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Identifying Gaps and Future Research Agenda: Key Success Factors of Digital Transformation Adoption

Amando Jr. Pimentel Singun

Abstract: ***The purpose of this study is to advance knowledge for managers, policymakers, and researchers regarding the important key factors of successful Digital Transformation (DT) adoption, which can shed light on research gaps and help form a research agenda. A systematic literature review was conducted to analyse 26 peer-reviewed journal articles published between 2020 and 2025 from the Scopus, Emerald, Insight, Google Scholar, and ProQuest databases, following the PRISMA guidelines. Four DT adoption models, such as Diffusion of Innovation (DOI), Technology Acceptance Model (TAM), Task-Technology Fit (TTF), and Theory of Planned Behaviour (TPB), have been analysed to understand why people embrace DT either positively or negatively. According to the literature, the success factors for adopting DT have been identified. In addition, it is found that using only one DT adoption model does not ensure success. It is advisable to use an integrated multi-model or multiple frameworks for the theoretical adoption of DT. Using multiple frameworks makes DT adoption easier to understand. The Input-Process-Output (IPO) schema allows consolidating the gaps in the present state and setting out the research agenda. The IPO schema can be considered a helpful tool for identifying research gaps and setting the research agenda, as well as for planning, decision-making, and policymaking.***

Keywords**: *Digital Transformation, Diffusion of Innovation (DOI), Technology Acceptance Model (TAM), Task-Technology Fit (TTF), Theory of Planned Behaviour (TPB).***

Nomenclature:
DOI: Diffusion of Innovation
DT: Digital Transformation
ICT: Information and Communication Technology
R&D: Research and Development
TAM: Technology Acceptance Model
TPB: Theory of Planned Behaviour
TTF: Task-Technology Fit
IPO: Input-Process-Output
PRISMA: Preferred Reporting Items for Systematic Reviews and Meta-Analyses

I. INTRODUCTION

As technology advances rapidly and in new ways, organisations should consider the impact of digital changes to be highly important. Rather than treating digital changes as just an extra component, organisations should recognise their necessity for sustaining, competing, and flourishing in the contemporary world. Organisations should understand the factors driving their success through rapid, novel changes to gain a deeper understanding of the factors contributing to success.

The 2025 ICT Development Index reveals growth in global performance regarding technological advancement and adoption, but at a very slow and unpredictable pace [1]. Organisations can gain knowledge and insight into the elements that lead to rapid, efficient success by viewing the digital revolution as the adoption of a full set of new digital technologies. The 2025 ICT Development Index shows an improvement in global performance in technological advancement and adoption, though progress is unstable and unpredictable due to sectoral and economic challenges [1].

Even though some improvements are observed in the field of technology, managers and policymakers remain vigilant about their innovation efforts to maintain the balance between sustainability and innovation, given the constant environmental and economic issues that have led to a decrease in R&D spending [1]. To survive in the digital age, organisations should be innovative and flexible in adopting technologies and implementing strategies relevant to today's volatile environment. Based on the Global Innovation Tracker, organisations can enhance their four phases of the innovation cycle, which include: (i) science and innovation investment, (ii) technological progress, (iii) technology adoption, and (iv) socioeconomic impact [1].

Even though some nations and institutions succeeded in implementing digital transformation, others failed to do so. The primary reason for this difference in results is that some of them use adoption frameworks or models in their DT adoption process. Some of the models covered in this study include the Diffusion of Innovations (DOI), the Technology Acceptance Model (TAM), the Task-Technology Fit (TTF), and the Theory of Planned Behaviour (TPB). To gain an understanding of the organisational adoption of Digital Transformation (DT), the following research questions will be answered in this study:

- What are the major factors of adoption theories such as Diffusion of Innovations (DOI), Technology Acceptance Model (TAM), Task-Technology Fit (TTF), and Theory of Planned Behaviour (TPB) that influence Digital Transformation (DT) success?
- What are the literature gaps of digital transformation, and what would be a good research agenda in this area?

This research study is an in-depth look at DT adoption by organisations. To walk you through this article, the introduction section introduces the research problem, scope, and context of the study. The methodology section discusses the research process and procedures in

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*Correspondence Author(s)
Amando Jr. Pimentel Singun*, College of Computing and Information Sciences, University of Technology and Applied Sciences, Muscat, Sultanate of Oman. Email ID: Amando.Singun@utas.edu.om, ORCID ID: 0000-0002-9009-2564.

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detail. The third section presents the key findings. Moreover, addresses the research questions raised in this paper, including a discussion that analyses and interprets the results. Finally, the conclusion discusses the overall results, study limitations, and future recommendations.

II. METHODOLOGY

The researcher is aware that a systematic literature review is an extensive analytical tool for examining the existing literature to identify theories, concepts, methodologies, gaps, trends, and directions for future research [2]. According to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) protocol, this article critically reviews the scholarly literature, analysing the methodologies and generalisability of those works [3] (Fig.1). The author identified 21 articles from Scopus, which was chosen due to its high-quality peer-reviewed journals and greater coverage compared to Web of Science. [2], [4]. Additionally, 5 articles were found in Emerald Insight, 339 in Google Scholar, and 14 in ProQuest. Keywords 'AND' and 'OR' were used to identify the appropriate articles (Table I).

