

An Exploration of the Contemporary Work Ethic of IT Industry Employees in the United States

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This study contributes to the growing body of research identifying work ethic as an integral part of organizational performance. IT work in the U.S. is an essential component of the contemporary work environment as the dependency on technological resources increases. Relying on IT workers as respondents, this study examined multiple aspects of work ethic including changes in its aggregate level over time, differences across work environments, relationships with demographics, and the influence of organizational culture. Results suggest that work ethic is relatively stable over time and across demographic categories. Important relationships between work ethic and organizational culture are discussed and the relevance to the IT profession are supported.

Keywords: United States IT industry, information technology, work ethic, post-pandemic work environment, work-setting, organizational culture

INTRODUCTION

Work ethic is reflected through individual work attitudes and behaviors, and individuals with strong work ethic tend to be more committed and involved in their jobs (Mudrack, 1997). Studies suggest that strong work ethic leads to employee engagement, job satisfaction, and deep commitment to the organization (Grabowski, Chudzicka-Czupała, & Stapor, 2021; Maier & Brunstein, 2001; Otto et al., 2010; Simonson et al., 2017). Given the emergence and rapid expansion of technology-related fields, the presence of a strong work ethic among information technology (IT) professionals is essential for organizations aiming to drive innovation and sustain competitive advantage.

The U.S. Bureau of Labor Statistics (BLS) reports that employment in computer and technological occupations is projected to grow at a much faster than average rate from 2022 to 2032 (U. S. Bureau of

Labor Statistics, 2024). This increase in growth and simultaneous demand for IT employees is attributed to the ever-growing need for cloud computing, big data, cybersecurity, and digital services. Despite growing occupational demand, Dubina, Ice, Kim, & Rieley (2022) reported a U.S. IT employee shortage of 1.4 million in 2020, while Gartner (2022) found that only 29% of IT employees have high intent to stay with current employers. As such, modern technology organizations face the challenge of adopting aggressive recruitment and retention strategies to effectively navigate an environment that may be marked by inflated job demands and stress due to an ongoing employee shortage.

In the post-COVID-19 era, the necessity for organizations to embrace adaptive business strategies has heightened; therefore, employees must be resilient and readily equipped to manage continuous change (Herath & Herath, 2020). IT employees are considered crucial, value-adding resources that perform significant organizational functions in the midst of change (Arshad, 2020). Given their essential role, a strong work ethic among this employee division is critical to the facilitation of organizational success and the mitigation of the existing labor shortage through productivity maximization.

While many studies examine facets of work ethic (Alfano, 2022; Balay-odao et al., 2022; Bazzi, 2018; Bertsch et al., 2021; bin Salahudin et al., 2016; Buelens & Van den Broeck, 2007; Grabowski et al., 2021; Gurbuz & Aytakin, 2020; Harðardóttir et al., 2019; Hite et al., 2015; Jonck et al., 2017; Leenders et al., 2017; Mann et al., 2013; Meriac et al., 2010; Meriac et al., 2013; Meriac, 2015; Mussner et al., 2017; Ness et al., 2010; Richards & Steiger, 2021; Saks et al., 2009; Schilpzand & de Jong, 2021; Simonson et al., 2017; Weniger & Bigley, 2019), few do so in the context of the IT industry in the post-COVID-19 environment. As such, this study aims to address a gap in work ethic literature, particularly in the U.S. IT industry. This research is multipurpose and serves to 1.) investigate the current level of work ethic among employees in the U.S. IT industry, 2.) compare the post-pandemic levels of work ethic present among U.S. IT employees to those demonstrated by a pre-pandemic sample of multi-industry U.S. employees, 3.) examine levels of work ethic across varying work settings and IT occupational categories, and 4.) analyze the impact of demographic, job role, and cultural factors on the current work ethic of employees in the U.S. IT sector. In applying the results of this study, IT leaders and recruiters will have a more comprehensive understanding of the collective work ethic of IT professionals in a post-pandemic world. Additionally, they will have knowledge of the individual and organizational factors that affect employee work ethic, a construct which has been shown to positively predict work engagement, performance, and job satisfaction (Campbell, 1993; Grabowski et al., 2021; Meriac et al., 2013; Miller et al., 2002).

