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How Various Factors that Impact the Financial Behavior of the Members of the Self-Help Group of Indigenous Groups and Natives or Tribal Communities?

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Abstract:

This study explores the profound influence of social and cultural factors on the financial conduct of indigenous tribes and groups. Anchored in Vygotsky's socio-cultural theory, the analysis delves into the intricate interplay between cultural elements, such as bricolage, and the immediate availability of financial resources, illuminating their collective impact on the tribes' financial behavior. Typically residing in proximity, these communities exhibit homogeneity by forming groups exclusive to their clans, lacking access to conventional financial services and tangible assets that dissuade banks from extending loans. Crucially, the social capital embedded within the group dynamics, often referred to as the peer mechanism, emerges as a pivotal conduit for members to secure capital and bank credit. The synergy of bricolage, representing the adept use of available social capital, facilitates access to finance and credit. Despite the existence of social capital and financial literacy programs, a stark reality persists – a significant proportion of indigenous people remain financially excluded. This chapter endeavors to scrutinize the ramifications of these factors on tribal financial behavior, employing the Partial Least Squares Structural Equation Modeling (PLS SEM) method. Proposing a paradigm shift in financial attitudes, the research underscores the imperative of fostering financial inclusion within indigenous tribes and communities.



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Keywords: Indigenous Financial Behavior; Socio-Cultural Factors; Bricolage and Finance; Peer Mechanism; Financial Inclusion in Tribal Communities

1. Introduction

The social factors and cultural factors seem to have a vast impact on the financial behavior of the indigenous tribes and groups. The socio-cultural theory given by Vygotsky highlight how the cultural factors and bricolage, the availability of financial resources at hand impacts the financial behavior and financial behavior of the tribes and the indigenous people. Indigenous people or the tribes generally stay near each other. They form the group with only the members of their clan and thus as a group they are homogenous. They do not have access to finance and they do not have any tangible asset due to which the banks are not willing to provide loan to them. The social capital or the social relations existing between the members of the group called as peer mechanism enables to the member to access capital and bank credit. Bricolage or the availability of social capital at hand enables the members to access finance and credit from the bank. However, despite the presence of the social capital and various financial literacy programmes, the ground reality is that not many indigenous people use financial services and are financially excluded. There is a need for financial attitude change to facilitate financial inclusion of the indigenous tribes and people. This chapter aims to study the impact of these factors on the financial behavior of the tribes and indigenous people using PLS SEM method.

2. Objectives

UN Sustainable development goal of financial inclusion of indigenous tribes is an extremely big challenge. Indigenous tribes and native people stay away from the mainland and reside on the outskirts and move in small communities. These small communities do not have access to the collateral and they are not able to raise funds from the bank and formal sector. In this scenario, the socialization and peer effect have a major impact on the financial literacy of these tribes. Despite, innumerable financial literacy interventions introduced by the banks and the Government, the financial inclusion of the tribes is a distant tribe. In this regard, changing the attitude of the tribes and the dispositions of the tribes toward knowledge becomes



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extremely important. This study mainly aims to identify the impact of financial literacy and other socio-cultural factors on the financial attitude and financial behavior of the members of the groups of indigenous tribes. Besides, another major issue with financial literacy, cultural factors, and bricolage, access to local resources has an impact on the financial behavior of the members of the community. The members of the indigenous tribes are organized in the form of groups, where the leaders are responsible for the proper functioning of the groups. The leaders have an agency issue because there is a likelihood that the leader of the group might misuse his position to get benefits for himself.

3. Hypothesis

Data collection

The study is a quantitative empirical study and the data is collected using the cross-section data survey questionnaire. The sampling is done using the purposive sampling method, (Cheah et al., 2021; Sarstedt et al., 2018). To collect the data, the respondents were contacted personally through negotiating access with the prospects, who were selected through the convenience sampling method due to the superiority of the method in collecting the data, (Yao et al., 2015). The data is to be collected using a questionnaire with five constructs namely (1) Bricolage (2) Culture (3) Socialization (4) Agency (5) Financial Attitude and (6) Financial Behavior, where the responses to questions are measured using the Likert scale of 1 to 7. 1 being strongly disagree and 7 being strongly agree. During the period Nov 2023 to Dec 2023, interviews were conducted with the members of indigenous tribes, which was approximately 50 members using a standard questionnaire.

