decision-Support Model. *Journal of Organizations, Technology and Entrepreneurship*, 1(1), 35-46. https://doi.org/10.56578/jote010103

Bandur, M. (2016). Significance and Role of Small and Middle Entreprises in Economic Development. *ECONOMICS - Innovative and Economics Research Journal*, 4(1), 89-106. https://doi.org/10.1515/eoik-2015-0025

Barro, R. D. (1990) Government Expenditure in a Simple Model of Endogenous Growth. *Journal of Political Economy*, 98 (5), S103-S125. https://dash.harvard.edu/bitstream/handle/1/3451296/Barro_GovernmentSpending.pdf

Burga, L., Gimelli, N., Muradyan, S., Robakowski, A., Miller, M., Rawlins, M., & Snyder, G. (2021). Using digital solutions to address barriers to female entrepreneurship: A toolkit. Washington: The World Bank. https://doi.org/10.1596/35993

Chatterjee, N., Das, N., & Srivastava, N. K. (2019). A structural model assessing key factors affecting women's entrepreneurial success: Evidence from India. *Journal of Entrepreneurship in Emerging Economies*, 11(1), 122–151. https://doi.org/10.1108/JEEE-08-2016-0030

Chikh-Amnache, Sabrina & Mekhzoumi, Lotfi. (2023). The Impact of Female Entrepreneurship on Economic Growth in the Asean Countries: *A Panel MM-QR Approach. Economics and Business*. 37, 37-49. http://dx.doi.org/10.2478/eb-2023-0003

Deepa, B., Sunita Rani, Y., & Radhika, P. (2022). Role of women entrepreneurs in economic development of a country. *Journal of Positive School Psychology*, 6(3), 9831–9835. https://journalppw.com/index.php/jpsp/article/view/5509

Elam, A., Hughes, K. D., Guerrero, M., Hill, S., Nawangpalupi, C., Fuentes, M., González, J. P. D., Laviada, A. F., Martinez, C. N., Banon, A. C., Chabrak, N., Brush, C., Baumer, B., & Heavlow, R. (2021). Women's entrepreneurship 2020/21: Thriving through crisis. London: Global Entrepreneurship Research Association. https://www.gemconsortium.org/file/open?fileId=50841

Franzke, S., Wu, J., Froese, F. J., & Chan, Z. X. (2022). Female entrepreneurship in Asia: A critical review and future directions. *Asian Business & Management*, 21(3), 343–372. https://doi.org/10.1057/s41291-022-00186-2

Haque Mukit, M. M., Jahan Nabila, N., Safqul Islam, M., & Abdel-Razzaq, A. I. (2020). Valuing Women Entrepreneurship in the Informal Economy in Bangladesh. *ECONOMICS - Innovative and Economics Research Journal*, 8(2), 37–54. https://doi.org/10.2478/eoik-2020-0020

Hagemann, Harald. (2009). Solow's 1956 Contribution in the Context of the Harrod-Domar Model. *History of Political Economy*, 41, 67-87. http://dx.doi.org/10.1215/00182702-2009-017

Koshulko, O. (2018). Violence Against Female Citizens and Female Immigrants in some Countries Worldwide: Challenges And Solutions. *ECONOMICS - Innovative and Economics Research Journal,* 6(2), 71-77. https://doi.org/10.2478/eoik-2018-0026

Marsan, G. A., & Sey, A. (2021). Women's participation in the digital economy: Improving access to skills, entrepreneurship, and leadership across ASEAN. Senayan: Economic Research Institute for ASEAN and East Asia. https://www.eria.org/publications/womens-participation-inthe-digital-economy-improving-access-to-skills-entrepreneurship-and-leadership-across-asean/

Noor, S., Isa, F. M., & Shafiq, A. (2022). Women's entrepreneurial success models: A review of the literature. *World Journal of Entrepreneurship, Management and Sustainable Development*, 18(1), 137–162. https://doi.org/10.47556/J.WJEMSD.18.1.2022.7

Noori, Mahboobeh & Rezaei, Mohammad & Asgari, Ebrahim. (2020). Structural-Interpretive Modeling Factors Affecting the Physical and Social Resilience of Shiraz to Natural Disasters (Flood). 7. http://dx.doi.org/10.22103/JUSG.2020.2024

