DIGITAL TECHNOLOGY ADOPTION IN HORECA SMES – A MANAGERIAL PERSPECTIVE

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Abstract

This study examines the perceptions of managers in small and medium-sized enterprises (SMEs) operating in the HoReCa sector in Romania regarding the adoption of digital technologies and their impact on competitiveness and organisational processes. The research adopts an exploratory qualitative approach, based on semi-structured interviews conducted with managers of units of various types (hotels, restaurants, cafés, guesthouses), size, and geographical location (urban and rural). The reflexive thematic analysis led to the identification of four main analytical themes: digitalisation as a strategic necessity, the benefits of digitalisation, the barriers to digitalisation and the impact on performance. The findings indicate that digitalisation contributes to increased operational efficiency, improved customer relationships and professionalisation of decision-making processes, while being constrained by costs, a lack of digital skills, and structural vulnerabilities specific to the HoReCa sector. The study introduces the concept of dissonant tempo (the divergence between the planned pace of digitalisation and the reactive pace of the HoReCa sector) as an explanatory factor of the underutilisation of adopted technological solutions. The research provides relevant contributions to extend the TOE (Technology-Organisation-Environment) framework and dynamic capabilities theory, with practical implications for public policies and managerial strategies in emerging economies.

Keywords: digitalisation; SMEs, HoReCa, managerial perceptions, qualitative analysis, organisational performance, digital ecosystems.

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Introduction

Digital transformation is one of the most dynamic processes reshaping the contemporary economy, influencing how organisations conduct their activities, interact with customers, and build competitive advantages. In the EU, SMEs form the core of economic activity, yet they remain vulnerable to the challenges generated by the rapid pace of technological innovation. According to the Digital Decade Country Report (European Commission, 2024a, b), only 73% of European companies reach the minimum threshold of digital intensity, with SMEs consistently falling below this average. In Romania, the share of SMEs that meet the basic digital adoption criteria is significantly lower, reflecting a structural delay in the technological uptake process (European Commission, 2024a, b; Melo et al., 2023). The HoReCa (Hotel, Restaurant, Café/Catering) sector is particularly exposed to the challenges of digitalisation, as it operates in a customer-oriented, rapidly evolving environment that depends strongly on digital visibility. The recent economic and societal developments have accelerated the pressure on firms in this sector to adopt digital solutions that respond to new customer expectations and optimise operational costs (Buhalis & Leung, 2018; Cheng et al., 2023). However, the pace of adoption is not uniform, and the disparities between organisations can largely be explained by managerial perceptions, the level of available resources, and the organisational culture specific to each firm. The success of digital transformation depends both on investments in technology and on the way managers interpret potential benefits, assess risks, and manage employee preparedness (Li et al., 2018; Mihai et al., 2025a; Teece, 2018). In the case of SMEs, where hierarchical structures are limited and decision-making is strongly centralised at the managerial level, the impact of managerial perceptions becomes decisive (OECD, 2023). Small HoReCa firms adopt digital technologies in a fragmented manner, more as a reaction to external pressures than as a proactive strategy, having different digital maturity levels (Ivanov et al., 2020). At the same time, SMEs digitalisation must be interpreted as a simultaneous technological, managerial, and strategic process (Jia et al., 2024; Marino-Romero et al., 2024; Mihai et al., 2025b; Shao et al., 2025). Qualitative research dedicated to understanding how managers in the HoReCa sector develop their views on digitalisation, perceive opportunities and barriers, and integrate technology into firm strategy remains limited, particularly in Central and Eastern Europe. Studies conducted in Romania are relatively scarce and often oriented toward quantitative methods, which further justifies the need for this study.

Thus, the general objective of the research is to deepen the understanding of how managers of HoReCa SMEs perceive the adoption of digital technologies and how these technologies influence competitiveness and organisational functioning. Based on this general objective, two specific objectives were formulated: (1) identifying the main benefits and barriers perceived by managers in the digitalisation process, and (2) analysing how managers interpret the relationship between digitalisation and firm performance. In order to achieve these objectives, the research addresses the following questions: (1) How do managers of HoReCa SMEs define and understand the digitalisation process? (2) What factors enable or hinder the adoption of digital technologies in these organisations? and (3) In what ways do managers perceive digitalisation as contributing to business competitiveness and efficiency? Given the exploratory nature of the research, the following hypotheses were formulated: H1. It is anticipated that managers perceive digitalisation as a strategic condition essential for efficiency and adaptation to market requirements. H2. It is assumed that financial barriers and the lack of digital skills among employees are perceived as the main obstacles to technology adoption**.** H3. It is expected that managers associate the implementation of digital technologies with an improvement in customer relationships and increased online visibility. H4. It is anticipated that the level of digital adoption in HoReCa SMEs is influenced, to varying degrees, by managers' prior experiences with technological tools. The paper is further structured as follows: section 1 presents the analysis of relevant specialised literature, section 2 describes the qualitative methodology used, section 3 presents the results and discussions organised around the four identified analytical themes, and the last section summarises the conclusions, theoretical and practical contributions of the study.

1. Literature review

In the literature dedicated to SMEs, the topic of digital transformation has generated increasing interest in recent years, particularly as a response to global challenges related to competitiveness, innovation, and sustainability. The study conducted by Zhang and Wang (2024) presents an extensive bibliometric analysis of the digitalisation literature, highlighting three major research streams: measuring digitalisation, internal and external influencing factors, and the economic consequences on firm value. Thus, digitalisation is understood as a complex strategic process involving investments in skills, organisational transformation, and alignment with the external environment (Zhang & Wang, 2024). Moreover, the analysis by Clemente-Almendros et al. (2024) emphasised that the absence of internal factors, organisational culture, continuous learning, financial control, and digital leadership, represents a significant barrier to SME digitalisation.

