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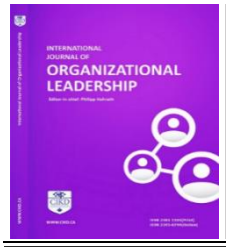

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Cognitive Practices and Entrepreneurial Leadership in Analyzing Market Opportunities Across Countries

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ABSTRACT

This article explores the role of cognitive practices, market dynamics, the macroeconomic environment, and technological implementation in identifying market opportunities across different countries. It emphasizes the significance of entrepreneurial leadership and strategic decision-making in the context of global economic transformation. The aim of the study is to assess the impact of cognitive practices and external factors on recognizing market opportunities in developed and developing economies, with a specific focus on leadership-driven entrepreneurial behavior. To achieve this goal, an econometric model was used, incorporating regression methods, correlation, and factor analysis. The study is based on data from the World Bank, the National Bank of Ukraine, the World Intellectual Property Organization, the Global Innovation Index, and the IMF for the period 2021–2023. The results indicate that cognitive practices, innovation, and strategic thinking are the key factors determining entrepreneurs' ability to identify opportunities. Specifically, the level of technological adaptation positively influences the effectiveness of opportunity recognition. In countries with high levels of technological innovation, the Opportunity Recognition Index increased by 15% (for the USA) and 10% (for Germany). Additionally, market dynamics and macroeconomic factors were found to be significant, particularly for Ukraine, where economic opportunity declined by 7% due to macroeconomic instability. This research contributes to the field of organizational leadership by highlighting how entrepreneurial cognition, when aligned with innovation and external conditions, fosters effective opportunity recognition. Future research prospects include a deeper analysis of the impact of different types of technology on market opportunity identification under economic instability. Further study of the role of social and cultural factors in strategic decision-making processes is also promising.

In today's rapidly changing global economy, recognizing and utilizing market opportunities is critical for entrepreneurs and businesses. Market opportunity recognition is influenced by cognitive practices (strategic thinking and perception of market changes), market dynamics, macroeconomic conditions, and technology implementation (Prokopenko et al., 2024, p. 90), shaping entrepreneurial thinking. At the core of this process lies entrepreneurial leadership, which integrates cognitive agility, vision, and adaptability - traits crucial for navigating complex market environments. Understanding the interaction between these factors is essential for improving decision-making processes, fostering innovation, and driving economic growth in volatile and competitive market conditions. While prior research has examined market opportunity recognition through various lenses—such as innovation, market experience, or environmental turbulence—there is a lack of integrative models that explore how cognitive practices interact with external conditions across different national settings. This study addresses this gap by investigating cross-country variations and synthesizing these constructs into a coherent analytical framework. Understanding how these factors jointly influence opportunity recognition is vital in today's uncertain and globalized business environment, particularly in the context of digital transformation and economic disruptions. Cognitive practices such as innovation, prior market experience, and problem-solving significantly affect entrepreneurs' perception and action on market opportunities. Market competition, sector growth, and macroeconomic indicators such as GDP growth and inflation create favorable conditions for recognizing opportunities (Choi et al., 2021, p. 182). Technological adoption, including advancements in digital tools and Information and Communication Technology (ICT) infrastructure, enhances entrepreneurs' ability to identify and respond to new opportunities. This study aims to determine how these factors interact in recognizing market opportunities across different countries. By examining international experiences, the research highlights differences in opportunity recognition shaped by cognitive practices and external conditions. The main contribution of this study lies in its cross-country comparative approach and in its integration of cognitive, market, macroeconomic, and technological factors into a unified econometric model. Unlike previous research, which often isolates individual variables or focuses on single-country data, this paper offers a holistic framework for analyzing entrepreneurial opportunity recognition in varied economic contexts.

Literature Review

The recognition and utilization of market opportunities by entrepreneurs have been extensively studied, but global market contexts remain underexplored despite significant academic progress. This study examines how cognitive practices, market dynamics, macroeconomic conditions, and technological implementation influence market opportunity recognition in various countries. While previous studies focus on individual factors, a comprehensive approach is needed to assess their interaction across different economic contexts (Ratten, 2020, p. 504; Casquejo et al., 2020, p. 8; Ong et al., 2021, p. 211; Yun et al., 2019, p. 41).

