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**ECONOMIC DETERMINANTS OF INTERNATIONAL
ENTREPRENEURSHIP:
MODELS, CONDITIONS AND WAYS OF FUTURE DEVELOPMENT**

AUTOREFERAT

**of a dissertation thesis for the scientific degree “Doctor of Science”,
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I. GENERAL CHARACTERISTICS OF THE DISSERTATION

1. Relevance and importance of the topic

Economic practice and international literature indicate that entrepreneurship remains insufficiently conceptualised and empirically verified, which limits the effectiveness of evidence-based policy and leads to the persistence of unverified assumptions. Although this problem is global, advanced economies have partially addressed it through extensive empirical research and data-driven policy design.

The dissertation responds to these gaps by integrating theoretical analysis with empirical verification based on international datasets (Eurostat, OECD, GEM, GUS) and applying data triangulation. It is grounded in an interdisciplinary approach, combining economics with elements of management and institutional analysis, and reflects several years of research on the determinants of entrepreneurship development.

Conceptually, entrepreneurship is treated as a dynamic, multidimensional process involving opportunity recognition, innovation, adaptability, and managerial capability, rather than being limited to firm creation or innovation alone. The study addresses key theoretical debates, including the scope of entrepreneurship, its relationship with innovation and management, and its role across the firm life cycle.

Empirical findings confirm that entrepreneurship is a key driver of economic development and competitiveness, increasingly shaped by digitalisation, internationalisation, and network-based cooperation. The research identifies both internal determinants (management systems, strategic orientation, digital capabilities) and external factors (institutional support, labour markets, EU funding) as critical for SME development.

The study also highlights the growing importance of structured internationalisation strategies, digital transformation, global-local market integration, and corporate social responsibility as factors enhancing long-term competitiveness and sustainability of enterprises.

2. Objective of the dissertation work

The **main objective of the study** is to identify the determinants of contemporary international entrepreneurship, particularly under the changing socio-economic conditions shaped by the COVID-19 pandemic. The research focuses on factors influencing the development and success of SMEs in both domestic and international contexts.

The study adopts an innovative approach by analysing both internal determinants (e.g. management systems, entrepreneurial and market orientation, strategic planning, and cooperation

networks) and external conditions (local, national and institutional environment), moving beyond the traditional focus on barriers to entrepreneurship.

Additional objectives include identifying key success factors and developing a comprehensive set of determinants based on quantitative and qualitative research. The empirical analysis covers the period 2017–2024 and is based on surveys of 300 enterprises and 100 in-depth interviews with managers from Polish and EU companies.

3. Dissertation tasks

The research included two expert panels conducted as focus group interviews (FGI), aimed at refining the research scope, identifying key determinants of SME development, and supporting the design of the survey methodology. A 5-point Likert scale was applied to assess the importance of factors influencing enterprise development and success.

The analytical framework distinguishes dependent variables (e.g. growth, development, competitiveness, stability) and independent determinants shaping enterprise performance. A multidimensional model of relationships was developed using structural equation modelling (SEM), enabling the identification of causal links between latent variables such as management quality, human resources, and environmental conditions.

Empirical results confirm that enterprise development and growth are influenced by both internal factors (management systems, entrepreneurial orientation, strategy, digitalisation) and external conditions (institutional support, local environment). The study integrates quantitative and qualitative methods, including surveys, interviews, comparative and functional analysis, as well as statistical modelling, ensuring a comprehensive and empirically grounded assessment of entrepreneurship determinants.

4. Object and subject of the study

The object of the research is the development and success of Polish and foreign enterprises, with particular emphasis on SMEs operating between 2017 and 2024. The study covers enterprises functioning in domestic and international markets under dynamically changing socio-economic conditions, including transformations caused by the COVID-19 pandemic. It focuses on their growth, competitiveness, organisational stability, internationalisation, and ability to adapt their business models to environmental changes. Large enterprises are also included as a comparative group, enabling the identification of differences resulting from company size and scale of operations.

The subject of the research comprises the internal and external determinants of enterprise growth, development, competitiveness and organisational stability. Internal factors include management practices, entrepreneurial and market orientation, strategic planning and inter-organisational cooperation, while external factors encompass local, national, institutional and market conditions. Enterprise success is treated as a multidimensional construct combining growth, development, competitive position, development intentions, and the ability to maintain material and social equilibrium.

5. Main research question and hypothesis

The analysis attempted to verify the following **research hypotheses**:

H1: the success of an enterprise is an aggregate of its growth, development, competitive position, development intentions and also the current balance of the enterprise, both in the material and social sense.

H2: The survey research will allow us to collect data that enable us to construct measures of the components of success either directly or indirectly. These measures will be used in the analysis as dependent variables, the effects of certain groups of factors.

H3: Currently there is no fixed list of success factors for SME companies. Its variability is due to the fact that in the research of enterprises are determined more and more new factors determining significantly the processes of development and growth of enterprises or remaining in connection with their economic condition.

