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EXPLORNG THE STRATEGIC ROLE OF DIGITALIZATION IN SME PERFORMANCE (CASE OF GEORGIA)

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Abstract: *Modern technology has become a key driver of business growth across sectors such as media, finance, medicine, and education. As digital tools and automation increasingly shape operations, enterprises are compelled to integrate digital capabilities to enhance sustainability and competitiveness. This study examines the role of digitalization in strengthening the sustainability and competitive advantage of Georgian SMEs, drawing on the Resource-Based View (RBV) and Dynamic Capabilities (DC) frameworks. Over one hundred participants contributed to this quantitative research, with data collected via surveys and analyzed using correlation and regression methods. Results indicate that while 68% of respondents view digitalization as important for sustainability, no direct relationship was found between perceived importance and actual digital adoption or performance. The findings underscore that technology alone does not ensure advantage; rather, strategic integration and adaptive utilization of digital tools determine SMEs' sustainable competitiveness.*

Keywords: *Digitalization, SME, sustainability, competitive advantage.*

INTRODUCTİON

Technology is the future when discussing the means of scaling a business. Organizations, media, banking sectors, and every industry division thrive on the use of digital tools and automated system software for day-to-day tasks. We can lately see newer professions and jobs being created to keep up with the digital presence in the world. This causes a lot of business enterprises to adopt digital capabilities and, therefore, focus on acquiring a competitive edge while managing their resources sustainably (Al-Omush, Momany, Hannoon, & Anwar, 2023). This type of change has caused industries, especially small and medium enterprises, to keep up with the market demands and ease their operational systems (Miranda, Saunila, Cruz-Cázares, & Ukko, 2024). Old ways of storing, analyzing, and manipulating data are not as valuable as it was 10 years ago. For context, during the coronavirus (COVID-19) pandemic, the mass switch on cloud systems, Artificial Intelligence (AI), Enterprise Resource Planning Systems (ERP), and ICT bettered the sustainable and competitive performance of SMEs by 70-80% and cut systematic costs by 15-30% in more than 90% of enterprises (Reichert & Candelon, 2020). Whereas, in 2015, only 20-30% of SMEs were digitally mature with basic operating systems like Microsoft Suite (OECD Digital Economy Outlook 2015, 2015). That gives us sustained results that Small and Medium Enterprises tend to move their digitalization ratio as time goes by, acknowledging newer trends being set to the market and internal operations. Digitalization is never a singular construct SMEs and the market have to deal with because it comes from a bundle of variables that creates synergy for companies to successfully adapt and integrate advancements for their company to operate in the long term. That is good news because, in today's world, sustainability and a competitive edge towards digitalization are a never-ending battle SMEs must go through to survive. (Trueba-Castañeda & Torre-Olmo, 2024).

However, questions remain: How and what strategies are suitable for the current state where the adoption of digital tools is getting more popular, the market faces saturation, and SMEs want to keep competitiveness and sustainability? As well as why companies do or do not single out sustainability while being exposed to digitalization. In the history of advanced development, many strategies with unique approaches have emerged. However, Author and management consultant Dr. Ichak Adizes brings forward the “Crawl-Walk-Run” strategy, which suggests that gradual adoption mitigates risks in SMEs, as they often lack the capital and expertise to make drastic shifts. Therefore, “Crawl” starts with the technological maturity of fundamental systems (Basic Digitalization), “Walk” with slightly advanced process automation (e.g., Low-code Automation, the connection of workflows), while "Run" puts the organization in an advanced setting (AI and IoT services) (Peláez, Escobar, & Félix, 2024).

Walking through that point, The Public Service Hall in Georgia is a notable example of the "Crawl, Walk, run" strategy as their development gradually went into ascending phases. In the years 2011-2015, through the "Crawling" phase of storing property, civil and license records tracking systems were in line with the basic digitalization cycle. By this, service time was decreased by 80% for people living in Georgia, as digital tools made it easier to find and analyze the resources. In the "Walking" phase, we have an introduction to Cloud paperless systems, Digital Signatures, Automated Queue process, Online Business Registry, Electronic Tax Systems, etc. Lastly, the "Run" stage of AI, Blockchain, and Mobile Software, such as chatbots, mobile apps, and blockchain systems, for a secure experience. Through these gradual movements, the Georgian Public Service Hall marked a competitive edge on an international scale while combining their digitalization process with sustainable initiatives: paperless offices saved 10 million sheets a year and roughly 1,200 trees. They also focus on green initiatives such as using the saved money from capital cuts to turn hall buildings into solar power systems.

