



ISSN: 2765-7213
<https://accesson.kr/fir>
 doi: <http://doi.org/10.13106/fir.2024.4.2.11>

Effects of Unified Theory of Acceptance and Use of Technology (UTAUT) Within the Circumstance of Fourth Industrial Setting*

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Received: August 18, 2024. Revised: September 11, 2024. Accepted: September 19, 2024

Abstract

Purpose: This research delves into the topic by exploring the impacts of the Unified Theory of Acceptance and Use of Technology (UTAUT) on the fourth industrial setting. As the study begins with a comprehensive review of the literature to find other scholars' contributions, the present authors try to synthesize and integrate scattered related topics in the literature dataset. **Research design, data and methodology:** We used a descriptive, causal, and explanatory research design hybrid. A causal research design is an approach used to investigate the interaction and relationship between given variables. The screening began with searching using keywords, filtering using the inclusion criteria, and arriving at the final set of sources. **Results:** There were four crucial findings: 1. The Performance Expectancy Construct Has Strongly Influenced and Influenced the Decision to Acquire and Use a Given Technology. 2. Effort Expectancy Construct Has Influenced the Trends of Adopting. 3. Social Influence and Impact on Choice and Use of Technologies. 4. Facilitating Conditions as A Factor in Modern Production and Consumption. **Conclusions:** All in all, UTAUT is used in a predictive manner and very instrumental for the producers and users of various technologies. Four primary constructs are critical in making the theory complete, essential, and reliable within the fourth industrial setting.

Keywords : UTAUT, Fourth Industry, Marketing, Consumer Behavior, Literature Analysis

JEL Classification Code: A11, C25, M31, P46,

1. Introduction

The fourth industrial setting embodies the radical transformation, invention, and adoption of critical intelligent and contemporary technologies into multidimensional aspects of life. It refers to a society where sophisticated technologies such as artificial intelligence, robots, and virtual reality are becoming a centerpiece of daily lives. For instance, the recent increased focus on

adopting and using artificial intelligence such as DALL-E and humanoid robots, depicts a fourth industrial setting quickly taking shape and gaining form and significance across various sectors (Persada et al., 2019). They include manufacturing, agriculture, industrial activities, health, and education. Such technologies have significantly redefined and enhanced work and outputs in various settings, such as businesses and workplaces. Despite the significance of modern technologies and the fourth industrial revolution,

* This work was supported by the research grant of the KODISA Scholarship Foundation in 2024.

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the various vital elements associated with such technologies have fewer appealing attributes. First, the success rate of some technologies vis-a-vis improving the return on investment and productivity are quite low at 41.9% globally (Hewavitharana et al., 2021). The preference, favorability view, and actual use of technology are not as high as many could expect owing to the impact of technology.

The variance in use, acceptability, and adoption has led to the development of theories such as the Unified Theory of Acceptance and Use of Technology (UTAUT) in broader, explicit, and pragmatic attempts to explain the above. The Unified Theory of Acceptance and Use of Technology (UTAUT) is relevant and fundamental. It explains how humans adopt and use technology and the factors affecting the two components in the modern world, i.e., the fourth industrial setting. The theory provides an exclusive approach to comprehensively, holistically, and pragmatically examining the above elements. According to Dwivedi et al. (2019), the Unified Theory of Acceptance and Use of Technology (UTAUT) is a refinement or enhanced version of all the previous theories that attempted to explain the topic. They include theories such as the Technology Acceptance Theory, the MPCU, and the TAM2 theories (Persada et al., 2019).

Despite the above theories and many more that attempted to explain human adoption and usage of technologies, they had various limitations that necessitated realizing the Unified Theory of Acceptance and Use of Technology (UTAUT). For instance, the limited empirical tests of the literature and research that led to the development of the theories implied severe implications, such as low predictive power in predicting and explaining the constructs of the topic. Therefore, the Unified Theory of Acceptance and Use of Technology (UTAUT) addresses such limitations, thus helping to explain and better predict the adoption and use of technologies by humans in the fourth industrial setting.

