ENHANCING WORKFORCE PRODUCTIVITY AND ORGANIZATIONAL AGILITY THROUGH DIGITAL TRANSFORMATION: ROLE OF TECHNOLOGICAL INTEGRATION, SKILLS DEVELOPMENT INITIATIVES AND LOW ORGANIZATIONAL TRUST

Abdullah Faisal Al Naim[1]
[1] School of Business, King Faisal University, Alhasa, Saudi Arabia.
Email: afalnaeem@kfu.edu.sa

ABSTRACT: Several facets of digital transformation and future work trends are dependent on data that may not always be easily accessible or may possess constraints in terms of precision and comprehensiveness. The primary objective of this study is to investigate the moderating influence of low organisational trust on the measurement factors employed in this research, namely technological integration, skills development initiatives, workforce productivity, and organisational agility. The data was collected from employees employed in organisations located in the Eastern region and Riyadh in Saudi Arabia. A total of 186 survey questionnaires were utilised for the analysis. Descriptive statistics were calculated utilising the Statistical Package for the Social Sciences (SPSS), while hypothesis testing was conducted employing regression analysis, which included the utilisation of Cronbach's alpha, as well as analysis of variance (ANOVA). The results of the study suggest that both organisational agility and technological integration play a significant role in moderating low organisational trust. However, it is important to note that no moderating effect was observed between organisational agility and technological integration. In addition, the integration of technology and the implementation of skills development initiatives have a beneficial impact on organisational agility and productivity. Research frequently depends on the utilisation of particular organisations or industries as case studies or participants in surveys. The advent of digital transformation has significant ramifications for the operational, competitive, and customer and stakeholder interaction aspects of organisations.

Keywords: Low Organization Trust, Technological Integration, Skills Development Initiatives, Workforce Productivity, Organizational Agility.

1. Introduction

The domain of digital transformation (DT) research is currently undergoing substantial expansion. During the COVID-19 pandemic, businesses have experienced notable disruptions in their operational activities and have made efforts to improve their digital capabilities. According to Jones, Hutcheson, and Camba (2021), there has been an increase in scholarly literature within the field of digital transformation, as indicated by the contributions of Reis, Amorim, Melão, and Matos (2018) and Mahmood, Khan, and Khan (2019). Scholars, such as Reis et al. (2018) and Ismail, Khater, and Zaki (2017), have conducted extensive literature reviews to comprehensively examine the breadth, findings, and impacts of existing literature on the contemporary phenomenon of digital transformation. The evaluations under consideration utilise a diverse range of perspectives to analyse various subjects across multiple disciplines, including technological disruption and corporate entrepreneurship. The imperative to engage in innovation is of paramount importance for the purpose of ensuring survival. The phrase "Digitise or drown!" underscores the imperative for organisations to promptly embrace digital technologies as a means to sustain competitiveness and pertinence within the swiftly evolving business environment of contemporary times. These examples serve as a mere illustration of an emerging pattern in claims about mortality, emphasising the urgent need for digital transformation (Schreckling & Steiger, 2017).

The COVID-19 pandemic has expedited the progression towards the fourth industrial revolution, thereby compelling individuals and organisations to promptly engage in innovative practises to avoid obsolescence and embrace digital transformation. The concept of digital transformation has been elucidated from various viewpoints (Osmundsen, Iden, & Bygstad, 2018). A more precise elucidation of digital transformation, congruent with prior scholarly investigations and affording a more lucid comprehension of the notion, can be articulated as follows: "Digital transformation refers to a systematic process that seeks to enhance an entity by instigating substantial modifications to its characteristics through the integration of information, computing, communication, and connectivity technologies" (Vial, 2021).

The role of technology in the revitalization of digital infrastructure is both significant and complex. It is important to recognise that digital transformation extends beyond the mere implementation and use of digital technologies by various entities, including organisations, industries, and societies (Wimelius,

Mathiassen, Holmström, & Keil, 2021). The definition described above, which states “significant changes to its properties” (Vial, 2021), is somewhat ambiguous.

The definitions mentioned above are in accordance with the clarification provided by Govindarajan and Immelt (2019), which states that a digital transformation involves the reimagining of goods and services as assets enabled by digital technology. This process of transformation generates innovative value by capitalising on the interconnections between physical and digital assets through data, thereby requiring the establishment of ecosystems to facilitate this phenomenon. According to Govindarajan and Immelt (2019), the authors argue that a digital transformation requires a significant modification in business and organisational activities, processes, competencies, and business models. Wessel et al. (2021) posits that the integration of digital transformation possesses the capacity to profoundly modify the essence of an enterprise. However, it is imperative to recognise that the achievement of effective digital transformation is fundamentally centred on individuals who play a pivotal role as the main catalysts and facilitators of change (Kane, 2019).

In recent years, the phenomenon of digital transformation has had a discernible influence on multiple facets of decision-making, processes, and operations within enterprises (Vial, 2021). The term “digital transformation” is commonly employed in current discussions, indicating the manner in which technology is altering the terrain of corporate activities (Kuhn, Bryant, Jensch, & Böllmann, 2022). Amidst the continuous process of change, organisations are utilising technological advancements to effectively navigate the future trajectory of labour (Wessel et al., 2021). Furthermore, in conjunction with the emergence of digital disruptions, there has been a discernible increase in competitiveness within the labour market. In addition, it is worth noting that the younger cohorts are bringing forth new and distinct expectations that are fundamentally reshaping the operational dynamics of the digital work environment (Attaran, Attaran, & Kirkland, 2019). The adoption of innovative work methodologies is exemplified through the implementation of a digital workplace design (Kovács Cerović, Mićić, & Vračar, 2022).