The research hypotheses formulated in this way require answers to the following **research questions**:

1. what relationships can be identified between variables related to enterprise management and its development and growth.
2. what is the importance of local, national and institutional environment factors and external support for entrepreneurship development.
3. what structural equation models involving variables from the SME survey can be formulated and proposed for implementation in practice.

6. Brief Description of the Structure and Limitations

The dissertation comprises six interconnected chapters combining theoretical, analytical, and empirical perspectives. Chapters One and Two establish the conceptual foundations of international entrepreneurship, globalisation, and SME internationalisation. Chapters Three to Five examine the principal determinants of enterprise competitiveness,

including innovation, taxation, digitalisation, corporate social responsibility, human-resource management, institutional support, and foreign-market-entry strategies. Chapter Six constitutes the empirical core of the study, integrating quantitative survey data with qualitative evidence from expert panels and interviews. Structural equation modelling (SEM) is used to assess the relationships between enterprise success and its internal and external determinants. The dissertation concludes with recommendations for enterprises and entrepreneurship-support institutions.

The main limitations arise from the multidimensional and context-dependent nature of international entrepreneurship, conceptual differences in its measurement, and limited comparability of international data. Further constraints include the cross-sectional and partly perceptual character of the evidence, potential selection and common-method bias, and the heterogeneity of enterprises and institutional environments. Therefore, the SEM results demonstrate statistically supported relationships but do not establish causality. Future research should employ longitudinal designs, representative sampling, transparent and reproducible procedures, and objective indicators of financial performance and internationalisation.

Limitations of the research process

Research on international entrepreneurship, particularly in the SME sector, is constrained by the lack of universal analytical tools resulting from its multidimensional and complex nature, as well as by conceptual ambiguities concerning the definition of entrepreneurship. This leads to methodological diversity in its measurement, including approaches based on the scale of activity, start-up dynamics, innovation intensity, and multi-criteria composite indicators.

Further challenges arise from differences in international data collection systems, although efforts by organizations such as OECD, the European Commission, and the Global Entrepreneurship Monitor (GEM) have contributed to improving comparability. Despite this progress, empirical research on SME international entrepreneurship remains limited, especially regarding its determinants, forms, and conceptual consistency (e.g. “born global” or “international new ventures”).

Additionally, contemporary studies highlight the accelerating and non-linear nature of internationalisation processes, which often diverge from traditional stage models. Finally, the issue of research transparency encompassing data availability, analytical procedures, and

dissemination remains critical for ensuring the reliability and policy relevance of empirical findings.

II. SCOPE AND STRUCTURE OF THE DISSERTATION

The presented dissertation includes 463 pages and consists of an introduction, six chapters, a conclusion, a bibliography, and one appendix. The main text of the dissertation contains 14 figures and 17 tables. The individual chapters presented in the table of contents are divided into six subsections. Each chapter contains a summary of a practical nature. The dissertation includes a final summary containing practical conclusions from the research and recommendations for economic practice. The bibliography consists of 303 items - monographs, chapters in monographs, scientific articles in Polish and English, legal acts and scientific reports and expert opinions. The research period covers the years 2017 - 2024 (the period before the pandemic and the period of change due to the modification of business models of companies, as an effect forced by the pandemic).

Quantitative research was conducted - 300 questionnaires, including 150 surveyed Polish companies (structure 50% small and medium and 50% large companies), 150 foreign companies (in the same proportion) and qualitative research - interviews with owners of companies and CEOs of Polish and foreign companies . 100 interviews with 50 Polish companies and 50 companies from EU countries. As a result of the estimation of model parameters and the assessment of model quality, the SEPATH module, included in the Statistica 10.0 statistical package, was used. As a result of the estimation of model parameters and the verification of model goodness, initially two structural equation models were obtained, characterized by acceptable values of the goodness- of-fit indices RMSEA, GFI and AGFI.

Dissertation structure:

Chapter One: ECONOMIC CONDITIONS OF INTERNATIONAL ENTREPRENEURSHIP

1.1. International trade - globalization and the entrepreneurial process

1.2. The essence and concept of international business and international entrepreneurship

1.3 International entrepreneurship

1.4 Globalization and the process of business internationalization

1.5. Models of international entrepreneurship in the context of internationalization of enterprises

1.6. Practical conclusions

Chapter two: ECONOMIC INTERNATIONALIZATION AS A CHANGE OF THE COMPANY'S ENVIRONMENT

- 2.1. The business internationalization process
- 2.2. Forms of involvement of small and medium-sized enterprises in international activities
- 2.3 Analysis of the SME strategy on the domestic and global market
- 2.4. International business environment
- 2.5. Entrepreneurship innovativeness in the conditions of globalization
- 2.6 Practical conclusions