The Unified Theory of Acceptance and Use of Technology (UTAUT) focuses on the behavioral element in explaining and predicting human tendencies in adopting and using technologies. The theory depends on four critical constructs in defining and describing the above. They are social influence, performance and effort expectancies, and influencing conditions. The above broad constructs encompass all the behavioral elements and factors that help in explaining the topic holistically (Wang et al., 2021). The Unified Theory of Acceptance and Use of Technology (UTAUT) has been instrumental in explaining and helping various stakeholders, such as manufacturers of technologies, to provide precise and proper insights on how users are likely to behave regarding adopting and using a given technology.

The present research delves into the topic by exploring the impacts of the Unified Theory of Acceptance and Use of Technology (UTAUT) on the fourth industrial setting. The study begins with a review of the literature to find other researchers' and scholars' contributions. The review would also identify a gap that would form a basis for this researcher. The methodology outlines the exact methods and approaches the researcher utilized in undertaking the study to arrive at the findings and discuss them in this paper. This study aims to research and provide critical insights that would facilitate an understanding of how the Unified Theory of Acceptance and Use of Technology (UTAUT) impacts the fourth industrial setting circumstance and impact.

2. Literature Review

Dash et al. (2023) researched the various factors and dynamics that influence how humans embrace and use technology, primarily in the manufacturing and healthcare settings. According to Persada et al. (2019), three significant theories explain explicitly the above aspects. First is the theory of reasoned action, which argues that a person's attitude and intention are critical influencers of their behavior and desire to do or use something. In this context, the writers argue that their intentions and attitudes influence human beings' desire and behavior to use technology. For example, a human being's intention to undertake complex operations using minimum effort while viewing technology as more straightforward to use are some of the intentions that influence the desire to invent and use various artificial intelligence software such as ChatGPT. The findings are supported by Liu et al. (2022), who add that subjective norms of a person influence one's attitude, which finally influences one's intentions and actions.

Second, Dash et al. (2023) explain that the social cognitive theory is another pertinent and resourceful theory in explaining human beings' adoption and use of technology in the contemporary world. Restrepo and Chang (2017) state that social cognitive theory posits that a human being's behaviors regarding adoption, approval, and use of technology result from various influences. They include environmental impact, other people's views and actions, and other social dynamics and influences on a person (Mohamad Zain et al., 2023). It implies that humans are creatures that heavily base their decisions on aspects such as feelings and personal views that are influenced by environmental reactions, influences, and opinions regarding a given technology. It implies that a given technology must have a good reputation, popularity, and favorable view to be popular and used by others.

Zuiderwijk et al. (2019) researched the models and predictors of technological use and societal impacts. The

writers agree with Second, Dash et al. (2023) and add that human beings' behaviors regarding using or embracing a given technology are a product of a combination of the above social factors and personal beliefs. It implies that one decides to use and how to use a given technology when their personal views align with the social and environmental influences or factors (Sarfaraz, 2017). For example, whenever one feels that they cannot embrace robots because of ethical issues such as job losses, they can't try. Elsewhere, Popova and Zagulova (2022) explain the technology acceptance model and its impact in explaining and predicting the behaviors regarding adoption, use, and attitude towards technology. They explain that many users evaluate a technology by looking at the following key elements. First is how easily they can interact with it. For instance, they gauge their knowledge, experience, and ease of understanding of how to use it. Second, the usefulness of a given technology plays a fundamental role in influencing its users (Shi et al., 2022). Users tend to adopt and use technologies that have maximum benefits while the vice versa suffices. Hu et al. (2020) support the above by further arguing that attitude is another critical element influencing users' behaviors of different technologies. Therefore, according to the acceptance model, a person's intention plays a minimal role in influencing their perception, decision, adoption, and use of a given technology.

