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Tourism management in financial crisis and industry 4.0 effects: Managers' traits for technology adoption in reshaping, and reinventing human management systems

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Abstract.
BACKGROUND: The literature paid diminutive attention to quantifying the relationship between tourism, industry 4.0, technology adoption, and managers' personality traits. This study represents recruitment managers' reactions to adopting social media recruiting technology in securitizing an appropriate candidate amongst a pool of applicants and how technology affects financial crisis.
OBJECTIVE: We explored the understanding of how managers' personality influence adoption and acceptance of social media networking websites. It caters to technology outcomes for organizations adopting faster technologies and designing their working environment under the protocols of industry 4.0. Such innovative organizations need to develop managers' personality traits to produce smart employees, clients, and other users who can help bridge this gap between intelligent people and smart products offered by advanced applications of IT for tourism.
METHODS: We processed 406 managers' data for analysis.
RESULTS: Managers' personality traits, except agreeableness, significantly impact the intention to adopt the technology. Technology acceptance fulfills technology outcomes, adding to the theoretical and practical body of knowledge.
CONCLUSION: Dependency on technology adoption and utilization in the tourism sector is based on the willingness and innovativeness of the recruiters. The outcomes of technology acceptance in the recruitment processes; are minimized cost, reduced time, and quality recruits.

Keywords: Social media recruiting technology, recruitment, personality traits, industry 4.0, tourism, COVID-19 financial crisis

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1. Introduction

The use of social media recruiting technology must be increased worldwide to accomplish organizational recruitment objectives as the dependence of humans on computer systems is growing over time. The financial crisis amid COVID-19 has affected tourism industry at large [1]. Service orginaztioons, including tourism firms have faced sever challenges of financial availability in the pandemic crisis. In human resource management, traditionally, organizations rely on face-to-face interviews to hire candidates [2]. However, due to the growing practices of social media recruitment, a traditional model of hiring and interviewing has been substituted with real-time technologies [3]. Recruiters access candidates' online profiles on social media platforms like Facebook, Twitter, Linkedin, Instagram, and find the suitability and eligibility of candidates for the relevant open posts instead of calling them physically [4], especially during the COVID-19 and new normal era. Due to higher reliance on computer-based systems, social media recruiting technology has become integral to recruitment [5–7]. Nowadays, different HR functions like recruitment, training and development, and evaluation of employees have been transformed to digitalization; various software applications have been adopted and practiced at departmental and organizational levels.

Industry 4.0 has been considered a new industrial stage in which the joint emergence of several technologies transporting innovative, digitalized, and rapid solutions; the current digital transformation

of the business world is referred to as industry 4.0 [8–11]. Various organizations are trying to get smart adoptions for smart clients; still, they need to know their managers' specific personality characteristics and incorporate their contributions to Industry 4.0 [12].

The present research aims to shed light on how applications of the 4.0 industry can enhance the efficiency of the human resources department of tourism agencies/sectors, especially in the recruitment process, where eligible and suitable candidates can be identified better among the pool of applicants. The study emphasizes which characteristics a smart manager in the tourism sector requires to adopt smart products/technologies and the potential outcomes of adopting such innovations. Scavarda, Daú [13, 14] gave the research evidence that organizations have realized the importance of transforming the traditional functioning means to a 4.0 environment. Like the transformation in different sectors, industry 4.0 altered tourism [15]. With the advent of Industry 4.0, organizations can work with better quality and time efficiency and improve their productivity [11, 16, 17). Pencarelli [18] has identified that Industry 4.0 has geared tourism practices towards smartness with quality enhancement; it also caters to the social values of both local and guest tourists. Nowadays, tourists have switched to different smart applications and practicing them as decision-making tools to make their trips more entertaining and allow them to systematically plan destinations, tourism resources, and the environment [19, 20]. The study of Gomes, Lopes [21] found several dimensions of tourism, i.e., better means of transformation of knowledge, network innovation, tourism innovation, smart ecosystem, and smart innovative research in tourism.

The tourism industry's demand is increasing in the global economy [18, 22]. Moreover, applications of the 4.0 industry have amended the prior laws, compliance, and regulations; correspondingly, tourism agencies are becoming part of the global service trade competition [23]. Under the scenarios of Industry 4.0, it has become challenging for recruiters to choose employees eligible to soak the functions, usability, and recent transformations [24]. In this way, different personality characteristics are required by managers for the effective adoption of innovative products to utilize the prospective consequences.

The use of social media recruiting technologies permits recruitment managers to grasp such advantages i) enable the recruiters to deal larger pool of applicants at the same time, ii) spending little time and effort, iii) minimizing the cost of the recruitment process, iv) scrutinizing the best qualified and skilled candidates v) recruiters may report about applicants more than the resumes [1, 6, 25]. Prior studies provided evidence about the usage of social technology in risk mitigation and crisis management [26], disbursement of job ads [1], and video communication [5]. Correspondingly, the internet has opened new doors for recruiters for the massive flow of advertisements via social platforms, which were not seen earlier [27, 28].