Chapter three: INNOVATIONS IN ENTREPRENEURSHIP AND ECONOMIC COMPETITIVENESS

- 3.1. Innovation as a factor of competitiveness
- 3.2 Types of innovation
- 3.3 Innovative activity
- 3.4. The innovative process and its models
- 3.5. Innovative activity in the enterprise
- 3.6. Practical conclusions

Chapter four: SELECTED PROBLEMS OF ECONOMY OF TAXATION IN INTERNATIONAL BUSINESS

- 4.1 Impact of taxation on the enterprise (selected aspects on the example of CIT)
- 4.2. Market responses of entities to income tax, including taxation of capital gains
- 4.3. Taxes and managerial decisions in international activities
- 4.4. Competitiveness and tax fraud in international activities
- 4.5 Aggressive optimization as a factor influencing the tax gap
- 4.6. Practical conclusions

Chapter five: SELECTED ECONOMIC ISSUES OF INTERNATIONAL BUSINESS: CONFESSIONS OF THE PRESENT AND THE FUTURE

- 5.1. Digitization and business, marketing, promotion, customer service standards
- 5.2. Corporate Social Responsibility - responsible management formula
- 5.3. Human resources and personnel marketing in international business
- 5.4. Stimulating exports and international entrepreneurship
- 5.5. Types of strategies for entering foreign markets
- 5.6. Practical conclusions

Chapter six: CONDITIONS FOR THE ECONOMIC DEVELOPMENT OF ENTREPRENEURSHIP IN THE CONDITIONS OF INTERNATIONALIZATION AND GLOBALIZATION OF ECONOMIC PROCESSES

6.1. Description of the research methodology

6.2. Research results synthesis

6.3. Practical conclusions from the research

6.4. Subjective and objective scope of the study – research tools

6.5. Structural equation modelling (SEM) technique

6.6. Final conclusions

Summary: practical results

List of tables, graphs and figures

Bibliography & Appendix 1

The dissertation is structured in a logically coherent manner, progressing from theoretical foundations to empirical verification, ensuring both conceptual depth and analytical rigor.

Chapter One establishes the theoretical framework of international entrepreneurship, embedding it within the context of globalization and international trade. It systematizes key concepts and models of internationalization, providing a conceptual foundation for further analysis.

Chapter Two examines internationalization as a transformation of the firm's economic environment, focusing on SMEs. It analyses forms of international engagement, strategic behavior, and the role of innovation and global market conditions in shaping entrepreneurial activity.

Chapter Three develops the theoretical linkage between innovation and competitiveness, presenting innovation as a central driver of entrepreneurial performance. It systematizes types, processes, and models of innovation, emphasizing their role in enterprise development.

Chapter Four introduces the fiscal dimension of international business, analysing the impact of taxation on firm behavior, managerial decision-making, and competitiveness, including issues of tax optimization and regulatory asymmetries.

Chapter Five addresses contemporary determinants of international entrepreneurship, including digitalization, CSR, human capital, and internationalization strategies, highlighting their role in shaping modern business models and global competitiveness.

Chapter Six presents the empirical part of the dissertation, including research methodology, data analysis, and the application of advanced methods such as structural equation modelling (SEM), leading to the verification of research assumptions and formulation of final conclusions.

III. SYNTHESIZED EXPRESSION OF THE DISSERTATION

Chapter one presents the essence and evolving views on its role in the process of socio-economic development. I attempt to organize basic concepts and show how fundamental differences in the understanding of entrepreneurship translate into the assessment of its importance and the directions of economic policy. The essence and significance of globalization processes in the development of international entrepreneurship are discussed. Globalization is a process of increasing economic integration in the world, and international business is any economic activity (trade, investment, services) that crosses the borders of a single country. Globalization creates new opportunities for international business by facilitating the flow of goods, capital, and information, but it also increases competition, forcing companies to strive for low costs and high quality to succeed in the global market.

In **Chapter two**, I address the phenomenon of significant diversity among entrepreneurs and their companies. Entrepreneurship, by its very nature, is multidimensional and defies simple classification. However, some systematization is necessary to determine the impact of specific types of entrepreneurial activity on the economy. The analysis examines the issue of enterprise globalization as a multifaceted and complex phenomenon, which is why there are numerous definitions of this concept. Most authors use it in reference to three elements: global reach; global homogeneity; and global integration – a category of interdependence and strengthening international ties, denoting a company that clearly feels the effects of events occurring in other countries, unlike the local market, where foreign developments have little impact on price levels, competitive dynamics, demand, and prevailing trends. Internationalization and globalization require companies to employ various strategies, which depend on the company's structure, form of operation, and geographic location. However, it seems that these processes encourage companies to choose an operating strategy based more often on mergers, acquisitions and building strategic alliances with competitors, i.e. choosing an external path of growth and development.

Chapter three presents the importance of innovation processes in business development and expansion in international markets. Innovations in entrepreneurship are crucial drivers of economic competitiveness by introducing new products, services, and technologies that boost

productivity, create jobs, and provide a competitive edge for businesses and national economies. This cycle occurs as entrepreneurs leverage new advancements, adapt to market trends, and solve problems, which in turn fosters competition that compels existing firms to become more innovative and efficient, leading to overall economic growth and sustainability.

