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The Impact of Digitalisation on The Performance of Companies at National Level

Abstract. *The starting point of this article was to understand how digitalisation strategies can influence the way a business operates. There is no surprise that research on digital transformation has recently attracted a lot of interest among academics. Countries, cities, industries, companies, and people face the same challenge of adapting to a digital environment. The phenomenon of digital transformation always tends to be complicated, ambiguous, challenging, and with unplanned managerial tasks for organisations. The success rate of such digital transformations is very low due to rapid changes in technologies. Digital transformation through these technologies requires a fundamental change in organisational processes, technology, and people's behaviour. Through a systematic review of the literature, it was found that digitally mature businesses focus on integrating digital technologies such as social, mobile, and analytics in the service of transforming the way businesses operate. A unique aspect of digital transformation is that risk-taking is becoming a cultural norm as more and more digitally advanced companies seek new levels of competitive advantage.*

Keywords: *digitalisation, digital transformation, digital education, entrepreneurship, digital maturity.*

JEL Classification: C02, C11, C45, C46, C63.

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1. Introduction

Today, companies are motivated to use digital transformation strategy to create significant business advantages as a result of the development and expansion of advanced technologies that have brought changes in society and industry. Organisations are under increasing pressure to apply digital technologies to renew and transform their business models. Today's society is undergoing a constant technological transformation involving changes in all areas, but especially in work and business. In the information society, the digitalisation of business becomes inevitable, as information is the most valued asset. The digitalisation of business is a task that began with the democratisation of technology and the implementation of the internet as a tool for everyday use. Digital maturity is a phenomenon that emerged with the digital economy and Industry 4.0.

The summarised definition of digital maturity is a company's appropriate response to changes in the digital area, the implementation of digital achievements in business processes, and the development of digital skills of staff. Due to the novelty of the term, there is no single, generally accepted definition that characterises the phenomenon of digital maturity. What is certain is that digital maturity is the foundation of digital transformation. Companies, which aim to increase their level of digital maturity are going through digital transformation in all aspects of their business.

The digital strategy sets the direction that the organisation needs to follow to gain technological competitive advantage, while also determining the action plans it needs to execute to move forward. A very important factor influencing strategy is the development of a digital business model. By examining and understanding the elements of the digital model covering: customer relationships, products, business models, value chains etc. a digital strategy can be defined. Thus, digital strategy becomes an essential part of the digital transformation of activities within an organisation ensuring that technology plays its role in supporting the achievement of objectives. This enables the company to acquire new and distinctive capabilities. The aim of a digital strategy is to seek and find ways to make the most effective use of technology tools in the interests of business transformation.

2. Literature review

IT know-how is one of the key drivers of digitalisation in businesses. In addition, new business models evolve from recent digitalisation processes due to ongoing information technologies in the business world (Härting, Reichstein & Jozinovic, 2017). In analysing the digitalisation process, we can identify notions such as digital education, digital innovation, digital transformation, and even digital maturity. Digital innovation includes a range of activities, from initiating and identifying opportunities to developing, implementing, and exploiting digital solutions.

Previous academic literature has not found a clear consensus on a definition of digital transformation, as it is an emerging concept. Digital transformation is a

topical process that is becoming a topic of discussion in the scientific community. Digital transformation usually means the application and use of modern technologies in an organisation's business with the aim of increasing efficiency. With digital transformation, digital maturity is becoming increasingly popular. Digital transformation has recently become a way to gain a competitive advantage and make the company stand out in order to be different (Ibarra, Igartua & Ganzarain, 2019).

Companies that take a proactive stance in the digital revolution are taking advantage of new technologies to restructure their customer value propositions and reshape their business operations to be more innovative (Berman, 2012). The digital transformation of business affects the work of entrepreneurs by providing tools to support their work, but also by changing the very context in which entrepreneurs operate (Secundo, Rippa & Cerchione, 2020). Entrepreneurs need to adapt to their changing context as ICTs disseminate and people become more familiar and competent with digital technologies.

How data is used and understood influences business performance because it provides opportunities to improve user or customer experience, marketing and sales strategy, and business scaling. This translates into digital maturity, which is not just about a company's response to changes in the digital environment, but also how it incorporates and uses digitalisation to grow the business. Recent studies have proposed several maturity models based on different approaches (Berghaus & Back, 2016). Maturity models share the common property of defining multiple dimensions or process areas at several discrete stages or levels of maturity (Fraser, Moultrie & Gregory, 2002).

