INVESTIGATING THE ROLE OF TRUSTWORTHINESS IN VIRTUAL ORGANIZATIONS: AN EMPIRICAL STUDY IN RIDE-HAILING PLATFORMS

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Abstract

This study investigated the factors influencing dimensions of trustworthiness in virtual organizations. The research model examined the relationships between trustworthiness dimensions (ability, benevolence, and integrity), user participation, information and communication technology (ICT), and shared values and goals. An online survey was conducted among online transportation users in Greater Bandung to test the model. The findings revealed positive relationships between ICT and both benevolence and integrity, and between shared values and goals and all trustworthiness constructs. Interestingly, participation only had a significant relationship with integrity. The study contributed to the literature by proposing a novel model that examines the impact of these factors on trustworthiness in virtual organizations.

Key Words

Information and communication technology; shared values and goals; trustworthiness; structural equation modelling (SEM).

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INTRODUCTION

Virtual Organizations (VOs) are dynamic ecosystems of legally independent organizations that strategically collaborate to deliver a cohesive set of services, seamlessly presenting themselves as a unified entity to the market (Jägers et al., 1998). This fluid network of diverse organizations can adapt and reconfigure its composition based on the evolving demands of the services or functions it provides (Camarinha-Matos et al., 2006). VOs hold the potential to transcend their transient nature, evolving into enduring partnerships characterized by long-term commitment, consistent service offerings, and a stable structure (Kasper-Fuehrer & Ashkanasy, 2003). However, unlocking the full potential of an inter-organizational VO hinges on the establishment of robust trust between member companies within the interconnected network, fostering collaborative success (Panteli & Sockalingam, 2005).

Trustworthiness blossoms from confidence in a partner's reliability and integrity. This notion, explored by Morgan and Hunt (1994), expands upon the three dimensions identified by Mayer et al. (1995): ability, integrity, and benevolence. Ability (ABI) encompasses the skills and expertise an individual possesses, though these strengths may vary across different fields (Bews & Rossouw, 2002). Benevolence (BEN), on the other hand, reflects the perceived sincerity of the partner's desire to benefit the other party, exceeding any self-serving motives (Cazier, 2003). Finally, integrity (INT) captures the trustor's belief in the partner's adherence to principles that align with their own values and standards (Lauer & Deng, 2007). By understanding these dimensions, we gain a deeper understanding of the foundation upon which trust is built.

Mukherjee et al. (2012) highlighted two key factors influencing trust in virtual organizations: information and communication technology (ICT) and shared values and goals (SVG). Effective communication through ICT platforms plays a crucial role in establishing trust. It allows individuals to assess an organization's trustworthiness across various dimensions. Beyond just hardware and software, ICT encompasses communication tools that facilitate information transmission (Bloom et al., 2014). These technologies significantly impact daily operations by enabling rapid and reliable information exchange and fostering connections between individuals (Tan & Wang, 2010; Wasko & Faraj, 2000). Notably, user-friendly communication technology fosters trust in decision-making processes (Kraemer & King, 1988). Therefore, ensuring good usability, which refers to the ease of use and efficiency in completing tasks, is crucial (Preece, 2001). On the other hand, Shared Value Graph (SVG) refers to the level of mutual understanding and agreement between exchange partners regarding the significance of their transactional motives, goals, and objectives. This shared understanding contributes to the establishment of trust between partners (Young-Ybarra & Wiersema, 1999). The existence of a strong SVG between organizations increases the perceived trustworthiness of a virtual organization (VO) (Mukherjee et al., 2012). While SVG is essential for any form of strategic partnership, it is particularly crucial in the context of virtual

organizations (Kasper-Fuehrer & Ashkanasy, 2003). Notably, shared values serve as the primary source of integration, coordination, and control within virtual organizations (Amah & Ahiauzu, 2014).