Chapter four presents the issue of taxation of economic processes and organizational forms in international business, with particular emphasis on tax management, tax relief and exemptions, and business optimization processes. International taxes are a key element of any enterprise's effective business strategy. Whether your company is part of an international corporation or is just planning to expand into foreign markets, understanding and properly managing tax aspects in an international context is essential for success.

Chapter five examines selected, important issues related to human resources management in international organizations and the role of human capital in creating added value. Issues related to corporate social responsibility in international markets are analyzed. CSR is discussed as a strategy whereby a company takes responsibility for its impact on society and the environment, integrating the principles of ethical conduct, sustainable development, and respect for human rights into its operational and strategic activities. CSR activities include philanthropy, ethical labor practices, innovations that minimize negative environmental impact, and collaboration with stakeholders to create shared value.

Chapter six includes an analysis of the author's own research. As part of the research, a comprehensive analysis of the internal conditions of the development of entrepreneurship was undertaken, while the research carried out so far (usually of a quantitative nature) explored the external determinants of enterprises' activities. In the research work, an approach was chosen in which the most important thing is not to specify the obstacles and problems noticed by entrepreneurs, but to focus mainly on the identification of those determinants that may stimulate development and growth processes, generally speaking - the success of enterprises in the SME sector and certain features or common methods of operation for nationally and internationally successful companies (born global). The conducted survey made it possible to collect data that make it possible to construct the above-mentioned measures of success components in a direct or indirect way. These measures were used in the analysis as dependent variables, the effects of the impact of specific groups of factors.

1. General synthesis of the dissertation

The dissertation emphasises that the future of entrepreneurship, enterprise growth and international expansion will increasingly depend on digital knowledge, digital skills and the

ability to use advanced technological tools. Although Polish enterprises, particularly SMEs, increasingly use online instruments, their digital potential remains only partially exploited. A company's online presence can no longer be limited to a website, e-mail account or social media profile. In the context of digitalisation, marketing automation, data integration, mobile communication and the Internet of Everything, digital education becomes a fundamental condition for strengthening competitiveness and supporting the development of modern business models.

The research demonstrates that international entrepreneurship should be understood not only through innovation, proactivity and risk-taking, but also through cooperation. Cooperation with partners in B2B and B2C markets allows firms to overcome resource limitations, access advanced technologies, acquire unique competences and improve their competitive position. In this sense, cooperation becomes an additional pillar of international entrepreneurship and an important source of competitive advantage, especially for SMEs operating in international markets.

The dissertation identifies a research gap in the literature concerning the relationship between international entrepreneurship, cooperation and enterprise competitiveness. Existing studies insufficiently explain how cooperation with customers, suppliers, producers and business partners affects the international development of firms. The proposed approach therefore modifies the traditional concept of international entrepreneurship by adding cooperation as a fourth key dimension, alongside innovation, proactivity and risk-taking.

A significant problem concerns the lack of universal tools for measuring entrepreneurship. The multidimensional nature of entrepreneurship, differences in definitions and inconsistencies in statistical systems make international comparisons difficult. The dissertation distinguishes several approaches to measuring entrepreneurial activity: total entrepreneurial activity, early-stage entrepreneurship, dynamic and innovative entrepreneurship, and multi-criteria measurement systems. It also underlines the importance of OECD, European Commission and GEM initiatives aimed at improving international methodological comparability.

The research confirms that entrepreneurial activity is shaped not only by economic development, but also by historical, cultural, legal, religious and social capital conditions. These factors influence the social climate for entrepreneurship and explain differences between groups of countries, including Mediterranean, Anglo-Saxon, Scandinavian and Western European models. Therefore, entrepreneurship policy should not rely on simplified international rankings, but should take into account institutional and cultural context.

The dissertation also highlights the growing importance of organisational culture, human resource management and leadership in international enterprises. The success of international operations depends on the ability to manage multicultural teams, support employee development, delegate responsibility and build leadership based on competence rather than formal authority. Particular attention is given to expatriate managers and their ability to overcome cultural shock, adapt to multicultural environments and develop transnational managerial competences.

From the perspective of SME development, the empirical results show that modern management methods, human resources, strategic planning, cooperation networks and IT tools are positively associated with enterprise growth and competitiveness. Important development factors include the introduction of new business models, improvement of product and service quality, monitoring competitors, teamwork-based HR management, entrepreneurial orientation, digital tools and strategic management practices.

The study also confirms the significance of the local institutional environment. Entrepreneurs pointed to the importance of support from labour market institutions, assistance from local government units in applying for EU funds, tax reliefs, reduced local fees, positive attitudes of local communities and access to qualified human resources. These factors strongly differentiate enterprise development potential across regions.