Berghaus and Back (2016) identified nine dimensions of the maturity model and proposed five stages in the digital transformation process, namely: promoting and supporting, creating and building, commitment to transform, user-focused and elaborate processes, and data-driven enterprise. Maturity models can be descriptive, – present assessment, prescriptive – future assessment, or comparative – benchmarking (Röglinger, Pöppelbuß & Becker, 2012). Although maturity models make important contributions to the field by identifying different dimensions of maturity and mapping these dimensions to different stages, the relationship between a given level of digital maturity and enablers requires further investigation.

Achieving digital maturity requires establishing a digital strategy and aligning the overall strategy with the company's digital goals (Hess, Matt, Benlian & Wiesböck, 2020). This means that successful digital transformation initiatives recognise the radical nature of new digital technologies and develop capabilities for change (Remane, Hanelt, Wiesboeck & Kolbe, 2017). Researchers have identified digital pivots and factors that propel an organisation's progress towards digital maturity. For example, Gurumurthy & Schatsky (2019) identify a number of digital capabilities (flexible infrastructure, digital talent network, business model adaptability, data management, ecosystem engagement, intelligent workflows, and unified customer experience) that are critical to organisations' digital maturity.

The survival and success of entrepreneurial companies, defined as firms that bring new products and services to the market by creating and exploiting

opportunities, depend largely on the work and capabilities of the founders or owners (Cowling & Nadeem, 2020). Within these organisations, owners play different roles and are involved in different types of activities: directing, planning, monitoring, selling, and coordinating (Mueller, Volery & Von Siemens, 2012). Entrepreneurs' time is a crucial resource for these projects, and the allocation of entrepreneurs' time influences the performance of the company (Piva, 2018).

3. Theoretical framework and research hypotheses

We have noted that the phenomenon of digitalisation on the performance of companies at national level is a topic very often addressed and debated both by writers in articles and journals and by young entrepreneurs in their businesses. The phenomenon of digitalisation at national level is extremely important and has significant implications for various aspects of a country's economy, society, and governance. Digitalisation influences economic growth, social development, innovation, governance, and international competitiveness. Countries that prioritise and invest in digitalisation strategies and policies can reap the benefits of a digitally transformed society, unlocking opportunities for their citizens, and driving sustainable progress in the digital age.

We believe that an analysis of this area is necessary, so we have started from some key concepts that we consider essential in the optimal development of the digitalisation phenomenon at national level. These are (1) implementation of digitalisation strategies - IDS, (2) the quality of business digitalisation processes - QBD, (3) performance of young entrepreneurs - PYE, (4) level of business digital maturity - LBDM, (5) implementation of digitalisation projects - IDP and (6) digital education - DE. These are the variables that will be used in the research and from which we derived the list of items (questionnaire questions constituted by Likert's scale). Once the theoretical framework has been established through the literature review, we want to test whether the key concepts identified and concretised into variables represent solutions to improving the performance of young entrepreneurs. Therefore, we are going to establish the hypotheses from which we start the research and subsequently test and interpret them.

The hypotheses derived from the literature review are:

H1: *Implementation of digitalisation strategies* ***(IDS)*** *has a significant positive effect on the quality of business digitalisation processes* ***(QBD)****.*

From the definition of business digitalisation processes, we know that they refer to the transformation of analogue or manual business operations into digital formats through the use of technology. Technology involves digitising data, automating tasks, and integrating digital tools and systems into different aspects of the business. Digitising business processes has numerous benefits, including increased efficiency, improved data management, enhanced customer experiences, cost savings, scalability, and agility. We believe that by embracing digitalisation businesses may obtain a competitive advantage, adapt to evolving market demands, and drive growth in the digital age.

H2: *The quality of business digitalisation processes* ***(QBD)*** *has a significant positive effect on the performance of young entrepreneurs* ***(PYE)***.

We know that the performance of young entrepreneurs can vary greatly depending on different factors, such as their individual skills, experience, mindset, and the nature of their business. Digitalisation allows young entrepreneurs to automate repetitive tasks, simplify workflows, and eliminate manual processes. By leveraging digital tools and technologies, they can streamline their operations, save time, and focus on higher value-added activities. This increased efficiency can lead to higher productivity and better overall performance.

H3: *Implementation of digitalisation strategies* ***(IDS)*** *has a significant positive effect on the performance of young entrepreneurs* ***(PYE)***.

It is important to note that the successful implementation of digitalisation strategies requires careful planning, knowledge of digital tools and trends, and the ability to adapt to evolving technologies. In addition, the specific impact of digitalisation on the performance of young entrepreneurs may vary depending on factors such as: industry, target market, individual skills and capabilities of the entrepreneur. There are also some general aspects that can be mentioned about the performance of young entrepreneurs: acceptance and understanding of the power of innovation, adaptability to changes in business, energy and enthusiasm, resilience, and making effective connections with different fields or people.