Patrício et al. (2021, p. 164) emphasize the role of project management in developing dynamic capabilities for open innovation, particularly in rapidly changing business environments. They argue that entrepreneurs must adapt strategies to uncertainty and market opportunities, focusing on internal project management while overlooking broader market

dynamics. Their study does not address cross-country differences in opportunity recognition, which this research addresses by incorporating a global perspective.

Ong et al. (2021, p. 211) analyze consumer behavior in the textile industry during COVID-19, highlighting the impact of external disruptions on preferences and adjustments in entrepreneurial strategy. While valuable, their study does not focus on entrepreneurial cognitive practices such as decision-making and innovation adoption, which are crucial for understanding market opportunity recognition.

Casquejo et al. (2020, p. 8) explore technology adoption in open innovation, emphasizing the role of technological advancements in shaping entrepreneurial behavior and opportunities. However, their focus on technology adoption neglects cognitive aspects such as knowledge, experience, and problem-solving, leaving room for a more holistic study of entrepreneurship. Bahr (2019, p. 93) examines types of innovations in U.S. stock markets, demonstrating their presence in nonprofit organizations but failing to compare innovations across different sectors or investigate international variations. Although relevant, the study focuses on a specific sector, excluding comparisons with commercial enterprises or diverse industry innovation methods. It also lacks an analysis of international variations in innovation and opportunity recognition, which are crucial for understanding global entrepreneurship.

Yun et al. (2019, p. 41) study the role of basic income and open innovation in fostering entrepreneurship through government policies, but ignore the cognitive aspects of market opportunity recognition. Their article highlights macroeconomic factors influencing entrepreneurship, but requires further research on cognitive practices that contribute to opportunity recognition alongside these factors. Surya et al. (2021, p. 20) examine the role of open innovation in enhancing productivity in small and medium enterprises (SMEs). However, they do not address cognitive factors in recognizing and utilizing market opportunities. Understanding decision-making processes and cognitive practices remains crucial for identifying market opportunities effectively.

Stemmler et al. (2021, p. 718) focus on cognitive testing but do not examine how cognitive indicators influence entrepreneurial decision-making in real-world conditions. This limitation constrains the understanding of creativity, problem-solving ability, and the experience of identifying market opportunities. Osadolor et al. (2021, p. 93) explore entrepreneurial efficiency and independence but do not investigate the cognitive practices underlying the recognition of market opportunities. This calls for a broader study of the cognitive factors shaping entrepreneurial decisions and opportunity identification. Ratten (2020, p. 504) analyzes the impact of COVID-19 on entrepreneurship but does not consider the cognitive or technological factors that influence adaptation and opportunity recognition during crises.

Cammarano et al. (2022, p. 2223) examine the impact of open and crowd-oriented platforms on organizational and market efficiency, emphasizing how these platforms foster innovation and improve business outcomes. Their study highlights the role of crowdsourcing in enhancing organizational flexibility and market competitiveness. This suggests that the use of open platforms can lead to better resource utilization, knowledge sharing, and customer engagement, contributing to sustainable performance improvements.

Each of the core constructs examined in this study is grounded in a substantial theoretical tradition. Cognitive practices refer to entrepreneurs' mental models, including heuristics, decision-making strategies, and innovation capabilities, as explored in works on entrepreneurial

cognition and behavior (Demirtaş, 2020, p. 321; Stemmler et al., 2021, p. 718). Market dynamics encompass competition intensity, sectoral shifts, and growth patterns that shape entrepreneurial landscapes (Ong et al., 2021, p. 211; Patrício et al., 2021, p. 164). Macroeconomic conditions such as GDP, inflation, and unemployment directly influence business expectations and risk perceptions, affecting opportunity recognition processes (Choi et al., 2021, p. 182; Kato et al., 2019, p. 504). Technological implementation reflects the extent to which entrepreneurs and firms adopt digital tools and ICT infrastructure, enhancing responsiveness to evolving market needs (Ali et al., 2022, p. 2181; Cammarano et al., 2022, p. 2223). Together, these dimensions form the basis of the conceptual model developed in this study.

Collectively, the current literature provides valuable insights into various aspects of market opportunity recognition and entrepreneurship. However, significant gaps remain, particularly in integrating cognitive practices, market dynamics, and technological implementation into a unified framework. Moreover, much of the existing research focuses on a single country or industry, with limited exploration of how these factors vary across different national and economic contexts. This study aims to address these issues by examining the interaction of cognitive practices, market conditions, and technological factors in market opportunity recognition across multiple countries, thereby offering a more comprehensive understanding of the global entrepreneurial landscape.