Oke and Fernandes (2020) researched the impact of the Unified Theory of Acceptance and Use of Technology (UTAUT) in the ever-evolving world, primarily on technology application in the education and manufacturing sectors. Their findings revealed that many managers and chief executive officers rely on the theory in making critical decisions on acquiring, using, or modifying a given technology. Specifically, they argued that the Unified Theory of Acceptance and Use of Technology (UTAUT) fundamental pillars provide a basis for organization heads and the management to assess the possible impact of acquiring or using a given technology. The findings then inform the strategic decisions on whether to continue using a given technology or develop it. Favorable feedback regarding aspects such as intention, attitude, and perceived usefulness are critical indicators of the effectiveness and usefulness of a given technology. Esawe et al. (2023) concur with Oke and Fernandes (2020) by arguing that many organizations further analyze the above data and compare it with the influence of a given technology on the outcomes of individuals and collectively as workers. The findings are critical in making decisions and establishing predictive models for essential choices about the impact of different technologies.

Dash et al. (2023) explored the impacts of using the various theories, models, and approaches of evaluating different stakeholders' adoption, use, and perception when

using multiple technologies. Their research was narrowed to financial, health, and manufacturing organizations. The findings established that many organization heads and key business leaders are skeptical regarding using theories such as the theory of reasoned action and the social cognitive theory because of the limited empirical tests by many researchers.

Dadhich et al. (2023) support Dash et al. (2023) by arguing that in addition to the low predictive powers of the theories, most of the developers of the theories, such as the user acceptance theory, based their findings on a significant focus on simple technology. As such, there is little focus on complex technology, which implies little knowledge of how the theories can be used to explain the use of complex technologies. For instance, there is a need to accurately predict and explain how complex technologies, such as those in robotics, influence the adoption and use by various consumers (Popova & Zagul). There is a need to focus on better and more complex theories to address such concerns effectively.

Van Winkle et al. (2019), in a review of Dadhich et al. (2023), recommend the use of the Unified Theory of Acceptance and Use of Technology (UTAUT) as a theory that addresses the above and many more limitations. According to the writers, the Unified Theory of Acceptance and Use of Technology (UTAUT) addresses limitations, such as limited explicitness and methodological weaknesses. It focuses on how users behave regarding technology in voluntary settings. Winkle et al. (2019), therefore, pontificate that the Unified Theory of Acceptance and Use of Technology (UTAUT) has various strengths, such as its explicitness, more expansive application, findings based on substantial empirical data, and reviews by multiple users. The above is supported by AL-Nuaimi et al. (2024), who contend that the Unified Theory of Acceptance and Use Of Technology (UTAUT) is one of the best theories for explaining the multidimensional behaviors aspects of human beings regarding the use of technology in the fourth industrial setting.

2.1. Research Gap

The above review reveals research gaps that must be addressed effectively to improve knowledge. First, many researchers have focused on alternative theorists, such as the acceptance model and social cognitive theory. Thus, there is limited knowledge of the critical aspects that the Unified Theory of Acceptance and Use of Technology (UTAUT) provides. Even the few scholars who delve into the Unified Theory of Acceptance and Use of Technology (UTAUT) do so alongside a focus on other theories. Therefore, it deprives the readers and consumers of such information an opportunity to comprehensively focus on how the Unified

Theory of Acceptance and Use of Technology (UTAUT) impacts various circumstances in the fourth industrial setting.

Second, the findings reveal various glaring weaknesses that multiple researchers have focused on. Notably, weaknesses include limited empirical data and a focus on voluntary data extraction settings. Hence, there is a need for a focus on researchers that address such weaknesses. This implies a need to focus on relevant and peer-reviewed sources that address the above weaknesses and thus provide more accurate and reliable findings.