H4: *Performance of young entrepreneurs* ***(PYE)*** *has a significant positive effect on the level of business digital maturity* ***(LBDM)***.

Digital maturity in a business refers to its level of competence and effectiveness in leveraging digital technologies and strategies to achieve its goals and remain competitive in the digital age. It encompasses various aspects including digital infrastructure, processes, culture, and strategy. By recognising the importance of digital maturity and supporting its embracing, the organisation can be inspired to implement digital strategies and initiatives. Young entrepreneurs are usually more familiar with technology and open to adopting new tools and digital practices.

H5: *Implementation of digitalisation projects* ***(IDP)*** *has a significant positive effect on the level of business digital maturity* ***(LBDM)***.

Digitalisation projects involve integrating digital technologies and tools into various aspects of business operations. This integration enhances the technological capabilities of the organisation and promotes a digital approach. We believe that by implementing digitalisation projects, companies can adopt and leverage new technologies, which contributes to their overall digital maturity. Digitalisation projects often involve re-evaluating and optimising existing business processes. This involves identifying inefficiencies, eliminating manual tasks, and automating workflows through digital solutions.

H6: *Implementation of digitalisation projects* ***(IDP)*** *has a significant positive effect on the performance of young entrepreneurs* ***(PYE)***.

Digitalisation projects encourage young entrepreneurs to embrace innovation and stay ahead of the competition. By embracing emerging technologies, they can differentiate their products or services, offer valuable proposals, and respond to

changing market demands. This type of focusing on innovation and maintaining a competitive edge contributes to their overall performance. Digitalisation projects give young entrepreneurs the ability to increase customer engagement and satisfaction. Through digital channels, customised communication, and targeted marketing campaigns, entrepreneurs can build strong relationships with their customers. By providing a seamless and convenient digital experience, they can increase customer loyalty and advocacy.

H7: *Digital education* ***(DE)*** *has a significant positive effect on levels of business digital maturity* ***(LBDM)***.

Digital education provides employees with the skills and knowledge to use digital technologies and tools effectively. By offering training programmes, workshops, or online courses, companies can improve the digital literacy of their workforce. This, in turn, improves their ability to embrace and use digital solutions, contributing to the overall digital maturity of the organisation. Digital education provides employees with information on industry best practices and emerging trends. Through learning opportunities, companies can expose their workforce to successful digital strategies, case studies, and various benchmarks.

H8: *Digital education* ***(DE)*** *has a significant positive effect on the implementation of digitalisation strategies* ***(IDS)***.

Digital education enables people to access knowledge and understanding of digital concepts, technologies, and strategies. Through digital education programmes, employees gain insight into the benefits, challenges, and practices of digitalisation. Digital education programmes focus on developing the skills required to implement digitalisation strategies. These may include skills in data analytics, digital marketing, automation, cybersecurity, or project management. By acquiring these skills, employees are better equipped to plan, execute, and monitor digitalisation initiatives, ensuring their successful implementation and maximising the positive impact on the organisation's digital transformation.

4. Research methodology

In the present research, we used structural equation modelling using PLS-SEM software. Structural equation modelling is a statistical model usually used in applied social science research to analyse and measure relationships between several variables simultaneously. It allows researchers to examine complex causal relationships, test hypotheses, and evaluate the fit of theoretical models to empirical data. We consider this research method to be appropriate because it allows testing a theoretical framework from a predictive perspective. Our proposed structural model is shown in Figure 1. This model is complex because it includes many constructs, indicators, and relationships between indicators.

The key concepts presented by us in Section 2, were transformed into variables that we used in structural equation modelling. The structural model developed is shown in the figure below and highlights the relationships between variables through eight assumptions. The data collection instrument was the questionnaire. The

questionnaire consisted of 26 questions and was organised in two sections. The collected answers were processed through structural equation modelling using PLS-SEM software.

The questionnaire used for this research was circulated online to the reference groups of Romanian entrepreneurs from 07.06.2023 to 11.07.2023. The first section contains questions identifying the profile of the entrepreneur (background, age, education, length of time in business, and how the business was started), and the second section contains five-step Likert scale questions on the key concepts identified in Section 2: Implementation of Digitalisation Strategies (IDS), Quality of Business Digitalisation Processes (QBD), Performance of Young Entrepreneurs (PYE), Level of Business Digital Maturity (LBDM), Implementation of Digitalisation Projects (IDP), and Digital Education (DE).