Hypothesis for the study is

H0: Bricolage has an impact on financial behavior of the indigenous people

H1: Culture has an impact on financial behavior of the financial behavior of the indigenous people

H2: Socialization has an impact on financial behavior of the indigenous people



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H3: Agency has an impact on financial behavior of the indigenous people

H4: Financial Attitude mediates the relationship between bricolage, culture, socialization, agency and financial behavior

4. Data Analysis and Empirical Analysis

Measurement Model

To empirically validate the conceptual framework given earlier, most of the indicator items in the questionnaire have been adapted from the existing literature on socialization, cultural impact, bricolage, agency, financial attitude, and financial behavior. The operational definition for the various reflective indicators of the constructs is provided along with the questions asked as part of the questionnaire.

Unique cultural values which emanate from tribes and religious beliefs and are passed on from generation to generation and has an impact on financial knowledge, financial behavior and financial attitude. The basic premise is that financial services are not part of certain cultures. In certain cultures, the financial services are considered to be a misfit and in certain tribes the traditional methods of financial management are considered to be superior. The case in point is the Bonda tribe is found in Jey pore region of Onkadelli. Tribals mainly sell goods of daily utility such as vegetables, fruits, medicinal plants, mahua drinks, groceries, variety of snack and beverages. Tribal people belong to the primitive tribes that have existed for more than thousand centuries now. They belong to the Particularly Vulnerable Tribal Groups. They do not practice any financial savings and financial habits to save money or get financially included in the system. Bonda people are unaware of the money as they have never have interacted with the outside world. Thus, the financial inclusion of the Bonda people shows that the culture has a deep impact on the financial inclusion of the tribal people and indigenous tribes. Due to this reason, the survey was conducted with tribal people who have been using financial services for some period. So towards this cause research mainly aims to find out the impact of culture on financial behavior. This includes cultures where financial services are considered to be misfit and where financial services usage is not part of



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cultural identity. Where the Government is trying towards financial inclusion and banks and financial institutions are not interested in them due to the lack of ROI (Return on Investment), the peer mechanism and social capital has a relevant role to play in the financial inclusion of the indigenous tribes and the native people. The peer mechanism or the social capital refers to the social relationships within the members of the community that are leveraged to facilitate financial inclusion. Thus, our next hypothesis that financial inclusion of the tribes and the native people is impacted by the level of peer mechanism and social interactions among the members of the group. Let us assume that there are members in the group, who stay in close a proximity and they go for fetching water from the well together in a group. In these groups, the financial inclusion through the peer mechanism plays an important role. Resilience of the indigenous people and the tribes has an important impact and bricolage, that is making do with whatever is at hand has an important impact on financial inclusion of the tribes and the indigenous people. The literature further highlights that in an excluded society the sole possession of a group of members is the relationships that they have and the social capital. This impacts the financial inclusion and financial behavior of the members of the group. For them the reality is socially constructed and the bricolage is the mutual trust and the relationships. Thus, if bricolage through the leveraging of social relationships play an important role, social capital becomes extremely important in the financial inclusion of the poor marginalized members of the tribes and group of natives. Thus, socialization and peer mechanism play an important role in promoting financial behavior among the members of the groups of indigenous people and tribes. The financial attitude refers to the personal disposition of the members of the group of indigenous people. The study aims to measure the impact of the financial attitude on financial behavior of the members of the self-help group comprised for indigenous people.