Elsewhere, there is a research gap regarding exploring the impact of the Unified Theory of Acceptance and Use of Technology (UTAUT) and other theories in the fourth industrial setting. As evidenced above, many researchers have focused on different aspects, such as using theories to explain user behaviors and predict future behaviors regarding the use of technology. Therefore, there is limited focus on how the theory impacts other critical aspects, such as decisions, courtesy of the knowledge it provides. Thus, there is a need for research that would address the above gaps comprehensively.

3. Research Design

We used a descriptive, causal, and explanatory research design hybrid. Davidavičienė (2018) explains that a causal research design is an approach used to investigate the interaction and relationship between given variables. Additionally, the design examines the impact of a given phenomenon. Therefore, elements of the strategy were fundamental in explaining the effects of the theory on the fourth industrial setting.

Pandey and Pandey (2021) explain that the descriptive research design is an approach used to study variables that require explaining the details of the underlying phenomenon or elements of a given study variable or variables. The design was, therefore, instrumental in describing how the impacts occur, their magnitude, and their nature in the fourth industrial setting. Elsewhere, according to Daniel and Sam (2011), the explanatory research design is used to investigate research aspects that have limited findings or that researchers have never delved into. Therefore, the research design was critical in enabling the researcher to arrive at adequate and meaningful conclusions on the topic, which has limited findings per the research gaps above.

3.1. Research Tools

The researcher utilized various simple and relevant tools in the study. They included notebooks, Google Search, files, Qualtrics, pens, and computers. Additionally, the researcher

relied on computers and files as critical supportive tools in accessing, collecting, and storing data.

3.2. Inclusion and Exclusion Criteria

The researcher utilized sources published not more than six years ago, about relevant topics by reputable writers, and from reputable and allowed academic sources and sites only, such as approved academic databases (Davidavičienė, 2018). The above were vital inclusion criteria. Additionally, the researcher prioritized peer-reviewed sources over non-reviewed sources (Kang & Hwang, 2018).

The contrary of the above amounted to exclusion criteria. It is sufficient to state that the writer excluded sources that had narrowed focus and ignored the comprehensive bits of the topic. The research did not have any participants because this was not primary research. The current researchers systematically reviewed the sources and collected the necessary data. This implies that the research depended on other sources, both primary and secondary.

3.3. Screening, Data Collection, and Analysis

The current researchers utilized a Prisma approach in screening the given sources to arrive at the final set of sources utilized in the study. The screening began with searching using keywords, filtering using the inclusion criteria, and arriving at the final set of sources. Further, the sources were subject to secondary review to approve their use and reliability (Pandey & Pandey, 2021). The researcher then collected data using a systematic and stepwise approach that entailed topical review and noting data in written and typed form. Further, the researcher repeated the technique to capture the intricate details and maintain the standard approach.

The researcher organized the data into tabular, plain, and column forms. Further, data was extracted in pictorial form and stored as images on the laptop and the computer. Further details were extracted and notes made in sketchy and detailed forms elsewhere. For example, the present authors noted that the definitions, explanations, and theories used to back up the findings were categorized according to various core study elements. The researcher then did a comparative analysis of the different aspects of the findings to eliminate critical issues such as duplicity of data, irrelevancy, and too much unnecessary data.

The researcher then organized the refined findings in thematic sequences and went through the work to eradicate the above and detect any other issues. The findings were further subjected to peer reviews to identify problems and get more recommendations (Pandey & Pandey, 2021; Woo & Kang, 2021). Finally, the researcher compared the data using the standards researcher guidelines to ensure that all

the processes were followed as the researcher ticked against all the processes. Then, the findings were established as provided in the findings section. The researcher stored their data in various study tools and materials such as laptops, notebooks, and computers.

3.4. Ethical Considerations

The researcher adhered to the highest standards of ethics in research. First, they acknowledged all the citations and references to other writers' research, as evidenced in the findings. The above ensured that the consent ethical principle was maintained during the study, analysis, and writing of the conclusions. Besides, the consent enhanced the adherence to the integrity principle and reliability of the study.