Practices of social media technology in the recruitment department include sourcing and acquiring the right talent [25, 29]. Studies [30, 31] highlighted the HEXACO personality model, which narrowed the traits of managers that can better examine predictors of organizational behavior as compared to broader personality domains. Generally, managers' personality traits are critical indicators of their social behavior and effectiveness evaluation [32]. To adopt technologies, managers' personality traits, including the big five and technology-specific traits, must be considered [30, 33, 34]. Moreover, recruitment managers play a vital role in achieving recruitment outcomes by adopting technology; for instance, a past study conducted by Oostrom, van der Linden [6] has found personality facets of an individual play a crucial role in human and organizational behavior regarding the acceptance of technology [6]. Research evidence is available from the job seekers' point of view on adopting social media technology [35–37]. However, less literature is available on evaluating managers' perspectives where the managers were considered to scrutinize the acceptance decision of technology [5, 35]. Nevertheless, a significant gap is available regarding technology adoption from the manager's perspective, including the big five (Agreeableness, Openness, Extraversion, Neuroticism, Conscientiousness) and technological personality factors (Computer Self-Efficacy, Personal Innovativeness in IT) and their ultimate impact on technology acceptance outcomes through the formulation of 4.0 working environment. Such a comprehensive model of technology adoption from managers' perspective has never been discussed in the literature as per the best knowledge of this study's researchers.

Industry 4.0 has provided an advanced setting to the acceptors, i.e., smart organizations, clients, employees, and users, simultaneously boosting their connected things in the form of the Internet of things, fintech, manufacturing solutions, cloud comput-

ing, artificial intelligence, etc. From the technology acceptance perspective, three outcomes have been highlighted from the literature, i.e., lesser cost, reduced time, and enhanced quality [1, 6]. Industry 4.0 is equally efficient in service quality and productivity reduces cost, and shortens the proceeding time [38]. These protocols help lower the cost of developing a heterogenous infrastructure and displaying a dashboard of the solutions for challenging employees and rendering their services in different departments [39]. Such individuals are shrinking the gap of shortcomings in implementation, practices, and usage understanding of SMART services offered by the 4.0 industry. The study conducted by Fernandez-Carames and Fraga-Lamas [40] found that integrating the 4.0 industry has changed the way of operators and efficiently reshaped the working environment into SMART means of working. In the same vein, the study of Piwowar-Sule [24] provides empirical evidence of IT in various functioning of HR; therefore, the current research has focused on the efficient proceeding of the employee recruitment process by considering the personality traits of recruitment managers.

The present study examines the manager's reaction and variances toward adopting new technology for hiring through a social media-based recruitment process in the tourism sector of Pakistan. It analyses the generic willingness of recruiters for its technology adoption because the personality factors of an individual play an essential role in human acquaintance and behavior. Further, the study reported the usage and applications of Industry 4.0 and encouraged the organizations to build the working environment and standards; correspondingly, such organizations may grab smart outcomes and achieve higher performance than non-adopters. Meanwhile, it is expected that the personality traits of recruiters may influence the adoption of new technology [6]. The study used the big five personality traits and technology factors, creating a new framework to examine recruiters' positive or negative personality traits while selecting an appropriate talent for a designated position among a pool of applicants through technology in the tourism sector. The current study has incorporated empirical evidence by focusing on the recruiters' characteristics to uplift organizational behavior by adopting innovative technologies. The present study has developed a research question to achieve the research objectives: How do the managers' personality characteristics play a role in accepting technology to achieve technology outcomes in the tourism sector of Pakistan?

The study findings likely contribute to human resource management, innovation, inductor 4.0, and tourism management. Organizations must closely work on recruiters' personality traits because they play a significant role in organizations' technological advancements in tourism and shift the working environment to 4.0 industry protocols and standards. The contextual framework of this study encourages an organization's administrative system to focus on narrow personality traits of managers to have digitalization in the organization. In general, the conduct of this study would establish a road map for organizations worldwide to focus on the managers' personality facets as a tool to have technological advancements in the organization in general and to attain the desirous technology outcomes in specific.

2. Literature review and hypotheses development

According to the literature, individual characteristics and perceived attributes of innovation can be used to predict whether or not a person will adopt an innovation [41]. However, only a few research studies on individual characteristics have been incorporated into adopting new technology [42]. Big Five personality variables and two technological factors are examined in this study to explain the use and adoption of social networking websites or social media technology. The TAM was first proposed by Davis [111] to describe how people accept new technologies. The TAM draws inspiration from Fishbein and Ajzen's [112]. Theory of Reasoned Action. It holds that a person's propensity to act in a given way is shaped by their feelings and standards. We settled on the TAM to analyze the connections between managers' traits and the acceptance of new technologies. First, the TAM has widespread support and validation, and its evolution has been summed up by Venkatesh, Morris, Davis, and Davis [113]. Second, the model's fundamental notion heavily emphasizes how people respond to technology, which may be influenced by personality, personal innovativeness in IT, and computer self-efficacy. Last, the TAM's theoretical underpinnings in the Theory of Reasoned Action [112] account for the influence of an individual's qualities from the outside.