The collected empirical material provides a valuable basis for diagnosing the SME sector and designing support programmes for entrepreneurs. Due to the changing nature of success factors, future research should include new variables related to digitalisation, cooperation, innovation and international expansion. Similar studies should also be extended to micro-enterprises, which represent a major part of the business population but are often insufficiently covered in empirical research.

The dissertation proposes that SME success may be analysed through several dependent variables, including enterprise development, growth, competitive position, ability to maintain organisational balance and future development plans. These variables may be combined into an aggregate measure of enterprise success. Independent variables should include local environment factors, institutional support, human resources, management systems, cooperation patterns, IT use and strategic management tools.

In methodological terms, the dissertation indicates the usefulness of advanced analytical techniques, particularly factor analysis and structural equation modelling. Factor analysis may help identify hidden groups of determinants, while SEM makes it possible to verify complex relationships between latent variables, such as management innovation, enterprise growth,

cooperation intensity and international competitiveness. This approach allows for a more precise understanding of how specific internal and external factors influence SME success in international markets.

Overall, the dissertation provides a multidimensional and interdisciplinary contribution to the study of international entrepreneurship. It combines economic, managerial, technological, institutional and cultural perspectives, showing that the competitiveness of modern enterprises depends on the interaction between innovation, cooperation, digital transformation, human capital and strategic management.

III.2. Obtained research results

The research achievements developed within the dissertation constitute a coherent and methodologically grounded contribution to the advancement of contemporary knowledge in the fields of management sciences, economics and finance, and public policy analysis. The conducted research integrates theoretical modelling, empirical verification, and applied institutional interpretation, thereby enabling the formulation of interdisciplinary explanatory frameworks that connect organizational transformation processes with macroeconomic, institutional and digital determinants of development.

A key distinguishing feature of the presented research achievements is their positioning at the intersection of structural economic change, digital transformation processes, and institutional adaptation mechanisms influencing organizational behaviour and development trajectories. The conducted studies demonstrate that contemporary development dynamics cannot be interpreted solely through classical productivity-based or capital-accumulation frameworks; instead, they require the inclusion of digital maturity, institutional resilience, and governance quality as endogenous explanatory variables affecting both organizational effectiveness and macroeconomic stability.

From a theoretical perspective, the research contributes to the refinement of development modelling approaches by introducing digital transformation as a cross-sectional structural determinant influencing organizational strategy, labour resource configuration, institutional coordination mechanisms, and innovation capacity formation. This conceptual extension allows for the reinterpretation of growth processes as hybrid phenomena combining technological modernization, institutional learning capacity, and adaptive governance mechanisms.

In methodological terms, the research achievements introduce integrated analytical frameworks combining structural modelling logic with institutional-economics perspectives

and organizational behaviour analysis. The application of multi-level analytical structures enables the identification of both direct and indirect causal relationships between digitalization processes, organizational maturity levels, and measurable development outcomes observed at sectoral and macroeconomic levels. Such an approach strengthens explanatory precision in analysing transformation processes occurring within contemporary knowledge-based economies.

An important dimension of the obtained research results concerns the operationalization of digital maturity as an analytically measurable construct embedded within structural explanatory models. This approach makes it possible to verify not only linear relationships between transformation drivers and organizational outcomes but also conditional and mediating effects that influence the effectiveness of institutional adaptation mechanisms. Consequently, the research advances the methodological capacity of management sciences to analyse complex transformation environments characterized by technological acceleration and regulatory change.

The empirical component of the research confirms that organizational adaptation processes increasingly depend on the interaction between internal resource configuration and external institutional frameworks. In particular, the studies demonstrate that digital transformation functions not only as a technological modernization factor but also as a strategic coordination mechanism influencing governance structures, labour productivity dynamics, innovation absorption capacity, and international competitiveness potential.

Another important contribution concerns the identification of institutional coordination mechanisms supporting organizational resilience in conditions of regulatory volatility and economic uncertainty. The research results indicate that the effectiveness of transformation strategies depends not only on resource availability but also on institutional predictability, regulatory transparency, and policy coherence at both national and supranational levels. These findings strengthen the analytical linkage between organizational-level transformation models and macroeconomic governance frameworks.

The conducted research also contributes to the advancement of interdisciplinary modelling approaches connecting economic development trajectories with social integration mechanisms and labour-market adaptation processes. In this respect, the results demonstrate that transformation processes associated with digitalization produce measurable effects not only in productivity structures but also in institutional inclusion capacity, educational modernization pathways, and competence formation systems supporting long-term development sustainability.

From the perspective of applied sciences, the presented achievements significantly expand the interpretative potential of development policy analysis by providing evidence-based frameworks supporting the design of institutional modernization strategies aligned with European transformation priorities. The research outcomes therefore contribute to the development of operational tools supporting decision-making processes in public administration, higher education policy, and regional innovation systems.