The digital workplace transformation poses notable challenges that require the incorporation and examination of human resource practises within the framework of the digital age (George & Bajbair, 2021). The viability of an organisation and the efficient utilisation of resources are contingent upon productivity within the realm of business and administration. The significance of managing work engagement in mitigating the effects of technostress within the realm of pervasive digital technologies is underscored in this research (Picazo Rodríguez, Verdú-Jover, Estrada-Cruz, & Gomez-Gras, 2023). In Gong and Ribiere’s (2023) study, the author addresses the conceptual ambiguity surrounding organisational agility as discussed in existing literature.

Additionally, the study explores the role of organisational agility in the context of digital transformation connections. Organisational agility encompasses the process of reconfiguring resources and making prompt decisions in order to effectively adapt to unforeseen changes in dynamic environments. The full comprehension of the importance of organisational agility in the context of digital transformation remains incomplete. This article aims to fill the existing gap by asserting that the implementation of organisational agility enables a business to effectively involve its personnel, operations, and network in the process of digital transformation. In order to undertake a digital transformation that necessitates substantial modifications across various organisational levels, it is imperative for organisations to strategically cultivate both reactive and proactive approaches. This comprehensive literature review investigates the concept of organisational agility in the context of digital transition.

2. Literature Review

The digital revolution and the proliferation of diverse platforms have had a profound impact on the business environment, presenting entrepreneurs with a multitude of opportunities (Andreoni, Barnes, Black, & Sturgeon, 2021; Bouncken & Barwinski, 2021; Nambisan, Wright, & Feldman, 2019). Dethine, Enjolras, and Monticolo (2020) define the concept of “digital transformation” as encompassing organisational modifications that arise from the adoption and integration of digital technologies, as acknowledged within academic and industrial spheres. This phenomenon exhibits a strong correlation with the fourth industrial revolution, commonly known as Industry 4.0 (Alcácer & Cruz-Machado, 2019; Weking et al., 2020). The integration of advanced techniques and disruptive technologies into the production of goods and services is facilitated by the digitalization of business processes and the implementation of digital strategies within the framework of Industry 4.0. The integration discussed here also encompasses the management and governance of businesses, thereby facilitating global communication and collaboration across various industries.

The adoption of digital technologies and methodologies enables the creation of innovative products and services (Kohtamäki et al., 2019; Kohtamäki et al., 2021), which can quickly cross international borders and significantly impact the economic activity and institutional frameworks of both the countries of origin and destination. Moreover, it should be noted that these factors possess the capacity to exert an impact on the internationalisation process in diverse manners. These include temporal dimensions, velocity, geographical factors, strategies pertaining to entry modes, as well as the acquisition and integration of foreign markets (Vadana, Kuivalainen, Torkkeli, & Saarenketo, 2021).

Additionally, the availability and utilisation of local market resources and capabilities also play a significant role in this context (Coviello, Kano, & Liesch, 2017). In addition, the application of digitization, contemporary data science, and business intelligence methodologies (Lederer & Riedl, 2020) can augment the efficiency of knowledge-intensive services and procedures, irrespective of an organization’s decision to operate within national or global boundaries. Alcácer and Cruz-Machado (2019) argue that the phenomenon of digital transformation leads to the rejuvenation of industries and enables the integration of emerging technologies, resulting in the transformation of societal norms, the introduction of innovative business models, and the revolutionization of manufacturing processes. The prevailing inclination towards digital transformation has a noteworthy influence on business models, as it fundamentally modifies the dynamics of interactions among consumers, enterprises, and suppliers.

According to a study conducted by Bertani, Raberto, and Teglio (2020), the utilisation of presently accessible technologies holds the capacity to automate approximately 50% of existing work activities. Moreover, it is estimated that a substantial number of workers, ranging from 75 million to 375 million, will encounter displacement as a result of automation by the year 2030. Consequently, there is a pressing need to transition to alternative occupations in order to alleviate the potential consequences of unemployment.

Technological Integration

The study conducted by Miller and Miller (2019) on the incorporation of technology is strongly linked to the theoretical advancements proposed by scientists and economists concerning the operations of economic entities via both enduring and transitory linkages. The phenomenon of progressive amalgamation between discrete constituents and the overarching entity entails the formation and establishment of an intricate web of interconnections among the constituent elements. As a result, the unique distinguishing features of the individual components decrease while new characteristics are acquired. Within the manufacturing sector, industrial enterprises encounter the imperative to undertake a comprehensive array of organisational, technical, financial, and economic analyses. The objective of these studies is to identify challenges associated with the integration of technology and to support the transition towards a new phase of technological advancement (Bibri & Bibri, 2019).

Skills Development Integration

The prioritisation of skill development has emerged as a significant focus at the national level, resulting in the introduction of diverse initiatives and sustained endeavours aimed at long-term progress. In a world that is becoming more interconnected, nations will actively seek out strategies to optimise the utilisation of their respective factor endowments. The expeditious rate at which technological advancements are occurring not only amplifies the efficacy of transactions but also fortifies the process of global integration. The prevailing consensus is that the conflicts of the present era will be shaped by the dominance of intellectual concepts. As societies continue to evolve, there will be an increasing focus on economies driven by knowledge and the development of sectors that heavily rely on knowledge. Ganeshan and Vethirajan (2020) asserts that skills hold significant importance in determining an individual’s level of prosperity and overall well-being.

Rohm, Stefl, and Ward (2021) proposes that skill development encompasses the acquisition of proficiency in a specific domain, enabling individuals to perform at a high level of competence. In contrast, development refers to the process of improving or expanding current capabilities through the integration of innovative components. Skill development encompasses the systematic and deliberate efforts aimed at augmenting and broadening pre-existing capabilities with the objective of advancing and perpetuating growth. The cultivation of skills is imperative for individuals to flourish in our continuously advancing society. The development of skills holds significant importance in promoting economic advancement and facilitating social progress. Skills and information are essential factors in facilitating macroeconomic growth and maintaining socio-economic stability. The implementation of appropriate policies related to skill development exerts a substantial influence on the development of the economy (Ganeshan & Vethirajan, 2020).