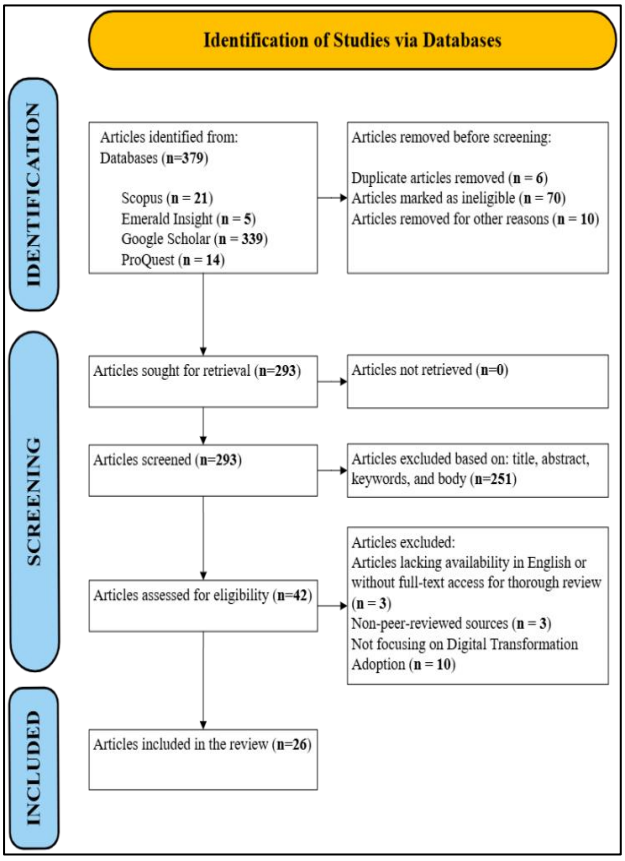
Table-I: Search Keywords

Database	Search Keywords	Results
Scopus	(TITLE-ABS-KEY ("digital transformation adoption") AND TITLE-ABS-KEY("theories") OR TITLE-ABS-KEY("factors")) AND PUBYEAR > 2019 AND PUBYEAR < 2026	21
Emerald Insight	(title: "digital transformation adoption theories" OR keywords: "digital transformation" OR keywords: "adoption theories" OR keywords: "factors") AND (publication_year:2020 TO 2025)	5
Google Scholar	(title: "digital transformation adoption theories" OR keywords: "digital transformation" OR keywords: "adoption theories" OR keywords: "factors") AND (publication_year:2020 TO 2025)	339
ProQuest	(("digital transformation adoption theories" OR "digital transformation" OR "adoption theories" OR "factors") AND (publication_year:[2020 TO 2025]))	14
Total		379

As a freely accessible bibliography tool, Zotero efficiently organised and classified 379 scholarly journal articles for citation and resource exchange in the literature review. Fig.1 shows that 86 of the initially selected 379 articles were filtered out as duplicates or ineligible. Furthermore, after reviewing the titles, abstracts, keywords, and article content, another 251 articles that did not meet the requirements were removed. Thus, 42 articles remained for further assessment. The predetermined inclusion and exclusion criteria, as shown in Table II, helped in assessing the quality of the remaining 42 articles. This resulted in the exclusion of 16 articles, leaving 26.

Table-II: Inclusion, Exclusion, and Quality Assessment Criteria

Inclusion Criteria	Exclusion Criteria	Quality Assessment Criteria
▪ Peer-reviewed articles published in academic journals ▪ Publication dates from 2020 to 2025 ▪ Articles written in English and available in full-text format ▪ Focused on the context of digital transformation (DT) adoption ▪ Articles utilise theories such as DOI, TAM, TTF, or TPB	▪ Articles lacking availability in English or without full-text access for thorough review ▪ Non-peer-reviewed sources, including but not limited to blog posts, opinion pieces, and news articles ▪ Studies that do not fall within the scope of digital transformation (DT) adoption theories	▪ Consistency between the article's objective, method, and results ▪ Article's compliance with the inclusion/exclusion criteria



[Fig.1: Review Protocol using PRISMA]

The researcher used NVivo, a tool for analysing articles and identifying key ideas. The researcher worked on coding and studying the results. Using this program helps avoid mistakes that can happen when doing the work manually.

III. RESULT AND DISCUSSION

The researcher recognises that a systematic literature review is a comprehensive analytical tool for evaluating extant scholarship, resulting in the following results and

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discussion.

A. Demographic Overview of Scholarly Articles Reviewed

The summary of the twenty-six (26) scholarly articles reviewed, coded P1 to P26, is listed in Table III.