The rapid development of technology, particularly in the service provider sector, has fundamentally reshaped how we interact in a globalized world. This is especially evident in online transportation services, a prime example of virtual organizations (VOs) where trust is paramount. Building on existing research by Mukherjee et al. (2012), this study sought to move beyond enablers of trustworthiness in VOs. It aimed to bridge the critical gap between theory and practice by empirically testing the proposed framework and developing a more comprehensive model that considers user participation, internet-based communication technology, and shared values. By employing a real-world case study of an online ride-hailing app, this research was intended to significantly impact the field by providing concrete evidence to solidify the foundation of trust in VOs. By providing concrete evidence, this study was expected to strengthen existing theories and to significantly impact our understanding of trust dynamics in the dynamic world of virtual collaboration (Maass et al., 2018).

HYPOTHESIS DEVELOPMENT

This study investigated a model framework exploring the relationships between Information and Communication Technology (ICT), Shared Values and Goals (SVG), trustworthiness dimensions (Ability, Benevolence, Integrity – ABI, BEN, INT), and user participation (PAR) within the context of virtual organizations (VOs). Drawing upon the concepts of VOs established by Mukherjee et al. (2012), Mayer et al. (1995) and Porumbescu et al. (2019), the study formulated hypotheses and employs an online survey to test the validity of the proposed framework.

ICT implementation and dimensions of trustworthiness

Trustworthiness, defined as the extent to which something or someone can be relied upon (Filieri, 2016), encompasses three key dimensions: ability, benevolence, and integrity (Mayer et al., 1995). It plays a critical role in Information and Communication Technology (ICT), impacting technology, information processing, and user interactions. ICT can significantly influence trustworthiness in several ways. For instance, bank customers rely on the security and reliability of the bank's ICT infrastructure against cyberattacks and disruptions. Frequent downtime, technical glitches, or service interruptions can negatively impact trust and confidence in the technology. Similarly, online transactions, particularly financial ones, require trust in platforms offering secure payment gateways and buyer/seller protection mechanisms. These mechanisms are essential for fostering trust in digital trade. Based on these dimensions of trust, we proposed three hypotheses:

H1: The stronger ICT governance, the greater influence.
H2: Good ICT governance is perceived as more benevolent.
H3: Good ICT governance is perceived as more integrity.

Shared values and goals and dimensions of trustworthiness

Shared values and goals act as a cornerstone for building trust across diverse contexts, from personal relationships to professional settings and communities (Yu et al., 2015a). They fundamentally strengthen trustworthiness by fostering alignment, understanding, consistency, collaboration, ethical conduct, open communication, resilience, and a long-term perspective (Rud, 2009). Shared values and goals signal common intentions and motivations, which fosters better understanding, encourages cooperation, and facilitates collaboration (Chaney & Martin, 2017). Open and transparent communication, further bolstered by shared values and goals, strengthens trustworthiness as well. In line with this reasoning, we developed three hypotheses exploring the relationship between shared values and goals and various dimensions of trust.

H4: Shared values and goals increase organizational ability.
H5: Shared values and goals promote inter-organizational benevolence.
H6: Shared values and goals strengthen perceived organizational integrity.

Trustworthiness and user participation

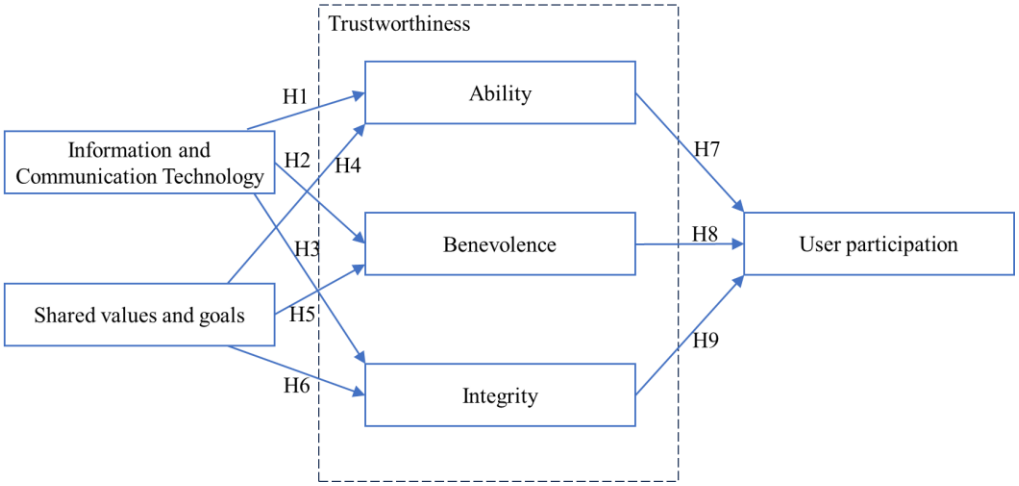
Building upon the established connection between user participation and trustworthiness, this research delves deeper by exploring the specific aspects of organizational behavior that foster user engagement. Trustworthiness serves as a critical cornerstone for thriving online communities, platforms, and business interactions (Benlian & Hess, 2011). It forms the bedrock for establishing a strong user base and cultivating a positive user experience (Cornacchia et al., 2021). When users trust a system, website, or organization, they are more likely to actively participate, engage, and contribute, fostering a vibrant and dynamic ecosystem. This trust is built upon transparent communication and actions (Yue et al., 2019), secure handling of user information, privacy, and financial transactions (Mashatan et al., 2022), and positive reviews and testimonials from other users (Utz et al., 2012). To further explore this relationship, we proposed three hypotheses that examine the impact of specific organizational traits on user participation:

H7: Ability boosts user participation.
H8: Benevolence increases user participation.
H9: Stronger integrity leads to higher user participation.

CONCEPTUAL FRAMEWORK

This research utilized a conceptual framework, visualized in Figure 1, to organize and structure the key ideas and concepts relevant to the study. This framework served as the foundation for the hypotheses tested, which are also presented in Figure 1.

Figure 1. Conceptual framework of the model



To measure the variables in our hypotheses, we designed a comprehensive survey questionnaire. Leveraging relevant literature from sections 2.1 and 2.2, we developed clear, unbiased, and closed-ended questions to gather specific insights into participants' experiences. To ensure the questionnaire's efficacy, we conducted a pilot test with 30 customers, evaluating individual questions and the overall flow. We employed an online platform for efficient data collection. The operational definitions of our research constructs are provided in Table 1.

Table 1: Operational definition of research constructs

Constructs	Indicators	Sources	Code	Question
Information and Communication Technology	Easy to learn	Budi (2018)	X_1	The application media "Online Transportation" provided is easy to use
	Clear and Understandable			
	Easy to use			
	Flexible		X_2	The application media "Online Transportation" provided is flexible and up to date
	Become Skilled			
	Controlled			
Shared Values and Goals	Coordination	Amah and Ahiauzu (2014)	X_3	Activities in "Online Transportation" are clear and structured (the division of service categories is clear)
	Deal		X_4	The "Online Transportation" policy and the

Constructs	Indicators	Sources	Code	Question
				privacy policy provided are clear and can be accounted for according to the agreement
	Integration		X_5	Online Transport connects users and drivers in one community
Ability	"Amazon.com is competent"	Gefen and Straub (2004)	Y_1	Online Transportation is competent.
	"Amazon.com understands the market it works in"		Y_2	This Online Transportation understands customer needs
	"Amazon.com knows about books"		Y_3	Online Transportation It knows about the fastest route that can be taken
	"Amazon.com knows how to provide excellent service"		Y_4	This Online Transportation knows how to provide the best service
Benevolence	"I expect I can count on Amazon.com to consider how its actions affect me"	Gefen and Straub (2004)	Y_5	I hope this Online Transportation can take my advice
	"I expect that Amazon.com puts customer's interests before their own"		Y_6	I hope this Online Transportation has good intentions for customers
	"I expect that Amazon.com is well meaning"		Y_8	I hope that this Online Transportation has a good meaning
Integrity	"Promises made by Amazon.com are likely to be reliable"	Gefen and Straub (2004)	Y_9	This promise made by Online Transport is most likely reliable
	"I do not doubt the honesty of Amazon.com"		Y_{10}	I do not doubt the honesty of this Online Transportation
	"I expect that Amazon.com will keep promises they make"		Y_{11}	I hope this Online Transport will keep the promise they made
	"I expect that the advice given by Amazon.com is their best judgment"		Y_{12}	I hope the advice given by this Online Transport is their best judgment
Participation	Continuity	Wong (2017)	Z_1	This Online Transportation is a platform that I will continue to use
	Frequency		Z_2	I often use this Online Transportation service
	Recommendation		Z_3	I will recommend this online transportation service to many people