From a theoretical perspective, digitalisation in SMEs entails a set of transformations that include digital competencies, digital maturity, IT–strategy alignment, organisational culture, and financial resources. In SMEs, where resources are limited, flexibility is high, and vulnerability is considerable, a holistic approach becomes essential. The HoReCa sector is characterised by intense customer interaction, complex operations, seasonality, and a strong dependence on digital visibility; therefore, its digitalisation challenges and opportunities differ from those of other industries. Applying the TOE framework in a study conducted among small and medium-sized hotels identified that digital maturity, availability of financial resources, and governmental regulations significantly influence adoption intentions (Nikopoulou et al., 2023). The TOE framework, originally proposed by Tornatzky and Fleischer (1990), remains one of the most widely used models for explaining technology adoption in organisations. It structures influencing factors into three dimensions: (1) the technological context, referring to the characteristics of the technology and its compatibility with existing infrastructure; (2) the organisational context, including resources, competencies, and internal culture; and (3) the environmental context, represented by competitive pressures, regulations, and market dynamics. In HoReCa SMEs, this framework is particularly relevant because digital adoption decisions are shaped simultaneously by the availability of accessible technologies, the internal capacity for implementation, and the pressures generated by online platforms and customer expectations. Furthermore, Bulchand-Gidumal (2021) examined the evolution of HoReCa business models under the impact of digital technologies and platforms, showing that the transition from a traditional to a digital model is driven by platformisation, Industry 4.0 technologies, and changes in consumer behaviour. Similarly, the study by Law et al. (2018) on technology use in tourism management indicated that, especially for small enterprises, visibility on OTAs (Online Travel Agencies) and adaptation to digital brand requirements are key factors shaping customer satisfaction and loyalty.

In the HoReCa sector, the adoption of online reservation systems, mobile applications for customers, back-office process automation, and digital marketing enables firms to respond more promptly to demand and optimise costs (Buhalis & Leung, 2018). Clemente-Almendros et al. (2024) highlight that internal factors such as digital leadership and organisational culture are often overlooked, which slows down adoption. Moreover, in the HoReCa sector, barriers are amplified by high staff turnover, which makes it difficult to maintain a consistent level of digital skills, as well as by daily operational pressure, which limits the time available for training and technological implementation. Relevant mediators of the digitalisation process include managerial experience, the existing level of digitalisation, risk perception, external pressures, and the availability of public or partnership-based support. In the HoReCa context, digital maturity becomes a predictor of technological adoption. Managers with prior experience using technologies are more inclined to adopt new solutions, while the perception of financial and operational risk may inhibit the innovation process. Additionally, external support, whether in the form of consultancy or government funding programs, can facilitate the digital transition, especially for SMEs with limited resources.

Although studies in the specialised literature are becoming increasingly numerous, notable gaps persist, particularly for SMEs in Central and Eastern Europe and for the HoReCa sector. Kahveci's (2025) study highlighted that most research focuses on developed economies or large firms, which reduces transferability to SMEs in resource-constrained environments. Moreover, although studies on technology adoption exist, few investigations address managers' perceptions, especially regarding the meaning they assign to digitalisation, the interpretation of benefits and barriers, the negotiation of organisational culture, and the decision-making processes within a small or medium-sized enterprise. In addition, the need for qualitative studies that capture managers' motivations, emotions, and lived experiences is emphasised (Bulchand-Gidumal, 2021; Verhoef et al., 2021). This need is particularly acute in the context of Romanian SMEs, where contextual factors (developing digital infrastructure, limited access to financing, lack of technological expertise) create an environment distinct from that of Western economies. From this perspective, the current study addresses these gaps through a qualitative approach dedicated to managerial perceptions within Romanian HoReCa SMEs, a context rarely examined in the literature. Based on the reviewed literature, the factors influencing HoReCa digitalisation are: the technological context (Buhalis & Leung, 2018; Bulchand-Gidumal, 2021; Xiang et al., 2022); the organisational context (Kahveci, 2025; Zhang & Wang, 2024); the external context (Bulchand-Gidumal, 2021, Cheng et al., 2023; Marino-Romero et al., 2024); HoReCa specific factors (Buhalis et al., 2023a; Ivanov & Webster, 2020); and mediators (Jia et al., 2024; Li et al., 2018; Shao et al., 2025). This synthesis provides a conceptual foundation for understanding how managers in HoReCa SMEs perceive and negotiate the digitalisation process. The present research aims to explore these dimensions in the specific Romanian context, identifying how the listed factors manifest in managerial perceptions and decision-making.

2. Research methodology

The present research was grounded in a qualitative approach, considered the most appropriate to analyse how managers of HoReCa SMEs assign meaning and understanding to the phenomenon of digitalisation (Merriam, 2009; Silverman, 2020). As Creswell (2013) emphasised, qualitative research is suited to situations in which understanding a phenomenon depends on the perspectives of those involved. The general objective of the research is to deepen the perceptions of managers in HoReCa SMEs regarding the adoption of digital technologies and how they influence the competitiveness and processes of organisations. The specific objectives aim to: (1) identify the main benefits and barriers perceived by managers in the digitalisation process and (2) analyse how managers interpret the link between digitalisation and company performance.