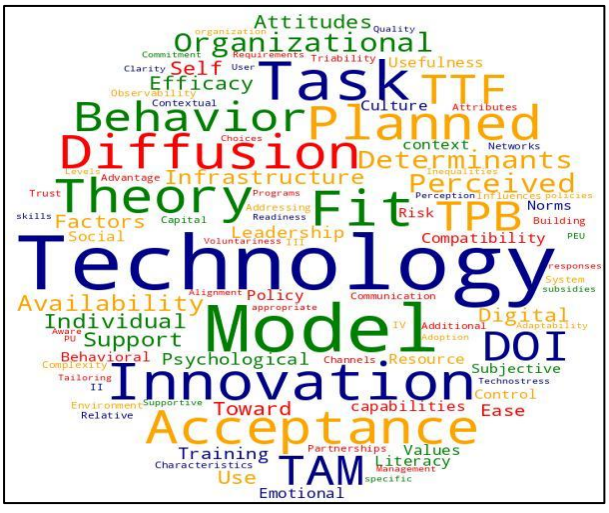
Table-III: Scholarly Articles Reviewed

Code	Title	Reference
P1	Transformative shift: Digital evolution in Israeli public sector agencies during an emergency period	[5]
P2	Determinants of the Intention to Use Digital Technology	[6]
P3	A Diffusion of Innovation Perspective for Digital Transformation in Education	[7]
P4	Boosting the Potential for GeoDesign: Digitalisation of the System of Spatial Planning as a Trigger for Smart Rural Development	[8]
P5	Exploring the growth challenge of mobile payment platforms: A business model perspective	[9]
P6	Rogers' diffusion of innovations theory and the adoption of a patient portal's digital anamnesis collection tool: study protocol for the MAiBest project	[10]
P7	Unravelling the dynamics of digital equality and trust in AI-empowered metaverses and AI-VR-convergence	[11]
P8	Mapping Theories, Models, and Frameworks to Evaluate Digital Health Interventions: Scoping Review	[12]
P9	Digital Transformation Strategies Enabled by Internet of Things and Big Data Analytics: The Use-Case of Telecommunication Companies in Greece	[13]
P10	Digital transformation of college teacher education from the perspective of behaviourist psychology: initiatives, effectiveness, and pitfalls	[14]
P11	Enhancing Administrative Efficiency in Pondok Pesantren: Exploring the Acceptance of E-Santren App System for Administrative Tasks	[15]
P12	Beyond digital finance: The impact of internet banking adoption on subjective life satisfaction	[16]
P13	Digital Transformation and Strategy in the Banking Sector: Evaluating the Acceptance Rate of E-Services	[17]
P14	Bridging technostress and continuous learning in knowledge-intensive organisations: A socio-technical systems approach for the future of healthy working life.	[18]
P15	Research on the Introduction of a Robotic Process Automation (RPA) System in Small Accounting Firms in Taiwan	[19]
P16	An Evaluation of Key Adoption Factors towards Using the Fog Technology	[20]
P17	Factor Analysis of Croatian Secondary School Teachers' Readiness for Digital Transformation	[21]
P18	Searching for New Technology Acceptance Model under Social Context: Analysing the Determinants of Acceptance of Intelligent Information Technology in Digital Transformation and Implications for the Requisites of Digital Sustainability	[22]
P19	Organisational Digital Transformations and the Importance of Assessing Theoretical Frameworks such as TAM, TTF, and UTAUT: A Review	[23]
P20	Exploring the Smart Retail Scenario for Traditional Retailers: Case Studies from a Developing Country	[24]
P21	Entrepreneurial intention: The role of the perceived benefits of digital technology	[25]
P22	Driving Digital Success: How Managerial Readiness Shapes Strategic Decisions in Digital Transformation	[26]
P23	The dynamics of digital technology adoption in rainbow trout aquaculture: Exploring multi-stakeholder perceptions in Ontario using Q methodology and the theory of planned behaviour	[27]
P24	Identifying the influence factors of residents' low-carbon behaviour under the background of ''Carbon Neutrality'': An empirical study of Qingdao city, China	[28]
P25	Service innovation in the restaurant sector during COVID-19: digital technologies to reduce customers' risk perception	[29]
P26	The Role of Employees in Digital Transformation: A Preliminary Study on How Employees' Digital Literacy Impacts Use of Digital Technologies	[30]

The selected scholarly articles explore how various organisations adopt DT initiatives. For instance, P1 focuses on government, while P2 and P18 examine how digital technology is used across different organisations. Four studies (P3, P10, P11, and P17) focus on education and training. Three studies (P5, P12, and P13) examine the financial industry, focusing on mobile payments and online banking. Healthcare studies (P6 and P8) explore patient websites and digital health apps.

Some studies examine new technologies such as AI and the metaverse (P7). Other articles discuss organisations that utilise digital tools (P19 and P22) and staff who are upskilled in innovative technology (P26).

As shown in Fig.2, the word cloud derived from the reviewed scholarly articles visually emphasises the principal theories and their corresponding factors associated with the adoption of DT. This suggests that the selected articles were appropriately chosen by the search queries, as well as the established inclusion and exclusion criteria and quality assessment standards.



[Fig.2: Keyword Density of the Scholarly Articles Reviewed]

Fig.3 shows the main theories used in articles published between 2020 and 2025, including DOI, TAM, TTF, and TPB. In 2020, scholars applied only the DOI theory, which examines innovation characteristics such as