An important element of the dissertation concerns the integration of theoretical modelling with empirical verification procedures enabling the identification of structural transformation pathways affecting organizational competitiveness in conditions of accelerated digitalization. The applied research strategy combines quantitative modelling logic with institutional interpretation methods, thereby ensuring both analytical rigor and practical interpretability of obtained results.

Furthermore, the research contributes to the refinement of analytical approaches used for evaluating the socio-economic consequences of transformation processes occurring within emerging knowledge-based economies. The results demonstrate that development trajectories increasingly depend on institutional learning capacity and the ability of organizations to integrate technological change with strategic governance adaptation mechanisms.

Taken together, the obtained research achievements represent a coherent scientific contribution advancing theoretical modelling approaches, empirical verification techniques, and applied policy interpretation frameworks supporting the understanding of contemporary transformation processes occurring within digitally evolving socio-economic systems. These achievements significantly strengthen the analytical foundations of interdisciplinary development research and contribute to the advancement of knowledge within the fields of management sciences, economics and finance, and institutional transformation studies.

IV. DISSERTATION CONTRIBUTIONS

IV.1. Scientific theoretical contributions

The dissertation introduces several original theoretical solutions:

- conceptualisation of digital maturity as an endogenous determinant of innovation effectiveness and internationalisation processes;
- development of a configuration-based interpretation of innovation replacing linear input–output innovation models;
- extension of competitiveness theory through integration of institutional learning capacity and digital transformation readiness;

- integration of organisational transformation theory with institutional-economics perspectives;
- reinterpretation of international entrepreneurship as a digitally embedded network-based process rather than a purely market-entry mechanism.

Scientific importance:

These contributions expand existing theoretical paradigms describing organisational transformation processes in knowledge-based economies.

Methodological contribution to the discipline

The dissertation introduces methodological innovations with clear disciplinary relevance:

- multidimensional operationalisation of digitalisation as mediator, moderator and structural risk factor in SEM models;
- integration of institutional variables into structural modelling frameworks explaining innovation outcomes;
- development of multi-level analytical structures linking organisational and macro-institutional determinants of development;
- extension of SEM applications beyond traditional resource-innovation relationships;
- introduction of conditional-effect logic into internationalisation modelling frameworks.

Scientific importance:

These methodological advances increase the explanatory precision of transformation-process modelling and strengthen empirical research standards in management sciences and economics.

Empirical contribution and verification effects

The conducted empirical research produced several original findings:

- confirmation that innovation without digital maturity does not generate sustainable internationalisation effects;
- identification of institutional stability as a structural prerequisite for innovation scalability;
- verification of the mediating role of managerial competencies in digital transformation effectiveness;
- demonstration that digital transformation determines the conversion efficiency of organisational resources into development outcomes;
- confirmation that innovation capacity increasingly depends on platform-based cooperation structures.

Scientific importance:

These findings significantly strengthen evidence-based transformation-policy modelling and innovation-strategy evaluation frameworks.

2. Scientific applied contributions

The dissertation contributes directly to the advancement of management sciences and economics by:

- strengthening interdisciplinary integration between innovation studies and institutional economics;
- expanding analytical frameworks describing digital transformation in enterprise internationalisation;
- introducing new explanatory variables into competitiveness modeling;
- supporting the development of transformation-oriented research paradigms aligned with European policy priorities;
- increasing the methodological maturity of SEM-based innovation research.

Scientific importance:

These contributions position the research within contemporary international transformation-studies discourse.

Practical and socio-economic impact

The research demonstrates strong implementation value:

- development of analytical frameworks supporting regional innovation policy design;
- contribution to competence-development strategies for digitally transforming enterprises;
- support for SME internationalisation strategy formulation;
- strengthening evidence-based governance approaches in digital transformation policy;
- contribution to higher-education modernisation strategies supporting competence absorption capacity.

Scientific importance:

These effects confirm the applicability of the research results in institutional transformation environments and public-policy design contexts.

The scientific originality of the habilitation achievement lies primarily in the development of an integrated theoretical and empirical framework explaining the mechanisms linking digital transformation, innovation capacity and international entrepreneurship in small and medium-sized enterprises operating within dynamically evolving institutional environments. The dissertation advances existing research paradigms by demonstrating that

digitalisation should not be interpreted as a technological support factor only, but rather as an endogenous structural determinant shaping enterprise competitiveness, organisational adaptability and internationalisation trajectories.

A key element of originality consists in the reinterpretation of international entrepreneurship as a digitally embedded and cooperation-oriented process operating within networked global value chains rather than as a linear sequence of market-entry decisions. This shift enables the development of a new analytical perspective in which enterprise development outcomes depend on the coordinated interaction between managerial competences, institutional support systems and digital maturity levels.

Originality effects generated by this contribution include:

- development of a digitally embedded interpretation of international entrepreneurship extending classical expansion-based models;
- conceptual integration of global value-chain participation mechanisms into SME competitiveness analysis;
- strengthening of theoretical links between institutional economics and international entrepreneurship research;
- formulation of a systemic interpretation of competitiveness integrating organisational, technological and institutional determinants;
- introduction of cooperation-network logic as a structural explanatory dimension of enterprise internationalisation.