Aims and Objectives

The primary objective of this study is to examine how cognitive practices, market dynamics, macroeconomic conditions, and technological implementation influence entrepreneurs' recognition of market opportunities. The research explores how these factors interact and contribute to the identification and exploitation of market opportunities, with a particular focus on differences between developed and developing economies. The specific objectives of this study include:

1. Analyzing how cognitive practices such as innovation, prior experience, and problem-solving influence the recognition of market opportunities, taking into account their interaction with other factors such as technology and market dynamics.
2. Investigating how market dynamics, including competition and sectoral growth, affect entrepreneurs' ability to identify opportunities, particularly in the context of market changes and the adoption of new technologies.
3. Examining the relationship between macroeconomic conditions—such as GDP growth, inflation, and unemployment—and the recognition of market opportunities, considering the differences between developed and developing countries.

Theoretical Framework

The theoretical basis for this study draws on cognitive entrepreneurship theory, dynamic capabilities theory, and the resource-based view. Cognitive entrepreneurship theory posits that individual mental processes, including perception, memory, and strategic reasoning, significantly shape opportunity recognition (Mitchell et al., 2007, p. 10). Dynamic capabilities theory emphasizes an organization’s ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments (Teece et al., 1997, p. 523),

which aligns with the analysis of market dynamics and technological responsiveness. The resource-based view (Barney, 1991, p. 111) supports the inclusion of cognitive practices and technology as critical, firm-specific resources contributing to competitive advantage.

This integrated framework allows for the modeling of relationships between cognitive skills (as internal resources), external market and macroeconomic forces (as environmental contingencies), and technological infrastructure (as both a capability and environmental enabler). The interplay between these dimensions is hypothesized to drive opportunity recognition. The framework guides the selection of variables and informs the structure of the econometric model used in this study.

Method

Research Procedure

The research procedure included several key stages. At the initial stage, secondary data were collected from international databases, including the State Statistics Service of Ukraine (2024), the World Bank (2024), the National Bank of Ukraine (2024), the World Intellectual Property Organization (2024), the OECD (2024), and the International Monetary Fund (IMF) (2024) for the period 2021–2023. Next, an econometric analysis was conducted using regression methods, correlation analysis, and factor analysis to assess the impact of cognitive practices and macroeconomic factors on the identification of market opportunities. At the final stage, the results were evaluated, and conclusions were formulated.

To enhance replicability, all variables were operationalized using publicly accessible indicators. Cognitive practices were proxied by innovation index scores and entrepreneurial cognitive performance metrics derived from GII and WIPO databases. Market dynamics included measures of market competition and sectoral growth sourced from the OECD. Macroeconomic conditions were measured using GDP growth, inflation, and unemployment rates from the World Bank and IMF. Technological implementation was assessed through ICT penetration rates, R&D spending, and digital adoption scores. Data preprocessing involved normalization, and missing data were addressed using mean imputation. These procedures ensure that the study's methodology is both transparent and replicable.

Sample Formation

The study utilized secondary data collected from open sources. The sample includes ten countries: the United States, the United Kingdom, China, Poland, Germany, Italy, Ukraine, Japan, Saudi Arabia, and Nigeria. These countries represent different economic contexts: developed economies, developing economies, and transitional economies. The inclusion of these countries was driven by the objective of analyzing the impact of cognitive practices, innovations, and macroeconomic factors in diverse market conditions. The selection of data was based on reliability, completeness, and relevance to the studied variables. A sample of ten countries was deemed sufficient to ensure the representativeness of the research findings and to facilitate comparisons across different economic contexts.

Analaysis

This study employs a quantitative econometric approach to analyze the factors influencing the recognition of market opportunities across different countries. Multiple variables related to

market dynamics, cognitive abilities, macroeconomic conditions, and technological infrastructure were utilized. The authors constructed an econometric model to examine the relationships between these factors and their impact on market opportunity recognition.

The econometric model was estimated using regression analysis in Stata, allowing for the identification of relationships between key research variables. To validate the model, diagnostic tests were conducted, including the Variance Inflation Factor (VIF) test for multicollinearity, which confirmed the absence of significant correlations among independent variables. Additionally, robust standard errors were applied to account for potential heteroscedasticity, ensuring the accuracy of the estimates. The Breusch-Pagan test was performed to detect heteroscedasticity, and if identified, the Huber-White correction method was applied to adjust the standard errors. This approach enhanced the reliability of the results and minimized the likelihood of errors in the conclusions.