These steps amplify the positive outcomes of digitalization's role in the 21st Century as it navigates through healthy and competitive development and scaling of one's business processes. (Trueba-Castañeda & Torre-Olmo, 2024). However, gaps and barriers stand in line by aligning innovation with sustainability goals as globalized approaches for saturated markets push SMEs into difficult positions as opposed to different expertise and interest areas.

The current study contributes to the literature by using the Resource-Based View and Dynamic capability theory models to answer the question: Does digitalization help SMEs to be sustainable and have a competitive advantage? Digitalization acts as a mediator between sustainability performance and competitive advantage while also using a Resource-Based View and Dynamic Capability model constructs such as operational efficiency, digital capabilities, organizational agility, and, additionally, to enrich the literature - market responsiveness. The research aims to explore the relationship between the given variables. With the data collected, the study will provide practical implications and recommendations for entrepreneurs and managers in SMEs to better satisfy the needs of current market conditions and sustainable prospects of enterprises

MATERIALS AND METHODS

The RBV model integrates several concepts, each of which unifies elements of core theories related to the acceptability and use of digital technologies. Given the specificity of SMEs' lack of resources, researchers have increasingly used the Resource-Based View (RBV) to investigate how internal capabilities and assets affect a firm's ability to adopt, implement, and benefit from digitalization initiatives. The RBV perspective is interesting because it argues that a firm's sustainable competitive advantage derives from its unique, valuable, rare, inimitable, and non-substitutable resources (VRIN), and it is particularly well-fitted to address the specific challenges faced by SME operations in the complex digital economies. (Antero & Riis, 2011) Reinforce the idea that competitive advantage for SMEs arises from resources that are uniquely developed and difficult to replicate. The authors demonstrated that complementarity among digital resources in an SME ERP ecosystem leads

to competitive advantage, although sustainability is not addressed. Recent empirical and theoretical studies have used RBV to examine both the beginnings and consequences of digitalization in SMEs. For example, (Rupeika-Apoga, 2023) used RBV to investigate the influence of digital orientation and digital capability on measuring digital transformation in Latvian SMEs during the COVID-19 pandemic, concluding that these characteristics are significant indicators of revenue enlargement as well as increased business model portfolio. Similarly, (Zhang, 2022) unites and connects the RBV with resource-dependence theory to analyze how organizational resources mediate the influence of technological and environmental factors on Chinese SME's digital transformation success.

Across the studies, digital and smart technologies such as smart manufacturing systems, digital platforms, and integrated digital operations are presented as internal strategic resources that align closely with the RBV perspective. Rather than emphasizing scale or external market power, the authors argue that SMEs can leverage their internally developed digital capabilities to overcome resource limitations and build sustainable competitive advantage. For instance, (Trueba-Castañeda & Torre-Olmo, 2024) discuss that digital capabilities increase the value and achievement of SMEs in environmental sustainability and simultaneously create financial performance. These capabilities improve operational efficiency, product map, and customer satisfaction, which demonstrates the internal resourcing focus of the RBV with regard to innovation and sustainability. (Kumar, Saunila, Rantala, & Ukko, 2024) Provided some practical evidence claiming the application of smart technologies in SMEs increases business sustainability, which in return improves environmental sustainability. Thus, advanced internal technological resources are important for performance. (Vrontis, Belas, Thrassou, Santoro, & Christofi, 2022) analyzing the RBV and dynamic capabilities approach, claiming the use of digital technologies enables SMEs to create economic and social value. It is shown in their analysis that these internal technological resources perform as critical drivers of organizational outcomes, and their positive impact is enhanced by entrepreneurial orientation.

While some of these sub-capabilities may be applied individually in a non-digital environment, the emergence of new digital technologies such as blockchain, cloud, and IoT platforms is changing the nature of dynamic capabilities. The convergent and generative nature of these digital technologies makes building dynamic capabilities for the wider organization a key strategic imperative. As a result, digitalization forces incumbents to think and act more entrepreneurially and respond to new threats from the dynamic environment by strategically developing digital capabilities.