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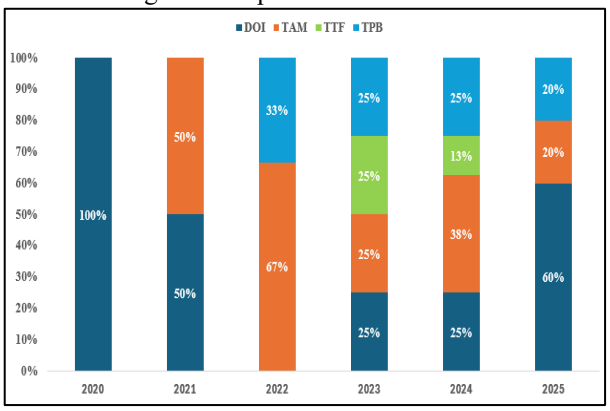
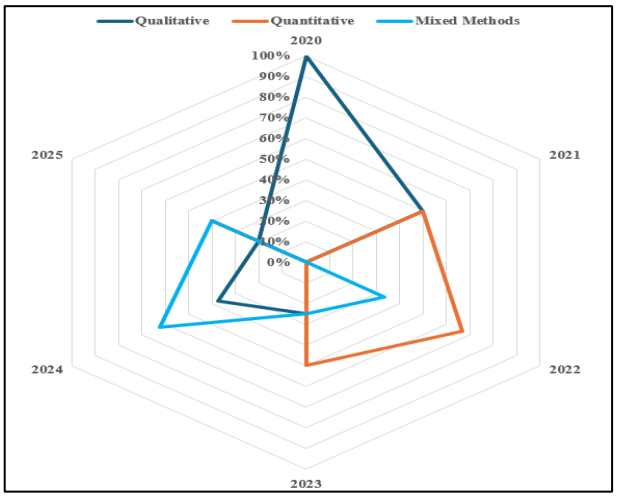
advantages and visibility. By 2021, studies used both DOI and TAM equally, showing greater interest in how users perceive technology's usefulness and ease of use. In 2022, TAM became more popular (in 67% of studies), while DOI use decreased, suggesting that researchers sought to understand user acceptance better. In 2023, all four theories were used equally (about 25% each), showing a complete approach to DT. In 2024, the focus spread out more: DOI returned slightly, and TAM and TPB were each used in about 12.5% of studies, while TTF was used less often. In 2025, TTF had established theoretical predominance in the literature, accounting for over 60% of the investigations analysed. This paradigmatic shift demonstrates that contemporary scholarship increasingly emphasises the congruence between technological affordances and organisational imperatives, especially within contexts characterised by resource limitations. Concurrently, the use of the DOI and TAM frameworks declined substantially, whereas TPB theory remained absent from scholarly discourse throughout this period.

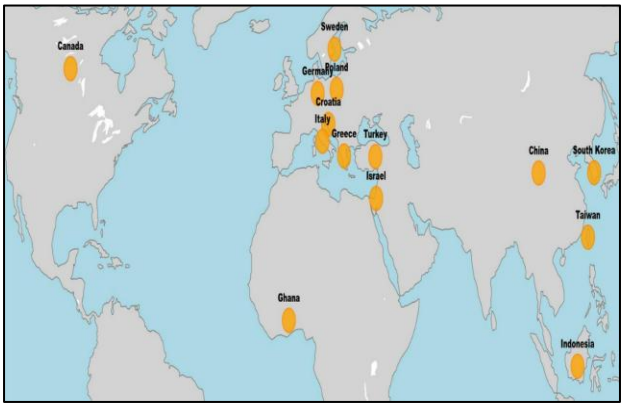


[Fig.3: Adoption Theories Covered in the Reviewed Scholarly Articles]



[Fig.4: Overview of Methodologies Covered in the Reviewed Literature]

Fig.4 illustrates trends in the use of Qualitative, Quantitative, and Mixed Methods research from 2020 to 2025. In 2020, scientists primarily used Qualitative methods (almost 100%), Quantitative methods were less frequent (about 40%), and Mixed Methods were used even less often. Changes in the methods used by scientists can be traced during this period. In 2023, the use of Quantitative methods increased by 60% as scientists began to lean towards a data-driven approach. On the other hand, the use of Qualitative and Mixed Methods decreased. In 2025, the use of the three methods became balanced, although Quantitative methods retained their dominance. This trend shows that current researchers place importance on both numerical and qualitative research approaches.



[Fig.5: Spatial Distribution of Reviewed Scholarly Articles]

Fig.5 shows that the studies reviewed in this essay come from different countries across the globe, on different continents. These studies include Canada from North America (P23), Sweden, Germany, Poland, Croatia, Greece and Italy from Europe (P14, P6, P4, P17, P9, P13, P25 respectively), Turkey from Asia Minor (P26), Israel from the Middle East (P1), China (P10, P22, P24), South Korea (P7, P18), Taiwan (P12, P15) and Indonesia (P11) from Asia and Ghana from Africa (P21). Some research studies could not specify the location of their research or provided only general locations. This is evident across different geographic regions, indicating that the topic of this study is of international significance.

B. Factors from Adoption Theories that Foster Success of Digital Transformation (DT)

Regarding the first research question, this literature review summarises the results of selected academic works on DT adoption theories and factors contributing to the success of DT implementation. Four theoretical frameworks (Diffusion of Innovations (DOI), Technology Acceptance Model (TAM), Task-Technology Fit (TTF), and Theory of Planned Behaviour (TPB)) show that the success of DT requires the complex interplay of multiple factors. The combination of factors such as technology, personal attitudes, organisational factors, social factors, and the environment plays an active role in promoting DT adoption success.

i. Diffusion of Innovations (DOI) Theory Factors

The existing literature demonstrates the importance of considering the whole system rather than its separate parts. So, for instance, schools in China require strong infrastructure, digital competencies, policy support, and positive attitudes to succeed [7]. In the same manner, [8] found that digital planning tools in rural Poland need local leadership, community engagement, and infrastructure.