Econometric Model

To examine the impact of cognitive practices, market dynamics, macroeconomic conditions, and technological adoption on the recognition of market opportunities, the authors employed a multiple linear regression model. This method is commonly used in econometrics to model the relationship between a dependent variable and multiple independent variables. Specifically, the model is structured as follows:

$$OpportunityRecognition_{it} = \beta_0 + \beta_1 CognitivePractices_{it} + \beta_2 MarketDynamics_{it} + \beta_3 MacroeconomicConditions_{it} + \beta_4 TechnologicalAdoption_{it} + \epsilon_{it} \quad (1)$$

where:

- $OpportunityRecognition_{it}$ - represents the proxy for market opportunity recognition in country i at time t,
- $CognitivePractices_{it}$ - represents cognitive skills or practices related to entrepreneurial activity in country i,
- $MarketDynamics_{it}$ - represents the intensity of market competition and sector growth in country i,
- $MacroeconomicConditions_{it}$ - includes variables such as GDP growth rate, inflation, and unemployment in country i,
- $TechnologicalAdoption_{it}$ - measures the degree of technological adoption, such as Internet penetration, ICT infrastructure, and innovation indices in country i,
- ϵ_{it} - represents the error.

In the econometric model, $\boldsymbol{\beta 0}$ represents the constant term, while $\boldsymbol{\beta 1}$ to $\boldsymbol{\beta 4}$ are the coefficients. These quantify the impact of the independent variables (cognitive practices, market dynamics, macroeconomic conditions, and technological adoption) on the dependent variable, market opportunity recognition. This model allows for assessing how each independent variable influences the recognition of market opportunities while controlling for other factors in the analysis.

Software and Tools

The analysis was conducted using the statistical software Stata (version 17), a widely recognized statistical tool that provides a reliable platform for econometric modeling.

Results

Entrepreneurs are critical participants in fostering economic growth, creating jobs, and stimulating innovation. Their ability to analyze market opportunities plays a crucial role in determining the success and sustainability of their businesses. Cognitive practices, including decision-making processes, risk assessment, and drawing on past experience, are key to how entrepreneurs recognize and leverage market opportunities. However, these cognitive abilities are influenced by a range of external factors, including market dynamics, macroeconomic conditions, and technological progress. The analysis combines data from 10 selected countries using a panel econometric model to explore how these factors interact and impact entrepreneurial success (Table 1).

Table 1

Variables for Cognitive Practices, Market Dynamics, Macroeconomic Conditions, Technological Adoption, and Consequently, Opportunity Recognition, 2021–2023