The sample is composed of managers with a minimum of three years of experience in HoReCa were selected, all directly involved in operational processes and in decisions regarding the adoption of digital technologies. The inclusion criteria targeted the typological diversity of units (hotels, restaurants, cafés, guesthouses), the size diversity (micro-enterprises, small and medium-sized enterprises), and the geographical diversity (urban and rural environments). The individual profile of the participants reflects the typological and dimensional diversity of the HoReCa sector in Romania. The 25 interviewed managers have an average experience of 10 years in the sector, with values ranging from 3 to 18 years. From the perspective of the type of unit, the sample includes 8 restaurant managers, 6 hotels managers, 6 cafes managers and 5 guesthouses managers. The geographical distribution includes 18 managers of units operating in urban areas and 7 in rural areas. In terms of company size, 13 managers are running microenterprises, 7 small enterprises, and 5 medium-sized enterprises. All participants are directly involved in operational decisions and in the processes of adopting digital technologies. The identity of the participants was kept confidential; each respondent being identified by alphanumeric code during the analysis. Before conducting the interviews, the interview guide was piloted with five managers with extensive experience (over 15 years) and direct involvement in digitalisation processes. The pilot study helped improve the guide, through adjustments in form and clarification of the research directions. The final structure included fifteen open-ended questions, grouped around the three research questions. The questions follow a narrative flow, moving from the respondent's personal definition of digitalisation to lived experiences within the organisation, and finally to the interpretation of its effects on the business. Within this structure, the interview becomes not only a technical tool for data collection, but also a space in which the respondents reconstruct their experiences. The interview guide was structured into three thematic areas, corresponding to the three research questions, each area comprising main questions and in-depth questions. This structure allowed for maintaining coherence between interviews, while ensuring the flexibility necessary for a qualitative exploratory approach. Data collection continued until informational saturation was reached (Guest et al., 2006), the point at which additional interviews no longer generated new significant themes. The interviews were conducted either online or on-site at the participants' locations, depending on availability, and lasted on average between 45 and 60 minutes. The conversational atmosphere, rather than a strictly formal dynamic, allowed for the identification and articulation of meaningful details regarding the technologies used, as well as how participants experience market pressures, relationships with staff, the need for adaptation, and their own fears and aspirations. All interviews were audio recorded (with the participants' prior consent) and fully transcribed to ensure accuracy for subsequent analysis. Transcription was carried out verbatim, preserving respondents' original phrasing, including hesitations, pauses, or reformulations, elements considered relevant for understanding discursive nuances.

The qualitative analysis began with the repeated reading of the interview transcripts, an essential stage for understanding tone, rhythm, and implicit meanings. The interview transcripts were analysed using the reflexive thematic analysis proposed by Braun and

Clarke (2006, 2019). Following the six-phase model formulated by Braun and Clarke (2006), the analysis was conducted iteratively, with continuous returns to the text and to the developing interpretations. The first stage involved repeated and careful reading of the transcripts, noting initial ideas and recurring elements. In the present study, familiarisation highlighted recurrent divergences between external digital pressures and internal managerial reluctance. Initial coding was performed with the aim of capturing any significant element, without fitting data into pre-existing categories. Codes such as technology for survival, online visibility as necessity, or unstable seasonal staff were extracted directly from participants' responses. In the spirit of reflexivity described by Braun and Clarke (2019), the coding was treated as an interpretive rather than descriptive activity, with an emphasis on the subjective meanings managers attribute to their experiences. Codes were compared and grouped based on semantic convergence, in a process reminiscent of axial coding, without formally adopting its terminology. Preliminary thematic clusters emerged, represented by perceived benefits, staff relations, structural difficulties, customer impact, or strategic uncertainties, elements that align with the foundational structures of broader interpretive frameworks. Theme generation already involved a shift from description to interpretation, as researchers began analysing relationships among the meanings expressed in the data. The preliminary themes were evaluated from two perspectives: internal coherence and external validity, in line with Braun and Clarke (2006) recommendations. During this stage, some themes were separated, others merged, and certain codes were reassigned based on their predominant meaning. This evaluative process was dynamic, necessary to avoid overlap and to consolidate the thematic architecture. After coherence checks, each theme was enhanced conceptually, with clarified boundaries, essence, and internal substructures. In this stage, researchers drafted concise descriptions for each theme, defining the generic elements the theme establishes and its relationship to the research questions. The process had a strongly reflexive character, aiming to identify what Braun and Clarke call the core idea that gives meaning to the theme. The final stage consisted of integrating the themes into a coherent analytical narrative. Moving from themes to the final report required selecting illustrative quotations, articulating the connections among themes, linking findings to the existing literature, and formulating an interpretation that reflects both the granularity of the data and the study's original contribution. This stage is both descriptive and interpretive, grounded in theoretically and practically relevant analysis.

3. Results and discussion

Starting from the interview structure built around three major themes, the content analysis led, inductively, to the delineation of four analytical themes that more accurately reflect the complexity of respondents' perceptions, experiences, and strategies. This thematic reconstruction, from the initial three dimensions (understanding digitalisation, benefits and barriers, and impact on performance) to four distinct analytical themes, was achieved through the process of open and axial coding. It enabled a more detailed exploration of semantic correlations and highlighted significant differences among various HoReCa unit typologies. The hierarchical structure of the reflexive thematic analysis comprised 4 main themes, 12 subthemes, and more than 40 primary codes identified across the 25 interviews. The descriptive codes represent direct examples from participants' discourse and illustrate how initial codes were grouped into subthemes, and how these were consolidated into the final analytical themes. The coding process was iterative, involving multiple cycles of revision and refinement, in accordance with Braun and Clarke (2006, 2019). To ensure transparency of the analytical process and to substantiate the identified themes, we calculated the occurrence frequency of each main theme and associated subthemes in the 25 interviews (T1 – 100%, T2 – 96%, T3 – 100%, T4 – 92%). A theme was considered analytically relevant if it appeared in at least 60% of the interviews, a threshold consistent with recommendations in the specialised literature on thematic saturation in qualitative research (Guest et al., 2006). In the following sections, each subsection presents the results for one main theme, using a narrative approach centred on the participants' voices and linking their responses to the current scholarly literature.