DOI theory applies to the analysis of digital health and government services to identify factors that foster and

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hinder adoption at the individual and organisational levels. The study conducted by [12] uses DOI to analyse digital health programs. At the same time, [10] revealed that staff at German hospitals favour patient portals only when they possess sufficient competencies and administrative support. Emergencies accelerate adoption, as seen in [5], where government agencies adopted digital tools quickly due to clear benefits and strong leadership. Personal factors of usefulness, ease of use, and perceived self-efficacy influence the process of technology adoption in business [6]. Trust, justice, and risk management are the main factors in the case of emerging technologies, for instance AI [11].

Within organisations, numerous factors influence the rate of innovation adoption. They have been classified into Technological Attributes [5], [6], [7], [12]; Social System Factors [8], [9]; Individual Characteristics [10], [11]; Organizational/Contextual Factors [5], [7]; and Other Factors [11].

Organisations tend to adopt technological innovations if they are easy to learn, compatible, and improve their efficiency. It motivates others to adopt as well. [5], [6], [7]. The technological attributes include the following specific factors: (i) Relative Advantage - Perceived benefits of the innovative technology compared to other options, and thus encouraging adoption due to the greater efficiency or performance achieved with the help of the new tool; (ii) Compatibility - How compatible the innovation is with current values and systems, thus making it easier to integrate; (iii) Complexity/Ease of Use - How user-friendly the technology is; innovations which are easier to use are more likely to be adopted; (iv) Triability - To what extent users can test out the innovation and decide whether to adopt or not to adopt it; and (v) Observability - How observable the benefits of the innovation are; when success stories start appearing, the adoption rate increases.

The social environment at work makes all the difference in the acceptance of new technology. When organisational leaders sincerely support and promote new technology, it motivates employees, makes them feel more enthusiastic and confident about the process, and helps overcome any initial reluctance or fear related to its implementation [8]. Communication facilitates employees' understanding of what changes occur and why, while established social ties enable the exchange of information, resources, and experiences [8], [9]. When colleagues establish mutual trust and strong relationships, they can benefit greatly from new technology. The four main social factors of successful implementation of the new technology are mentioned in [8]. The Social System Factors are as follows: (i) Leadership support - active and supportive involvement of organisational leaders that stimulates motivation, eliminates resistance, and provides resources [8] (ii) Communication channels - effective and open communication that guarantees understanding, addressing concerns, and building a positive attitude to digital transformation [9] (iii) Partnerships/networks - collaboration both inside and outside of the organisation that facilitates sharing information and pooling of resources and thus enables adoption [8], [9]; and (iv) Social capital - trust, relationships, and shared norms of employees that make information sharing and problem solving possible [8].

Factors in the category of Individual Characteristics include: (i) Digital Literacy adoption [10]; (ii) Self-Efficacy [11]; and (iii) Attitudes Toward Technology [10], [11]. Digitally literate individuals can utilise digital tools effectively and are more receptive to adopting new technologies. In contrast, people with high self-efficacy are more confident in using technology, more proactive, more committed, and more resistant to change [10], [11]. Attitudes Toward Technology include positive attitudes and excitement toward technology, which facilitates adoption; on the other hand, scepticism or nervousness discourages adoption [10], [11].

Organisational and contextual factors help create an environment for adoption. Factors included under Organizational/Contextual Influences include: (i) Organisational Culture/Values - Innovative and flexible culture that is open to experimentation and changes [7]; (ii) Infrastructure Availability - Availability of technological infrastructure that provides needed tools and environment for DT [5]; and (iii) Policy Environment - Policies regarding data security, privacy, and resources that eliminate uncertainties and promote adoption [5], [7].

Besides, according to the studies of [11], other factors include: (i) Trust-Building - Building trust in technology, leadership, and transformation to facilitate engagement and minimise resistance [11]; (ii) Equality Considerations - Ensuring equal opportunity for everyone to avoid digital divides that may hinder adoption; and (iii) Psychological Factors - Handling worries, fears, and risk perceptions concerning job security and privacy.

Regarding the above points, the interactions among technological factors, social aspects, personal factors, and organisational climate determine the rate and effectiveness of digital technology adoption, in accordance with DOI Theory [5], [6], [7], [8], [9], [10], [11].

ii. Technology Acceptance Model (TAM) Factors

Factors affecting adoption of DT include: (i) Perceived Usefulness (PU) [13], [14], [15], [16]; (ii) Perceived Ease of Use (PEU) [17]; (iii) Self-Efficacy [17], [18]; (iv)Training [18]; (v) Leadership Support [19]; (vi) Compatibility & Infrastructure [20], [21]; (vii) Control and Autonomy [18]; (viii) Organisational, social and cultural factors [20], [31]; (ix) Emotion and psychological factors of TAM including: (a) Technostress [18], [22]; (b) Perceived Risks [18]; and (c) Voluntariness [18], [22]; and (x) Other TAM factors such as: (a) Security Issues [20]; (b) Social influence and culture [20]; and (c) Organisational support [19].