METHODS

Our survey, conducted from December 2021 to January 2022, recruited 252 online transportation service users via a Google Forms questionnaire. All participants were informed about the research purpose. The criteria for participation included having used online transportation at least three times. Participants' ages ranged from 17 to over 60, with the majority (132) aged between 17 and 24. The remaining participants were distributed as follows: 89 were between 25 and 40 years old, 30 were between 41 and 60 years old, and 1 was over 60. In terms of gender, 186 participants were female and 66 were male. Our research did not involve drug or medical treatment trials so it was exempted from requiring formal ethics committee approval. However, the research adhered to the ethical principles outlined in the Declaration of Helsinki and was conducted under the supervision of the researchers' affiliated department.

Structural equation modelling

This research drew upon the findings of previous researchers, utilizing a framework model that explored the intricate relationships between various constructs. This model investigated how Information and Communication Technology (ICT), alongside shared values and goals, influenced different aspects of trustworthiness (ability, benevolence, and integrity) and ultimately, user participation. To analyze this complex framework, Structural Equation Modeling (SEM) was employed. While the preliminary questionnaire data was processed using SPSS software, the main questionnaire data required a more advanced tool - AMOS 23 software. This choice was driven by the model's complexity (multilevel) and its unique capability to estimate intricate relationships between multiple constructs within the model.

Regression analysis

To delve into the intricacies of the proposed framework, this study employed regression analysis, a powerful statistical tool. This analysis focused on two key areas: first, quantifying the influence of trustworthiness on user participation. This aimed to understand how different aspects of trustworthiness (ability, benevolence, and integrity) collectively affect the level of user engagement. Second, examining the influence of information and communication technology (ICT) and shared values and goals (SVG) on trustworthiness. This analysis explored how each of these factors individually affects each dimension of trustworthiness. To ensure reliable findings, multicollinearity tests were meticulously conducted. These tests assessed for the presence of strong correlations between independent variables within each model. Mitigating potential multicollinearity issues was crucial, as it helps prevent misleading interpretations of the results based on inflated or deflated coefficient estimates.

RESULTS AND DISCUSSION

Reliability and Validity Test

Prior to testing the final model, a pilot study involving 30 randomly selected participants was conducted to assess the validity and reliability of the research questionnaire's statement items. This pilot study aimed to ensure the instrument accurately measures what it intends to (validity) and produces consistent results across administrations (reliability). The pilot study revealed encouraging results. The reliability coefficient (r_H) exceeded 0.80, indicating very high reliability. However, the initial validity measure (α) fell below the desired threshold of 0.05, at 0.361. As shown in Table 2, specific statement items requiring adjustments were identified based on this preliminary test. Table 3 presents the details of the validity assessment.

Table 2: Reliability test

Item-Total Statistics					
Variables	Cronbach's Alpha if Item Deleted	**r_H > 0.6**	Variables	Cronbach's Alpha if Item Deleted	**r_H > 0.6**
ICT1	0.920	Reliable	BENE2	0.920	Reliable
ICT2	0.918	Reliable	BENE3	0.921	Reliable
SVG1	0.920	Reliable	BENE4	0.917	Reliable
SVG2	0.919	Reliable	INTE1	0.916	Reliable
SVG3	0.918	Reliable	INTE2	0.917	Reliable
ABILITY1	0.916	Reliable	INTE3	0.919	Reliable
ABILITY2	0.918	Reliable	INTE4	0.917	Reliable
ABILITY3	0.920	Reliable	P1	0.917	Reliable
ABILITY4	0.917	Reliable	P2	0.919	Reliable
BENE1	0.919	Reliable	P3	0.917	Reliable