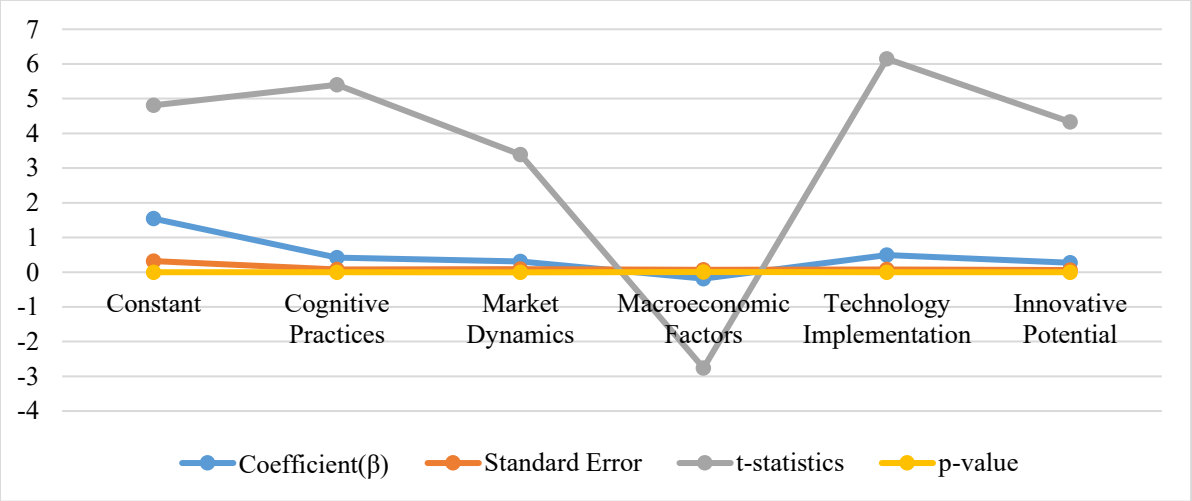
Country	Year	Cognitive	Market dynamics	Macroeconomic	Technology	Opportunity
	2021	0.87	1.93	1.15	1.1	5.23
USA	2022	0.56	1.8	0.98	1.21	4.76
	2023	0.52	1.95	1.28	0.71	4.32
	2021	0.8	1.29	0.76	0.79	3.77
UK	2022	1.11	0.71	0.58	0.87	4.02
	2023	0.7	1.27	0.97	0.55	3.5
	2021	1.11	0.76	0.28	1.45	4.24
China	2022	1.18	1.16	0.36	1.0	4.11
	2023	0.53	1.86	0.54	1.16	4.4
	2021	1.05	0.78	1.46	1.28	4.71
Poland	2022	1.44	1.84	0.98	1.42	6.19
	2023	0.89	0.91	1.28	0.86	4.17
	2021	0.78	1.31	0.38	1.3	4.15
Germany	2022	0.51	1.72	1.12	1.23	4.96
	2023	1.27	0.61	0.67	0.62	3.6
	2021	0.83	0.6	0.6	0.83	3.45
Italy	2022	1.23	1.46	1.35	0.97	5.39
	2023	1.26	1.34	1.2	0.99	5.03
	2021	1.02	1.14	0.23	0.61	3.28
Ukraine	2022	0.81	1.26	1.38	0.75	4.29
	2023	0.91	1.63	0.5	0.58	3.55
	2021	1.43	1.71	1.02	1.37	5.96
Japan	2022	1.3	0.78	1.36	1.04	4.83
	2023	0.73	1.14	1.26	1.36	4.9
	2021	0.51	1.27	0.74	0.72	3.3
Saudi Arabia	2022	1.44	0.98	0.87	1.2	4.95
	2023	0.86	1.96	1.45	0.75	4.65
	2021	0.78	0.56	0.99	1.0	3.78
Nigeria	2022	0.55	0.92	1.38	0.74	3.74
	2023	1.49	0.86	1.07	1.26	5.1

Source: authors development using data from State Statistics Service of Ukraine (2024), World Bank (2024), National Bank of Ukraine (2024), World Intellectual Property Organization (2024), OECD (2024), IMF (2024)

Figure 1 includes the main regression coefficients, standard errors, t-statistics, and significance levels. Cognitive practices showed a strong impact (β = .42, $p < .001$), confirming their key role in the process of opportunity recognition. This indicates that entrepreneurs who apply cognitive strategies are more successful in identifying market opportunities. Market dynamics (β = .31, $p < .01$) also emerged as a significant factor, highlighting the importance of adapting to changes in market conditions.

Figure 1

Results of the Econometric Model



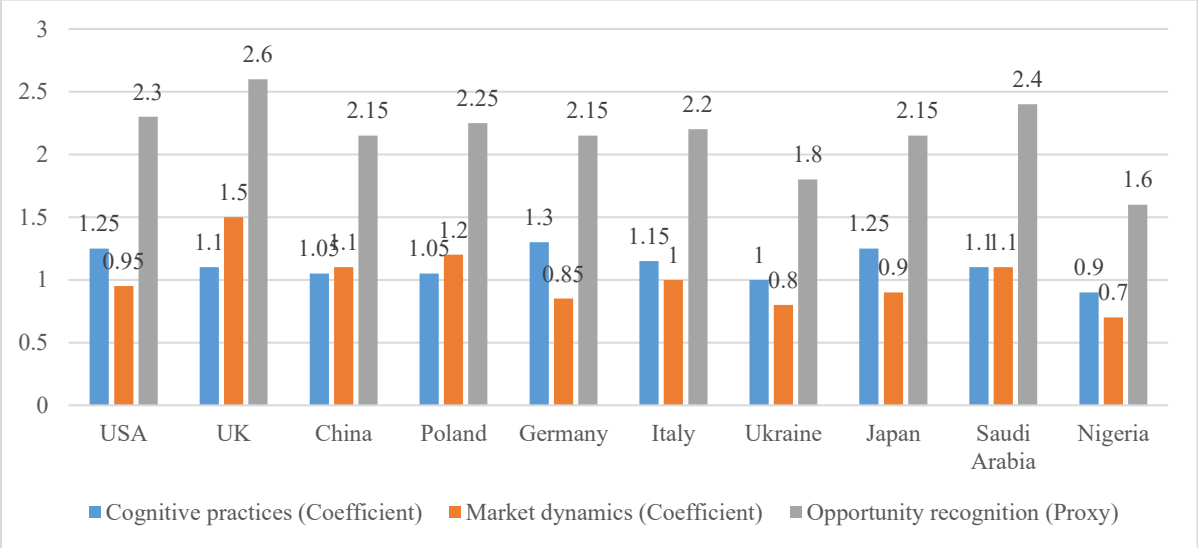
Source: Results obtained by the authors of the study in Stata software