3.1. Digitalisation as a Strategic Necessity

The analysis of the responses provided by the interviewed managers' highlights, first and foremost, that digitalisation is perceived as a condition of existence in a market redefined by platforms, algorithms, and customers' digital behaviours. From their perspective, digitalisation represents the minimum threshold for entering the game. The managers' responses clearly capture the idea that the balance of power between the firm and the market has shifted with the entry of digital platforms into the HoReCa ecosystem. The manager of a 3-star urban hotel articulates this reversed relationship explicitly: *"We no longer compete with the hotels next to us, but with everything that appears on Booking in the city. The algorithm doesn't forgive. If your average drops by 0.1, you lose 20% of bookings in a week."* This perception aligns with the concept of platform dependency discussed by Bulchand-Gidumal (2021) in the context of HoReCa business models, where digital platforms become mandatory infrastructures of economic activity. Moreover, the statement highlights an entire process of transformation through which competition becomes trans-local (Gazzola et al., 2024), no longer geographically bounded but algorithmically mediated in digital spaces where physical proximity becomes irrelevant, and performance is measured through visibility within a digitally mediated environment. A form of structural dependency becomes apparent, expressed by the manager of a restaurant for whom delivery platforms have become a necessary evil, yet an evil that cannot be avoided without existential costs: *"They take a big commission, but if you're not there, the market erases you. Clients don't look for you on the street, they look for you in the app."* This type of response suggests an asymmetric power dynamic in which HoReCa SMEs must adapt to the logic of digital infrastructures they do not control. Furthermore, for units targeting younger audiences, platforms act simultaneously as sales channels and as spaces of symbolic validation. In this context, one respondent observed: *"Clients no longer ask what coffee we use, but why we don't post more often,"* signalling a shift in the centre of gravity from the product itself to visual communication and the rhythm of online presence. A noteworthy interpretative element is the difference between urban and rural units. The rural respondent experiences the same digital pressure, but translates it into a more practical register: *"They want everything fast: pictures, routes, availability, instant booking. If you tell them to call you, you've lost them."*. From an analytical perspective, subtheme 1.1 outlines a relationship in which digitalisation is reactive, with managers responding to rules, requirements, and expectations imposed by external structures (platforms, customers, competitors with higher digital maturity). A second emerging direction refers to the fact that digitalisation is associated, almost invariably, with visibility and reputation. Managers speak about online image, reviews, search presence, or ranking position. One respondent noted: *"Reviews are more important than receptionists. If an employee smiles a little less one morning, I have a problem in the rating by evening."* This statement highlights the way in which digital visibility influences micro-level processes in the organisation, with front-office employee behaviour being reshaped under the pressure of immediate and public evaluation. In this context, reputation becomes a volatile indicator, updated in real time. This transformation, also emphasised by Buhalis and Leung (2018), shows that reputation becomes a digital artifact, constructed through the aggregation of public evaluations, with amplified effects on consumer behaviour through social media mechanisms. In the case of restaurants, digital visibility is perceived as a combination of exposure on social media and positioning on search platforms. One respondent observed that *"…a few years ago, a satisfied customer did my advertising. Now an algorithm does it,"* signalling the shift from relational marketing, based on informal recommendations, to marketing mediated by information systems. Another respondent highlighted the economic dimension of this visibility: *"We ended up paying for visibility on Google. If you don't pay, you're invisible. It's not a fair game."* In rural areas, the same logic is expressed with different vocabulary: *"If you don't reply to messages in 10 minutes, guests think you don't exist."* In this case, respondents emphasised the structural discrepancy whereby small units, with limited staff, cannot ensure the constant digital availability that customers perceive as normal. All these responses converge toward the conclusion that, for HoReCa SMEs, digitalisation becomes the invisible infrastructure of reputation. It conditions access to the customer, the way the organisation is perceived, and, indirectly, the way trust-based relationships develop. Reputation is transformed into scores, ratings, and textualised reviews, accessible to anyone. A third important dimension of this theme concerns the way managers describe digitalisation as a continuous process of adaptation, often exhausting and unstable. While the management literature frequently discusses digital transformation in terms of staged projects, the responses in this study highlight the rapid pace of change. As one respondent, a restaurant manager, stated: *"I've barely learned one platform, and an update already comes. I barely integrate one software, and another one appears. It's a race. And sometimes you feel like you're running after something you can't catch."* From an interpretive perspective, this statement captures the perceived nature of change, whereby digitalisation represents a permanent race, with the pace dictated externally, while the organisation struggles not to fall behind. This perception reflects what the digital transformation literature calls technological volatility, a structural characteristic of digital ecosystems in which innovation cycles are shorter than organisational implementation cycles (Zhang & Wang, 2024), generating a permanent divergence between adaptive capacity and the rhythm of external change. Another respondent, a 4-star hotel manager, elaborates even further: *"Digitalisation has no end point. What we implement now will be outdated in two years. And that forces me to think short-term, not long-term."* In this case, an important strategic consequence can be observed: instead of supporting long-term planning, technological instability may induce a logic of immediate reactions and permanent adjustments, at the risk of fragmenting strategic vision. In smaller organisations, this digital instability is felt even more acutely. One response captures precisely the exhausting nature of digital change: *"It drains me. Keeping up with digital trends, visuals, campaigns. It feels like I'm not running a café anymore, but a social media page."* In rural contexts, a parallel world emerges, some tourists' value simplicity and human contact, while others penalise the absence of digital functionalities such as online check-in. The respondent therefore feels caught between two types of expectations: one traditional and one digitalised. Analytically, these responses highlight the divergence between the necessity of adaptation and the psychological and organisational costs of that adaptation. This instability, combined with external pressures and dependence on platforms, creates an environment in which digitalisation is simultaneously a source of opportunity and a source of exhaustion.