The explanations for the factors listed in the review are described below: (i) Perceived Usefulness (PU) – a belief that digital technology can improve job performance and effectiveness on the part of users that stimulates its adoption [13], [14], [15], [16]. Also, when individuals clearly benefit from employing new technologies, they adopt the same [14], [16]; (ii) Ease of use of systems reduces resistance to adoption [17]; (iii) Self-efficacy- self-confidence in successful employment of digital technology reduces resistance and stimulates adoption [17]. Effective training that boosts skills and self-confidence improves self-efficacy [17], [18]; (iv) Training - Adequate training

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improves skills and self-confidence of users and therefore facilitates adoption [18]; (v) Leadership Support- Active support from executives and CEOs encourages employees. Involvement of the leaders is essential in creating a supportive environment for the changes [19]; (vi) Compatibility & Infrastructure - Compatibility between the digital tools used and the current workflow process and enough technical capacity make adoption easier. Technical systems and infrastructure enable the effective use of these tools [20], [21]; (vii) Control and Autonomy - Amount of control that people perceive they have on using technologies affects acceptance; more control means better acceptance [18]; (viii) Organizational, Social, and Cultural Factors - Perceived benefits, society's values, security concerns, and peer influence impact acceptance [20]. UTAUT framework includes such social and support factors as leadership, continuous learning, and infrastructure [31]; (ix) Emotional and Psychological TAM factors include (a) Technostress, meaning the stress from the use of new digital tools, hinders adoption [18], [22]; (b) Perceived Risk, meaning the privacy, security, or fear of losing the job that can be a reason for non-acceptance [18]; and (c) Voluntariness, meaning the amount of the choice the employees have, impacts their acceptance [18], [22]; and (x) Other TAM factors include (a) Security Concerns, meaning the data privacy and safety concerns that affect the acceptance of the technologies [20]; (b) Social Influence and Cultural Norms, or Peer pressure and society's values shaping attitudes towards technology adoption [20]; and (c) Organizational Support, or the management leadership providing the continuous trainings promoting favorable environment for DT [19].

iii. Task Technology Fit (TTF) Factors

According to the TTF model, elements of success for DT include factors related to the level of fit between new technology and organisational needs [32]. If new technology aligns well with people's job requirements, it becomes easier for organisations to adopt it and improve work processes and performance. When technology is misaligned with an organisation's needs (due to incorrect assumptions or poor selection decisions), digital transformation projects fail. The problem can be solved by making TTF a key priority for organisations, thereby enabling the identification of potential challenges and the development of effective strategies to address them. According to the TTF model, organisations are successful in adopting new technology when they align technology, tasks, and competencies to a particular situation [23], [24].

Based on this information, the study of [24] applied the TTF model to explore how traditional retailers in developing countries adapt to the adoption of smart retail technologies. As mentioned above, according to the authors' results, when an organisation adopts new technology, it should align well with the organisation's work processes, staff competencies, and physical environment. Choosing appropriate technology is very important – it should meet the needs of a particular organisation and staff.

The determinants of TTF that affect DT implementation are classified into three major categories. [23], [24]: (i) Compatibility with Organisational Tasks and Competencies; (ii) Resource Availability; and (iii) Technology Appropriation to Organisational Context.

The first category describes technologies that align with the tasks people perform, fit smoothly into their everyday activities, and match their competencies. If technology corresponds to people's tasks and competencies, its implementation becomes easier, there is less resistance to change, and people are more productive [23], [24]. Organisations should ensure that new technologies fit their tasks so they can implement them successfully and make life easier, not harder.

The second category addresses resource availability. The idea of this category is that the sufficiency of the workforce's competencies and infrastructure (hardware, software, networking, and support) strongly affects the fit between technology and organisational needs; therefore, it affects DT implementation. Skilled people increase acceptance of new technologies, and reliable infrastructure provides good conditions for their smooth functioning without any issues [24].

The third element pertains to Context-Aware Technology Selections, which involves selecting and configuring technologies aligned with the organisation's operational context, such as industry type, business processes, and user preferences. Customisation will improve the relevance and acceptance of the DT [23]. By understanding the environment and goals, organisations can make the right choices about digital technologies that are effective and readily accepted. With both technology-task fit and adequate resources coupled with context-based decision-making, successful DT is highly likely [23], [24].

iv. Theory of Planned Behaviour (TPB) Factors

Recent research revealed that a person's mental state, thoughts, and others' opinions can determine their level of digital readiness regarding DT. For example, the experts [26] argue that managers' beliefs, attitudes, and perceived ability to control digital technologies are important factors in managers' willingness to conduct technological innovations. To increase managers' digital readiness, authors recommend conducting targeted training and providing organisational support. Similar results were presented by [30]. The researchers revealed that employees' digital literacy and self-efficacy are the key predictors of their use of various technologies. Building employees' skills and fostering a positive attitude toward new technologies are ways to conduct DT.

According to the studies of [27] and [28] People's emotional state, perceptions of others' expectations, and behavioural control affect their intention to use new digital technologies. To promote the adoption of these technologies, organisations should provide individualised support for skill-building, addressing security issues, and building trust in digital technologies. The study of [25] described the effect of perceiving benefits of using digital technologies, taking risks, and the presence of certain skills on business activities of small and medium-sized organisations. Thus, all the studies mentioned provide evidence of the significance of psychological factors in the success of DT across various organisational settings.

The TPB factors are

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classified in the following four categories: (i) Attitudes Towards Technology [25], [26]; (ii) Subjective Norms [25], [26], [27], [28]; (iii) Perceived Behavioural Control [26], [27]; and (iv) Psychological Readiness and Risk Perception [25], [29].

The first factor concerns people who are more inclined to accept digital technology based on their perceptions of its usefulness, usability, or benefits. The positive attitude will motivate employees to be actively involved in DT activities [26]. This is shaped by positive experiences, faith in the benefits of technology, and beliefs that digital technology can improve their jobs by making them more convenient or easier [25], [26].