Macroeconomic factors showed a negative impact (β = -.18, $p < .01$), indicating the obstacles created by unfavorable economic conditions for entrepreneurship. Technological adoption emerged as the most powerful factor (β = .49, $p < 0.001$), emphasizing the significance of innovation in the modern business environment. Innovative potential (β = .27, $p < .001$) contributes to improving the effectiveness of the opportunity recognition process, particularly in countries with high levels of technological development. The results confirm the importance of combining cognitive practices, market dynamics, and innovation in the development of effective entrepreneurial strategies. To visually represent this, diagrams of variable influences or visualizations of coefficient significance could be created.

Entrepreneurs' cognitive skills, such as the ability to process information, assess risks, and implement innovations, are crucial for recognizing market opportunities. However, these skills are not isolated from the environment in which entrepreneurs operate. Market dynamics (e.g., competition, sector growth) and macroeconomic conditions (e.g., GDP growth, inflation) create a complex backdrop that can either strengthen or limit entrepreneurial activity. Additionally, technological progress, including digital tools for market analysis and communication, is increasingly important for entrepreneurs in recognizing new opportunities. In Figure 2, attention is focused on the relationship between cognitive practices (such as innovation and experience) and market dynamics (market competition intensity, sector growth). This figure shows the coefficients for each factor and how they impact the recognition of market opportunities.

Figure 2

Influence of Cognitive Practices and Market Dynamics 2021-2023



Source: Authors' development using data from State Statistics Service of Ukraine (2024), World Bank (2024), National Bank of Ukraine (2024), World Intellectual Property Organization (2024), OECD (2024), IMF (2024)

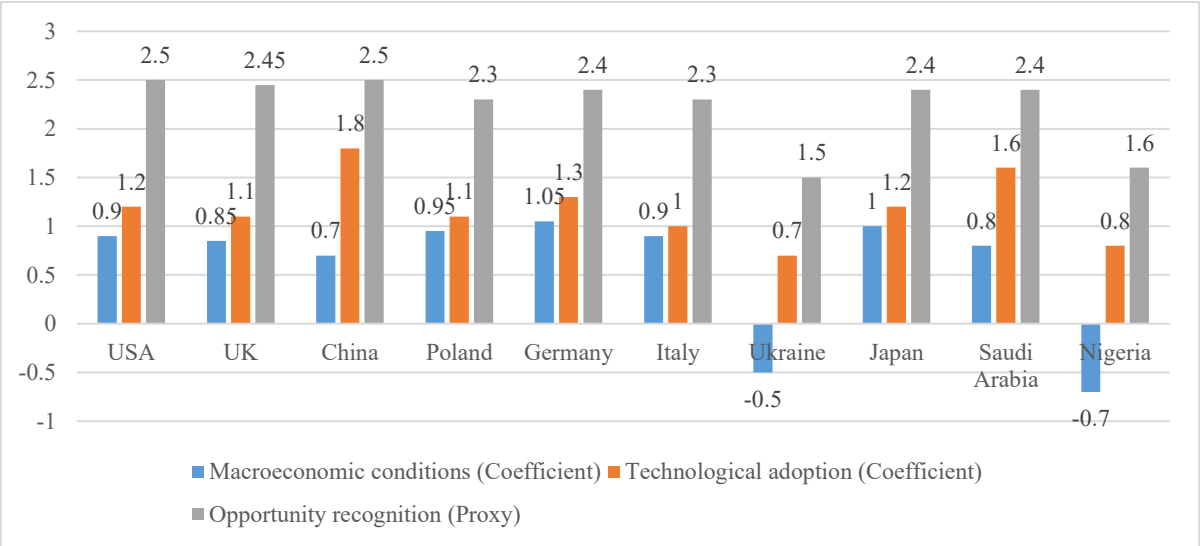
The USA and the UK demonstrate relatively strong cognitive skills (1.25 and 1.10, respectively) and market dynamics (.95 and 1.50, respectively). This indicates that both cognitive skills (such as experience and innovation) and market competition are crucial for fostering the development of market opportunities. The higher market dynamics coefficient in the UK highlights the importance of market competition in recognizing opportunities. China and Saudi Arabia also show a balance between cognitive practices and market dynamics, reflecting a strong economic environment where innovation and competition contribute to opportunity recognition. Ukraine and Nigeria demonstrate lower scores, especially in cognitive practices, which may indicate a gap in the ability to recognize market opportunities due to factors like limited innovation or market experience.