DDC is an extension of the broader DC framework, adapted for the digital age. DDC is defined as the ability of an organization to integrate, build, and reconfigure digital resources and capabilities to respond to a rapidly changing technological environment (Warner & Wager, 2018). DDC is particularly important for companies to master digital transformation because it provides the flexibility and adaptability needed to leverage digital technologies for competitive advantage. Companies with superior digital capabilities can leverage technological advances to automate processes, improve efficiency, and reduce costs (Bowman & Ambossini, 2009). Digital capabilities can also help companies improve their ability to innovate to develop new products and services (Schepis & Purchase, 2021), such as mobile applications or digital platforms, to improve customer experience and create revenue growth (Gustomo & Prasetio, 2024). The ability to recognize and evaluate new digital opportunities and risks in the workplace, including looking for new technology developments and comprehending the effects they have, is known as digital sensing (Warner & Wager, 2018). The ability to mobilize resources and implement strategies to take advantage of opportunities that have been recognized, such as implementing digital platforms or reworking workflows to integrate new technology, is known as digital capturing (Teece, 2018). Reconfiguring organizational structures, procedures, and cultures to meet the needs of the digital age through the promotion of agility and creativity within the company is known as "digital transformation" (Vial, 2019).

According to the literature currently in publication, businesses that embrace digital transformation see improved financial outcomes and returns on assets, which boosts their profitability and competitiveness (Miranda, Saunila, Cruz-Cázares, & Ukko, 2024). Nevertheless, professional

scholars and research centers have predominantly examined the phenomena of digital transformation and its impact on business, while academic scholars have contributed very little to this area of study (Pereira & Bamel, 2021). However, scholars and research institutes have mostly investigated the phenomena of digital transformation and its impact on business, while academic scholars have made a relatively small contribution to this field of study (Pereira & Bamel, 2021)

For SMEs, which often operate under resource constraints, building strong digital capabilities is both a challenge and a strategic imperative. Digital transformation, often described as the fourth industrial revolution or Industry 4.0, involves the integration of information and communication technologies (ICTs) with production systems to enable autonomous decision-making and interconnected value networks (Sarbu, 2022). This integration supports innovation by allowing firms to collect and analyze data, collaborate digitally with stakeholders, and respond swiftly to market shifts (Suseno, Sick, & Laurell, 2018)

According to (Radicic, 2023), SMEs can benefit from three main forms of digitalization: big data analytics, digital production and logistics systems, and digital value chains. Each of these enhances innovation performance differently. For example, big data tools help firms extract valuable customer insights and make informed decisions under uncertainty (Niebel, Rasel, & Viete, 2018). Digital interconnection in production processes increases efficiency and enables faster product development cycles (Hahn, 2020), while digital value chains foster collaboration across supply networks, often leading to co-created innovation (Lee & Schmidt, 2016)

However, digital adoption is not uniform across SMEs. Resource limitations, cultural resistance, and lack of technical expertise often slow digital transformation in micro and small firms (Gruber, 2019) . Despite these challenges, SMEs that develop internal digital skills and strategically integrate digital tools can strengthen their capacity to innovate and grow (Scuotto, Nicotra, Giudice, Krueger, & Gregori, 2019). Investing in digital literacy is thus not merely a technical upgrade—it is an organizational shift essential for long-term survival.

Interestingly, internal R&D plays a nuanced role in the digital-innovation relationship. While in-house R&D is traditionally seen as a driver of innovation (Raymond & St-Pierre, 2010), found that SMEs without internal R&D benefitted more from digital tools in terms of product and process innovation. This may be because digital technologies often embed standardized and easily transferable knowledge, which complements the DUI (doing-using-interacting) innovation mode prevalent among smaller firms (Jensen, Johnson, Lorenz, & Lundvall, 2007) Additionally, SMEs in traditional sectors are increasingly hiring digitally capable talent to navigate new business models and meet the expectations of digitally native consumers such as Gen Z and millennials (Rachinger, Rauter, Ropposch, & Vorraber, 2018). This shift is crucial for aligning with Industry 4.0, where physical and digital systems must work in tandem. Moreover, policy initiatives play a vital role. For instance, Germany's "Digital Jetzt" program supports SMEs in upskilling their workforce and adopting secure IT systems (European Commission, 2021). These efforts highlight how external support can catalyze internal digital capability development, particularly in firms lacking R&D resources. Digital capabilities also influence a firm's absorptive capacity—the ability to recognize, assimilate, and apply external knowledge (Sarbu, 2022). Access to big data and real-time information enhances this capacity, leading to more agile innovation cycles. However, without appropriate skills or managerial support, data remains underutilized, especially in smaller enterprises (Peláez, Escobar, & Félix, 2024)