The second factor concerns the social and organisational influences that shape behavioural intentions. Perceptions of social expectations of colleagues, supervisors, and the organisation itself create a positive climate of social approval and motivate people to adopt technology [27], [28]. With social approval and organisational support, the employees become more motivated to use digital technology [25], [26].

The third factor indicates that when organisations provide employees with appropriate tools, training, and financial support, they feel more secure when using the new digital technology. With the availability of necessary resources, people are more inclined to do something new [26], [27].

The fourth factor concerns the extent to which managers' psychological preparedness and their attitude to risk affect their support for DT. Managers with high levels of self-confidence and knowledge who see small risks will more easily support DT efforts [25], [29]. It is very important to address the risks perceived by managers and increase their confidence, since their support is vital to the success of DT.

As can be seen from the discussion above, the theoretical approaches described -- Diffusion of Innovation (DOI), Technology Acceptance Model (TAM), Task-Technology Fit (TTF), and Theory of Planned Behaviour (TPB) -- are successfully applied to practical situations in different fields. Digital Transformation (DT) research often faces difficulties because it treats key concepts in isolation. For instance, DOI examines the role of social support and trust in the adoption of innovative technology. TAM considers the usefulness and ease of use of technology, while TTF examines the technology's applicability to task accomplishment.

To identify determinants of the adoption of new technology, TPB reveals how people's attitudes toward innovation and their intentions to use it determine adoption decisions. The problem with the research is that the two theories are considered separately, leading to a lack of completeness and dispersion. To gain a more detailed understanding and promote DT in companies, further investigation should integrate these various approaches into a comprehensive strategy. Those integrated concepts should be based on three key elements: (i) social aspects (opinions of colleagues and corporate culture); (ii) technological characteristics (interoperability and usability); and (iii) psychological attributes (attitudes and readiness for change). This approach allows for an exhaustive vision of DT determinants. The integration of perspectives will enable researchers and organisations to develop a strategy that accounts for all factors influencing the decision to adopt new technology, rather than considering only one.

DT application scenarios lack context in most cases. Thus, the sector-specific DT case studies tend to overlook the organisation size, available resources, culture, and technology. As a result, some strategies can be efficient for one big institution while being totally inefficient for another small institution. To make research on the topic more relevant and useful, scholars should consider differences in organisational contexts and design their own analytical framework.

Most of the time, DT application processes overlook the need to prepare an organisation for change. Although the TAM and TTF models are useful for determining the conditions under which people will accept technologies because they focus on users' needs, they do not address how to manage a change process. For this purpose, there are detailed models, such as Kotter's 8-step process and Lewin's change model, that help raise awareness and overcome resistance to change.

A. Gaps and Proposed Research Agenda for DT Adoption

Regarding the second research question, Fig.6 presents the gaps and the proposed research agenda for DT adoption. The research contributes to the academic community by identifying research gaps in DT adoption, helping researchers discover areas not yet covered by existing studies and establish the novelty of further research.

Moreover, the researcher highlights the lack of literature on methods for identifying research gaps and employs the Input-Process-Output (IPO) schema to this end, thereby demonstrating that systematic reviews play an essential role in identifying research gaps and formulating the research agenda. As illustrated in Fig.6, there is a natural flow from the IPO schema that suggests the current gaps and, hence, the possible focus areas for future research (Research Agenda).

The problem of technology adoption to support DT remains understudied. Most researchers focus on only one or two principal concepts among numerous theoretical constructs, such as DOI, TAM, TTF, and TPB, which complicates the analysis of the reasons for adopting the new technology. Moreover, psychological aspects associated with emotional discomfort, such as stress or anxiety, may become barriers to adopting new technology. What is more, there is little information on the gradual adoption of new technology by individuals and organisations, differences in technology adoption across organisational characteristics, and how individual traits such as age, education, and computer skills influence it. Another issue is the use of varied terminology and analytical approaches, which complicate comparisons of research findings and make it impossible to formulate recommendations.