2.1. Agreeableness and intention to adopt technology

Agreeableness is a personality trait that positively impacts people's trust while accepting technol-

ogy [43]. This personality trait of an individual refers to altruism, tender-mindedness, compliance, cooperation, trustfulness, straightforwardness, and friendliness [44]. Having this trait in personality, such individuals are optimistic and act according to the stream of others' behavior by giving value to others by taking suggestions, opinions, and recommendations [45]. As a result, people followed innovation and technology and accomplished their tasks in technological aspects. A higher level of affection in an individual shows a sincere, friendly, and sympathetic attitude. Such characteristics of an individual refer to how the particular person is courteous, flexible, generous, and cooperative [46]. On the contemporary side, non-agreeable people do not motivate others' recommendations while making the decision [47].

Living in the era of modern technology where everything is prevailing and becoming frequent to use. Despite this facilitation and modernization of technology, people from different fields face a high risk of privacy related to their lives and safety [48]. Social media recruiting technology acceptance has accommodated the recruiters by reducing privacy concerns to overcome such a severe issue. This personality trait directly links to participation, collaboration, and task completion [49]. Subsequently, agreeable people have an impactful conversational bounding in all mood swings and are directly associated with the intention to adopt the technology.

Based on the reviewed literature, the given hypothetical statement is generated.

H1a: Agreeableness is positively related to the intention to adopt the technology.

2.2. Openness and intention to adopt technology

This personality trait opposes privacy and secrecy, where an individual considers alternative approaches and gathers the data and information before deciding instead of relying on people's suggestions [50]. It is a combination of both collaboration and management cooperation. Such people are quite social and open in their ideas [51]. Recruiters having this personality trait may put their intention to adopt the technology and become curious about this adoption. It seems that individuals holding openness can quickly switch towards innovation and are more creative or do not hesitate to express their thoughts [52]. People having a higher level of openness may switch to adopt the changes, accept the technological advancement, and be more creative while expressing their thoughts on social networking sites [53]. Such individuals prefer to communicate without any hesitation in interaction [54]. People who are opposite of this personality trait show a lack of interest in accepting technological advancement and prefer to spend time overcoming the challenges of this acceptance of advancement [55].

Individuals having an openness to experience may better resolve the customers' concerns through their liberalization and independence of thoughts [56]. Such individuals are the early adopters of technology and explore things with their way of dealing and keep waiting to seek further advancement in technology. Openness has a positive relation to the advancement of technology. It has been seen that the openness adopters are lower or vary according to the technological products [25]. Generally, such people cater information through online modes, so they use more internet than others [57]. People who exhibit the advancement to openness may keenly have more attention to adopting SMART.

Based on a literature review, the given hypothetical statement is generated.

H1b: Openness is positively related to the intention to adopt the technology.

2.3. Extraversion and intention to adopt technology

Individuals with extroversion are sociable, friendly, and talkative and engage in social interactions compared to introverts. Extroverts do not bother to be alone; they energize themselves by staying around with others [58]. This personality trait plays a crucial role in adopting social networking websites and online communication [59]. Extroverts develop a trusty attitude toward others as they can overcome doubts and better tackle technology for communication. On the other hand, introverted people have a deficient level of trust in the new product and the use of technology. Current prevailing circumstances have turned the whole world into extroverts, where communication among people has become more manageable [60].

Extroversion positively correlates to those who can feel happier, comfortable, and relaxed even by sitting among strangers. They put their entire focus outside the world. Current communication appliances like mobile, internet, and software have facilitated extroverts to communicate and elaborate more socially [61]. Extroverts keep them connected to new tech-

nologies and better use them while expressing their thoughts, feelings, ideas, imaginations, and behavior to the general public. Such people are willing to learn new skills and share their knowledge.

Extroverts rely more on social networking websites and use them optimistically for recruitment [62]. It has a direct influential impact on the apparent joy of belongingness. Extrovert recruiters would pay more attention to the use of social media recruiting technology to raise the accuracy of selection decisions [63].

Based on a literature review, the given hypothetical statement is generated.

H1c: Extroversion is positively related to the intention to adopt the technology.

2.4. Neuroticism and intention to adopt technology

The tendency of an individual to be worried is said to be neuroticism. It is susceptible to anger, stress, and hostility. Neuroticism is directly associated with individuals' anxiety, worry, anger, depression, and various types of insecurity [64]. The individual holding this personality trait carries abrupt mood swings and varies according to the behavior of others. Such people have low self-esteem and low motivation level. Neurotics use more internet but restrict their attention to what they know [65]. Neurotic people perceive that they are unwilling to adopt the changes and are cautious while making decisions [66]. Neurotic people have negative beliefs and perceptions related to social media technology. So, it is negatively correlated to social media recruiting technology.

Neurotic persons do not put effort into the usability of the technology and perceive that the technology should not be easy to use. Furthermore, it declines people's morale regarding technological advancements [67]. Neurotic persons are unsocial and have little belongingness to online services, consequently making little connection outside the world. With this trait, people are reluctant to switch to the new advancement for purposeful usage [68]. If an unusual happens in their life, these people go into a state of depression as they are habitual to normal customized settings [69]. People with neuroticism do not like to use new technologies and do not take risks by practicing to avoid the new state of affairs.