When considering the Sustainable Development Goals, the concept of graduate employability encompasses multiple dimensions. The augmentation of employability among graduates and the development of skills are pivotal elements that contribute to the attainment of success in one’s prospective vocation. The topic of graduate employability has received considerable attention and

has raised concerns in both domestic and international labour markets. The increased attention on this matter can be ascribed to the escalating population of individuals experiencing unemployment, a phenomenon that has been further intensified by the COVID-19 pandemic (Alam, Ogawa, & Islam, 2022).

Workforce Productivity

In contemporary times, it can be argued that total factor productivity (TFP) has diminished in its role as the primary driver of economic growth. This phenomenon arises due to the existence of unquantified advantages resulting from technological progress, which are inadequately accounted for in metrics assessing the returns on innovation or in the National Accounts. Evaluating the existence of synergistic relationships between technologies resulting from the adoption of robotics, e-commerce, or innovation presents difficulties when exclusively relying on data at the national level (Ballestar, Camiña, Díaz-Chao, & Torrent-Sellens, 2021).

In their research, Graetz and Michaels (2018) investigate the impact of robots on productivity, utilising data sourced from the International Federation of Robotics (IFR). The estimates suggest that there is no discernible change in the amount of time spent working after a rise in the concentration of robots. Nevertheless, if no changes are made to the workforce composition, a technological bias will persist that disproportionately benefits individuals with high and medium qualifications. Based on the research conducted by Bondel, Faber, and Matthes (2018), it can be observed that the increased prevalence of automation in the United States has negative consequences for the relocation of production to Mexico and also affects the imbalance of knowledge. Acemoglu and Restrepo (2020) employ data sourced from the International Federation of Robotics (IFR) to evaluate the effects of the interaction between robotic automation and human labour on employment rates and wage dynamics in the United States. There has been an observed decline in employment due to the replacement of human labour with robots, which may be linked to variations in the specific sectors where this substitution occurs.

The study conducted by Varlamova and Larionova (2020) aimed to investigate the impact of information and communication technology (ICT) adoption on labour productivity in businesses. Furthermore, the study investigated the correlation between labour productivity and high-tech manufacturing, as well as the impact of regional factors on the fluctuations of labour productivity. The preservation of construction labour productivity can be attained through a thorough comprehension of health and safety management. Chen et al. (2020) asserts that the implementation of efficient strategies at different phases of a project's life cycle holds the capacity to augment labour productivity. There are several factors that can exert an influence on workforce productivity, such as fatigue, weather conditions, the occupational backgrounds of employees, and the management of projects. Furthermore, it has been observed that the well-being and occupational safety of employees can significantly influence their level of productivity (Alsharef et al., 2021). Ballestar et al. (2021) have presented empirical findings that lend support to the proposition that enhanced productivity confers a notable benefit in the context of organisational growth.

Organizational Agility

Organisational agility encompasses the innate capacity, proficiency, and flexibility of an organisation to promptly and effectively react and adapt to fluctuating changes in the external environment and contextual circumstances (Walter, 2021). The industry 4.0 ecosystem, also referred to as the implementation and adoption of Industry 4.0 technologies with the aim of attaining a competitive advantage, presents significant external challenges that organisations must address (Perakovic, Perisa, Cvitic, & Zoric, 2020). Agility is commonly referred to as the ability of an organisation to effectively gain and leverage a competitive edge by adopting and utilising Industry 4.0 technologies (Walter, 2021).

An organisation that possesses agility as a dynamic competency would demonstrate the capacity to efficiently reorganise its operations and effectively adopt and implement Industry 4.0 technologies (Lee, Um, Shin, & Jeong, 2019; Saengchai & Jermsittiparsert, 2019). The literature contains a scholarly discussion concerning the role of agility in the implementation of Industry 4.0, wherein various perspectives exist regarding whether it functions as a catalyst or a consequence of this phenomenon.

The literature review reveals that agility is a complex capability that allows industries across different sectors to achieve a competitive advantage and sustain their long-term performance (Alami & ElMaraghy, 2021; Arifin, Jalaldeen, Kartiwi, & Abdullah, 2020; Choudhury, Behl, Sheorey, & Pal, 2021; Kurniawan & Hamsal, 2019; Neden, Cleak, & Thomson, 2020). Brenner (2018) presents empirical evidence that organisations exhibit a keen interest in augmenting their agility through the adoption of Industry 4.0 technologies. The authors participated in a scholarly discussion regarding the potential effects of implementing Industry 4.0 technologies on improving agility in a dynamic manner (Kasim, Auzair, Amir, & Abdullah, 2020). On the other hand, the participants also engaged in a discussion regarding the potential adoption of Industry 4.0 technologies, which presents a challenge in the context of change management (Tajudeen, Nadarajah, Jaafar, & Sulaiman, 2022).

Moreover, academic literature has proposed that the implementation of Industry 4.0 technologies results in a profound transformation in the culture, structure, and functioning of organisations (Hassan & Arshad, 2019; Kasim et al., 2020; Le Grand & Deneckere, 2019; Marnewick & Marnewick, 2019; Tajudeen et al., 2022). Therefore, it can be contended that organisations that foster a nascent ability to adapt quickly will experience enhanced advantages from the adoption of Industry 4.0 technology, as suggested by Gladden (2019), Habib and Chimsom (2019) and El Mouayni et al. (2019). Therefore, it can be deduced that companies that possess agility have the ability to adopt Industry 4.0 technologies. After its adoption, the agility attribute undergoes a significant increase in its dynamic nature (Arromba et al., 2020).