The integrity principle was further enhanced by following the steps correctly and avoiding any shortcuts or biases to influence the results without actual research. Elsewhere, the researcher adhered to the primary researchers' confidentiality principle in the primary sources. The writer did not expose the confidential details without the consent of the primary researchers. However, the researcher acknowledged the weaknesses of the research used to enhance the reliability of this study's findings.

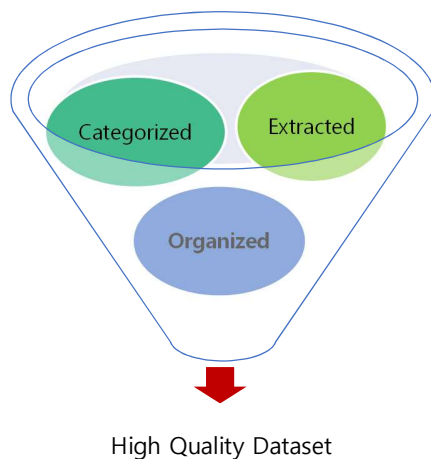


Figure 1: Data Screening Procedure

4. Findings

The following were crucial findings about the effects of the Unified Theory of Acceptance and Use of Technology (UTAUT) on the fourth industrial setting.

4.1. The Performance Expectancy Construct Has Strongly Influenced and Subsequently Influenced the Decision to Acquire and Use a Given Technology by Users

Hewavitharana et al. (2021) explain that the performance expectancy construct is the most fundamental and consequential construct of the Unified Theory of Acceptance and Use Of Technology (UTAUT). It refers to the perception, type, and magnitude of how a given technology would help them. Per Li et al. (2022), human beings rely primarily on technology to improve life and work. Therefore, they could easily accommodate incidences such as pain of purchase and difficulties in learning to use a technology provided it helps them achieve their objectives. Notable areas where human beings use the constructs include anticipating that a given technology would enhance their work output, study results, and general productivity in formal and informal settings. For instance, a human would prefer an Excel spreadsheet that would enable them to do quick calculations and analysis and present findings within the shortest time at work.

The performance expectancy construct has long impacted the fourth industrial setting in various ways. First, it has provided a basis for critical players such as manufacturers of technologies and managers to gauge the impact of technologies before rolling them out for use in their organizations or selling to clients (Van Winkle et al., 2019). The implication of the above is that it has promoted the production of technologies that significantly improve people's results and outcomes. It is because such key players can accurately analyze and determine such key statistics courtesy of the model and make informed decisions on such consequential elements as the impact of technology on human morale (Kim & Kang, 2023).

Second, the construct has been instrumental in guiding users' decision-making and attitude formation in the fourth industrial setting. According to Wang et al. (2021), users of technologies, such as employees, utilize the theory to ensure that they align themselves with best people trends and realities on technology use. For instance, they learn about the need to focus on output or the help of a given technology as one of the critical considerations before adopting and using a technology. The above influences the type, extent of use, and attitudes based on the perceived usefulness of a technology.

The above, thus, have influenced the purchasing trends, use, and recommendations for various users' purchase of technologies. For instance, super-fast technologies such as artificial intelligence-based have high satisfaction and thus have influenced the purchase of AI technologies as opposed to traditional ones.

4.2. Effort Expectancy Construct Has Significantly Influenced the Trends of Adopting and Use of Technologies

Effort expectancy, as the name suggests, is linked to the effort one uses when using a given technology. According to Dadhich et al. (2023), people opt for technologies that require less effort. Thus, they can concentrate on doing other things, as the Unified Theory of Acceptance and Use of Technology (UTAUT) explains. However, Oke and Fernandes (2020) explain that effort expectancy is not standard but moderated by various dynamics and factors. They include the gender, personality of a person, age, and expertise in using a given technology. For instance, someone with a background in engineering would find it easier to use a given machine than a teacher.