LITERATURE REVIEW

The IT Industry

As early as 1979, elevated demands for efficiency and quality necessitated an increased reliance on technology. This reliance transitioned the workforce from a period where technological concepts evolved gradually across generations to a modern era where rapid technology-oriented advancements require continuous adaptability throughout an employee's career (Dobrov, 1979). The connection of computers over networks led to applications that allowed the digital delivery of information, drastically changing communications and increasing the amount of data being produced and handled. Gallipoli and Makridis (2018) highlight the substantial expansion of IT-intensive occupations noting that the majority of productivity growth since 1950 has been concentrated in IT sectors. Segars and Hendrickson (2000) discuss the transition of IT from being perceived as a cost center to becoming a profit center that is characterized by a service-oriented free market system. This paradigm shift has enabled organizations to acquire IT resources from a variety of providers, thus resulting in significant changes in IT management and personnel requirements.

The demand for IT resources further expanded with the emergence of the internet and subsequent strategic importance of e-commerce (Laudon & Traver, 2024). Additionally, the globalization of firms necessitated a rapid evolution within the IT industry. The focus of IT became the development and distribution of customized systems to support organizational processes and functions with the systems development process becoming decentralized and independent.

The COVID-19 pandemic prompted a significant transformation in the IT industry as organizations increased IT expenditures to support items such as remote work, education, and enhanced digital presence (Cortes & Forsythe, 2022; Deschacht, 2021; Herath & Herath, 2020; Melnyk et al., 2020; Ntasis et al., 2021; Xiang et al., 2021). Organizations have since found that remote work provides advantages for both the employee and the organization, some of which are reflected through greater employee motivation and productivity (De Lucas Ancillo et al., 2021; Makridis & Han, 2021). Research also suggests that the hybrid work model leads to the greater fulfillment of employees' psychological needs, including belongingness, esteem, and self-actualization (McConnell & Metz, 2024). As such, the development and deployment of technology is crucial in shaping the future landscape of the workplace. However, the acceleration of digitalization has simultaneously revealed critical deficiencies in IT infrastructure, workforce planning, and skills development.

Due to the ever-evolving nature of the IT industry, employees will continue to navigate innovation and change. Further, the current labor shortage introduces heightened job demands and gaps in employee supervision. As such, a thorough understanding of IT employee work ethic is paramount for employers aiming to nurture an environment where performance and innovation thrive alongside a commitment to responsible work practices.

Work Ethic

Work ethic is defined as “a set of beliefs and attitudes reflecting the fundamental value of work” (Meriac et al., 2010, p. 316). The most influential research on work ethic comes from sociologist Max Weber (1958), who explained that work ethic encompasses a complex set of values that recognize the inherent worth of labor, not just as a means of economic necessity, but as a moral obligation. Weber's theory originated with the Protestant work ethic concept which viewed work as a divine calling (Mann et al., 2013). According to Jones (1997), Weber's model was a convergence of asceticism and religion, collectively emphasizing commitment to work, the frugal use of resources and gains, innovation, and personal honesty. Weber also recognized nonreligious elements in the development of the Protestant work ethic and placed significant importance on money (Jones, 1997). While Weber proposed that work ethic was a religiously oriented concept that played an important role in the development of capitalism in Western societies, he also argued that, once capitalism was fully established, work ethic would become embedded in society and would no longer align with religious orientations (Weber, 1958).

Boulding (1952) asserted that the abolition of poverty can only come from development and not redistribution of wealth; therefore, a high degree of importance is placed on work ethic from an economic perspective. In support of this notion, English and Marchione (1983) discussed the importance of strong work ethic in leading to improved productivity and output. Similarly, Congleton (1991) argued that a proper work ethic can improve economic efficiency and material well-being, thereby improving the overall performance of an economy. McClelland (1961) posited the critical connection between individuals' achievement motivation and economic growth, reaffirming Weber's theory by demonstrating the role of work ethic in driving economic prosperity. Further, Schilpzand and de Jong (2021) found that a country's social, economic, and institutional circumstances are indicators of work ethic. Similarly, Byrne (2017) asserts that individual work ethic stems from the attainment of social status, wealth, duty, and pride in one's work.