Low Organization Trust

The persistent challenge faced by organisations is the process of transitioning towards digitization (Bencsik, Hargitai, & Kulachinskaya, 2022). The notion of achieving successful transformation can be defined as the cumulative result of multiple factors, wherein the disposition, confidence, and/or scepticism displayed by employees towards technology plays a pivotal role.

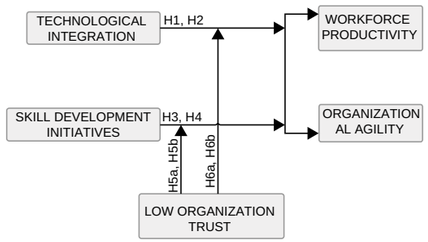
Prior research has suggested that a notable barrier impeding the aforementioned transition is the absence of confidence among personnel towards technology (Almarashdeh et al., 2018). The Nielsen Norman Group conducted a study which revealed that individuals often generate idiosyncratic and frequently inaccurate explanations and myths when they possess an incomplete understanding of the fundamental mechanisms of a given system. Numerous fallacies pertaining to technology arise from a prevailing scepticism towards digital tools, particularly in regard to apprehensions regarding privacy, security, and cost-efficiency (Németh & Cameron, 2018).

The influence of management's supportive actions on employees' confidence in technology is of paramount importance, while the company's digital readiness and internal training programmes serve as supplementary factors. The crucial importance of management in offering support is a pivotal element within the framework, as it exerts a substantial influence on trust, both in a direct and indirect manner, through various pathways outlined in the model. Bencsik, Hargitai, and Kulachinskaya (2022) asserts that the importance of the supportive role of leadership is evident in its influential effect on the assessment of trust or distrust.

The impact of skill development initiatives on workforce productivity and organisational agility. The integration of technology, exemplified by the utilisation of collaboration tools and communication platforms, enables the efficient exchange of information and promotes effective collaboration among employees. The ability to be agile is of utmost importance in a dynamic business landscape, as it enables organisations to efficiently respond to changes in the market and meet the evolving needs of customers. The utilisation of integrated data analytics and business intelligence tools offers significant insights into employee performance and operational efficiency. Skill development programmes provide employees with the necessary tools and resources to acquire and enhance their knowledge and abilities in order to stay current and competitive in their respective fields.

The implementation of skill development programmes has been found to result in a reduction in errors and mistakes, as employees are provided with enhanced capabilities to effectively manage their assigned tasks. The cultivation of skills fosters an environment conducive to fostering innovation. Nevertheless, a lack of trust within an organisation can act as a barrier to the development of skills, result in excessive micromanagement, reduce employee autonomy, and hinder the process of innovation. Additionally, it has the potential to generate opposition towards change initiatives, thereby exerting a detrimental impact on decision-making processes and impeding technological advancements. The establishment of trust is a crucial factor in fostering a work environment that is both productive and conducive to innovation.

H1: Technological integration is positively influenced workforce productivity.
H2: Technological integration is negatively influenced organizational agility.
H3: Skill development initiatives is positively influenced workforce productivity.
H4: Skill development initiatives is negatively influenced organizational agility.
H5: Low organization trust moderates the relationship between workforce productivity and Technological integration.
H6: Low organization trust moderates the relationship between organizational agility and Technological integration
H7: Low organization trust moderates the relationship between workforce productivity and skill development initiatives
H8: Low organization trust moderates the relationship between organizational agility and skill development initiatives



3. Methodology

Data Collection and Analysis

The primary participants in this study were employees employed by Saudi organisations. Data was gathered from employees working in Saudi organisations that operate in the Eastern region and Riyadh. A total of 193 questionnaires were collected from participants. However, 7 of these questionnaires were excluded from the analysis due to illogical responses. Therefore, the final sample size used for analysis consisted of 186 completed survey questionnaires. The statistical software SPSS was employed to calculate the descriptive statistics, while regression analysis was conducted to examine the hypothesis.

Research Instrument

Table 1: Measurement Tools

Items	References
Technological Integration	
"I am proficient in the use of common input and output devices; I can solve routine hardware and software problems; I can make informed choices about technology systems, resources, and services. I can use technology to locate, evaluate, and collect information from a variety of sources. I can use technology tools and information resources to increase productivity, promote creativity, and facilitate academic learning. I can use content-specific tools (e.g., software, simulation, environmental probes, graphing calculators, exploratory environments, Web tools) to support learning and research. I can collaborate in constructing technology-enhanced models, preparing publications, and producing other creative works using productivity tools. I can use technology tools to process data and report results. I have a strong understanding of the nature and operation of technology systems. I understand the legal, ethical, cultural, and societal issues related to technology. I can choose learning and technology resources. I can use technology resources to facilitate higher order and complex thinking skills, including problem solving, critical thinking, informed decision-making, knowledge construction, and creativity. I can troubleshoot common computer problems. I can use technology in the development of strategies for solving problems in the real world. I have knowledge to discuss health and ethical issues related to technology. I can use technology tools and resources for managing and communicating information (e.g., finances, schedules, addresses, purchases, correspondence). I can evaluate and select new information resources and technological innovations based on their appropriateness to specific tasks I can use a variety of media and formats, including telecommunications, to collaborate, publish, and interact with peers, experts, and other audiences. I can discuss diversity issues related to electronic media."	Almekhlafi and Almeqdadi (2010)
Skills Development Initiative	
"Soft skills are critical for career advancement Soft skills are highly sought after by employers Soft skills are important for getting a better job Soft skills are difficult to learn compared to professional knowledge Soft skills cannot be enhanced through practice Soft skills are not as important as professional knowledge"	Majid, Liming, Tong, and Raihana (2012)
Workforce Productivity	
"The organization has certain level to measure skill and experience of the workforce The organization has certain level to measure motivation/commitment of the workforce The organization has certain level to measure the inadequacy of site staff The organization has certain level to measure familiarity with current job trends and conditions The organization has certain level to measure reason behind workforce absenteeism The organization has certain level to measure empowerment (training and resourcing) "	Durdyev, Ismail, and Kandymov (2018)
Organizational Agility	
"The organization has been slow in terms of detecting changes that occur in customer preferences for products. The organization has been slow to detect changes that occur in the movements of competitors. The organization has been slow to detect changes in technology. The organization analyses important events concerning customers, competitors, and technology without any delay. The organization detects the opportunities and threats to changes in customers, competitors, and technology in time. The organization carries out a specific action plan in order to meet customer needs without any delay. The organization implements a plan of action in order to respond to the strategic movements of competitors without delay. The organization is implementing an action plan on how to use the new technology without delay."	Nafei (2016)
Low Organization Trust	
"Affect-based trust	
We have a sharing relationship. We can both freely share our ideas, feelings and hopes I can talk freely to this individual about difficulties I am having at work and know that (s)he will want to listen We would both feel a sense of loss if one of us was transferred and we could no longer work together If I shared my problems with this person, I know (s)he would respond constructively and caringly I would have to say that we have both made considerable emotional investments in our working relationship	Rutten, Blaas-Franken, and Martin (2016)
Cognition-based trust	
This person approaches his/her job with professionalism and dedication-based trust Given this person's track record, I see no reason to doubt his/her competence and preparation for the job I can rely on this person not to make my job more difficult by careless work Most people, even those who are not close friends of this individual, trust and respect him/her as a coworker Other work associates of mine who must interact with this individual consider him/her to be trustworthy If people know more about this individual and his/her background, they would be more concerned and monitor his/her performance more closely."	