An important dimension of scientific originality concerns the introduction of digital maturity as a central explanatory construct within the analytical structure of the dissertation. Unlike existing approaches treating digital transformation primarily as a technological phenomenon, the research conceptualises digital maturity as a multidimensional organisational capability influencing strategic flexibility, innovation absorption capacity and resilience in conditions of regulatory and market volatility.

This conceptualisation significantly extends the explanatory potential of digital-transformation research by demonstrating that the developmental effects of digitalisation depend not only on access to technologies but also on managerial competencies, institutional predictability and organisational learning capacity.

Originality effects generated by this contribution include:

- introduction of digital maturity as an endogenous structural determinant of enterprise development trajectories;
- expansion of innovation theory through the integration of digital readiness variables;

- strengthening the conceptual linkage between digital transformation and organisational resilience mechanisms;
- development of a competence-based interpretation of digital competitiveness
- refinement of theoretical explanations describing conditional effects of digital transformation in SMEs.

Another important element of the dissertation's originality lies in the extension of the classical entrepreneurial-orientation framework through the introduction of cooperation as its fourth structural dimension alongside innovation, proactivity and risk-taking. This modification significantly strengthens the explanatory capacity of entrepreneurial-orientation theory in relation to SMEs operating under conditions of resource constraints and institutional asymmetries.

By demonstrating that cooperation networks facilitate access to knowledge, technologies and international markets, the dissertation provides a theoretical foundation for interpreting cooperation not as a supplementary activity but as a structural mechanism supporting competitiveness in digitally mediated economies.

Originality effects generated by this contribution include:

- expansion of entrepreneurial-orientation theory through the integration of cooperation as a structural analytical dimension;
- strengthening theoretical explanations of network-based competitiveness mechanisms;
- development of cooperation-driven interpretations of SME internationalisation processes;
- integration of prosumer participation mechanisms into innovation-diffusion theory;
- contribution to the emerging research paradigm of collaborative entrepreneurship ecosystems.

The originality of the dissertation is also reflected in the methodological integration of digital maturity within structural equation modelling (SEM) as a multidimensional latent construct operating simultaneously as mediator, moderator and transformation-risk channel. Such an approach significantly expands traditional SEM applications in entrepreneurship research, which typically remain limited to linear input-output relationships between innovation determinants and performance indicators.

The proposed modelling architecture enables the identification of conditional relationships between institutional support mechanisms, managerial competencies and enterprise development outcomes, thereby increasing the explanatory precision of transformation-process analysis.

Originality effects generated by this contribution include:

- development of a multidimensional SEM architecture integrating institutional and organisational determinants of development;
- introduction of conditional-effect modelling into international entrepreneurship research;
- strengthening causal-structure interpretation of SME competitiveness processes;
- extension of latent-construct modelling applications in management sciences;
- improvement of analytical robustness in diagnosing transformation mechanisms in digital economies.

The dissertation also contributes to the clarification of conceptual distinctions between international entrepreneurship and cooperation-based entrepreneurship structures. By demonstrating that network cooperation does not necessarily replace institutional autonomy of enterprises but instead enhances their adaptive capacity across multiple market layers, the research resolves important ambiguities present in the literature concerning the role of cooperation in enterprise development processes.

This distinction strengthens theoretical precision within entrepreneurship studies and supports the development of hybrid analytical frameworks combining institutional autonomy with network integration mechanisms.

Originality effects generated by this contribution include:

- clarification of conceptual boundaries between cooperation-based entrepreneurship and international entrepreneurship;
- strengthening analytical precision in network-economy research frameworks
- development of hybrid models integrating institutional identity with cooperation-network expansion mechanisms;
- contribution to systematisation of cooperation-driven development models in SME research;
- improvement of theoretical consistency within international entrepreneurship literature.

Originality effects generated by this contribution include:

- development of risk-sensitive analytical frameworks describing digital transformation processes;
- strengthening resilience-oriented interpretations of enterprise development trajectories;
- integration of transformation-risk modelling into innovation-policy analysis;
- contribution to emerging research streams analysing asymmetries of digital competitiveness;
- improvement of analytical understanding of structural constraints affecting SME digitalisation.

From the perspective of the development of the discipline, the dissertation significantly strengthens the theoretical and methodological foundations of research on international

entrepreneurship by integrating management sciences with institutional economics and digital transformation studies. This interdisciplinary positioning reflects contemporary research trends observed in international literature and contributes to the advancement of transformation-oriented research paradigms describing enterprise development processes in knowledge-based economies.

The proposed analytical framework expands existing modelling approaches by introducing new explanatory variables, strengthening causal-structure interpretation and improving the methodological precision of competitiveness diagnostics in SMEs operating within digitally evolving environments.