In addition to the pertinent role of work ethic in economic growth and security, scholars recognize the importance of work ethic as a psychological construct, focusing on human identity and personal fulfillment. Morse and Weiss (1955) measured the non-economic benefits of work by seeking to answer the “lottery question.” The question states, “If by some chance you inherited enough money to live comfortably without working, do you think that you would work anyway or not?” (Morse & Weiss, 1995, p. 191). The research indicated that 80% of working men would continue to work, despite resultant financial security. The authors propose that the need for wages often serves as the immediate reason for work; however, the desire to continue in a role despite certain financial security extends far beyond extrinsic reward.

In examining non-financial employment commitment in the post-industrialization environment, Harpaz (1989) found that 88% of survey respondents demonstrated a willingness to work regardless of financial

need. Similarly, Kalleberg and Marsden (2013) examined work values in the U.S. from 1973 to 2006 and found that “importance and sense of accomplishment” ranked highest throughout the period. This finding supports the work of Rosso, Dekas, and Wrzesniewski (2010) who discuss self-efficacy, self-esteem, and purpose as mechanisms that facilitate work meaningfulness. Maslow (1998) acknowledges that work can be a critical contributor to the attainment of belongingness, self-esteem, and self-actualization needs. Similarly, the psychological needs of autonomy, competence, and relatedness may positively impact the quality and quantity of work (Deci et al., 2017).

Because of its relevance in economic and psychological contexts, Furnham (1990) advocated for the decoupling of work ethic from its religious roots, supporting broader applications across cultures and belief systems. Miller, Woehr, and Hudspeth (2002) built upon the work of Furnham (1990) and other scholars (Heaven, 1989; McHoskey, 1994; Mirels & Garrett, 1971; & Tang, 1993) and conceptualized work ethic as a multidimensional collection of learned work-related attitudes and beliefs. The dimensions are defined as 1.) belief in the sense of hard work, 2.) centrality of work, 3.) distaste for wasting time, 4.) distaste for leisure, 5.) delay of gratification, 6.) independence, and 7.) morality. By delineating the work ethic construct, Miller et al. (2002) provided a framework through which the concept can be universally examined, independent of religious or societal influences.

Work Ethic and Organizational Culture

Organizational culture is defined as “...a pattern of shared basic assumptions learned by a group as it solved its problems of external adaptation and internal integration, which has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems” (Schein, 2010, p. 18). Further, an organizational culture may be characterized as “strong” once the vast majority of employees readily accept a particular set of assumptions, beliefs, values, and practices (Flamholtz & Randle, 2011; Marker, 2009).

Arunchand and Ramanathan (2013) contend that a positive, hence motivating, organizational culture fosters employee engagement, loyalty, and effectiveness, while a negative culture often leads to employee dissatisfaction, reduced productivity, burnout, and turnover. Similarly, Cameron, Dutton, and Quinn (2013) emphasize the importance of progressive organizational principles and the practice of positive deviance through which organizations conscientiously seek to enhance employee well-being to nurture the long-term effectiveness of both individuals and the organization (2003).

Thokozani and Maseko (2017) and Sokro (2012) discuss the influence of organizational culture on employee motivation. Sokro (2012) suggests that culture can either motivate employees to excel in achieving organizational goals or can serve as a source of discouragement and demoralization that hinders organizational success. Given that work ethic is directly impacted by both intrinsic and extrinsic motivational factors, organizational culture, along with its associated values, beliefs, and normative behaviors, may also influence employee work ethic and resulting performance (Grabowski et al., 2021).