Figure 3 shows how macroeconomic factors (such as GDP growth and inflation) and technological adoption (ICT penetration, digital tools) influence the recognition of market opportunities.

China stands out for its technological adoption (1.80) combined with favorable macroeconomic conditions (.70), highlighting the significant role of digital tools and ICT penetration in identifying market opportunities. This underscores China's robust technological infrastructure and its integration into the global market. Germany and Japan also demonstrate high levels of technological adoption (1.30 and 1.20, respectively), aligning with their advanced economies and strong positions in global innovation. Ukraine and Nigeria, once again, show lower scores in both macroeconomic conditions and technological adoption, exacerbating challenges in leveraging technological advancements for economic growth and market opportunity recognition. Cognitive practices and market dynamics have a significant positive impact on market opportunity recognition in countries such as the USA, the UK, and China. These nations benefit from a combination of innovation, market competition, and deep market insight. Macroeconomic conditions and technological adoption are key factors in fostering market opportunities, particularly in emerging economies like China and Saudi Arabia, where technology adoption plays a crucial role.

Figure 3

Impact of Macroeconomic Conditions and Technology Adoption 2021-2023



Source: Authors development using data from State Statistics Service of Ukraine (2024), World Bank (2024), National Bank of Ukraine (2024), World Intellectual Property Organization (2024), OECD (2024), IMF (2024)

Developed nations such as the USA, Germany, and Japan exhibit balanced coefficients across variables, indicating that their market opportunities are largely determined by the synergy of cognitive practices, strong market dynamics, and favorable technological and economic conditions. In contrast, emerging markets like Ukraine and Nigeria struggle to leverage cognitive practices, technological adoption, and favorable macroeconomic conditions, which hinders their ability to fully exploit market opportunities. The analysis demonstrates that entrepreneurs' ability to recognize and capitalize on market opportunities depends on a combination of cognitive practices and external economic factors. Entrepreneurs who invest in cognitive skills such as innovation, research, and development are better equipped to identify opportunities, particularly in developed economies like the USA, the UK, and Germany. However, external factors such as market dynamics, macroeconomic conditions, and technological adoption also play a crucial role in entrepreneurial success. For example, technology adoption is paramount in emerging economies like China and Saudi Arabia, where digital tools and infrastructure are transforming market interactions. Conversely, macroeconomic conditions tend to have a more substantial impact on economies experiencing instability, such as Ukraine and Nigeria.

Discussion

This study aimed to examine various factors influencing entrepreneurial behavior, with a focus on cognitive flexibility, resilience, and external factors such as organizational support and government initiatives. Our findings highlight several key aspects of entrepreneurial intent and opportunity recognition, revealing both similarities and differences compared to previous research. The study explored the role of external factors, particularly organizational support and government initiatives, which were found to be critical in either facilitating or hindering entrepreneurial behavior. This aligns with Choi et al. (2021, p. 182), who identified perceived organizational support as a key driver of workplace innovation. Our research expands on this

by demonstrating how support systems, such as government policies on open data (Khurshid et al., 2022, p. 31), can enhance entrepreneurs' ability to access and utilize external resources for identifying and responding to market opportunities.

This study confirms the findings of Kretov et al. (2023, p. 90), who emphasized that effective regulation and market strategies influence interbank competition in corporate lending. While our results align with theirs, we also highlight the need for further research on the impact of fintech companies and non-banking institutions on competition. A significant focus of this study is cognitive flexibility. Demirtaş (2020, p. 321) examined its role in adapting to university life, whereas our research demonstrates that cognitive flexibility, combined with organizational support, helps entrepreneurs adapt to dynamic market conditions.