Based on the literature reviewed, the given hypothetical statement is generated.

H1d: Neuroticism is negatively related to the intention to adopt the technology.

2.5. Conscientiousness and intention to adopt technology

Conscientiousness is opposed to neuroticism. This personality trait reflects vigilance and carefulness [69]. Conscientious people consider all possible circumstances before deciding and completing their assigned tasks. They are well-mannered and organized, plan things before they happen, give spontaneous reactions, and work according to compliance [70]. Conscientiousness plays a positive and significant role in the intention to adopt technological advancements [71]. A person with this trait is more to the next plan of action and ready to face the consequences of actions being taken.

Conscientiousness contributes more effectively to organizing one's life cycle, sustains the smooth flow of causalities like e-banking and online recruitment process, and attains social media technology outcomes by reducing time and cost [72]. Resultantly, recruiters are apt to the quality candidates among the pools. Based on a literature review, the given hypothetical statement is generated.

H1e: Conscientiousness is positively related to the intention to adopt the technology.

2.6. Personal innovativeness in IT and Intention to adopt technology

Personal innovativeness in information technology is one of the most stable personality traits, explicitly those individuals interested in adopting the technology and ready to move ahead towards its continuous progressions. According to the literature, individuals with this trait mostly liked to search for new ideas and incorporate them practically while tackling uncertainties [73]. However, such people are intrinsic and lose some potential benefits after some interval. Most of these personality traitors are confident and entirely rely on technological advances. They closely check the technology, whatever features come forward under the consequences of advancement [74]. Innovativeness made people more critical and showed perfection in their work via constructive use of technological advancement. Multiple researchers and practitioners studied this area; Agarwal and Prasad [74] conceptualized innovativeness in IT as the most stable trait where an individual is ready to capture

technology up-gradation [74]. An individual who possesses this trait has more ability to uplift their skills by adopting newer technologies. This study has taken this trait in assessing the recruiters' willingness to adopt technological tactics while recruiting quality candidates.

Based on a literature review, the given hypothetical statement is generated.

H1f: Personal innovativeness in IT is positively related to the intention to adopt the technology.

2.7. Computer self-efficacy and intention to adopt technology

Computer self-efficacy is the judgment of one's computer ability [75]. The dependence on this ability is directly proportionate to the personal excellence of an individual who is likely to find the use and conduct of working via computer more accessible and enjoyable than the traditional mode of accomplishing the task. They are willing to adopt the technological advancements and explore their constructive use independently rather than attend training or helpful guidance. Evidence found that computer self-efficacy traitors are technology criticizers too; they are not technology users only; they also highlight the concerning limitations. Such limitations are the foundation of future up-gradation technology [76–78]. Subsequently, computer self-efficacy plays a crucial role in adopting technology [79]. This study explores the computer self-efficacy of recruiters in online recruitment and on social networking websites.

Based on a literature review, the given hypothetical statement is generated.

H1g: Computer Self-efficacy is positively related to the intention to adopt the technology.

2.8. Intention to adopt technology and technology acceptance

In the view of the current designated model, the intention to adopt technology is the dependent variable under personality traits and is independent of technology acceptance. These personality traits are studied by targeting the personality traits of recruiters. Intention to adopt technology is a move where an individual decides to continue and discontinue technological use based on task or personality-relevant factors. At the same time, the technology acceptance expresses the extent and frequent use. This extent varies according to personality traits, but most recruiters want to do so [5]. It is beneficial in two ways, i.e., ease of use and criterion suggested to the usability [62, 80]. Technology adoption enables recruiters to attract a pool of applicants and make initial contact with potential candidates for unoccupied positions. Based on a literature review, the given hypothetical statement is generated.

H2: Intention to adopt the technology is positively related to technology acceptance.

2.9. Technology acceptance and outcomes

Employee recruitment is one of the human resource (HR) departments' main functions [81]. Outcomes of HR activities have both post-hiring and pre-hiring advantages as per Breaugh's recruitment model [82]. This research has focused on pre-hire outcomes as less research is available. The literature review has highlighted that reduced cost, less time, and recruitment quality fall under significant pre-hire objectives, and the HR department is more concerned with them [62]. Technology acceptance enables recruiters to opt for quality candidates in lesser time and with reduced cost than usual recruitment methods. Subsequently, accomplishing technology outcomes yields the achievement of organizations' objectives. The lesser cost refers to the cost incurred for seeking the applicant pool, sourcing an advertisement, and an initial communication exchange to scrutinize a potential candidate. Lesser time is the approximate time required to scrutinize a potential candidate for an available position. Higher quality of recruitment is associated with quality of hiring in the view of recruitment method that consequent into the selection of quality of potential candidate. Based on a literature review, the given hypothetical statements are generated. Figure 1 describes the conceptual framework.