The presence of intrinsic motivators within an organization’s culture, such as autonomy, empowerment, development, growth, belonging, meaningfulness, and sense of purpose, may enhance employee work ethic by fostering a heightened sense of internal satisfaction and fulfillment (Amabile, 1988; Barney & Elias, 2010; Cameron & Quinn, 2005; Fried & Ferris, 1987; Lunenburg, 2011; Naranjo-Valencia, Jiménez-Jiménez, & Sanz-Valle, 2011; O’Reilly III, Chatman, & Caldwell, 1991; Olynick & Li, 2020; Van Wingerden & Van der Stoep 2018). Conversely, adverse cultural dynamics such as micromanagement, lack of trust, lack of support, lack of resources, inflexible work structures, time pressure, discouragement of innovation, stress, conflict, and poor work-life balance may negatively impact intrinsic motivation (Barney & Elias, 2010; Lansisalmi, Peiro, & Kivimaki, 2000; Maslach & Leiter, 1997; Motowidlo, Manning, & Packard, 1986; Olynick & Li, 2020; Schaufeli & Bakker, 2004; Smit & Schabracq, 1997; Sparks, Faragher, & Cooper, 2001; Thompson, Stradling, Murphy, & O’Neill, 1996). Extrinsic motivators imposed by organizational culture can also affect employee work ethic through tangible rewards and consequences resulting from effort and performance (Cerasoli, Nicklin, & Ford, 2014; Gerhart & Fang, 2015; Turner, 2017).

Work Ethic and Organizational Performance

Individual work ethic provides the motivational and attitudinal backdrop that fuels organizational performance (Meriac et al., 2013; Miller et al., 2002; Yandle, 1992). Campbell's Theory of Performance discusses work performance as the behaviors or actions that support the goals of an organization (Campbell et al., 1993). Campbell et al. (1993) contend that work performance is influenced by role-specific knowledge, skill, and deliberate choices regarding the intensity and duration of effort. It is also asserted that work performance should be appraised in terms of displayed behaviors and effort as opposed to the results of such effort (Campbell et al., 1993).

Campbell's framework defines eight determinants of work performance. They include 1.) job-specific task proficiency, 2.) non-job-specific task proficiency, 3.) written and oral communications, 4.) demonstrating effort, 5.) personal discipline, 6.) facilitating team performance, 7.) supervision, and 8.) management and administration (Campbell et al., 1993). Deeper examination of the construct led Campbell to redefine the dimensions of work performance as 1.) technical performance, 2.) communication, 3.) initiative, persistence, and effort, 4.) counterproductive work behavior, 5.) supervisory, managerial, executive (i.e. hierarchical) leadership, 6.) management performance (hierarchical), and 7.) peer/team member management performance (Campbell, 2012). As work ethic is fundamentally associated with the values and motivations that drive initiative, persistence, and effort, Campbell's theory recognizes the role of work ethic in being paramount to organizational success.

RESEARCH PROCEDURES AND METHODOLOGY

Research Design

This study applied a quantitative survey approach to holistically explore the state of work ethic among a sample of 267 adult U.S. IT employees following the occurrence of the COVID-19 pandemic. First, current levels of work ethic were assessed among a sample of U.S. IT industry employees. Second, the collected sample was compared to pre-pandemic work ethic levels exhibited by multi-industry U.S. employees. Next, current work ethic levels were examined across work settings and IT occupational categories. Lastly, the research examined the impact of demographic, job role, and cultural factors on current levels of work ethic of U.S. IT sector employees.

Instrumentation

A combined survey instrument incorporated three sections to measure the studied variables. Section One requested information concerning participants' demographic characteristics. Section Two included questions relating to the organizational job role variables of employment status (full-time or part-time), work setting (traditional, remote, and hybrid), and IT occupational category (data and information, networking and architecture, programming and software development). This section also included questions regarding a set of factors recognized as critical facets of organizational culture that promote or inhibit advancement (Amabile, 1988; Barney & Elias, 2010; Cameron & Quinn, 2005; Cerasoli et al., 2014; Dawson et al., 2011; Fried & Ferris, 1987; Gerhart & Fang, 2015; Lansisalmi et al., 2000; Smit & Schabracq, 1997; Lunenburg, 2011; Maslach & Leiter, 1997; Motowidlo et al., 1986; Naranjo-Valencia et al., 2011; O'Reilly III et al., 1991; Olynick & Li, 2020; Schaufeli & Bakker, 2004; Sparks et al., 2001; Thompson et al., 1996). The cultural factors included were employees' perceptions of achievement culture, ability to think creatively, fairness of salary, flexibility, freedom, growth opportunities, ability to think independently, job security, managerial concern, the requirement of multiple priorities, effective planning, the requirement to remember many things, resource availability, sufficiency of skills, the presence of time pressure, work variety, and workload. The lottery question was also included in this portion of the questionnaire (Morse & Weiss, 1995).