In summary, Theme 1 shows that, in the perception of HoReCa managers, digitalisation is both a voluntary strategic project and an internalised external imperative. It is positioned as a **market pressure** mediated by platforms and algorithms, an **infrastructure of reputation** that conditions access to clients, and a **continuous process of adaptation**, often experienced as an endless race. From a theoretical standpoint, Theme 1 confirms H1 and H3 and supports the idea that, in HoReCa, digitalisation is an externally driven process that fundamentally reshapes the relationship between the firm, the client, and the market.

3.2. Benefits of Digitalisation – Operational Efficiency, Managerial Control, and the Reconstruction of Customer Relationships

Whereas in the previous theme digitalisation was described primarily from the perspective of external pressures and forced adaptation, in Theme 2 the managers' responses take on a different tone, with digitalisation emerging as a process which, although imposed, generates a series of tangible benefits, clearly perceived in day-to-day operations. A restaurant manager succinctly captures this transition, stating: *"Before digitalisation, I felt like I was running two restaurants: the imagined one and the real one. Now I see exactly what is happening, without illusions."* The phenomenon also aligns with the concept of internal information asymmetry highlighted in the SME performance literature (OECD, 2023), where managers previously relied on subjective perceptions rather than objective data, increasing the risk of suboptimal decision-making. Another respondent, a hotel director, confirms this dynamic by noting: *"I no longer have invisible losses. The software shows me everything: consumption, flow, stocks, idle times. I no longer work with assumptions."* In another type of unit, the benefits are experienced in a context-specific form: *"For us, efficiency means knowing exactly when it's peak time and when it's empty. I reduced the schedule by one day and made money. Digitalisation means not wasting energy."* In rural areas, the logic differs but the outcome is similar, with digitalisation introducing order into a fragile logistical environment: *"I don't have much staff. The system helps me not forget anything."* From a theoretical perspective, these perceptions confirm the findings of recent literature (Cheng et al., 2023; Gallardo et al., 2025), which argue that digitalisation acts as a mechanism for reducing operational uncertainty, providing firms with the ability to manage the complexity of the HoReCa sector, characterised by high transaction volumes, seasonality, and interdependent workflow structures. Managerial control represents the component in which the benefits of digitalisation are articulated most clearly and coherently across all types of units. While in Theme 1 managers expressed a sense of losing control in relation to external platforms, Theme 2 reveals a recovery of control within the organisation itself. One respondent explains this transition in revealing terms: *"I like to make quick decisions. The problem was that they were quick and wrong. Digitalisation forced me to confront reality."* This statement illustrates a phenomenon well documented in the literature (Marino-Romero et al., 2024), according to which digitalisation provides data and triggers a cognitive reorganisation in the way managers understand their business. This cognitive reorganisation, as described by Marino-Romero et al. (2024), represents a transition from learning based on personal experience to learning based on objective, systematic feedback, transforming the managerial style from a reactive one into a proactive and calibrated one. Another respondent, the director of a 3-star hotel, reinforces this perspective: *"Now I have the real seasonality, not the one I felt. The software shows me what is profitable and what is merely exhausting."* From the perspective of a café manager, the view is more nuanced: *"I no longer depend on memory. It's a relief. I can delegate and show the team what we need to change."* An important side effect highlighted here is that digitalisation enhances the manager's control while also creating transparency within the team, an aspect that can improve collective performance as well as individual accountability. From a theoretical standpoint, this dimension confirms what Teece (2018) refers to as dynamic capabilities, represented by the firm's ability to learn quickly and adapt its decision-making processes based on new information. The third subtheme focuses on the way digitalisation rewrites the interaction with customers. This transformation is perceived simultaneously as an opportunity and a vulnerability, yet in the managers' responses, the balance clearly leans toward opportunity. One respondent, a hotel manager, describes the relationship with the customer in terms of co-creation of the experience, stating that *"Digital feedback is a gift and a curse. But lately, more of a gift. You find out immediately what doesn't work. You can correct it the same day."* This observation highlights that managers have internalised the logic of digital feedback as an instrument for rapid adjustment and managerial responsiveness. The concept of co-creation (Buhalis et al., 2023a; Buhalis et al., 2023b) refers to the process through which the service experience is no longer delivered unilaterally by the provider, but is shaped in continuous interaction with the customer, through immediate feedback and adaptation processes. In HoReCa, this mechanism is amplified by digital transparency, in which every interaction becomes potentially public, and reputation is built sequentially through the accumulation of micro-experiences that are evaluated and communicated digitally.

Theme 2 outlines a coherent and detailed picture of the benefits of digitalisation, perceived as structural transformations in the way HoReCa firms operate. Digitalisation is a mechanism for clarifying operational reality, an instrument for professionalising decision-making, a bridge of communication between the organisation and the client, and a managerial resource of power within an ecosystem dominated by uncertainty. Thus, Theme 2 counterbalances Theme 1; thus, while digitalisation represents an inevitable challenge, it simultaneously constitutes one of the few ways through which HoReCa SMEs can create space for control and development in an environment marked by unpredictability. From a theoretical perspective, Theme 2 fully validates hypothesis H3, emphasising the idea that managers associate digitalisation with improvements in the relationship with customers and directly experience this transformation through feedback, co-creation of the service experience, and the building of loyalty in the digital space. At the same time, the results also contribute to the validation of hypothesis H1, showing that digitalisation is perceived as a strategic resource essential for restoring managerial control in an environment dominated by uncertainty.