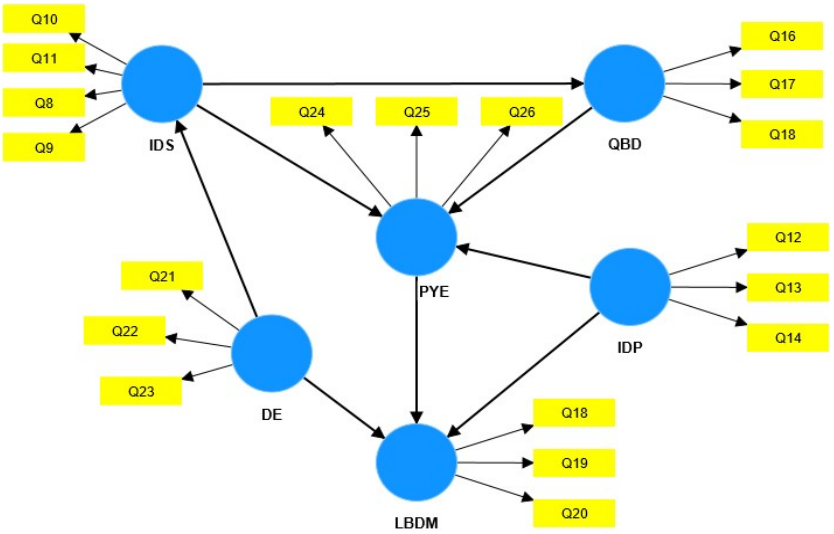

Figure 1. Conceptual model of structural equation modelling research
Source: authors' processing.

Fifty-two women and 47 men participated in the research. In terms of background, 71 people came from urban areas and 28 from rural areas. More than 68% (n=68) of the respondents have a university degree, bachelor's degree, and the rest have a master's degree (n=25) or doctorate (n=6). The age grouping of the respondents is as follows: 21 - 30 years (n=19), 31 - 40 years (n=56) and 41 - 50 years (n=24). As for the business domain of entrepreneurs, it is extremely varied, so we obtained answers such as: HoReCa, marketing, IT, services (car service, vulcanisation, tailoring, florist, travel agency, beauty salon), shop (bookstore, decoration shop), with the largest share being recorded in the service sector. Regarding the way of starting the business, we identified that about 63% (n=62) of the entrepreneurs obtained start-up financing and 37% (n=27) started the business with their own funds. We analysed the responses received from entrepreneurs using the Smart PLS software, version 4. This software is based on structural equation

modelling and is useful for setting up and estimating strong relationships between several variables simultaneously. Variables can be dependent and independent. The variables analysed are measured indirectly by indicators. Through this modelling, an accurate measurement of conceptual models can be achieved.

Figure 1 illustrates the relationship among constructs. It also shows each relationship corresponding to each hypothesis. Likewise, H1, H2, H3, H4, H5, H6, H7 and H8 are identified. Therefore, ten equations were derived from the mediation framework as follows:

DE -> IDS -> PYE -> LBDM

$$LBDM=\alpha 1+\beta 1PYE+\varepsilon 1 \quad (1)$$
$$PYE=\alpha 2+\beta 2IDS+\varepsilon 2$$
$$IDS=\alpha 3+\beta 3DE+\varepsilon 3$$

IDS -> PYE -> LBDM

$$LBDM=\alpha 4+\beta 4PYE+\varepsilon 4 \quad (2)$$
$$PYE=\alpha 5+\beta 5IDS+\varepsilon 5$$

IDS -> QBD -> PYE -> LBDM

$$LBDM=\alpha 6+\beta 6PYE+\varepsilon 6 \quad (3)$$
$$PYE=\alpha 7+\beta 7QBD+\varepsilon 7$$
$$QBD=\alpha 8+\beta 8IDS+\varepsilon 8$$

QBD -> PYE -> LBDM

$$LBDM=\alpha 9+\beta 9PYE+\varepsilon 9 \quad (4)$$
$$PYE=\alpha 10+\beta 10QBD+\varepsilon 10$$

DE -> IDS -> QBD -> PYE

$$PYE=\alpha 11+\beta 11QBD+\gamma 11IDS+\varepsilon 11 \quad (5)$$
$$QBD=\alpha 12+\beta 12IDS+\gamma 12DE+\varepsilon 12$$
$$IDS=\alpha 13+\beta 13DE+\gamma 13\varepsilon 13$$

DE -> IDS -> QBD

$$QBD=\alpha 14+\beta 14IDS+\gamma 14DE+\varepsilon 14 \quad (6)$$
$$IDS=\alpha 15+\beta 15DE+\gamma 15\varepsilon 15$$