Section Three of the combined instrument measured the work ethic construct using Meriac, Woehr, Gorman, and Thomas's (2013) short form of the Multidimensional Work Ethic Profile (MWEP-SF). The original MWEP assessment tool was developed by Miller, Woehr, and Hudspeth (2002) and is theoretically rooted in the Protestant work ethic. The MWEP and was developed to measure seven unique and

conceptually distinct elements of work ethic: 1.) Belief in the Sense of Hard Work, 2.) Centrality of Work, 3.) Distaste for Wasting Time, 4.) Distaste for Leisure, 5.) Delay of Gratification, 6.) Independence, and 7.) Morality. Miller et al.'s (2002) MWEP is one of the most widely used inventories for measuring work ethic; however, its length has been cited as a potential barrier to widespread use, thus leading to development of Meriac et al.'s (2013) MWEP-SF.

The MWEP-SF contains 28 of the MWEP's original 65 items and has been confirmed to be reliable and valid (Meriac et al., 2013). The MWEP-SF uses the same 5-point Likert-type scale as the extended version of the MWEP, with one (1) indicating "strongly disagree" and five (5) indicating "strongly agree". Within the MWEP-SF, each of the 28 items are scored into the dimensions of 1.) Hard Work, 2.) Centrality of Work, 3.) Wasted Time, 4.) Leisure, 5.) Delayed Gratification, 6.) Self-Reliance, and 7.) Morality and Ethics (Meriac et al., 2013). Table 1 demonstrates the four survey items associated with each work ethic dimension. Each dimensional variable is scored as the average of the four items related to the dimension multiplied by 10. Each dimension has a possible score range from 10 to 50, resulting in an MWEP-SF composite score ranging from 70 to 350. Table 2 provides a summarization of all variables examined within the study.

**TABLE 1
SURVEY INSTRUMENT MWEP-SF DIMENSIONS AND RELATED ITEMS**

MWEP Weber-related Dimensions	Items
Centrality of Work	2,7,24,28
Delayed Gratification	6,8,15,21
Hard Work	9,11,20,22
Leisure	4,16,18,25
Morality/Ethics	3,13,23,27
Self-Reliance	10,14,19,26
Wasted Time	1,5,12,17

**TABLE 2
DEMOGRAPHIC, JOB ROLE, CULTURAL, AND WORK ETHIC VARIABLES**

Demographic Variables	Job Role and Cultural Variables	Work Ethic Variables (MWEP-SF)
Age	Fairness of Salary	Centrality of Work
Educational Level	IT Occupational Category	Delayed Gratification
Employment Status	Lottery Question	Hard Work
Gender	Achievement Culture	Leisure
Income Level	Creative Thinking	Morality/Ethics
Marital Status	Fairness of Salary	Self-Reliance
Number of Dependents	Flexibility	Wasted Time
	Freedom	Work Ethic (MWEP-SF Composite Score)
	Growth Opportunities	
	Independent Thought	
	Job Security	
	Managerial Concern	
	Multiple Priorities	
	Planning	

Demographic Variables	Job Role and Cultural Variables	Work Ethic Variables (MWEP-SF)
	Remember Many Things Resource Availability Sufficiency Of Skills Time Pressure Work Variety Workload Work Setting	

Data Collection

The targeted population in this research included individuals employed in the U.S. IT industry with a minimum of five years of experience in the IT-oriented occupational categories utilized by the U.S. Bureau of Labor Statistics, including information research scientists, network architects, programmers, support specialists, systems analysts, database administrators, and architects, information security analysts, network systems administrators, software developers, quality assurance analysts, software testers, web developers, and digital designers. Respondents from the target population were obtained through Amazon Mechanical Turk (MTurk), and survey data were collected using internet-based survey software. The combined use of the internet-based services was selected to provide participant anonymity, recruit diverse sample participants, and access defined sub-populations.

The required sample size was determined based on an alpha of .05 and power of 0.85. Using the number of groups and predictors for each research question and adding 20% for attrition, it was determined that a minimum sample size of 245 with a minimum total of 72 per work setting group would meet the statistical power criterion. The final sample included 267 adult U.S. IT employees from 39 states.