Digital capabilities are not just technical enablers but strategic assets that shape how SMEs create value, innovate, and compete. Developing these capabilities requires a multifaceted approach that combines investment in human capital, access to technology, supportive policies, and a mindset geared toward change.

In addition to that point, digital adoption is not uniform across SMEs. Resource limitations, cultural resistance, and lack of technical expertise often slow digital transformation in micro and small firms (Gruber, 2019) . Despite these challenges, SMEs that develop internal digital skills and strategically integrate digital tools can strengthen their capacity to innovate and grow (Scuotto,

Nicotra, Giudice, Krueger, & Gregori, 2019). Investing in digital literacy is thus not merely a technical upgrade—it is an organizational shift essential for long-term survival. While existing studies have primarily aimed to understand digitalization development, usage, and adoption in more developed markets of SMEs, there is a lack of research examining digitalization and its affecting constructs in an emerging economy such as Georgia. Thus, there is a clear gap in current studies on how SME managers deal with sustainability and competitive advantage in relation to technological advancements, especially considering post-COVID transformational trends.

We undestand that digitalization is a practice oriented on positive outcomes, however both RVB and DCT propose that only adoption without specific knowledge, strategic alignment and long-term roadmap is not something SME's should participate into. In many EU countries, sustainability is an emerging word that companies want to aqcuire thus do not fully understand it's daily operations.

Considering the identified gap in understanding how digitalization influences SME growth and competitiveness, the following hypothesis were formulated:

H1: SMEs whose sustainability-related digital initiatives attract new customers or business partners report a higher digitalization and competitive level than those whose initiatives do not .

H2: Perceived importance of digitalization for sustainability is positively associated with a firm's self-rated level of digitalization.

H3: SMEs that use digital tools for sustainability tracking are more likely to report that digitalization has improved their environmental sustainability.

H4: SMEs that consider digitalization important for sustainability are more likely to use digital tools to support sustainability efforts.

A quantitative research design was employed to investigate the determinants impacting the SME's digitalization level, it's acceptance and role on sustainability and competitiveness among managers in the diverse sectors. A questionnaire was structured to collect the responses, and then statistical analysis was conducted using Microsoft Excel.

In total, 100 responses were collected. All participants had experience working in the small and medium enterprise, ensuring the relevance of their insights regarding digital orientation adoption in the field. Respondents were reached directly through social media platforms (LinkedIn, Facebook, Gmail). The participants were selected based on their working experience (SME professionals).

The survey consisted of 4 sections. The questionnaire began with demographic questions to get data about the participant's age, gender, and experience with digital platforms. The remaining sections were dedicated to the variables explored in the study, and seven questions were structured for each of them. The respondents answered the questions using multiple-choice options. This study used a non-probability sampling method to collect data for analysis. Participants were reached randomly through online social media platforms. All participants had professional experience in the SME industry, either currently employed or previously worked in this field. Positions varied across different levels, from entry-level to managerial roles. In total, 100 responses were collected from an initial outreach to more than 200 respondents. The sample included both men and women, aged under 25 to 55+.