H3: Technology acceptance is positively related to a lesser task cost.

H4: Technology acceptance is positively related to reduced task time.

H5: Technology acceptance is positively related to a higher recruitment quality.

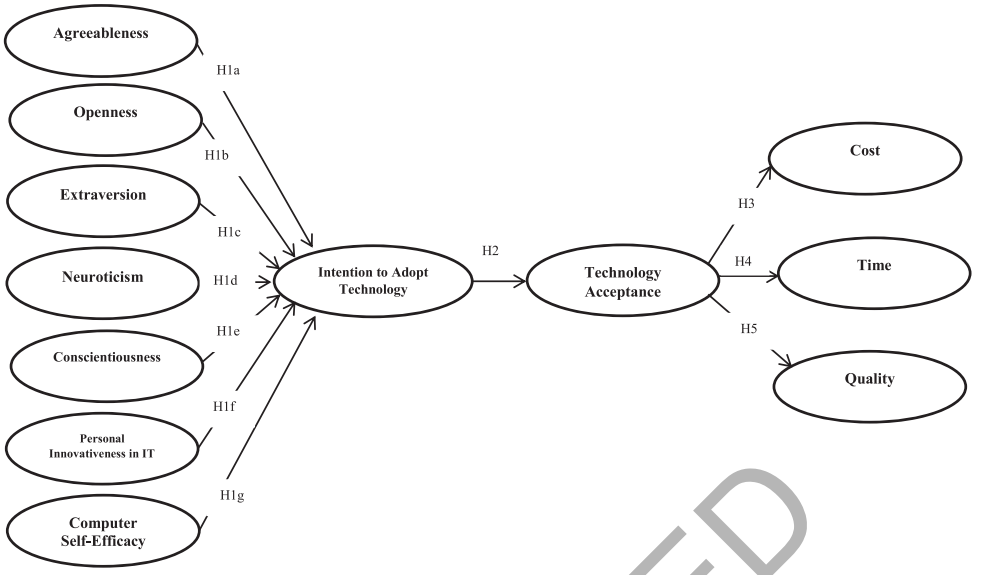

Fig. 1. Conceptual framework of the study. A proposed conceptual framework based on a literature review.

3. Method

3.1. Sample and procedure

The investigators contacted HR and hiring managers of tourist companies enlisted with different travelling agencies working in Pakistan for the purpose of desired data collection. The researchers set the inclusion criteria for participation in this survey at a minimum of ten employees working in the organization, and participating companies must have social media accounts for recruitment and other purposes. The population frame for this targeted data does not exist in Pakistan. Therefore, finding the exact sample size took a lot of work for the researchers, as it was a difficult task. This research study applied a snowball sampling/nonprobability sampling technique to draw the desired sample for this survey. The snowball sampling approach is suitable when a sampling frame is challenging to select and when existing study subjects help recruit future subjects from among their acquaintances. This technique allows researchers to draw the desired sample from the population. This study determined sample size under the minimum criterion recommended by item response theory. This theory recommends multiplying the entire questionnaire by 10 to draw the desired sample ($39 \times 10 = 390$). The formula suggested a 390 sample size for this study, while we collected 406 responses, which is more than the required sample size. Therefore, the complied dataset contains a contribution of 406 responses used in data analysis.

3.2. Measures

The items of the entire questionnaire were measured with the help of a pre-established 7-point Likert scale ranging from "1 = strongly disagree to 7 = strongly agree". By adopting this scale, respondents have multiple choices to rate their emotions, gestures, or feelings.

The big five personality traits, which consisted of agreeableness, openness, extroversion, neuroticism, and conscientiousness, were measured by a 10-items scale established by a previous study [83]; each trait holds two items, respectively. The sample item of agreeableness is 'I see myself as critical, quarrelsome; the sample item for openness is 'I see myself as conventional, uncreative'; the sample item for extroversion is 'I see myself as reserved, enthusiastic'; the sample item for neuroticism is 'I see myself as calm, emotionally stable'; and sample item for contentiousness is 'I see myself as dependable, self-disciplined'.

Next, the assessment of personal innovativeness in IT is carried out by a 4-items scale developed by [74]. The sample item is 'If I heard about the new technology, I would look for ways to experiment with it.'

Computer self-efficacy is assessed by an 8-item scale developed by a past study [84]. The sample

Table 1
Respondents' profile

Demographic Characteristics		$n = 406$	%
Gender	Male	339	83
	Female	067	17
Age of recruiting Managers (in years)	(18–25)	013	03
	(26–35)	162	40
	(36–45)	179	43
	(46–55)	047	12
	55 above	005	02
Designation	CEO	001	0.2
	Managers	004	0.8
	HRM Heads	130	32
	Recruitment Managers	138	34
	Others	133	33

item is 'It would be hard for me to learn to use a computer.'

An assessment of intention to adopt technology is carried out with a 3-items scale developed by [29, 85]. The sample item is 'Our organization intends to continue using social networking websites for recruitment purposes.'

An assessment of Technology acceptance is carried out with a 3-items scale developed. The sample item is 'Our HR staff use social networking websites for searching for candidates.'