3.3. Barriers to Digitalisation – Costs, Digital Skills, and Structural Vulnerabilities

If the first two themes highlighted a divergence between the external pressure and the internal benefits of digitalisation, Theme 3 becomes the space in which these two dimensions turn directly antagonistic. In this case, the limits and contradictions of the digitalisation process become evident, both at the organisational level and at the individual level. The managers' responses depict a complex picture in which financial constraints, the lack of digital competencies, and the structural instability of the HoReCa sector converge, generating a challenging context for the coherent and sustainable implementation of technological solutions. The interviews highlight three fundamental dimensions, which include **costs, employee competencies**, and the **structural vulnerabilities** of the sector. Within the responses provided, it becomes evident that managers approach costs in existential and strategic terms. Costs appear frequently as barriers that can determine the pace, scale, or even the feasibility of digital implementation. One respondent, a restaurant manager, captures the essence of the issue by stating, "*Everyone talks about the benefits, but no one says how much it costs to get there. In digitalisation, you pay three times: when* *you buy, when you implement, and when you maintain.*" This observation highlights a reality that is difficult to capture statistically, namely, that costs include financial expenses, transition costs, time, learning, and the adaptation of internal processes. Another respondent adds an important element, noting, "*Often, the subscriptions are more expensive than the software itself. It's a monthly dependency that weighs on you. If you can't pay anymore, you lose everything."* This remark reflects an acute perception of risk: digital investments are viewed as irreversible, and managers express concern about becoming locked into a technological ecosystem they cannot control. This perception of irreversibility aligns with the concept of lock-in from platform economics (Bulchand-Gidumal, 2021), which holds that *once a technological ecosystem is adopted (such as a POS or a reservation system), switching costs rise exponentially, not only financially but also operationally (retraining staff), relationally (reintegrating suppliers), and strategically (losing data history). Thus, the initial decision becomes practically irreversible in the medium term.* A hotel manager, although more financially stable, expresses similar anxieties: "*You never know how much a software will cost next year. Licenses change, packages change. It's hard to plan strategically."* All these observations are consistent with findings in the literature. An OECD (2023) study underscore that for SMEs, recurring costs represent the primary barrier to digitalisation. Among all the barriers identified, the lack of digital skills among employees is the most frequently mentioned. Managers describe it as a systemic problem, deeply rooted in the organisational culture of the sector. One respondent, a restaurant manager, articulates the issue directly: *"You can learn the technology in two days. It takes people a year. And sometimes not even then."* This observation clearly distinguishes between technical difficulty (low) and human difficulty (high). Digitalisation is not a technological barrier but a cultural and mindset barrier. Another respondent states: *"Training is continuous. Some colleagues forget, others are afraid, others make mistakes. And every mistake shows up in the system. It's stressful for them,"* while another adds: *"I work a lot with young staff. They're good at social media, but not at software. It's a different paradigm."* This is a relevant observation, indicating that perceived digital competence is not equivalent to operational digital competence. The workforce development literature (Telukdarie et al., 2024) confirms that this confusion is common and generates unrealistic expectations from managers toward younger employees. Another, far more complicated issue is described by a respondent who states: *"I have employees who don't have an email address. How can I teach them digital check-in?"* All these responses reveal a structural gap between the pace of technological change and the pace of human capital adaptation. Barriers stem from lack of skills, fear of errors, dependence on outdated procedures, cognitive overload, and the challenge of long-standing routines. Specialised literature supports this perception. Studies by Shao et al. (2025) highlight that insufficient digital literacy is the most persistent obstacle in SME transformation, while OECD (2023) underscores the difficulty HoReCa organisations to maintain a digitally competent workforce. This subtheme highlights issues that extend beyond the boundaries of the firm and correlate with the structural characteristics of the HoReCa sector in Romania. One respondent precisely articulated one such problem, stating, *"The internet fails exactly when I need it the most. What digitalisation are we talking about?"* This remark underscores a simple yet fundamental reality: digitalisation requires infrastructure, and in many areas that infrastructure remains inadequate. At the same time, managers of restaurants and cafés point to another vulnerability, high staff turnover: *"I can't invest constantly in training. In* HoReCa, *people come and go. You struggle for two months with an employee, and after three months they leave."* Hotel managers emphasise seasonality: *"In the off-season, I cannot sustain the costs of complex digital solutions. In the high season, I don't have the* *time to use them efficiently. It's a contradiction."* This observation is essential because digitalisation does not align with the economic rhythm of HoReCa, producing a structural discontinuity between the need for technological stability and the reality of seasonal activity. Restaurant managers highlight yet another structural contradiction: *"Technology needs time to be integrated, but HoReCa does not give you time. It's a sector of firefighters, not architects."* The *firefighters versus architects'* metaphor illustrates the structural divergence: digitalisation requires planning, whereas HoReCa operates in a regime of continuous reaction. A fundamental structural divergence also emerges: digitalisation requires a long-term strategic planning logic, while HoReCa operates under conditions of operational urgency (*firefighting*), marked by constant pressure, seasonality, fluctuating demand, and the need for immediate response. This temporal dissonance explains why many digital investments remain underused, not due to a lack of intrinsic value, but because of incompatibility with the sector's operational rhythm. The literature on organisational transformation (Teece, 2018) underscores that the success of technological adoption critically depends on aligning technological, operational, and strategic rhythms. The dissonance between digital tempo (slow, planned) and the sector's tempo (fast, reactive) represents one of the most significant findings of this study, rarely addressed in the specialised literature.

Synthesising the findings, Theme 3 highlights the challenges and limitations accompanying the digitalisation process in HoReCa SMEs, where barriers emerge from the convergence of economic, human, organisational and structural constraints. These results confirm the existing literature (OECD, 2023; Shao et al., 2025) but add a new interpretative dimension, namely that managers perceive barriers not only as technical difficulties but also as issues of harmonising two different operational rhythms: the fast, competitive pace of the digital market and the fragmented, unpredictable, and intense pace of the HoReCa sector. This theme confirms hypothesis H2 and substantially extends it, demonstrating that financial barriers and lack of digital skills are indeed the main obstacles (OECD, 2023; Shao et al., 2025), while adding psychological dimensions (fear of irreversibility), structural dimensions (staff turnover, seasonality), and rhythmic dimensions (the dissonance between digital tempo and HoReCa tempo) that were not initially anticipated. These results show that digitalisation barriers extend beyond technical aspects, constituting challenges of harmonising fundamentally different operational rhythms.