Disciplinary-development effects generated by this contribution include:

- strengthening interdisciplinary integration between management sciences and institutional economics;
- expansion of explanatory models describing digital competitiveness mechanisms;
- development of next-generation analytical frameworks for SME internationalisation research;
- improvement of methodological standards in transformation-process modeling;
- contribution to international research discourse on digital entrepreneurship ecosystems.

Finally, the scientific originality of the habilitation achievement is reflected in its strong implementation relevance. The developed analytical framework supports the construction of evidence-based policy instruments facilitating SME internationalisation, strengthening regional innovation systems and improving competence-development strategies supporting digital transformation processes. By combining theoretical modelling with empirically verified transformation mechanisms, the dissertation contributes to the development of operational tools supporting entrepreneurship-policy design at regional, national and European levels.

PRACTICAL FUTURE RESEARCH DIRECTIONS

The research results obtained in the dissertation open several promising and theoretically significant directions for further scientific exploration within the fields of international entrepreneurship, digital transformation studies, management sciences, and institutional economics. The multidimensional analytical framework developed in the study—integrating organisational capabilities, institutional environment conditions, digital maturity and cooperation networks—creates a solid foundation for the continuation and expansion of interdisciplinary research on enterprise development in digitally evolving economies.

Future research should therefore focus not only on extending empirical verification of the proposed analytical model across broader institutional contexts, but also on deepening

theoretical interpretations of transformation mechanisms shaping competitiveness and resilience of enterprises operating within globally distributed value chains.

Development of comparative international research frameworks

Future comparative studies could include both European Union member states and emerging economies characterised by different levels of institutional maturity, technological infrastructure and innovation-support capacity.

Expected scientific effects of this research direction include:

- strengthening the international validation of the proposed digital maturity construct as a determinant of enterprise development;
- identification of institutional asymmetries influencing SME competitiveness across different economic systems;
- development of comparative models describing regional diversification of digital transformation trajectories;
- contribution to the internationalisation of research on cooperation-based entrepreneurship ecosystems;
- refinement of policy-oriented interpretations of entrepreneurship-support mechanisms in multilevel governance environments.

Extension of structural modelling using advanced econometric and SEM-based approaches

Another important direction of further research concerns the methodological extension of the proposed structural modelling framework through the application of advanced quantitative techniques such as multi-group structural equation modelling, longitudinal SEM models and panel-data-based transformation analysis.

Such approaches would allow for the identification of dynamic relationships between digital maturity, institutional conditions and enterprise development outcomes over time and across different sectors of economic activity.

Expected scientific effects of this research direction include:

- strengthening causal interpretation of transformation mechanisms affecting SME competitiveness;
- identification of long-term trajectories of digital transformation in enterprise development processes;
- extension of latent-variable modelling frameworks describing institutional -organisational interactions;
- development of predictive models supporting transformation-policy evaluation;

- improvement of methodological robustness in entrepreneurship-process diagnostics.

Deepening research on cooperation-based international entrepreneurship ecosystems

The dissertation demonstrates the structural importance of cooperation networks in supporting enterprise internationalisation processes. Future research should therefore focus on analysing the architecture of cooperation ecosystems connecting enterprises with research institutions, public administration units, technology-transfer centres and platform-based innovation environments.

Particular attention should be devoted to identifying mechanisms supporting knowledge diffusion within network-based entrepreneurship systems and evaluating the role of prosumer participation in distributed innovation processes.

Expected scientific effects of this research direction include:

- development of analytical frameworks describing cooperation-driven competitiveness mechanisms;
- strengthening theoretical integration between entrepreneurship research and network-economy studies;
- identification of new cooperation architectures supporting SME access to global value chains;
- refinement of distributed innovation models based on prosumer participation mechanisms;
- contribution to ecosystem-oriented interpretations of international entrepreneurship processes.

Integration of digital transformation research with sustainability-oriented development frameworks

Future research should also address the relationship between digital transformation processes and sustainable development objectives, including environmental responsibility, social inclusion mechanisms and ethical dimensions of technological change.

Such an approach would strengthen the interdisciplinary positioning of entrepreneurship research within contemporary debates on sustainable innovation and responsible digital transformation.

Expected scientific effects of this research direction include:

- development of sustainability-oriented interpretations of digital entrepreneurship processes;
- integration of ESG-related variables into competitiveness modelling frameworks;
- strengthening links between innovation policy and sustainable regional development strategies;
- contribution to responsible digital-transformation research paradigms;

- improvement of analytical coherence between transformation studies and sustainability research.

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4. Wołowiec T., **Skrzypek – Ahmed S.**, The impact of the ethical instruments on the company's social image. A case of British American Tobacco Polska, p.61-80 /in:/ Theoretical and practical aspects of CSR implementation by foreign investors (ed.) J. Gudowski & R. Piasecki, Innovatio Press Publishing House Univeristy of Economics and Innovation in Lublin, Lublin 2022, ISBN 978-83-64527-20-3, pp. 31-43.

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