Structural Equation Modelling

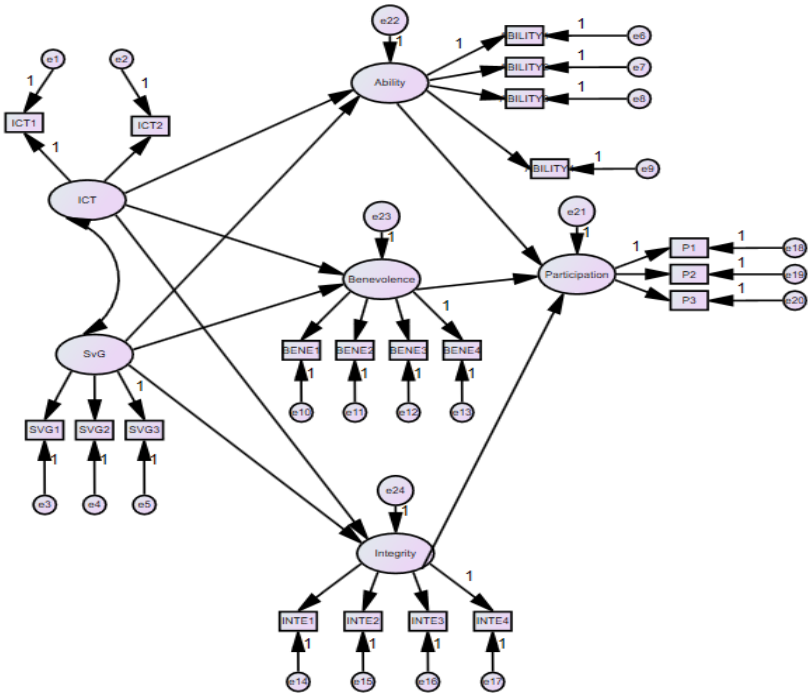
The model framework was described in the AMOS 23 software, and SPSS data from the main questionnaire was inputted into the model. The software also identified that there was a relationship between the ICT and SVG. The model framework resulting from the software computation is shown in Fig. 2.

Table 3: Validity test

Correlations			5%		Correlations			5%	
		TOTAL	0.125	0.05			TOTAL	0.125	0.05
ICT1	Pearson Correlation	.525**	Valid		BENE2	Pearson Correlation	.547**	Valid	
	Sig. (2-tailed)	0.000		Valid		Sig. (2-tailed)	0.000		Valid
ICT2	Pearson Correlation	.641**	Valid		BENE3	Pearson Correlation	.533**	Valid	
	Sig. (2-tailed)	0.000		Valid		Sig. (2-tailed)	0.000		Valid
SVG1	Pearson Correlation	.570**	Valid		BENE4	Pearson Correlation	.689**	Valid	
	Sig. (2-tailed)	0.000		Valid		Sig. (2-tailed)	0.000		Valid
SVG2	Pearson Correlation	.599**	Valid		INTE1	Pearson Correlation	.744**	Valid	
	Sig. (2-tailed)	0.000		Valid		Sig. (2-tailed)	0.000		Valid
SVG3	Pearson Correlation	.641**	Valid		INTE2	Pearson Correlation	.692**	Valid	
	Sig. (2-tailed)	0.000		Valid		Sig. (2-tailed)	0.000		Valid
ABILITY1	Pearson Correlation	.722**	Valid		INTE3	Pearson Correlation	.617**	Valid	
	Sig. (2-tailed)	0.000		Valid		Sig. (2-tailed)	0.000		Valid

Correlations			5%		Correlations			5%	
		TOTAL	0.125	0.05			TOTAL	0.125	0.05
ABILITY2	Pearson Correlation	.664**	Valid		INTE4	Pearson Correlation	.680**	Valid	
	Sig. (2-tailed)	0.000		Valid		Sig. (2-tailed)	0.000		Valid
ABILITY3	Pearson Correlation	.589**	Valid		P1	Pearson Correlation	.674**	Valid	
	Sig. (2-tailed)	0.000		Valid		Sig. (2-tailed)	0.000		Valid
ABILITY4	Pearson Correlation	.669**	Valid		P2	Pearson Correlation	.665**	Valid	
	Sig. (2-tailed)	0.000		Valid		Sig. (2-tailed)	0.000		Valid
BENE1	Pearson Correlation	.615**	Valid		P3	Pearson Correlation	.701**	Valid	
	Sig. (2-tailed)	0.000		Valid		Sig. (2-tailed)	0.000		Valid