IDP -> PYE -> LBDM

$$LBDM=\alpha 16+\beta 16PYE+\varepsilon 16 \quad (7)$$
$$PYE=\alpha 17+\beta 17IDP+\varepsilon 17$$

DE -> IDS -> QBD -> PYE -> LBDM

$$LBDM=\alpha 18+\beta 18PYE+\varepsilon 18 \quad (8)$$
$$PYE=\alpha 19+\beta 19QBD+\gamma 19IDS+\delta 19DE+\varepsilon 19$$
$$QBD=\alpha 20+\beta 20IDS+\gamma 20DE+\varepsilon 20$$
$$IDS=\alpha 21+\beta 21DE+\varepsilon 21$$

IDS -> QBD -> PYE

$$PYE=\alpha 22+\beta 22QBD+\gamma 22IDS+\varepsilon 22 \quad (9)$$
$$QBD=\alpha 23+\beta 23IDS+\varepsilon 23$$

DE -> IDS -> PYE

$$PYE=\alpha 24+\beta 24IDS+\gamma 24DE+\varepsilon 24 \quad (10)$$
$$IDS=\alpha 25+\beta 25DE+\varepsilon 25$$

The data is analysed in two steps. The first step is to estimate reflective model measurement. In the reflective measurement model, constructs are examined with internal consistency, convergent validity, and discriminant validity. Internal consistency is measured by Cronbach's alpha, composite reliability, and rho_A. Convergent validity is measured by the average variance extracted and the indicator reliability. These issues will be detailed in Section 5.

5. Analysis of research results based on structural equation modelling

Figure 2 shows the relationships between the latent variables included in the research model. The arrows are directed from the exogenous latent variable considered as predictor to the dependent (endogenous) latent variable. The diagram illustrates the measured variables through a reflective approach in which the arrows

are directed from the variables to the indicators. The dependent variable is the variable of primary interest in the research model, which we want to explain or understand based on relationships with other variables in the model. The independent variable is the variable that is believed to have an impact on the dependent variable, and it is represented by the factors that are believed to influence, explain, or cause changes in the dependent variable.

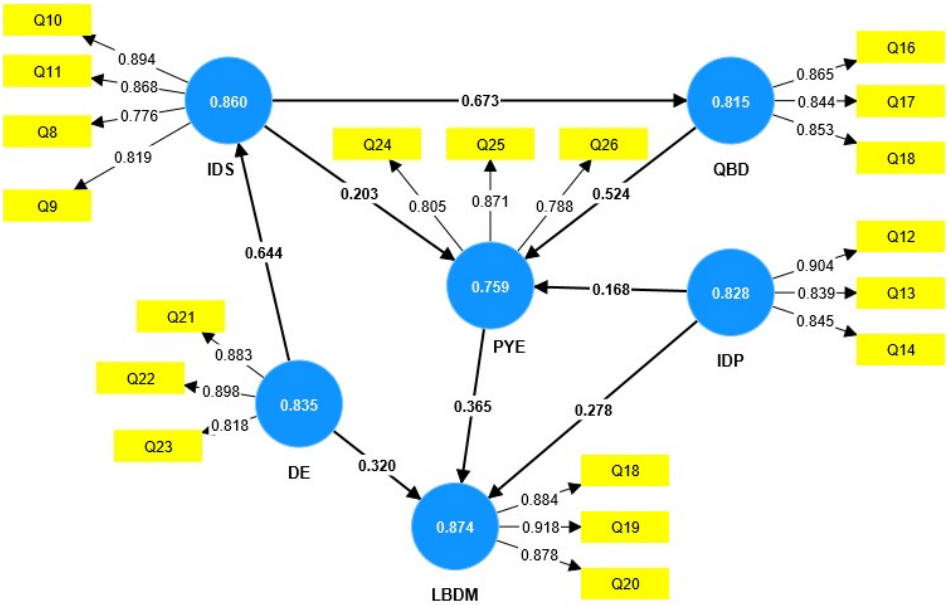

Figure 2. Determination of effect sizes, indicator contributions to reflective latent variables

Source: Smart PLS 4 software processing.

From the structural model, we observe that the *implementation of digitalisation strategies has a significant effect (IDS)* has the strongest effect on *the quality of business digitalisation processes (QBD)* (effect coefficient 0.673), while the *implementation of digitalisation projects* has a weaker effect on the *performance of young entrepreneurs (PYE)* (effect coefficient 0.168). We also observe a strong effect of the *digital education (DE)* variable on the *implementation of digitalisation strategies (IDS)* (effect coefficient 0.644).