OECD. (2021). SIGI 2021 regional report for Southeast Asia. Social institutions and gender index. Paris: OECD Publishing. https://doi.org/10.1787/236f41d0-en

Ojediran, F. O., & Anderson, A. (2020). Women's entrepreneurship in the global South: Empowering and emancipating? *Administrative Sciences*, 10(4). https://doi.org/10.3390/admsci10040087

Protsenko, I. (2023). Legal Status and Peculiarities of Taxation of E-Residents in Ukraine. *Collection of Papers New Economy*, 1(1), 244-255. https://doi.org/10.61432/CPNE0101244p

Puška, A., Kozarević, S., & Okičić, J. (2020). Investigating and analyzing the supply chain practices and performance in agro-food industry. *International Journal of Management Science and Engineering Management*, 15(1), 9-16. https://doi.org/10.1080/17509653.2019.1582367

Radukic, S., Mastilo, Z., Kostic, Z., & Vladusic, L. (2019). Measuring of the Goods and Labor Markets Efficiency: Comparative Study of Western Balkan Countries. *Montenegrin Journal of Economics*, 15(2), 95-109. https://doi.org/10.14254/1800-5845/2019.15-2.8

Sajjad, M., N. Kaleem, M.I. Chani, and M. Ahmed. (2020). Worldwide Role of Women Entrepreneurs in Economic Development. *Asia Pacific Journal of Innovation and Entrepreneurship*, 14 (2), 151–160. https://doi.org/10.1108/APJIE-06-2019-0041

Sallah, C. A., & Caesar, L. D. (2020). Intangible resources and the growth of women businesses: Empirical evidence from an emerging market economy. *Journal of Entrepreneurship in Emerging Economies,* 12(3), 329–355. https://doi.org/10.1108/JEEE-05-2019-0070

Satpayeva, Z., A. Kireyeva, & G. Kenzhegulova. (2020). Gender Equality and Women Business of Framework 5Ms in Kazakhstan: Analysis and Basic Directions. *The Journal of Asian Finance, Economics and Business*, 7(3), 253–263. https://doi.org/10.13106/jafeb.2020.vol7.no3.253

Tambunan, T. (2019). Women entrepreneurship in Asian developing countries: Their development and main constraints. *African Journal of Gender and Women Studies*, 4(5), 1–14. https://www.internationalscholarsjournals.com/articles/women-entrepreneurship-in-asian-developing-countries-their-development-and-main-constraints.pdf

UN Women. (2022). Women's leadership in the ASEAN region. United Nations Entity for Gender Equality and the Empowerment of Women (UN Women). https://asiapacific.unwomen.org/en/digital-library/publications/2022/10/womens-leadership-in-the-asean-region

UNEP. (2020). Powering Equality: Women's Entrepreneurship Transforming Asia's Energy Sector. https://www.unep.org/resources/report/powering-equality-womens-entrepreneurship-transforming-asias-energy-sector

Vial, Virginie & Richomme-Huet, Katia. (2017). Women entrepreneurs in France. *International Journal of Entrepreneurship and Small Business*, 30, 80-97. http://dx.doi.org/10.1504/IJESB.2017.081034

Vlasenko, T. (2023). Dimensions of the Analysis of the Organizational Culture of Multinational Companies. *Collection of Papers New Economy*, 1(1), 110-125. https://doi.org/10.61432/CPNE0101110v

Vracheva, V. & I. Stoyneva. (2020). Does Gender Equality Bridge or Buffer the Entrepreneurship Gender Gap? A Cross-Country Investigation. *International Journal of Entrepreneurial Behavior & Research*, 26(8), 1827–1844. https://doi.org/10.1108/IJEBR-03-2020-0144.

Wang, L. & Hu, T. (2024). A Method for Creative Scheme Generation for Brand Design of Plush Toys Based on Extension Theory. *International Journal of Knowledge and Innovation Studies*, 2(1), 1-10. https://doi.org/10.56578/ijkis020101

World Bank Group. (2020). Women, business and the law 2020. Washington: International Bank for Reconstruction and Development. https://openknowledge.worldbank.org/handle/10986/32639

World Development Indicators (2023) World Development Indicators database provided by the World Bank Online https://databank.worldbank.org/source/world-development-indicators/preview/on