Figure 2: Trustworthiness model framework in AMOS 23 software



To assess the validity of the research model, two key SEM tests were employed: the Measurement Model Test and the Structural Model Test. The Measurement Model Test specifically evaluated the construct validity and internal consistency of the measurement instrument. It assessed how accurately the observed variables (manifest variables) represent the underlying theoretical constructs (latent variables) and whether the chosen model aligns with established goodness-of-fit criteria. The detailed results of this test are presented in Table 4.

Table 4: Measurement model test results

Measurement Model Test	Notation	Cut Off	Result	Source
Absolute Indices	x^2	$x^2_H < x^2_T$ **or** x^2_H saturated model < x^2_H < independence model	x^2_H (450.484) > x^2_T (190.516) **or** 0 < 450.484 < 2521.991	(Santoso, 2018)
	x^2/df	x^2/df ≤ 3	2.815	(Kline, 2016)
	GFI	0-1 (the closer to 1 the better)	0.843	(Santoso,2018)
	AGFI		0.794	
	RMR		0.033	

Measurement Model Test	Notation	Cut Off	Result	Source
Incremental Fit Indices	NFI		0.821	
	CFI		0.875	
Parcimony Fit Indices	PNFI		0.692	
	PCFI		0.737	
	AIC	AIC saturated model < AIC_H < AIC independence model	420 < 550.484 < 2561.991	
	ECVI	ECVI saturated model < $ECVI_H$ < ECVI independence model	1.673 < 2.193 < 10.207	
	Hoelter's (N)	75 ≤ *value* < 200 (worthy)	104	(Wan, 2002)

The measurement model test (Table 4) confirmed a good fit between the hypothesized framework and the data, providing strong support for the constructs' operationalization. This paves the way for the structural model test (Table 5), which examines the relationships among the constructs themselves.

Our research in Greater Bandung provided compelling evidence that users prioritize trustworthiness (security, competence, benevolence, and integrity) when choosing ride-sharing services (hypotheses 4-6, Table 5). This aligned with previous research by Yu et al. (2015b) who highlighted shared values as a key factor in building trust. As Cho et al. (2016) suggested, trustworthiness signify an entity's reliability. When users perceive ride-sharing services as trustworthy, they become more comfortable relying on them. Interestingly, shared values and goals further strengthen trust by fostering mutual understanding of motivations. Alignment on what's important builds trust, whereas misaligned values creates friction. The research revealed a particularly strong link between Information and Communication Technologies (ICT) and both user perceptions of benevolence and integrity. Participation, however, only impacted integrity. This suggested that clear communication of values and goals through effective ICT platforms is crucial for building trust. Notably, data analysis using AMOS software uncovered a remarkable correlation (0.973) between ICT and Service Value Gap (SVG), highlighting the strong influence that ICT had on user-perceived value.

Table 5: Structural model test results

Hypothesis	Acceptance	Relationship	Estimate Regression	Correlations (Close = estimates> 0,5)	
1	ICT vs Ability	H_0	No Real Relationship	-1.012	Very weak
2	ICT vs Benevolence	H_1	There's a Real Relationship	-1.916	Very weak
3	ICT vs Integrity	H_1	There's a Real Relationship	-2.557	Very weak
4	SVG vs Ability	H_1	There's a Real Relationship	1.837	Close
5	SVG vs Benevolence	H_1	There's a Real Relationship	2.569	Close
6	SVG vs Integrity	H_1	There's a Real Relationship	3.306	Close
7	Participation vs Ability	H_0	No Real Relationship	0.215	Weak
8	Participation vs Benevolence	H_0	No Real Relationship	-0.125	Very weak
9	Participation vs Integrity	H_1	There's a Real Relationship	0.679	Close

Note: Grey-shaded cells show rejected hypotheses.