Gender split is almost even (≈ 54 % female, 46 % male). Largest age band is 25-34 (≈ 37 %), followed by 35-44 (≈ 31 %). About one-third of firms are "250 +" employees; the rest are mostly 10-49 and < 10. Professional Services, retail and healthcare make up the biggest industry groups in this sample. A simple linear regression was conducted to investigate whether the attraction of new customers or business partners through sustainability-related digital initiatives could predict the overall level of digitalization within companies. The regression results ($R^2 = 0.00047$, $F(1,97) = 0.05$, $p = 0.83$) indicate that the model is not statistically significant. The p-value ($p = 0.83$) is greater than the conventional 0.05 significance level, suggesting we fail to reject the null hypothesis that there is no relationship between these two variables. Furthermore, the regression coefficient for sustainability-related initiatives is tiny and negative ($\beta = -0.017$), indicating a very weak and inverse, but no significant, relationship. The 95% confidence interval (-0.18 to 0.14) includes zero, which underscores

the lack of significance. The Pearson's r of -0.022 also reflects a very weak, nearly non-existing, and negative association.

RESULTS AND DISCUSSION

The research examined how digitalization among small and medium enterprises effect competitive advantage as well as sustainability. The study found that while digital adoption is high in researched small and medium enterprises, differentiation is low. Most of the respondents representing healthcare, professional services and retail, highlighted usage of mainstream digital resources, such as: customer relationship management systems, Business Intelligent tools, social media marketing and cloud services, confirming that SME's progress in adopting modern demanded digital tools is positive. Although, simple regressions and χ^2 analyses did not reveal significant relationship between digital orientation and examined variables such as competitiveness and sustainability. Testing hypothesis one between sustainably-related digital initiatives and attraction of new customers, therefore a competitive edge, did not emerge a linear relationship because identified sectors did not give evidence of deeper capability, rather than symbolic differentiation. This finding suggests that in this concrete case and chosen industries, healthcare, retail and professional services, a company might land a sustainable-related customer by something they do by narrative, thus when we look deeper they're not more digitalized or strategically competitive than similar firms without that initiative. The thesis suggests that technology independently in my researched industries does not guarantee advantage in the market. Organizational culture, process integration, and data governance will be needed to advocate for the value creation. Thus, the following result could be impact of the saturation, when similar digital tools are adopted, technology becomes basic requirement to stay in business and tolerate the market. The results therefore validate principle of the dynamic capabilities theory: subject of how firms choose, create, and orchestrate capabilities.

Alongside, second hypothesis of this research provided insight that managers who chose digitalization as "important" or "somewhat important" are not automatically along the journey. Result: $r = –0.16$, $p = 0.12$ suggests that other constructs such as compliance responsibilities and strategic enthusiasm is needed for a company to meet its resources and align with future prospects. The digitalization metrics which questionnaire provided does not translate into real-world digitalization maturity.

Similarly, H3, H4, draws a pattern of adoption not being equal to actual integration, on a bigger picture – implication that importance does not cover successful execution. Hypothesis 3 demonstrated digital sustainable tracking dashboards not being significant to the day-to-day usage. Suggesting that sustainable tracking tools are passive rather than result and effort in environmental improvement.

H4 with the chi-square result ($X^2 = 0.568$, $df = 2$, $p = 0.753$) faced attitude-behavior gap, meaning while firms understand strategical value of differentiation and digitalization, they still face budget problems, lack of expertise, time constraints. Therefore, this hypothesis was not supported due to similar reasons.

Managers of small and medium enterprises can use the following findings of this study to improve the efforts of the integration and adoption process with value and strategy. For example, rather than acquiring software or tool directly, they need to accept how those resources of deployed, emphasizing strategic clarity, organizational culture, data literacy and accurate calculations of the ROI.

Despite contributing to the existing literature the study has some limitations. The number of responses does not provide a whole picture. The responses were gathered from people of different industries, yet the ratio is uneven. In addition, the convenience sampling method limits the findings generalizability. Moreover, the study utilized quantitative approach by employing pre-defined, closed-ended items. This sets back the possibility of gathering more in depth responses.

CONCLUSION

The thesis helps advance the understanding of the digitalization picture on SME's in the emerging economy, which confirms that mass adoption of digital tools in firms are not reliable without further emphasis on strategy and internal capabilities. Digital resource adoptions do not guarantee success in competitiveness and sustainability. While SMEs have progress in enriching the digital market, for competitive edge and sustainable development – stronger internal capabilities are needed. RVB correctly argued that sustainable competitive advantage come from VRIN framework, regarding how valuable, rare, inimitable and non-substitutable resources are. As well as DCT's agreement on reconfiguring subjects to strategically integrate capabilities based on its valuable ownership.

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