Data Analysis

Data were analyzed using JMP® Pro 17 statistical software. After assessing the reliability of the data, the descriptive statistics were summarized. The reliability of the MWEP-SF dimensions was assessed using Cronbach's alpha. The Cronbach's alpha score for each dimension is listed in Table 3. Next, a distributional analysis was performed to assess the current level of work ethic among the sample. A one-sample t-test was employed to compare MWEP-SF composite scores to previous research, while ANOVA analyses were used to compare the means of MWEP-SF composite scores among IT employees working in differing work settings (traditional, remote, and hybrid) and occupational categories (data and information, networking and architecture, and programming and software development). Homogeneity of variance among groups was confirmed using Levene's tests. Multiple regression analyses were employed to investigate the predictive relationships found between demographic, job role, and cultural attributes on MWEP-SF composite scores.

TABLE 3
CRONBACH'S ALPHA SCORES FOR MWEP-SF DIMENSIONS

Dimension	<i>M</i>	<i>SD</i>	Cronbach's α
Self-reliance	39.11	7.08	0.70
Morality/Ethics	39.37	7.81	0.71
Leisure	37.82	7.49	0.72
Centrality of Work	39.50	6.67	0.66
Hard Work	40.53	6.66	0.72
Wasted Time	39.49	7.07	0.70
Delay of Gratification	38.54	7.15	0.71

RESULTS

Distributional Analysis

To assess the current level of work ethic among IT employees in the U.S., a distributional analysis was performed using the MEWP-SF composite scores of 267 study respondents. Scores ranged from a minimum of 130 to a maximum of 327.50, with an overall range of 197.5. The interquartile range (IQR), which captures the middle 50% of scores, is 40, spanning from the 25th percentile value of 240 to the 75th percentile value of 280. The respondents' mean composite score was 258.75 with a median score slightly higher at 262.50. The standard deviation of the composite scores was 32.10. The mean scores associated with each work ethic dimension are provided in Table 4.

One-Sample T-Test

A one-sample t-test was used to investigate the difference between the mean MWEP-SF composite score of the current sample ($M = 258.75$) versus that of a U.S. sample previously recorded by Woehr, Arciniega, and Lim in 2007 ($M = 259.02$). The analysis yielded a p-value of 0.8969, indicating that the difference between the observed mean score of 258.75 and the hypothesized mean of 259.02 is not statistically significant ($t [266] = -0.1400, p = 0.8888$). These findings demonstrate consistency in current work ethic levels among U.S. IT professionals as compared to historical U.S. multi-industry employee data.

ANOVA Analyses

ANOVA was utilized to examine the impact of work setting on IT employees' MWEP-SF composite scores. Respondents were categorized into one of three work-setting groups, including traditional, remote, and hybrid. The analysis revealed that IT employees working in traditional ($M = 261.27$), remote ($M = 257.23$), and hybrid ($M = 257.98$) settings do not demonstrate significant differences in composite work ethic scores ($F [2, 264] = 0.3828, p = 0.6823$). The descriptive statistics associated with the MWEP-SF composite score by work setting are found in Table 4. Additional ANOVA analyses found that the traditional, remote, and hybrid groups do not demonstrate statistically significant differences in the scores associated with the dimensional work ethic components of Centrality of Work, Delayed Gratification, Hard Work, Leisure, Morality/Ethics, Self-Reliance, and Wasted Time. The results of these analyses are found in Table 5. These findings indicate that work setting, whether traditional, remote, or hybrid, does not affect work ethic nor any of its seven key dimensions.

TABLE 4
DESCRIPTIVE STATISTICS OF MWEP-SF COMPOSITE SCORES BY WORK SETTING

Work Setting	N	Mean Composite Score	SD
Traditional	83	261.27	33.97
Remote	91	257.23	33.07
Hybrid	93	257.98	29.44