Cost is measured with a 2-item scale developed by [86]. The sample item is 'The acceptance of social network websites has helped our organization reduce the cost incurred to get a qualified candidate to accept an offer.' Time holds a 3-item scale developed by [86]. The sample item is 'The acceptance of social network websites has helped our organization in reducing the period between the first advertisement of a vacancy and the acceptance of an offer by a job candidate'. Quality contained a 6-item scale developed by [86]. 'The acceptance of social networking websites has helped our organization in expanding the job candidate reach beyond their personal networks.'

4. Results

The study collected demographic information, and the respondents were requested to provide some basic information under the designated possibilities of a questionnaire. It comprised gender, age group, designation, and organization size regarding currently working employees and its sector. Most respondents were male ($n = 339$), with a percent 83, while female respondents ($n = 17$), with a percent 17. Table 1 displays the detail of demographic characteristics.

4.1. Construct reliability and validity

Measuring Cronbach's Alpha value and Composite Reliability (CR) reliability of constructs has been endorsed. According to the study by Nunnally (1978), the suggested threshold is more significant than 0.50. Cronbach's values of agreeableness, openness, extroversion, neuroticism, conscientiousness, personal innovativeness in IT, computer self-efficacy, intention to adopt the technology, technology acceptance, Cost, Time, and Quality are 0.748, 0.743, 0.732, 0.627, 0.734, 0.854, 0.919, 0.793, 0.899, 0.755, 0.871 and 0.918, respectively as per the accordance with Table 2. The suggested criterion of acceptance range surrounds all mentioned CR values and confirms the questionnaire indicators' reliability [87–92]. An assessment of convergent validity is carried out by examining the values of the Average Variance Extract (AVE), which should be greater than 0.50 [93–98]. Table 2 shows the good indices of convergent validity.

4.2. Discriminant validity analysis

To determine the discriminant validity of the measurement model, the square root of all AVE was

Table 2
Inter-correlation matrix, reliability of constructs, Composite reliability, Cronbach alpha and Average variance extracted

Variables	Mean	SD	CR	AVE	α	1	2	3	4	5	6	7	8	9	10	11	12
1. Agreeableness	4.44	1.28	0.746	0.598	0.748	**0.773**											
2. Openness	4.58	1.21	0.739	0.592	0.743	0.564**	**0.769**										
3. Extroversion	4.62	1.20	0.731	0.578	0.732	0.612**	0.563**	**0.760**									
4. Neuroticism	2.91	1.30	0.627	0.457	0.627	–0.575**	–0.593**	–0.611**	**0.676**								
5. Conscientiousness	4.67	1.28	0.732	0.580	0.734	0.541**	0.564**	0.568**	–0.540**	**0.762**							
6. Personal Innovativeness in IT	4.07	1.02	0.854	0.594	0.854	0.686**	0.618**	0.633**	–0.512**	0.564**	**0.771**						
7. Computer Self-Efficacy	4.06	0.99	0.919	0.587	0.919	0.718**	0.674**	0.662**	–0.546**	0.603**	0.877**	**0.776**					
8. Intention to Technology	4.35	1.14	0.796	0.561	0.793	0.589**	0.617**	0.613**	–0.521**	0.548**	0.701**	0.747**	**0.749**				
9. Technology Acceptance	4.28	1.05	0.898	0.559	0.899	0.665**	0.649**	0.637**	–0.568**	0.602**	0.775**	0.808**	0.752**	**0.747**			
10. Cost	4.45	1.31	0.751	0.607	0.755	0.429**	0.478**	0.489**	–0.513**	0.466**	0.461**	0.496**	0.492**	0.556**	**0.779**		
11. Time	4.48	1.26	0.871	0.692	0.871	0.490**	0.521**	0.558**	–0.522**	0.487**	0.528**	0.571**	0.572**	0.613**	0.727**	**0.832**	
12. Quality	4.57	1.17	0.918	0.651	0.918	0.514**	0.550**	0.577**	–0.584**	0.522**	0.544**	0.584**	0.566**	0.612**	0.767**	0.783**	**0.807**

Note: **Correlation is significant at a 0.01 level (2-tailed).

Table 3
Measurement model. Summary of model fit indices for the measurement model

Model	X^2	Df	X^2/Df	RMSEA	NFI	CFI	TLI	IFI
	897.12	794	1.13	0.018	0.957	0.991	0.990	0.991

computed, resulting in values higher than the corresponding inter-correlation values [97–101]. Thus, it can be summarized that the current designated model holds discriminant validity. Table 2 shows outcomes of the Inter-correlation matrix, Mean scores, SD values, CR, AVE and (α)

Table 3 elucidates the outcomes of the Measurement Model with summarized results of the Fit Indices. An assessment of the measurement model in Table 3 illustrates how gathered data is fitted to the designated model and gauges the extent to which the items present their latent constructs.