3.4. Digitalisation and Performance – Economic Efficiency, Organisational Transformation, and Identity Reconstruction

The final theme brings to the forefront the way in which managers interpret the impact of digitalisation on firm performance. Unlike the specialised literature, which approaches performance strictly from a financial perspective (profit, costs, revenues), the managers' responses suggest a much more complex view, in which performance results from the interaction between economic indicators, process coherence, public image, organisational identity, and the capacity to respond quickly to change. In this case, the perspectives become more introspective and more oriented toward the meaning attributed to digitalisation. Managers speak not only about what they produce digitally but also about what they *become* as organisations and as professionals within a digitalised ecosystem. In most interviews, managers associate digitalisation with an increase in economic efficiency, but they emphasise that this increase occurs gradually and often in a non-linear manner, *not* proportional to investment or time, but characterised by thresholds, delayed jumps, and effects specific to learning curves. The specialised literature on digital ROI in SMEs (Cheng et al., 2023) confirms this pattern, in which economic benefits appear late, after a period of decline during which costs (financial, temporal, cognitive) are high and results still invisible. One respondent clearly articulates this dynamic: *"Digitalisation didn't increase my profit all at once, but it reduced my losses. It was a slow but steady process."* This statement is important because it highlights that, in HoReCa, digitalisation is both a stabilising mechanism and a driver of accelerated growth. Profitability does not rise through a sudden leap, but through reduced waste, optimised consumption, and adjusted workflows. Another respondent expresses the same idea in a revealing way: *"For us, digitalisation was like a good brake, not an accelerator. It helped me control the skidding."* This perspective aligns with the findings of Cheng et al. (2023), who noted that in HoReCa SMEs, digitalisation provides control first, and growth second. Another respondent speaks of flexibility: *"When market changes hit us, digitalisation is the only reason we don't collapse. I can adjust prices, schedules, campaigns quickly. Without it, I'd be paralysed."* Finally, a more pragmatic viewpoint underscores: *"I'm not talking about profits; I'm talking about survival. Without digitalisation, we wouldn't even be on the map for foreign tourists."* All these responses support an important conclusion: for many SMEs, digitalisation is not a competitiveness strategy, but a continuity strategy. Performance is defined not only in financial terms but also as the firm's ability to exist in a volatile environment. Managers consistently emphasise that digitalisation transforms not only outcomes but also the way the organisation functions and understands itself. One respondent describes this process in highly illustrative terms, stating: *"Digitalisation forced me to put things in order. I had to map processes, create procedures, standardise. It was hard, but it matured us."* This statement supports what the literature on dynamic capabilities describes as technology-induced organisational transformation, according to which digital adoption forces organisations to clarify their processes, behaviours, and roles (Omol, 2024; Teece, 2018). In HoReCa, a sector traditionally grounded in improvisation and informal flexibility, this discipline may initially be perceived as rigidity, but in the long term it generates operational coherence and scalability. Another respondent adds a similar perspective: *"Now we have a way of working, not just a routine. We have indicators; we know what we monitor. That is real professionalisation."* A third respondent experiences this transformation at an identity level: *"I realised I'm no longer running a 'small' café. We are a brand. Digitalisation made us visible, and that obliges us to be consistent."* Managers' responses highlight the fact that digitalisation functions as a catalyst for standardisation, and standardisation produces internal coherence. In HoReCa, this transition is profoundly transformative. Perhaps the most compelling dimension of Theme 4 is the way managers describe the personal changes brought about by digitalisation. Far from being limited to technical functions, digitalisation transforms how managers perceive themselves, their roles, their authority, and their responsibilities. One respondent, a restaurant manager, expresses this transformation in one of the most complete statements in the entire interview set: *"Digitalisation didn't change my business; it changed my profession. It made me become a different type of manager."* This perspective is closely aligned with the literature on digital leadership (Teece, 2018), which argues that technological adoption cannot succeed without a reconfiguration of managerial identity. Another respondent highlights the decision-making dimension: *"Digitalisation made me less impulsive. I no longer rely solely on instinct. I changed my style."* An even deeper perspective emerges from another manager, who notes: *"I found myself becoming, without intending to, a content creator. It's strange, but that's what the market demands. I had to accept that the identity of the business is built through me."* In contrast, in rural guesthouses a different identity-based tension appears, articulated as: *"I am a field person, not a laptop person. But if I want to stay relevant, I must step out of my comfort zone."* All these responses reveal a reality often omitted by quantitative research: digitalisation functions simultaneously as a technological and an identity transformation, one that requires new attitudes, new competencies, and sometimes giving up professional routines consolidated over years of experience.