TABLE 5
ANOVA RESULTS OF THE IMPACT OF WORK SETTING ON
MWEP-SF DIMENSIONAL SCORES

Dependent Variable	Work Setting	N	Mean	SD	F-Statistic	P-Value
Centrality of Work	Traditional	83	39.43	7.14	0.0861	0.9175
	Remote	91	39.34	6.66		
	Hybrid	93	39.73	6.29		
Delayed Gratification	Traditional	83	39.16	7.31	0.5991	0.5501
	Remote	91	37.97	7.66		
	Hybrid	93	38.58	6.50		
Hard Work	Traditional	83	40.51	7.12	0.0515	0.9499
	Remote	91	40.38	6.72		
	Hybrid	93	40.70	6.24		
Leisure	Traditional	83	38.07	7.97	0.5789	0.5612
	Remote	91	38.27	7.18		
	Hybrid	93	37.15	7.41		
Morality/Ethics	Traditional	83	40.51	7.12	0.0515	0.9499
	Remote	91	40.38	6.72		
	Hybrid	93	40.70	6.24		
Self-Reliance	Traditional	83	39.88	6.44	0.8178	0.4425
	Remote	91	39.01	7.63		
	Hybrid	93	38.52	7.10		
Wasted Time	Traditional	83	40.51	7.09	1.6036	0.2031
	Remote	91	39.48	7.53		
	Hybrid	93	38.60	6.55		

An ANOVA was also conducted to determine the impact of IT occupational category on work ethic. Survey respondents' scores were grouped into one of three occupational categories – data and information, networking and architecture, and programming and software development. Respondents were categorized based upon their disclosed occupation type. The analysis revealed that the composite work ethic scores among data and information workers ($M = 262.20$), networking and architecture workers ($M = 255.11$), and programming and software development workers ($M = 258.90$) do not significantly differ, ($F [2, 264] = 1.1346, p = 0.3231$). As such, it is determined that that IT occupational category has no bearing on level of work ethic. Additional descriptive statistics associated with the IT occupational categories are found in Table 6.

TABLE 6
DESCRIPTIVE STATISTICS OF MWEP-SF COMPOSITE SCORES BY
IT OCCUPATIONAL CATEGORY

Occupational Group	N	Mean Composite Score	SD
Data and Information Management	93	262.20	27.83
Networking and Architecture	92	255.11	33.87
Computer Programming and Software Development	82	258.90	34.35

Multiple Linear Regression Analyses

A multiple linear regression analysis was employed to determine the effect of organizational and cultural attributes on MWEP-SF composite scores. The final regression model included variables that were most predictive of the MWEP-SF scores based on preliminary analyses. This selection was guided by the need to balance model complexity with explanatory power. The bivariate correlations between predictor variables were investigated, and no multicollinearity was found among variables included in the model. Independent variables included in the final model were achievement culture, fairness of salary, flexibility, freedom, growth opportunities, the requirement to remember many things, resource availability, sufficiency of skills, the presence of time pressure, work variety, and the lottery response variable.

The model accounted for approximately 11% of the variance in MWEP-SF composite scores ($R^2 = 0.14$, Adjusted $R^2 = 0.11$) and was statistically significant ($F [11, 255] = 3.8809$, $p < 0.0001$). The individual model effects indicated that achievement culture ($t = 2.52$, $p = 0.0124$), the requirement to remember many things ($t = 2.46$, $p = 0.0145$), and the lottery question ($t = 2.92$, $p = 0.0039$) were significant positive predictors of composite work ethic scores. Time pressure ($t = -2.46$, $p = 0.0144$) was a significant negative predictor of composite work ethic scores. The multiple regression analysis results are summarized in Table 7.

A separate multiple linear regression analysis was performed to examine the predictive effects of demographic variables on MWEP-SF composite scores. The demographic variables included in the model were age, gender, income, employment status, marital status, number of dependents and education level. The analysis produced an insignificant result ($F [7, 259] = 1.11$, $p = 0.3475$), conveying that the demographic variables utilized do not have a statistically significant impact on the MWEP-SF outcomes within this sample.