Effort expectancy has led to systematic discrimination and preferences for different technologies based on different moderating factors. Notably, it has led to understanding the causes and reasons behind general preferences and increased popularity in automated and semi-automated technologies that require the littlest degree of human effort and input (Dadhich et al., 2023). For example, according to the Unified Theory Of Acceptance And Use Of Technology (UTAUT), the recent rise in popularity of Artificial intelligence and robotics in the fourth industrial setting and sectors such as health, education, fiancé and social interaction has significantly been influenced by the effort expectancy construct (Popova & Zagulova, 2022).

People generally require and prefer such technologies that they spend little time on. The above is influenced by the direct or indirect influence on the users of the products, for instance, through directly influencing the knowledge on what many consider before purchasing and using a given technology, which in turn influences one's attitudes and decisions on adopting and suing a technology to conform with the others or realities such as the nature of human beings to like technologies' that they spend less energy operating or using.

The manufacturers and developers of technologies have used the construct to influence the product patterns of various technologies. Notably, there is a bubble of growth and a rush to produce technologies that are based on artificial intelligence (Wang et al., 2021). It explains why, for instance, companies like Tesla are quickly gaining significant popularity and attention due to their production of effortless technologies and products. The above will likely influence future trends in production and sales (Howard et al. 2017). such companies use the construct to understand the market dynamics and thus adjust their production.

4.3. Social Influence and Impact on Choice,

Acquisition, and Use of Technologies

Social construct refers to the influence of the external environment on human beings' choice and use of technology. Per Persada et al. (2019), the Unified Theory of Acceptance and Use Of Technology (UTAUT) argues that human beings are social beings and thus are highly influenced by social reactions and influences. For instance, peer pressure, recommendations by other users, and social norms are crucial social factors that dictate one's decision to accrue and use a given technology.

The above construct has strongly influenced various technologies' production, purchase, and use patterns. According to Dash et al. (2023), recommendations by fellow users have been primary influencers of decisions to acquire and use a given technology as explained by the Unified Theory of Acceptance and Use of Technology (UTAUT). For example, the high popularity of Apple products and Microsoft due to perceptions of class, performance, and recommendations by fellow users are integral to their prosperity and further purchase of its products and software. On the other hand, the peer pressure on the need to abandon some technologies, such as Nokia, has rendered it less meaningful.

Besides, the construct is instrumental in promoting the sales and preferences of some technologies over others. Per Esawe et al. (2023), the construct underscores the arguments that manufacturers and marketers utilize to sell their products correctly. For example, manufacturers and sellers rely on social recommendations based on user experience to adjust their products to increase their social sentiments and sales. It explains why some trends exist, such as the prohibition of using specific manufacturing techniques, for example, in modern cars, while the old ones are slowly being phased out. The theory has been instrumental in guiding and influencing decisions on manufacturing types and processes, leading to the preference for certain technologies in modern manufacturing, such as using intelligent data over ancient technologies.

4.4. Facilitating Conditions as A Factor in Modern Production and Consumption

Hu et al. (2020) explain that production, adoption, and use of technology are not complete unless there are various supportive factors. For instance, there is a need for resources and infrastructure to support using a given technology. For example, a reliable electricity supply and internet connection are necessary to use specific software. As such, the above construct has informed key decisions and activities to ensure that many people use key technologies (Popova & Zagulova, 2022). For instance, manufacturing companies opt for partnerships supporting associated

supportive aspects such as internet by other parents to enable them to expand their market. The above has led to collective growth and expansion or the availability of supportive services and resources to society.

The facilitating conditions have also led to the existing trends in purchasing and use of various technologies. Users in certain regions prefer technologies they can use easily courtesy of existing facilitating conditions and the Unified Theory of Acceptance and Use of Technology (UTAUT). Courtesy of the theory, users get such details before acquiring and using critical technologies. It further explains why there are specific trends in technology use, such as users of Apple technology and devices in areas where users can get supportive services such as customer care.