The relationship coefficients were calculated by SmartPLS 4 software and are shown in Figure 3, and the values are detailed in Table 1. The strongest correlation is between the latent variables IDS and QBD (relationship coefficient 0.673), and the weakest correlation is between the latent variables IDP and PYE (relationship coefficient 0.168).

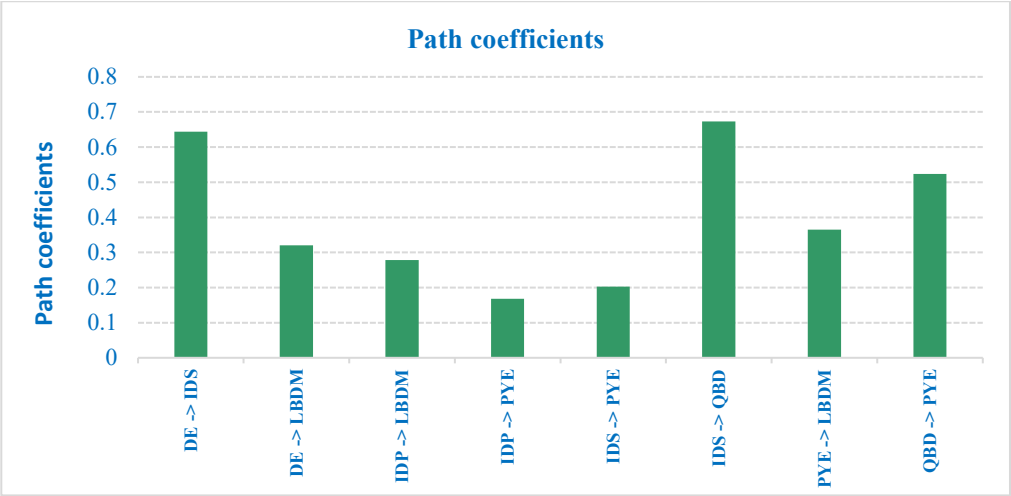

Figure 3. Graphical representation of relationship coefficients

Source: Smart PLS software processing.

Table 1. Results of the relationship coefficients

	Path coefficients
DE -> IDS	0.644
DE -> LBDM	0.320
IDP -> LBDM	0.278
IDP -> PYE	0.168
IDS -> PYE	0.203
IDS -> QBD	0.673
PYE -> LBDM	0.365
QBD -> PYE	0.524

Source: report generated by Smart PLS 4 software

Cronbach's Alpha is used to measure the internal consistency of the data set. Cronbach Alpha also reflects the degree of correlation of the variables within the structural model. The minimum accepted threshold for this indicator is 0.7.

For the model in the present research, the values for Cronbach Alpha are shown in Table 2, all of them exceed the threshold of 0.7, which demonstrates a high internal consistency of the variables within the structural model.

Table 2. Assessment of internal consistency and convergent validity for the reflective measurement model

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
DE	0.835	0.848	0.901	0.752
IDP	0.828	0.829	0.897	0.745
IDS	0.860	0.866	0.905	0.706
LBDM	0.874	0.874	0.922	0.798
PYE	0.759	0.762	0.862	0.676
QBD	0.815	0.815	0.890	0.729

Source: Smart PLS 4 software processing.

The composite confidence level (CR) is the reliability indicator, as the Cronbach Alpha indicator. For the CR indicator to be met, its value must exceed the recommended minimum threshold of 0.7. All six reflective variables scored above the accepted threshold. Spearman's rank correlation coefficient (Rho) is used to measure the strength of association between two variables. The value r = 1 means a perfect positive correlation and the value r = -1 means a perfect negative correlation.

We identify for the six reflective variables (IDS, QBD, ED, IDP, LBDM, and PYE) a positive correlation. **AVE** (average extracted variance) represents the convergent validity of the model. AVE measures the variance captured by a variable relative to the variance due to measurement error. The accepted value for AVE must be at least 0.5 or greater; otherwise, the error variance is greater than the variance explained. We note that all six variables (IDS, QBD, DE, IDP, LBDM, and PYE) have AVE values above the recommended threshold.

Table 3. Evaluation of the collinearity statistical test

	VIF
Q10	2.994
Q11	2.553
Q12	2.411
Q13	1.801
Q14	1.857
Q16	1.915
Q17	1.751
Q18	1.755
Q18	2.290
Q19	2.873
Q20	2.194
Q21	2.029
Q22	2.407
Q23	1.746
Q24	1.574
Q25	1.837
Q26	1.425
Q8	1.651
Q9	1.934

Source: report generated by Smart PLS 4 software.