4. Analysis

Descriptive Statistics

Table 2 displays the descriptive statistics of the different variables examined in the study, encompassing measures such as the mean, standard deviation, reliability statistics, and correlations among the variables. Upon examination of the table, it becomes evident that the reliability statistics for all variables fall within the acceptable range. This indicates that the measurement instruments employed to gather data exhibit internal consistency, thereby establishing their reliability. Additionally, the correlations between variables do not exhibit excessive levels that would result in multicollinearity.

Table 2: Descriptive Statistics

Variable	Mean	SD	Cronbach's alpha	1	2	3	4	5
Technological Integration	3.65	2.37	7.88	1				
Skills Development Initiatives	3.29	2.13	7.94	0.42	1			
Workforce Productivity	3.12	3.08	7.90	0.53	0.44	1		
Organizational Agility	3.01	3.64	7.58	0.67	0.37	0.50	1	
Low Organization Trust	2.97	2.69	7.67	0.47	0.69	0.67	0.64	1

Testing of Hypotheses

The data that was collected was subjected to analysis using IBM SPSS. The study hypotheses were tested using simple linear regression. Table 2 presents the outcomes of the regression analysis. The table illustrates that the adjusted R square value indicates that the combined influence of two independent variables, namely technological integration and skill development initiatives, accounts for 0.71, equivalent to 71%, of the variability observed in the dependent variable, specifically workforce productivity and organisational agility. Furthermore, the table presented below provides evidence that there is a positive and statistically significant relationship between technological integration and workforce productivity, thereby supporting the hypothesis H1. According to H2, the integration of technology has a detrimental impact on organisational agility. According to H3, skill development initiatives have a positive impact on workforce productivity. However, according to hypothesis H4, skill development initiatives have a negative impact on organisational agility.

Table 3: Regression Analysis

Regression Statistics					
Multiple R	0.63				
R^2	0.54				
Adjusted R^2	0.71				
Standard Error	0.53				
Observations	186				
ANOVA					
	df	**SS**	**MS**	**F**	**Significant F**
Regression	71	59.67	8.97	49.67	12.63
Residual	29	21.01	0.52		
Total	100	80.68			
	Coefficients	**SE**	**t value**	**P-value**	
Constant	0.033	0.29	2.01	0.01	
Technological Integration	0.028	0.35	3.28	0.01	
Skills Development Initiatives	0.026	0.24	3.69	0.02	
DV=Workforce Productivity P<0.05 (Hair et al., 2007), t>1.96 (Hair et al., 2007)					

Table 4: Regression Analysis

Regression Statistics					
Multiple R	0.60				
R^2	0.49				
Adjusted R^2	0.65				
Standard Error	0.44				
Observations	186				
ANOVA					
	df	**SS**	**MS**	**F**	**Significant F**
Regression	56	62.31	7.55	47.66	16.60
Residual	44	23.67	0.41		
Total	100	85.98			
	Coefficients	**SE**	**t value**	**P-value**	
Constant	0.026	0.36	2.00	0.02	
Technological Integration	0.020	0.39	4.67	0.02	
Skills Development Initiatives	0.018	0.33	3.90	0.01	
DV=Organizational Agility P<0.05 (Hair et al., 2007), t>1.96 (Hair et al., 2007)					

Testing Moderation
Moderating Effect of Low Organization Trust

In addition to the primary outcomes, the moderating effect of low organisation trust was examined using Hayes Macro in IBM SPSS. The presented table demonstrates that, as indicated by H5 and H7, the presence of low levels of organisational trust influences the connection between workforce productivity, technological integration, and skill development initiatives. It is noteworthy that both hypotheses were confirmed during the analysis phase. However, the measurement of H6 as low organisational trust, which serves as a moderator for the relationship between organisational agility and technological integration, was ultimately rejected following thorough testing and analysis. On the other hand, the level of trust within an organisation, specifically H7 low organisation trust, serves as a moderating factor in the association between workforce productivity and initiatives aimed at skill development. The final hypotheses were examined and found to be valid. Hypothesis 8: The presence of low trust within an organisation serves as a moderating factor in the relationship between organisational agility and skill development initiatives.