This is measured with the help of the reliability and validity of the items within the constructs. To endorse construct validity, the confirmatory factor analysis was performed. The combination of measurement fit indices of a conceptual model like $X^2 = 897.12$; Df = 794; Chi-square ratio X^2/Df = 1.13; root mean square RMSEA 0.018; CFI = 0.991; TLI = 0.990; IFI = 0.991 have revealed that all attained values have met the threshold standards of requisite fit indices [29, 102, 103]. Next, the model can assess structural model indices and hypotheses testing. See Table 4 that describes the outcomes of the Structural Model with the brief results of the Fit Indices.

Table 4 exhibited the structural model fit indices and opted for the recommended threshold standards where CFI, NFI, TLI, and IFI should be greater than 0.90 [104] while RMSEA should be smaller than 0.08 [105–107]. Considering the results mentioned above, the current designated model is frequently available to proceed further with hypothesis testing. See Table 5, which shows the outcomes of the Paths Estimates with Beta and *p*-values and status of the proposed hypotheses.

4.3. Direct relation of personality traits to intention to adopt the technology

In the first attempt at hypothesis testing, a direct association between personality traits and intention to adopt technology was performed with 5000 bootstrapped resamples; this procedure was suggested by [59]. H1a predicts agreeableness is positively related to the intention to adopt the technology. Results ($\beta = 0.036$, $p < 0.001$ in-sig) did not prove its positive association, so H1a is not accepted. Output found that both openness and extroversion are significant and positively related to the intention to adopt the technology by ($\beta = 0.113$, $p < 0.001$); ($\beta = 0.106$, $p < .001$), respectively. Thus, both H1b and H1c are accepted. Results ($\beta = -0.094$, $p < 0.001$) found it significant and approved that neuroticism is negatively related to the intention to adopt the technology, so H1d is also accepted. As proposed in the model, both conscientiousness ($\beta = 0.084$, $p < 0.001$) and personal innovativeness in information technology ($\beta = 0.157$, $p < 0.001$) have significant positive influences on the intention to adopt the technology; thereby, both H1e and H1f are accepted. It was found that the recruiter's computer self-efficacy positively influences the intention to adopt the technology by ($\beta = 0.326$, $p < 0.001$). Thereupon, H1g is accepted in its accordance.

4.4. Direct relation between intention to adopt technology and technology acceptance

In the following analysis attempt, the significance of the intention to adopt technology has been tested. H2 predicts that intention to adopt technology directly impacts technology acceptance, and the result was true as ($\beta = 1.082$, $p < 0.001$).

4.5. Direct relation between technology acceptance and technology outcomes

Technology acceptance has been simultaneously tested under the direct influence of technology outcomes and found its positive association with SMART outcomes. For Cost ($\beta = 0.677$, $p < 0.001$); Time ($\beta = 0.756$, $p < 0.001$) and Quality ($\beta = 0.790$, $p < 0.001$).

5. Discussion

The current study used big five personality variables and two technological factors are examined in

Table 4
Assessment of structural model and hypotheses testing. Summary of model fit indices for structural model

Model	X^2	Df	X^2/Df	RMSEA	NFI	CFI	TLI	IFI
	47.32	24	1.972	0.049	0.998	0.994	0.984	0.994

Table 5
Path estimates The results of relationships among study variables and the status of all hypotheses are given in Table 5.

Hypotheses	Beta Values	*P*-Value	Status
H1a: Agreeableness –>Intention to adopt technology	0.036	0.265	Not Accepted
H1b: Openness –>Intention to adopt technology	0.113	***	Accepted
H1c: Extraversion –>Intention to adopt technology	0.106	***	Accepted
H1d: Neuroticism –>Intention to adopt technology	–0.094	0.001	Accepted
H1e: Conscientiousness –>Intention to adopt technology	0.084	0.003	Accepted
H1f: Personal Innovative in IT –>Intention to adopt technology	0.157	***	Accepted
H1g: Computer Self-Efficacy –>Intention to adopt technology	0.326	***	Accepted
H2: Intention to adopt technology –>Technology Acceptance	1.082	***	Accepted
H3: Technology Acceptance –>Cost	0.677	***	Accepted
H4: Technology Acceptance –>Time	0.756	***	Accepted
H5: Technology Acceptance –>Quality	0.790	***	Accepted

Note: ***significant at 0.001 level.

this study to explain the use and adoption of social networking websites or social media technology. The TAM was first proposed by Davis [111] to describe how people accept new technologies. The TAM draws inspiration from Fishbein and Ajzen's [112] Theory of Reasoned Action. It holds that a person's propensity to act in a given way is shaped by their feelings and standards. Prior studies have considered social media technology in HR for the advertisements of vacant posts, selection through online interviews, grouping the pool of candidates, video communication, and other post-hire benefits [5, 25, 26]. Still, the area of technological outcomes was almost neglected. Although several organizations have shifted towards accepting social networking websites in the current epoch, it is essential to consider whether recruiting managers are ready for such adoptions because the recruiters are the actual technological clients in technology acceptance [6].