In this context, Theme 4 highlights the fact that digitalisation contributes to the performance of HoReCa SMEs across four deeply interdependent levels: the operational level (reducing uncertainty, optimising workflows, limiting losses), the economic level (increasing profitability not through rapid expansion but through stabilisation), the organisational level (emergence of standardisation, professionalisation, and consolidation of procedures), and the identity level (the manager becomes a strategic actor of change, and the firm's identity is reconfigured according to a digital logic). The impact of digitalisation is neither instantaneous nor uniform, but it is profound and transformative. Managers' responses emphasise the existence of a process in which technology becomes both a tool for efficiency and a stimulus for redefining organisational roles, values, and strategies. Theme 4, thus, coherently concludes the overall narrative arc of the findings. In a context dominated by pressures and divergences, digitalisation constrains but also provides the resources through which organisations can regain control, coherence, and meaning in their activity. The results of Theme 4 confirm hypothesis H3: managers associate digitalisation with improved customer relationships and increased visibility, but they also extend this perspective toward identity-related and organisational dimensions that were not initially anticipated. Moreover, hypothesis H4 is partially validated: previous experience with technology influences the adoption process and managerial style (Teece, 2018), but this influence is significantly mediated by structural factors (seasonality, staff turnover) and cultural factors (resistance to change). The findings show that, in the HoReCa context, external pressures can drive digital adoption even in the absence of favourable prior technological experience, suggesting that platform dependence exceeds the individual capabilities of managers.

Conclusions

From the perspective of the research questions, the first question, *How do managers of HoReCa SMEs define and understand the process of digitalisation?*, received a consistent and convergent answer, demonstrating that digitalisation is perceived as an external imperative imposed by digital platforms, customer behaviour, and competitive dynamics. Managers describe it primarily as a condition of existence, a minimum threshold for entering the market, rather than as a source of competitive differentiation. This perception is mediated by the logic of algorithms and digital visibility, which represent the invisible infrastructure of organisational reputation. Instead of adopting a proactive strategy, managers assume a reactive stance, responding to external requirements that they cannot control but must internalise in order to survive. The second question, *What factors enable or hinder the adoption of digital technologies in these organisations?*, revealed a complex structure of facilitating and inhibiting factors. On one hand, managers recognise the tangible benefits of digitalisation, including real-time operational visibility, data-driven managerial control, instant customer feedback, and the ability to adjust decisions quickly in response to market changes. On the other hand, the barriers are deep and multilayered, including recurring software subscription costs, lack of employee digital skills, and fear of irreversible investments, high staff turnover, seasonality, and inadequate IT infrastructure, especially in rural areas. What differentiates this study from other quantitative research is the identification of a fundamental temporal barrier arising from the conflict between the digital rhythm (planned, sequential) and the operational rhythm of HoReCa (reactive, intense, fragmented). Managers highlight the difficulty of integrating technology into an environment characterised by unpredictability and constant pressure. The third question, *In what ways do managers perceive that digitalisation contributes to business competitiveness and efficiency?*, revealed a nuanced perspective that goes beyond the strictly economic view of performance. Managers do not associate digitalisation with a rapid increase in profits but with gradual stabilisation, reduction of losses, and an enhanced ability to survive in a volatile environment. At the same time, its impact manifests at an organisational level and at an identity level, with managers describing profound personal changes, moving from intuitive decisions to indicator-based decisions, assuming new roles (such as content creator), and stepping outside their comfort zones. This identity dimension, rarely examined in the literature, suggests that digitalisation is both a technical and a transformative process that redefines the meaning of the managerial role in HoReCa.

From a theoretical perspective, the research offers three distinct contributions. First, it extends the application of the TOE framework to the HoReCa sector in Romania, demonstrating that the determinants of digitalisation are technological, organisational, contextual, affective, and identity-based. The current literature (Nikopoulou et al., 2023; Tornatzky & Fleischer, 1990) often focuses on the structural aspects of technology adoption while neglecting the lived, experiential dimension of digitalisation. The present study highlights the fact that managers adopt technology not only because they possess resources and competencies, but also because they are embedded in a network of external pressures that cannot be ignored. Second, the research contributes to the development of dynamic capabilities theory (Teece, 2018) in the context of HoReCa SMEs, showing that digitalisation is both an instrument of efficiency and a mechanism of organisational reconfiguration. This perspective expands Teece's view, focused on adaptability, by adding a dimension of digital discipline, understood as the idea that technology both enables and enforces change. Third, the study introduces into the specialised literature the concept of *dissonant tempo*: *the divergence between the digital rhythm (planned, sequential, stabilising) and the operational rhythm of HoReCa (reactive, fragmented, intense).* This dissonance explains why many HoReCa units adopt technology but fail to integrate it effectively, given that digitalisation assumes a logic of planning and stability that is often incompatible with the sector's typical characteristics. This contribution opens avenues for future research regarding how organisations can reconcile these divergent rhythms.

From a practical perspective, the research provides several essential directions for supporting digitalisation in HoReCa SMEs. First, funding and consultancy programs should move beyond a purely technological approach and integrate components of continuous training, managerial coaching, and support for redefining organisational identity. Second, a differentiated approach is required depending on the typology of the HoReCa unit. Hotels need solutions that reduce pressure from OTA platforms and increase control over distribution; restaurants require tools that effectively manage dependence on delivery applications; cafés face the challenge of balancing social media presence with operational sustainability, while rural guesthouses need support in strengthening IT infrastructure and adapting to tourists' digital expectations. All of these considerations stem from the fact that a uniform digitalisation policy risk ignoring these specificities and failing to generate real impact. Third, the creation of support ecosystems that reduce recurring costs and provide continuous technical assistance is essential. Managers express fear of becoming locked into technological ecosystems that they do not control and cannot financially sustain in the long term.

The study also presents a number of limitations that must be taken into account when interpreting the results. First, the sample of 25 interviews, although sufficient to reach thematic saturation, does not allow for the generalisation of the conclusions at national or sectoral level. Second, the qualitative nature of the study implies a degree of interpretative subjectivity, even if methodological reflexivity was maintained throughout the analysis. Future research directions may include quantitative studies that validate the qualitatively identified themes on a large scale; comparative analyses between different geographical regions or between countries in Central and Eastern Europe; longitudinal research that tracks the evolution of digital maturity over time; and exploring ways in which HoReCa organisations can harmonize digital tempo with the operational rhythm specific to the sector.

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