Table 5: Moderating Relationships

Dependent Variable	R^2	Variables	B	T	F	P
Workforce Productivity	0.35	Constant	3.24	5.99	22.39	0.04
		TI	0.27	2.01		
		LOT	0.13	1.22		
		TI x LOT	0.03	2.45		
Organizational Agility	0.29	Constant	2.71	3.90	28.60	0.67
		TI	0.22	1.99		
		LOT	0.27	0.55		
		TI x LOT	0.49	1.09		
Workforce Productivity	0.26	Constant	2.60	3.08	27.99	0.01
		SDI	0.13	2.64		
		LOT	0.21	1.03		
		SDI x LOT	0.02	2.71		
Organizational Agility	0.26	Constant	3.11	2.63	32.67	0.03
		SDI	0.24	3.04		
		LOT	0.02	2.55		
		SDI x LOT	0.04	7.75		

Table 6: Result of Analyses and Hypotheses

Hypotheses		P-value	t-value	Accept or Reject
H1	Technological integration is positively influenced workforce productivity	0.01	3.28	Accept
H2	Technological integration is negatively influenced organizational agility	0.02	2.00	Accept
H3	Skill development initiatives is positively influenced workforce productivity	0.02	3.69	Accept
H4	Skill development initiatives is negatively influenced organizational agility	0.01	3.90	Accept
H5	Low organization trust moderates the relationship between workforce productivity and Technological integration	0.04	2.45	Accept
H6	Low organization trust moderates the relationship between organizational agility and Technological integration	**0.67**	**1.09**	**Reject**
H7	Low organization trust moderates the relationship between workforce productivity and skill development initiatives	0.01	2.71	Accept
H8	Low organization trust moderates the relationship between organizational agility and skill development initiatives	0.03	7.75	Accept
p-value<0.05 (Hair et al., 2007), t-value>1.96 (Bhatti and Sundaram, 2015)				

5. Discussion

The advent of digital transformation is significantly altering the landscape of work, exerting a profound impact on its future trajectory. In the contemporary era, enterprises are embracing novel technologies and strategies in order to maintain their competitiveness and relevance. Consequently, this has led to substantial transformations in the nature of work, the requisite skills, and the physical environment of the workplace. In summary, the process of digital transformation encompasses more than the mere integration of novel technologies. It entails a fundamental reevaluation of work processes and the operational strategies employed by businesses. The forthcoming landscape of employment will be distinguished by a convergence of human and machine cooperation, heightened adaptability, and an ongoing necessity for learning and adjustment. Organisations and individuals who adopt and embrace these changes will be more strategically positioned to flourish in the digital era.

Technological integration is positively influenced workforce productivity

The aforementioned hypothesis posits that technology has the potential to automate tasks that are routine and repetitive in nature, thereby enabling employees to allocate their time and efforts towards more strategic and creative dimensions of their respective roles. This practise not only diminishes the probability of errors but also empowers workers to allocate their time towards tasks that hold greater value. The incorporation of technology facilitates employees' convenient access to extensive quantities of information and data. This facilitates the process of making well-informed decisions in a timely manner, thereby minimising the duration spent on information retrieval or data compilation. Based on the results and deductions of this investigation, the integration of technology yields a favourable influence on workforce efficiency. Nevertheless, it is crucial to acknowledge that the impact of technological integration on workforce productivity can be contingent upon various factors, including the effectiveness of technology implementation, the adequacy of employee training, and the alignment of technology with the organization's objectives and procedures. The implementation of meticulous planning and continuous evaluation is imperative in order to ascertain that technology effectively enhances productivity within a given context.

Technological integration is positively influenced organizational agility

The integration of technology does not inherently yield a positive influence on the agility of an organisation. Indeed, when implemented with careful consideration, technology has the potential to augment the agility of an organisation. Agility pertains to the capacity of an organisation to swiftly adjust to shifting circumstances, make well-informed choices, and effectively address emerging challenges and opportunities. Based on the empirical evidence and resultant deductions presented in this study, it is evident that the selection of technology and its congruence with the requirements and operations of an organisation can exert a substantial influence on its agility. Inadequately selected or excessively intricate systems have the potential to impede organisational agility. The adoption and utilisation of technology are influenced by the organisational culture. A society that embraces innovation and change is more inclined to utilise technology in order to enhance its agility. Effective change management practises are essential in order to facilitate a seamless transition during the process of technological integration. Inadequately executed change management has the potential to disrupt organisational operations and impede the ability to adapt quickly. Ensuring that employees possess the necessary skills to effectively utilise new technologies is imperative. Insufficient training has the potential to impede operational efficiency and diminish organisational agility.

In the end, the effective implementation of technological integration has the potential to enhance organisational agility. However, it is crucial to take into account several factors such as technology selection, training, and culture. This consideration is necessary to ensure that technology functions as a support rather than an impediment to an organization's capacity to adapt and respond to change.

Skill development initiatives is positively influenced workforce productivity

Undoubtedly, skill development initiatives can exert a favourable impact on the productivity of the workforce. The investment made by organisations in the enhancement of their employees' skills has the potential to yield various advantages that ultimately contribute to heightened levels of productivity. Based on the findings and conclusions derived from this study, it can be inferred that the efficacy of skill development initiatives is contingent upon a multitude of factors. These factors encompass the pertinence of the skills being imparted, the calibre of the training programmes, and the congruence between skill development endeavours and the objectives of the organisation. Therefore, it is imperative for organisations to meticulously strategize, execute, and assess their initiatives aimed at enhancing skills in order to optimise their beneficial influence on the productivity of their workforce.