The variance inflation factor (VIF) is used to measure multicollinearity among a set of variables in a multiple regression. Values greater than 5 indicate high multicollinearity. We note that the Smart PLS 4 software generates variance inflation factor (VIF) values for all reflective variables.

The reflective indicator Q10 has the highest level of variance inflation (2.994), while the reflective indicator Q26 (1.425) has the lowest level of variance inflation. All VIF values are below the threshold of 5.00 (Table 3) and we can state that the collinearity analysis does not reach critical levels for any of the formative or reflective variables and, therefore, does not create problems in the estimation of the structural model under analysis.

The PLS-SEM modelling is based on a non-parametric bootstrap procedure for testing the significance of the relationship coefficients estimated in PLS-SEM. By applying the bootstrapping procedure, subsamples are created with observations randomly extracted from the original data set (by replacement). Subsequently, the

subsample is used to estimate the structural model. This process is repeated until a large number of random data samples are created, about 5,000. The T-test values and asymptotic significances (P-values) are calculated to assess the significance of each estimate and finally to validate or reject the research hypotheses.

Figure 4 shows the structural model generated after applying the bootstrap procedure, in which the link relationships between the latent variables are highlighted on the asymptotic significance values (P-value).

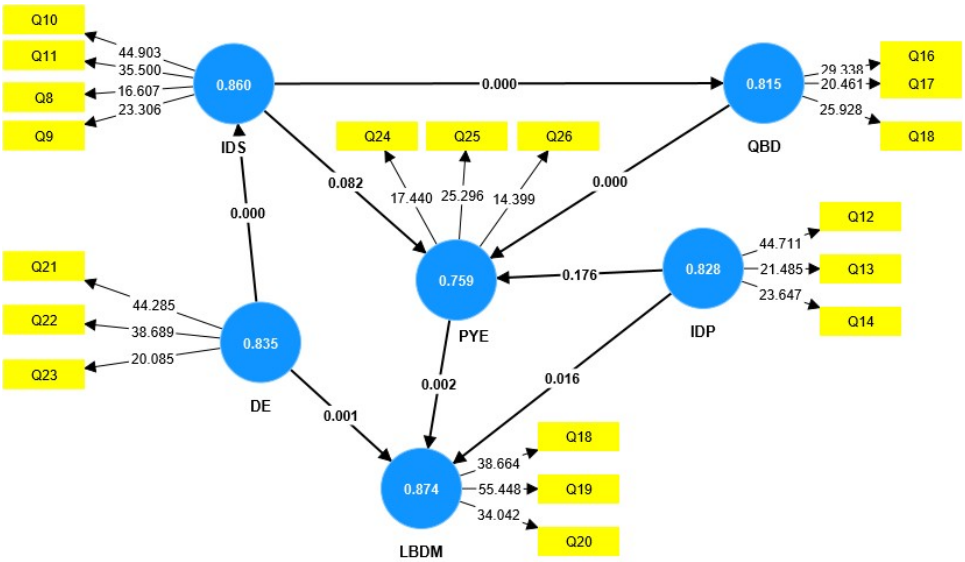

Figure 4. Determination of p-values associated with the relationships between model variables after bootstrapping

Source: Smart PLS 4 software processing.

Specific indirect effects in SmartPLS play an important role in a detailed understanding of how one variable influences another through other variables. Their impact on assumptions can be substantial in measuring and validating relationships in the proposed structural model. The results of the equations initially established were calculated after bootstrapping in SmartPLS 4 software, obtaining the following values:

DE -> IDS -> PYE -> LBDM = 0.048 (1)
IDS -> PYE -> LBDM = 0.074 (2)
IDS -> QBD -> PYE -> LBDM = 0.129 (3)
QBD -> PYE -> LBDM = 0.191 (4)
DE -> IDS -> QBD -> PYE = 0.227 (5)
DE -> IDS -> QBD = 0.433 (6)
IDP -> PYE -> LBDM = 0.061 (7)
DE -> IDS -> QBD -> PYE -> LBDM = 0.083 (8)
IDS -> QBD -> PYE = 0.353 (9)
DE -> IDS -> PYE = 0.130 (10)

These values refer to indirect influences between variables through specific pathways. By analysing and interpreting these effects, a more detailed understanding of the relationships between the variables in the proposed structural model can be obtained. The data presented in Table 4 are useful for validating/rejecting the hypotheses in the structural model analysed.