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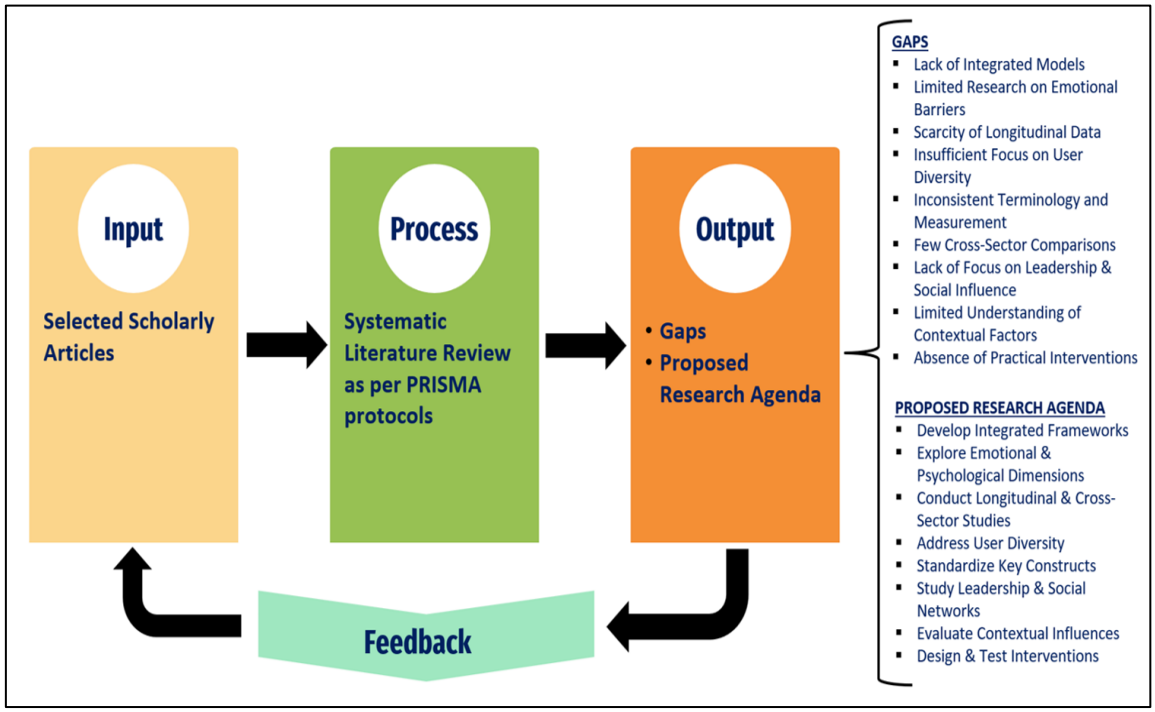

[Fig.6: Gaps and Proposed Research Agenda for DT Adoption]

Insufficient research on how social factors affect technology adoption is also noted. To address such issues, further research must focus on developing integrated frameworks that combine theories to explain the process of technology adoption. It is also necessary to explore the emotional and psychological aspects of adoption using both qualitative and quantitative methods and reveal barriers such as technostress. Longitudinal and cross-sectoral studies are needed to track the evolution of adoption patterns and compare obstacles across sectors. The emphasis should also be on exploring user diversity by examining how demographic and psychological characteristics influence adoption. The standardisation of key constructs is also required. Analysis of the mechanisms of leaders' work and social influences can help identify ways to create a motivating environment. Considering culture and policy will allow customising such interventions to a particular community or environment. Finally, testing practical initiatives and interventions to promote digital competence and change is critical.

IV. CONCLUSION

This review states that successful adoption of DT requires cooperation among three main aspects: technology itself, behaviour, and organisational structure. To provide an understanding of the DT adoption process, the review analyses four useful frameworks that address the adoption of the innovation, its alignment with organisational requirements, and user engagement. As the field matures and professionals become more skilled, researchers tend to use numerical analysis and data-driven techniques more often. Furthermore, countries and organisations tend to cooperate more and share knowledge on adopting DT technologies across industries and countries.

The review emphasises that there is no universal approach or idea that guarantees the success of adopting DT technologies. To resolve issues related to technology itself, people's perceptions and emotions, and organisational processes, it is crucial to use a range of methods. To provide recommendations for further research and identify existing research gaps, the authors suggest using the simple Input-Process-Output (IPO) schema to develop comprehensive approaches to transforming digital systems. This schema helps to identify missing components and conduct comprehensive research.

Many studies do not pay sufficient attention to aspects such as people's emotions, organisation-specific features, and change management. To address these issues, the researcher needs to develop strategies that incorporate a long-term perspective, industry-specific considerations, and psychological and environmental factors. It will help improve perspectives on digital transformation among leaders, employees, and policymakers.

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AUTHOR'S PROFILE



Dr Amando Pimentel Singun Jr. has served as the Quality Assurance Officer under the Office of the Deputy Assistant Vice-Chancellor for Academic Affairs (DAVC-AA) at the University of Technology and Applied Sciences, Muscat Branch (UTAS-Muscat) since 2022. He has been a faculty member in the Informatics Section of the College of Computing and Information Sciences since 2007 and in the university's postgraduate program since 2026. He led the revision of the Information Systems curriculum as Head of the Information Systems Specialisation Sub-Committee at the Colleges of Technology, Oman (2012–2017). He also served as the IT Department QA Coordinator (2012–2020) and was the Editor-in-Chief of the department's very first newsletter (2016–2018). Additionally, he was a member of OQNHE (2014–2016), now known as OAQHE, and was appointed as an External Reviewer by Oman's Centre for Higher Education Quality Assurance, effective 09 January 2025, to participate in the Oman Authority for Quality Assurance of Education's External Quality Assurance activities. Responsible for contributing to the evaluation and enhancement of Oman's higher education standards. He received the Global Peer Review Award (2019) from the Web of Science Group. Following an

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internal decree, he was nominated as an evaluator for the 9th and 10th cycles of Oman's Annual Research Forum, organised by the Ministry of Higher Education, Research, and Innovation (MoHERI), for two consecutive years starting in 2022. Since 2016, he has been involved with international journals, contributing through peer reviews and editorial roles.

He previously held teaching positions as an undergraduate and postgraduate faculty member at Saint Paul University Philippines, Cagayan State University, and Liceo de Cagayan University. He earned a Bachelor of Science in Information Technology (2002) through CHED's State Scholarship Program, a Master's degree in Information Technology (2003), and a Doctorate in Information Technology (2016) from Saint Paul University Philippines. He is also listed in the Register of Licensed Professional Teachers by the Professional Regulation Commission of the Philippines.

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