Skill development initiatives is positively influenced organizational agility

When skill development initiatives are implemented in a thoughtful manner, they can have a positive impact on organisational agility. Indeed, the cultivation of skills has the potential to augment an organization's agility through the provision of requisite capabilities to its workforce, enabling them to effectively respond to evolving circumstances and capitalise on emerging prospects. Based on the results

and implications of this research, it is recommended that skill development endeavours be congruent with the strategic objectives of the organisation and the requisite skills necessary for their attainment. The presence of misalignment has the potential to result in the inefficient utilisation of resources and impede organisational agility. The efficacy of skill development programmes is contingent upon their design and execution. Ineffectively implemented endeavours have the potential to deplete resources without yielding the intended advantages.

The culture of an organisation plays a crucial role in shaping the perception and utilisation of skill development. A society that places importance on the acquisition of knowledge and the ability to adapt is more inclined to utilise the enhancement of skills in order to foster agility. In certain scenarios, organisations may encounter the necessity of achieving a harmonious equilibrium between the ability to swiftly respond to challenges and the comprehensive cultivation of skills, which may require a considerable amount of time. The determination of this equilibrium will be contingent upon the particular context and objectives. In brief, the implementation of skill development initiatives that are appropriately aligned with organisational objectives and executed with proficiency should not have adverse effects on organisational agility. Indeed, they possess the potential to serve as a valuable resource in cultivating a workforce that is both agile and adaptable, capable of effectively responding to dynamic circumstances and capitalising on emerging prospects.

Low organization trust moderates the relationship between workforce productivity and Technological integration

The fact that there is of low levels of organisational trust has the potential to moderate the association between workforce productivity and technological integration. Trust is an essential factor in shaping the dynamics of employee and management interactions, collaboration, and adaptation to technological advancements within an organisation. Based on the research findings and subsequent analysis, it can be inferred that organisations characterised by low levels of trust tend to exhibit greater resistance towards change, including the integration of technological advancements. Individuals may exhibit a tendency to harbour scepticism towards novel technologies and display reluctance in embracing them, thereby impeding the potential productivity enhancements that these technologies can provide. Trust plays a pivotal role in facilitating successful collaboration. In a context characterised by a deficit of trust, employees may exhibit a reduced motivation to collaborate in order to fully exploit the advantages offered by technology.

In order to effectively address and mitigate the impact of low trust on productivity and technological integration efforts, it is advisable for organisations to contemplate the implementation of various strategies. These strategies may include transparent communication, wherein information is shared openly and honestly throughout the organisation. Additionally, involving employees in decision-making processes can prove beneficial, as it fosters a sense of ownership and empowerment among the workforce. Providing adequate training and support to employees is also crucial, as it equips them with the necessary skills and knowledge to adapt to technological changes. Lastly, cultivating a positive organisational culture, characterised by trust, collaboration, and mutual respect, can contribute significantly to overcoming the challenges posed by low trust and enhancing productivity and technological integration efforts. The establishment of trust is not only intrinsically valuable, but it also plays a crucial role in facilitating the successful integration of technology and enhancing productivity within the workforce.

Low organization trust moderates the relationship between organizational agility and Technological integration

The existence of low levels of organisational trust has the potential to act as a moderating factor in the relationship between organisational agility and technological integration. The establishment of trust within an organisation is of utmost importance in assessing the successful implementation and impact of technological integration on organisational agility. Based on the findings and analysis undertaken in this study, it has been determined that the specific hypotheses have been refuted. The present study or analysis has yielded findings indicating a lack of substantial evidence in support of the notion that diminished levels of trust within an organisation have a significant impact on the relationship between organisational agility and technological integration. In the present context, trust may not exert a substantial influence on modifying the relationship. The reciprocal relationship between organisational agility and technological integration remains unaffected by the level of trust present within the organisation. This suggests that in a context characterised by limited trust, endeavours to improve organisational agility through the integration of technology can be implemented smoothly without substantial disruptions arising from trust-related concerns.

When a hypothesis is invalidated, it does not imply that the significance of trust is negligible within the realm of organisational agility and technological integration. Conversely, this implies that the empirical data, whether statistical or derived from real-world observations, failed to provide substantial support for the hypothesis that trust plays a significant moderating role in this relationship. In order to obtain a more comprehensive comprehension of the interplay between trust, agility, and technological integration within a particular organisational setting, it may be necessary for researchers or analysts to delve into additional potential factors and interactions.

Low organization trust moderates the relationship between workforce productivity and skill development initiatives

The hypothesis states that the degree of trust within an organisation can have an effect on the extent to which skill development initiatives influence workforce productivity. If the hypothesis were to receive support, it would suggest that there is a notable moderating impact of low organisational trust on the association between skill development initiatives and workforce productivity. Based on the research findings and conclusions, it is recommended that organisations with low levels of trust should prioritise trust-building initiatives in conjunction with skill development programmes to enhance workforce productivity.

Conversely, organisations with higher levels of trust may derive more direct and significant advantages from skill development endeavours. Ultimately, the results of this study or analysis would yield valuable insights into the intricate dynamics between trust, skill enhancement, and workforce efficiency within a particular organisational setting.

Low organization trust moderates the relationship between organizational agility and skill development initiatives

The provided statement suggests a correlation between three fundamental concepts: organisational agility, skill development initiatives, and low organisational trust. Moreover, it can be inferred that the degree of trust within an organisation plays a moderating or influencing role in determining the extent and nature of the connection between organisational agility and initiatives aimed at developing skills. Based on the results and implications of this research, it can be inferred that a lack of trust within an organisation has a moderating effect on the association between organisational agility and initiatives aimed at developing skills. This implies that the influence of organisational agility on the enhancement of skills may differ based on the degree of trust present within the organisation. When there is a lack of trust, the potential benefits of agility in skill development initiatives may be reduced or less observable.