Table 4. Asymptotic p-significance and T-test values for the 6 hypotheses in the structural model

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
DE -> IDS	0.644	0.651	0.059	10.974	0.000
DE -> LBDM	0.320	0.321	0.094	3.397	0.001
IDP -> LBDM	0.278	0.275	0.115	2.419	0.016
IDP -> PYE	0.168	0.182	0.124	1.355	0.176
IDS -> PYE	0.203	0.184	0.117	1.738	0.082
IDS -> QBD	0.673	0.682	0.065	10.412	0.000
PYE -> LBDM	0.365	0.366	0.119	3.066	0.002
QBD -> PYE	0.524	0.531	0.094	5.552	0.000

Source: Smart PLS 4 software processing.

Of the eight hypotheses, **six hypotheses are validated** because the P-values for those do not exceed the maximum allowed significance level of 0.05. **The validated hypotheses** are: **H1** (implementation of digitalisation strategies - IDS has a significant positive effect on the quality of business digitalisation processes - QBD); **H2** (quality of business digitalisation processes - QBD has a significant positive effect on the performance of young entrepreneurs - PYE); **H4** (performance of young entrepreneurs - PYE has a significant positive effect on the level of business digital maturity - LBDM); **H5** (implementation of digitalisation projects - IDP has a significant positive effect on the level of digital maturity of the business - LBDM); **H7** (digital education - DE has a significant positive effect on the level of digital maturity of the business - LBDM) and **H8** (digital education - DE has a significant positive effect on the implementation of digitalisation strategies - IDS).

The unvalidated hypotheses are **H3** (implementation of digitalisation strategies - IDS has a significant positive effect on the performance of young entrepreneurs - PYE and **H6** (implementation of digitalisation projects - IDP has a significant positive effect on the performance of young entrepreneurs - PYE. The T-test shows the strength of the correlation between the latent variables in this structural model. For the validated hypotheses, we identify that, *digital education - DE* has the strongest impact on the *implementation of digitalisation strategies - IDS* (T-test = 10.974), while the *implementation of digitalisation projects - IDP* has the lowest impact on the *level of business digital maturity - LBDM* (T-test = 2.419).

Thus, from the research, we understand that the impact of digitalisation strategies on the performance of young entrepreneurs can vary depending on different factors. Digitalisation strategies generally offer many opportunities for businesses, but their influence on entrepreneurs' performance may not always be direct. The implementation of digitalisation strategies may not directly influence the performance of young entrepreneurs for several reasons: the existence of implementation challenges, the choice and alignment of digitalisation strategies differs from business goals and objectives, the existence of various external factors that cannot be controlled (market conditions, competitive landscape, customer behaviour, regulatory environment, and economic factors) or the inappropriate implementation of digital technologies and tools. Also, the implementation of digitalisation projects may not directly influence the performance of young entrepreneurs due to certain factors. Young entrepreneurs may face limitations in terms of skills and resources needed to successfully implement digitalisation.

6. Conclusions and discussion

Digital transformation has brought significant changes to the way companies do business, shifting past business paradigms. Emerging technologies such as artificial intelligence, the internet of things, cloud computing, and blockchain have transformed the industry and created new opportunities for business growth and development. Traditionally, companies focused on delivering products or services, whereas now they focus on customer experience and creating a value ecosystem. Companies that embrace digital transformation are more agile, more efficient and can offer tailored solutions to customers, allowing them to remain competitive in a changing marketplace. Moreover, digital transformation has enabled companies to collect and analyse data in real time, giving them a better understanding of their customers and allowing them to make more informed decisions. This data-driven approach can lead to improved productivity, efficiency, and performance, as well as increased revenue.

Implementing digitalisation strategies directly influences the quality of business digitalisation processes by providing a strategic framework, optimising processes, standardising operations, improving data management, enhancing customer experience, promoting continuous improvement, and investing in employee skills. These factors collectively contribute to a higher quality of digitalisation processes

and produce positive business outcomes. Implementing digitalisation projects directly contributes to the digital maturity of a business, driving technology adoption, process transformation, data-driven decision making, customer centricity, cultural change, and integration. As these elements evolve and become ingrained in the organisation, the business progresses towards a higher level of digital maturity.

Digital education equips employees with the knowledge, skills, and mindset to adapt to digital technologies, align with digital strategies, promote innovation, collaborate effectively, and mitigate digital risks. By investing in digital education, businesses can improve their overall digital maturity, positioning themselves strategically effectively in the market, and seizing the opportunities offered by digital transformation. In conclusion, digital transformation has changed business paradigms, establishing itself as an essential element for a company's success in the modern world. Companies that embrace this change can improve their market position, increase their efficiency and offer tailored solutions to customers, while those that don't risk falling behind and losing competitiveness.

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