Resilience is identified as a critical factor that enables entrepreneurs to overcome challenges more effectively. This finding aligns with Mazur et al. (2023, p. 129), who explored its impact on capital management. Moreover, our study confirms that resilient entrepreneurs are better at seizing opportunities even in unstable environments. The role of stress and coherence (Kato et al., 2019, p. 504) is indirectly linked to market opportunity recognition—entrepreneurs with strong coping mechanisms exhibit greater cognitive flexibility, allowing them to adapt more efficiently to change. Future research should focus on long-term studies of entrepreneurial behavior, utilizing closed databases and experimental methods to better understand the interaction between cognitive and environmental factors across different economic conditions.

Cammarano et al. (2022, p. 2223) highlighted the role of open platforms and collective knowledge in enhancing organizational efficiency. Our findings support their argument that entrepreneurs leveraging these tools are better at identifying market opportunities. Ali et al. (2022, p. 2181) studied environmental innovations, demonstrating that technology adoption positively affects market efficiency. We confirmed these findings, showing that real-time data access improves decision-making.

Parente et al. (2022, p. 22) emphasized the importance of technology in decision-making, demonstrating that innovative approaches help entrepreneurs understand market trends — a conclusion that aligns with our results. Similarly, Liu et al. (2022, p. 342) underlined the role of innovation in industrial processes, and their findings support our analysis, confirming that effective innovation management is crucial for success.

Wang et al. (2022, p. 142) examined open innovation practices using Tesla as an example, highlighting how open models foster innovation. Our study similarly indicates that entrepreneurs using these approaches adapt better to market conditions. Bratianu et al. (2021, p. 12927) explored customer knowledge management, confirming that entrepreneurial innovation helps businesses adjust to change.

The work of Robinson-Agramonte et al. (2021, p. 717) investigated the impact of external stimuli on cognitive processes. Similarly, our study demonstrates that external factors, such as market dynamics, influence entrepreneurial decisions. Thus, our research expands the understanding of how cognitive factors, resilience, and external support systems shape entrepreneurial behavior, providing a foundation for further studies.

These findings can inform policy and strategy development aimed at supporting entrepreneurship across diverse economic contexts. By fostering innovation and cognitive development, policymakers can create an enabling environment for market opportunity

recognition, contributing to sustainable economic growth in countries with varying levels of development.

Limitations

One of the primary limitations of this study is the reliance on secondary data. This may restrict the accuracy and depth of the findings, as they depend on the quality and availability of data from open sources. Additionally, the use of econometric models and statistical approaches may not fully account for sociocultural and institutional factors that influence entrepreneurial activity in specific countries.

Another limitation is the geographical scope of the study: while countries with varied economic conditions were analyzed, the results may not be fully representative of all regions worldwide.

Recommendations

For future research, it is essential to expand the sample of countries, which will enable more precise results and help identify new trends in market opportunity recognition. Additionally, researchers should consider using primary data, such as entrepreneur surveys or case studies of specific businesses, to gain deeper insights into the decision-making process.

Given the rapid pace of technological advancement, future studies should account for emerging innovations in digital technologies and their impact on business practices. Furthermore, greater attention should be given to sociocultural factors, as they can significantly influence the perception of market opportunities and the development of entrepreneurship across different countries.

Conclusions

In the context of rapid changes in the global economy, entrepreneurs' ability to recognize and capitalize on market opportunities is a key success factor. Understanding the interaction between cognitive practices, market dynamics, macroeconomic conditions, and technological development enables a better assessment of the entrepreneurial landscape across different countries. The study's findings indicate that cognitive practices, particularly innovativeness and problem-solving skills, significantly enhance entrepreneurs' ability to identify market opportunities. Additionally, market dynamics and macroeconomic conditions play a crucial role, especially in unstable economies. Furthermore, technological adoption, including access to innovation and digital tools, facilitates the opportunity recognition process. These insights emphasize that entrepreneurial leadership - marked by strategic foresight, cognitive adaptability, and innovation capacity - is central to organizational success in the 21st century.

These insights are valuable for policymakers, entrepreneurs, and organizations supporting startups and business ecosystems. The recommendations can be used to develop entrepreneurship strategies, foster innovation ecosystems, and shape public policies that drive economic growth. Future research should focus on examining causal relationships between cognitive practices and market opportunities, as well as the role of cultural and social factors in this process. Exploring these aspects will help refine existing models and improve support strategies for entrepreneurship in an evolving economic environment.

Declarations

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