TABLE 7
MULTIPLE REGRESSION ANALYSIS SUMMARY OF ORGANIZATIONAL AND CULTURAL ATTRIBUTES ON MWEP-SF COMPOSITE SCORES

Variable	Estimate (B)	Std. Error	t-Statistic	P-Value	
Intercept	245.74	4.4014	55.83	<0.0001*	
Lottery	6.7368	2.3099	2.92	0.0039*	
Achievement	7.9678	3.1635	2.52	0.0124*	
Fair Salary	-4.4827	2.9146	-1.57	0.1171	
Flexibility	1.9545	3.1574	0.62	0.5364	
Freedom	3.5724	3.1104	1.15	0.2518	
Growth	-2.8461	3.5124	-0.81	0.4185	
Remember	6.8285	2.7729	2.46	0.0145*	
Resources	2.9615	3.7628	0.79	0.4320	
Skills	-2.2257	2.7543	-0.81	0.4198	
Time Pressure	-4.8595	1.9759	-2.46	0.0144*	
Variety	1.0545	2.9413	0.36	0.7203	
Model Summary	R²	Adj. R²	F-Statistic	P-Value	N
	0.1434	0.1065	3.8809	<0.0001*	267

* $p \leq 0.05$

DISCUSSION

Results generated several key findings regarding the current state of work ethic among U.S. IT industry professionals in a post-pandemic environment. First, the one-sample t-test found no significant difference when comparing the current sample's mean score to a historical multi-industry U.S. sample from 2007

(Woehr et al., 2007). This finding indicates stability in U.S. IT employee work ethic levels over time, and counters the presumption of declining work ethic as a result of the disruptions caused by COVID-19 pandemic.

The ANOVA results were evaluated to determine the effect of job role characteristics, including work setting (traditional, remote, and hybrid) and IT occupational category (data and information, networking and architecture, and programming and software development) on the work ethic levels of study participants. No statistically significant differences in composite work ethic scores existed between IT employees working in traditional, remote, and hybrid settings. Further, no significant differences in the scores of dimensional work ethic categories of Centrality of Work, Delayed Gratification, Hard Work, Leisure, Morality/Ethics, Self-Reliance, or Wasted Time were identified between the three work-setting groups. These findings challenge existing perceptions related to the exhibited work ethic and resulting productivity of remote and hybrid employees (McPhail, Chan, May, & Wilkinson, 2024).

Additionally, ANOVA results did not identify significant differences in composite or dimensional work ethic scores between IT occupational categories of data and information management, networking and architecture, and programming and software development. This finding suggests that specific IT occupational roles do not influence individual work ethic levels.

The results from the multiple linear regression analyses provided insights into factors that predict work ethic. The demographic variables of age, gender, income, employment status, marital status, number of dependents, and education level were determined to be insignificant predictors of work ethic scores. However, the organizational culture attribute model accounted for approximately 11% of the variance in composite work ethic scores; this finding reiterates the importance of cultural characteristics in shaping work ethic among IT professionals. Achievement culture and the requirement to remember many things were found to be significant positive predictors of composite work ethic scores, while time pressure was determined to be a significant negative predictor. These findings suggest that achievement culture, being an environment that emphasizes goal setting, strong performance, and organizational success, positively predicts composite work ethic scores, likely due to the motivating factors inherent in such a culture (Nguyen, Yandi, & Mahaputra, 2020). The requirement to remember many things may also positively predict work ethic due to the heightened level of mental engagement required to effectively facilitate numerous work-related requirements. Conversely, the negative impact of time pressure on composite work ethic scores indicates the adverse effects of excessive deadlines and urgency. Lastly, the lottery question was also found to be a positive predictor of composite work ethic scores. This finding confirms that individuals who maintain the propensity to work, regardless of financial freedom, demonstrate enhanced work ethic.

CONCLUSION

IT work in the United States is positioned to substantially increase in importance in the foreseeable future. As such, understanding the psychological dispositions of the IT workers and the cultural attributes of the organization are vitally important to maintain effective and efficient performance. The current study centers on work ethic as an impactful facet of an employee's attitudes and behavior. The results suggest that recent environmental shocks have not decreased the general level of work ethic over time. Additionally, individual demographics characteristics fail to predict work ethic. Instead, the current results indicate that the most important relationships with work ethic involve attributes of an organization's culture. An achievement culture and artifacts encouraging mental engagement were shown to support work ethic while stressors such as time pressure tend to inhibit it. More work is needed to further identify cultural elements that support positive work ethic in the IT profession and investigate the ability to generalize the findings to other professions. This current work contributes to the existing body of knowledge suggesting the importance of work ethic as a pertinent employee attribute related to a number of essential organizational phenomena.

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