From a practical standpoint, organisations that encounter low levels of trust must prioritise the resolution of trust-related concerns in order to successfully implement skill development initiatives and fully exploit their organisational agility. This may encompass various approaches, such as enhancing communication channels, fostering transparency, and bolstering the credibility of leadership, among other tactics, in order to restore trust and cultivate a more favourable atmosphere for the advancement of skills**.**

Theoretical Implications

The examination and analysis of the theoretical implications of digital transformation and its impact on the future of work are of utmost importance in comprehending and researching the changing dynamics of the contemporary workplace. The process of digital transformation frequently entails the incorporation of novel technologies. Theoretical discussions emerge regarding the contrasting perspectives of technological determinism, which posits that technology is the primary driver of societal change, and the social shaping of technology, which argues that society plays a significant role in shaping the development and utilisation of technology. Academic researchers investigate the dynamic interplay between technology and society and its implications for the future of labour.

The process of digital transformation places a high value on the acquisition and utilisation of digital skills and competencies. The application of theoretical frameworks, such as human capital theory, serves as a means to comprehend the effects of investments in employee skills on both organisational performance and individual career outcomes within the context of the future of work. The application of theoretical models such as the punctuated equilibrium theory and the diffusion of innovations theory is employed to gain insights into the process by which organisations adapt to the phenomenon of digital transformation. Academic researchers investigate the manner in which organisations modify their structures, processes, and cultures in reaction to the introduction of novel technologies.

Practical Implications

The practical implications of digital transformation and the future of work are of great importance for organisations, employees, and policymakers. In the realm of organisational studies, the term “organisations” refers to entities that are structured in order to maintain a competitive edge, organisations are required to allocate resources towards the training and enhancement of their workforce’s digital skill set. It is imperative for

organisations to offer continuous learning opportunities and facilitate career advancement amidst the dynamic and ever-evolving technological environment.

The implementation of resilient digital infrastructure and collaborative technologies is imperative in facilitating remote work and optimising digital operations. This encompasses the implementation of cybersecurity protocols aimed at safeguarding sensitive information and ensuring the preservation of individuals' privacy. Proficiency in and proficient utilisation of digital tools are imperative competencies for individuals employed in a digitalized work environment. Organisations ought to conduct a thorough analysis of their operational procedures and carefully evaluate the potential benefits of implementing automation technologies in order to enhance operational efficiency and mitigate financial expenditures. In addition, it is imperative to undertake job redesign efforts that effectively integrate automation technologies, while concurrently safeguarding the welfare and professional development of employees.

It is essential to take care of the physical and mental health of employees. The implementation of flexible work arrangements, wellness programmes, and mental health support has the potential to enhance both productivity and job satisfaction. It is imperative to place a high level of importance on engaging in self-care practices and establishing a harmonious equilibrium between professional responsibilities and personal life when operating within digital workspaces. It is imperative to remain well-informed regarding pertinent regulations and compliance obligations, particularly in domains such as data protection and legislation pertaining to remote work.

The aforementioned practical implications underscore the necessity of taking proactive measures to adapt to the evolving work environment in the digital era. In order to flourish in the future of work, it is imperative for both organisations and individuals to adopt novel technologies, cultivate a culture of continuous learning, and prioritise well-being. Policymakers assume a pivotal role in establishing a conducive atmosphere for these transformations, concurrently ensuring the principles of fairness and equity are upheld for all stakeholders involved.

6. Limitations and Future Research Directions

Digital transformation and the future of work are dynamic areas of research with ongoing developments and evolving challenges. Understanding their limitations and suggesting future research directions is essential for keeping pace with these trends. Here are some limitations and potential research areas for the future:

Limitations

Numerous digital transformation endeavours encompass the acquisition and examination of extensive quantities of personal data. Further investigation is warranted to delve into the ethical ramifications associated with the utilisation of data, apprehensions regarding privacy, and the establishment of conscientious frameworks for governing data.

Although automation and artificial intelligence (AI) have the potential to replace certain occupations, they also have the capacity to generate novel employment opportunities. Further investigation is warranted to explore the comprehensive effects of these technologies on employment, encompassing an examination of the calibre of newly generated jobs as well as strategies for facilitating the transition of the workforce.

There exists a potential disparity between the skill requirements of the digital economy and the skill set possessed by the current workforce. The research ought to prioritise the examination of strategies aimed at addressing the skills gap, encompassing the exploration of efficacious training methodologies and the development of curriculum.

Many organisations frequently encounter challenges in effectively managing change throughout the process of digital transformation. The research should focus on examining optimal approaches for change management, leadership tactics, and the cultivation of organisational culture in order to facilitate successful transformations.

Future Research Directions

It is imperative for scholarly investigations to delve into the enduring consequences of hybrid work models, wherein remote and on-site work are integrated. This entails the analysis of productivity, collaboration, and the architectural layout of hybrid work environments.In light of the escalating rate of change, it is imperative for research endeavours to prioritise the examination of the resilience and adaptability exhibited by both individuals and organisations. Evaluate the ecological consequences of initiatives aimed at digital transformation. The exploration of how organisations can incorporate sustainability as a fundamental principle within their digital strategies warrants further investigation in research. This inquiry delves into the diverse cultural and global contexts in which digital transformation and the future of work are encountered and comprehended. This entails the examination of variations in work practises, values, and attitudes towards technology.

Conducting a thorough assessment of the long-term consequences of digital transformation initiatives is crucial in research, as it should encompass a comprehensive analysis of their effects on diverse sectors, economies, and societies. Further investigation in these domains will enhance comprehension of digital transformation and the prospective implications for labour, aiding organisations, policymakers, and individuals in effectively navigating these transformative patterns.

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About Author

Abdullah Faisal Al Naim
School of Business, King Faisal University, Alhasa, Saudi Arabia.
Email: afalnaeem@kfu.edu.sa