Regression Analysis and Collinearity Tests

Regression analysis resulted a statistically significant equation (Eq. 1) that quantify the relationships between participation, ability, benevolence, and integrity.

$$PAR = -0.243 + 0.337\ ABI + 0.156\ BEN + 0.499\ INT \quad (1)$$

An interesting finding emerged from our analysis of the equation (Eq. 1). Even with maximum Ability, Benevolence, and Integrity, Participation could only reach 4.717. Conversely, it dipped to a minimum of 0.749 when all trust factors were one. This suggested that user trust acts as a ceiling for Participation in ride-sharing services. Further strengthening this notion, the equation identified Integrity (INT) as the most influential factor on Participation compared to Ability and Benevolence. This aligned with the SEM results where only Integrity had a statistically significant relationship with Participation. In short, building trust, particularly through strong Integrity, is crucial for maximizing user engagement in ride-sharing services.

Before relying on our model's results, we conducted a thorough examination to ensure its accuracy and reliability. This involved checking for collinearity, a phenomenon where independent variables are highly correlated. We achieved this by performing individual regressions between each pair of variables from Ability (Ability), Benevolence (BEN), and Integrity (INT) in Eq. (1). Following each regression, we calculated the Variance Inflation Factor (VIF) using Eq. (2) to assess the severity of any collinearity. The results are presented in Table 6, showing minimal collinearity concerns, with VIF values all falling below the recommended threshold of 2.7. This suggests a high degree of independence between the independent variables in our model, strengthening the reliability of our findings (Büssing et al., 2013).

$$VIF = \frac{1}{1 - R^2} \quad (2)$$

Table 6. Multicollinearity tests for PAR

Independent variable	Inter-independent variable regression model	Multiple R	R Square	VIF
Ability	ABI = 0.884 + 0.195 BEN + 0.546 INT	0.669	0.447	1.809
Benevolence	BEN = 1.717 + 0.151 ABI + 0.507 INT	0.682	0.465	1.871
Integrity	INT = 0.333 + 0.411 ABI + 0.493 BEN	0.757	0.573	2.341

Our regression analysis (Eq. 3-5) revealed a key insight: SVG exerted a stronger influence on all three trust dimensions (ABI, BEN and INT) compared to ICT. This aligned with the SEM results, where SVG demonstrated a more significant relationship with trust. This suggested that effectively addressing the gap between user expectations and service delivery is crucial for building trust in ride-sharing services. Further, the multicollinearity tests for Eq. 3-5 are shown in Table 7. The VIF values below

2.7 indicate very low but tolerable collinearity in the data (Büssing et al., 2013).

$$ABI = 0.911 + 0.197\ ICT + 0.537\ SVG \quad (3)$$
$$BEN = 2.035 + 0.259\ ICT + 0.299\ SVG \quad (4)$$
$$INT = 1.323 + 0.19\ ICT + 0.481\ SVG \quad (5)$$

Table 7. Multicollinearity tests for ABI, BEN and INT

Independent variable	Inter-independent variable regression model	Multiple R	R Square	VIF
ICT	ICT = 2.293 + 0.5323 SVG	0.596	0.355	1.552
SVG	SVG = 1.158 + 0.668 ICT	0.596	0.355	1.552

We also performed regression analysis between PAR as the dependent variable and ICT and SVG as independent variables, resulting an equation as written in Eq. (6). This equation indicated that the maximum value of Participation, achieved when ICT and SVG were maximum (five), was 4.475, while the minimum value (achieved when both were one) was 1.087. The collinearity between ICT and SVG had been tested for Eq. (5) in Table 7, so we did not test it again for Eq. (6).

$$PAR = 0.24 + 0.364 \cdot ICT + 0.483 \cdot SVG \quad (6)$$

Analysis of Variance

The last statistical test we used was Analysis of Variance (ANOVA), which was conducted ANOVA to find out whether our constructs were different among gender and age. The results are shown in Table 8, which provides mean values for six constructs (ICT, SVG, ABI, BEN, INT, PAR) segmented by gender and age groups, along with an indication of whether the differences are statistically significant at the 0.05 level. For gender, no significant differences are found between males and females for any factor. For age, differences are statistically significant for ICT and SVG across the four age groups (17-24, 25-40, 41-60, >60), but not for ABI, BEN, INT, or PAR. Specifically, ICT and SVG show a notable decline in mean values with increasing age, particularly dropping to 4.000 for the >60 age group, whereas the other factors do not show significant age-related differences.