Along with these outcomes, organizations are contributing their potential usage of the applications of the 4.0 industry and deliberating their practices to shrink the gap between faster technologies and their practical use for tourists while selecting destinations, trip plans, tourism resources, and sorting the entertainment sources. The study [108] has listed the requirements, advances, advantages, and limitations of the 4.0 Industry, which become part of the organizational considerations while taking support from the IT industry. Adopting the IT industry brings multiple opportunities for SMART service providers and suppresses SMART living; thereby, industry 4.0 has recruited cost-efficient leans in organizational functions [17]. For instance, previous studies have described that such increasing automation and the 4.0 industry have shortened the innovation cycles, simplified job operations, and offered higher work flexibility [109, 110]. The tourist industry provides quality-based and time-efficient services [11]. Simultaneously, industry 4.0 has provided smart applications where tourists pre-planned their destinations, tourism resources, and spot points.

From the study findings, it can be concluded that higher agreeableness led people to accept all types of changes and adoption imposed by the managers. Resultantly, their willingness to accept was almost neglected. Agreed people cannot incorporate their recommendations and preferences about the current changes and adoption. At the same time, studies could not find the positive role of neurotic people; employees having neurotic characteristics are not willing enough to accept such rapid adoptions made by organizations. They are more comfortable with their regular mode of workings. It is hard for them

to show any willingness for change. Such neurotic people rarely add these advancements into the systems [6]. The findings of this study revealed that the adoption of technology is highly dependent on the extent of recruiters' characteristics; such characteristics raise the recruiters' belief to adopt and focus them on gaining technology outcomes by putting in relatively less effort. In this sense, managers are encouraged to motivate recruiters by raising awareness about the practical uses of technology adoption. The present conduct of research makes three contributions to human resource management [112–118]. First, the study ascribed the impact of Big five personality traits on adopting technology. Second, this conduct of research studied the recruiters' reactions toward adopting and accepting particular technology. Third, the study addressed three outcomes as the consequence of technology acceptance. The outcome saves the time of scrutinizing quality candidates and the cost of contacting the individual candidate. Subsequently, recruiters may opt for the right people for the vacant positions by shrinking the proceeding via technological tactics.

The study's results emphasized an individual manager's personality traits in adopting social media recruiting technology. The findings revealed its practical and theoretical implications. The managers may introduce a reward system that could motivate the recruiters to explore more in a race for new technological adoptions [49]. The study reveals that all personality traits other than higher agreeableness and neuroticism positively impacted the adoption of SMART. Now, it would be the task of the managers to pick such agreed and neurotic recruiters and counsel them. So, more agreed and neurotic people act generically and can share their emotions, feelings, and thoughts. The study findings contribute to the field of Human Resource Management, where organizations must closely work on recruiters' personality traits because they play a significant role in organizations' technological advancements. The contextual framework of this study encourages an organization's officialdoms to focus on narrow personality traits of recruiters to grab an appropriate talent rather than over and above the selection of general characteristics. In general, the study establishes a road map for organizations worldwide to focus on the managers' personality facets as a tool to have technological advancements in the organization in general and to attain the desirous recruitment objectives in specific. The study guides businesses in enhancing their hiring procedures to identify qualified and quality candidates through the personality traits of recruiters.

6. Limitations and future research directions

In the contemplation of the current research, some limitations have been found, and accordingly, future research directions have been suggested. First, this research has been conducted in the context of recruiting required employees in tourism organizations. Hence, it is the limitation of this research study. Consequently, this model can be replicated in different fields of business according to the relevant technology related to Industry 4.0 and digitalization. This study framework/model is practical, and researchers can consider it comprehensive in determining managers' significant personality traits to adopt digitalization, especially in tourism organizations. Second, service organizations, especially tourism companies, can introduce a variable with a reward system that can encourage HR managers or recruiters to examine and practice new technologies. This new variable will compare the difference in technology adoption between personality traits and systems' rewards. As the 4.0 industry can store and align the data for a longer span and cater to the entire life cycle of the service, in the future, such databases can be used for modern data schemes like machine learning, big data, and deep data learning. Besides, tourists' satisfaction levels can be assessed in different contexts, such as service delivery, quality, and service evaluation. This study incorporated a snowball sampling approach, another limitation of this research survey. This technique can result in bias and reduce the representativeness of the sample. As a result, future studies can consider the model with different data collection techniques with other variables and sampling approaches, for instance, random sampling.

7. Conclusion

This research has been conducted to broader the understanding of reaction research in employee selection; reactions of recruiters were studied under the shed of adoption of technological websites [59]. The study's findings constitute the first contribution to untangling the perceptions developed by an individual related to the rapid adoption of social networking websites. The present study has put its entire focus on the adoption of social networking websites along with

the combination of Big Five personality traits and technological factors. Next, the study encourages and complies with the smart outcomes of the 4.0 industry by considering the context of smart organizations, smart clients, smart employees, and smart products. The study results reveal that technology acceptance is crucial in achieving technology outcomes. These outcomes are attained by bearing lower costs, the least time to proceed with the procedure, and the quality recruits. In addition, these outcomes are gained without compromising the quality or transparency of the entire recruitment process.

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Data availability

Data is available at the request from the corresponding author.

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