Table 1: Summary of the Results

Main Theme	Previous Resources
The Performance Expectancy Construct, Effort Expectancy Construct, Social Influence and Impact on Choice, Acquisition, and Use of Technologies, Facilitating Conditions as A Factor in Modern Production and Consumption have a strongly affected to consumers to use a given technology.	Hewavitharana et al. (2021), Kim and Kang (2023), Wang et al. (2021), Dadhich et al. (2023), Oke and Fernandes (2020), Hu et al. (2020), Popova and Zagulova (2022), Zuiderwijk et al. (2019), Van Winkle et al. (2019), Howard et al. (2017), Persada et al. (2019), Dash et al. (2023), Esawe et al. (2023), Hu et al. (2020)

5. Discussions

The Unified Theory of Acceptance and Use of Technology (UTAUT) is relevant and reliable for learning the various human behaviors regarding adopting and using technology. Besides, it is used in a predictive manner and thus is very instrumental for the producers and users of various technologies. Four primary constructs are critical in making the theory complete, essential, and reliable within the fourth industrial setting. First is the performance expectation construct. According to Zuiderwijk et al. (2019), human beings' decision to acquire and use a given technology is lately influenced by the feeling and satisfaction they will get that will enable them to achieve the desired results. As such, high-performing technologies are preferred over poorly performing-or impactful ones.

The effects of the performance expectancy construct are significant and preventable in society. Notably, it influences the critical decisions of the manufacturers who rely on such an argument to make technologies and products that solve

people's problems in the best way possible. The construct assists the users in aligning themselves with what the majority look for when purchasing various technologies and equipment before using them. It, therefore, explains why there is a higher preference for acquiring and using technologies such as robotics and intelligent data-based ones with high speed, effectiveness, accuracy, and other preference elements in today's society.

The efforts expectancy theory is another fundamental construct of the Unified Theory of Acceptance and Use of Technology (UTAUT). Dadhich et al. (2023) explain that the construct argues that people tend to adopt and use more technologies they feel are less demanding. Where they spend less energy (Wang et al., 2021). The decisions of users of technologies and manufacturers are highly guided by the construct because it explains what applies to many people. Therefore, it is expected that modern users prefer automated and semi-automated technologies, such as artificial intelligence and big data technologies, where they spend less effort (Zuiderwijk et al., 2019) above has also influenced the manufacturing trends, leading to the recent rise in popularity and manufacturing of intelligent data-based technologies that are increasingly becoming popular in the fourth industrial setting.

Social influence is another significant construct of the Unified Theory of Acceptance and Use of Technology (UTAUT) that affects society today. Van Winkle et al. (2019) explain that the construct explains that people's decisions on using a given technology are influenced by what others say about a technology. Therefore, the buyers and sellers consider such reactions in manufacturing and using technologies with better social views and recommendations. For example, it explains the increasing patterns of producing high-level technologies that are highly rated and favorable, such as robotics, which are highly recommended compared to traditional technology. The above has influenced production and consumption patterns worldwide, with many leaning on technologies with high ratings recommendations and social sentiment.

Elsewhere, there are the facilitating conditions or factors. According to Hu et al. (2020), technology is only meaningful and valuable if used alongside its supporting conditions. For example, a machine is only used where power is available. Therefore, many users are keen to ensure they have the supporting conditions before acquiring and using a given technology. On the other hand, the manufacturers of technologies work tirelessly to ensure they avail of supporting conditions, facilitate their availability, or concentrate on markets already having such facilitating conditions. The above has led to holistic growth and development of the fourth industrial setting characterized by the availability of complementary services, programs, and technologies. Shi et al. (2020), for example, state that the

rapid spread of the internet and electricity and the availability of technologies such as software and machinery have generally led to faster growth of society in a holistic manner.

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