Table 8. ANOVA test results (α=0.05)

	Gender			Age				
	Male	Female	Difference	17-24	25-40	41-60	>60	Difference
ICT	4.432	4.543	Not different	4.598	4.478	4.267	4.000	Different
SVG	4.121	4.192	Not different	4.283	4.071	4.000	4.000	Different
ABI	4.015	4.048	Not different	4.066	4.020	3.983	4.000	Not different
BEN	4.462	4.448	Not different	4.475	4.458	4.342	4.000	Not different
INT	4.148	4.200	Not different	4.254	4.132	4.058	4.000	Not different

PAR	3.778	3.944	Not different	3.907	3.910	3.844	4.000	Not different

Managerial Implications

Our research identified a critical link: user participation in ride-sharing services hinges heavily on their perception of the organization's integrity. This underscores the importance of prioritizing ethical practices. To cultivate a culture of trust, organizations can implement several key strategies. Firstly, a comprehensive code of ethics, a written document outlining the company's values and principles, serves as a vital foundation. This code should be clearly communicated to all employees, and regularly reviewed and updated to reflect evolving standards. Secondly, leadership sets the tone. By consistently demonstrating ethical behavior and holding themselves accountable to the same standards as everyone else, leaders inspire trust and encourage ethical decision-making throughout the organization. Finally, fostering openness and transparency is crucial. Establishing a system for addressing ethical concerns and complaints demonstrates a commitment to fair practices and encourages employee engagement. For a truly cohesive culture of integrity, consistent enforcement of the code of ethics across all levels of the organization is paramount. Recognizing and rewarding ethical behavior further reinforces the desired values. By implementing these measures, organizations can build a strong foundation of trust, ultimately fostering user participation and loyalty.

Our research also suggested a critical path to fostering trust: cultivating shared values and goals with users. Managers can achieve this by prioritizing open communication. This includes transparently sharing the organization's values and goals, understanding those of their users, and fostering a culture of mutual respect. Celebrating successes together reinforces this positive dynamic. Additionally, collaborative efforts like sharing resources, expertise, or network can further strengthen the bond. To solidify trust, maintaining transparency and accountability throughout the process is crucial. Finally, effectively resolving conflicts constructively demonstrates a commitment to a healthy, long-term partnership with users. Additionally, our study suggested that managers can implement gender-neutral policies as no significant differences exist between males and females across the six factors. However, age-specific strategies are necessary, particularly for ICT and SVG, where scores declined with age. Older people may require additional support in technology and strategic vision. For ABI, BEN, INT, and PAR, where no significant age-related differences were found, managers can adopt uniform policies, simplifying processes and ensuring consistent treatment. Continuous improvement and monitoring are essential to maintain high operation standards in these areas. Tailoring communication and engagement strategies to meet the diverse needs of different age groups will enhance customer satisfaction and retention, creating a more inclusive and effective business environment.

CONCLUSIONS

Our study investigated how communication technology, shared values and goals, and user participation influence trust in virtual organizations. Interestingly, well-designed communication platforms strongly linked to user perceptions of a company's benevolence and integrity, while a shared sense of goals among all stakeholders (riders, drivers, company) fosters trust across all aspects of trustworthiness: ability, benevolence, and integrity. Notably, user participation itself only impacted trust in the company's integrity. This suggested a two-pronged approach: clear communication of values through technology builds trust in benevolence and integrity, while fostering shared values strengthens overall trust. These findings paved the way for future models that explore a more comprehensive relationship between trust dimensions and user participation, ultimately leading to a clearer understanding of how to cultivate user trust in virtual organizations. Future research could delve into understanding the specific types of user participation that most effectively cultivate trust across all dimensions. It could also explore how virtual organizations can encourage and integrate user participation to reinforce shared values and trust. This clearer understanding will lead to better strategies for cultivating user trust in virtual organizations. Additionally, future studies could also collect more demographic data, such as education and profession, to provide a more comprehensive understanding of factors influencing online transportation usage.

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