(1 = Strongly Disagree ; 2 = Degree ; 3 = Some what disagree; 4 = Neither agree and neither disagree ; 5 = Somewhat agree ; 6 = Agree; 7 = Strongly agree)

Culture and financial behavior



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I feel that using financial services is not part of our culture

I feel a cultural misfit between the financial services and own culture

Using financial services is not part of our culture and cultural identity

I feel more comfortable to use the traditional methods rather than using the financial services

Socialization and financial literacy

Peers and community inspire me when it comes to financial management

I always discuss the money management with my peers and the members of society

I feel in financial control when my peers and family help me to control my spending

Community and my peers are proud of financial behavior, i.e., savings and loan repayment

I save money because I feel that it helps me network better

I save money as I think that it improves my status in the family

I pay my debt in time as I feel that it enhances my social reputation and credit standing

Bricolage and financial literacy

I believe that neccessity and the need for empowerment leads me to be financially literate

I feel that need for social status motivates me to gain financial literacy

Due to need for money and motivation for financial autonomy I do take financial literacy programmes

I feel that my social relationships have helped me to gain financial knowledge and implement it

I feel that social network has helped me to gain financial attitude to undertake financial literacy



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I feel that since I am from a woman self help group I have higher probability of getting microloan

As per my thinking my women self help group has helped me to get access to microloans

My internal savings and the retained earnings have enabled me to get microloans

Agency

I believe that the leader of the group works in the interest of the members of self help group

I believe that the members of the group cooperate with each other in payment of group loan

In a group loan I believe that some of the members strategically default that leads to moral hazard

I feel that there are chances that some of the members might not cooperate in the repayment of group loans

I feel that higher level of monitoring helps me to improve my financial savings and repayment in group

I feel that higher level higher level of monitoring helps me to improve my financial well being

Financial behavior

I repay the money that I owe in time

I have money available to pay loans in case of difficulty

To invest I plan to manage my expenses

I save my money to make investments

Finanicial attitude

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When I get money, I spend it immediately

Buy now, pay it later describes me

I see it, I like it, I buy it describes it

5. Common method bias

Common method bias refers to data from a single source (Avolio et al., 1991) that might cause quantitative data analysis issues. Common technique bias reduces data validity and structural relationship (MacKenzie et al., 2012). Statistical and procedural control diminish study method bias. Allowing respondents to respond anonymously, placing the demographic question at the end, and piloting the questionnaire before data collection ensures procedural control. Two statistical control approaches were used: the Harman one-factor test. The pathological VIF (Variance Inflation Factor) was below 5, hence the data had no Common Method Bias (CMB) (Anshuman et al., 2021; Ned Kock, 2015).

6. Measurement Model

According to Hair et al. (2017), the measurement model showed strong convergent validity and internal consistency in the data because the outer loading, composite reliability, and average variance extracted are all above 0.708 and below 0.95. To assess discriminant validity, the Fornell Larcker and HTMT criterion were utilized. The data has sufficient discriminant validity because the HTMT (Heterotrait Monotrait Ratio) was far below 0.85 (Henseler et al., 2015). The measurement model results are shown below in Tables 1, 2, 3, 4 and 5, as well as Figure 1. (Anshuman et al., 2021; Ned Kock, 2015).



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Table 1: Measurement Model

		Cronbac h Alpha	Composite reliability(rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)	R Square
A01*	0.916	0.977	0.983	0.981	0.895	
A02	0.942					
A03	0.949					
A04	0.966					
A05	0.943					
A06	0.960					
BFL1*	0.947	0.976	0.989	0.979	0.855	
BFL2	0.942					
BFL3	0.928					
BFL4	0.888					
BFL5	0.928					
BFL6	0.930					
BFL7	0.921					
BFL8	0.913					
CFB1*	0.946	0.963	0.964	0.973	0.901	
CFB2	0.953					
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CFB3	0.951					
CFB4	0.948					
FA1*	0.880	-0.829	0.899	0.599	0.810	0.450
FA2	0.930					
FA3	889					
F B 1*	0.925	0.919	0.939	0.943	0.806	0.532
FB2	0.920					
FB3	0.932					
FB4	0.808					
SFL1*	0.965	0.982	0.983	0.985	0.901	
SFL2	0.921					
SFL3	0.956					
SFL4	0.959					

*Note: A0 stands for Agency, BFL stands for Bricolage, CFL stands for Cultural factor, FA stands for the Financial Attitude, FB stands for Financial Behavior and SFL stands for Socialization factor

	A0	BFL	CFB	FA	FB	SFL
A0						
BFL	0.135					

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CFB	0.571	0.179				
FA	0.641	0.103	0.711			
FB	0.476	0.176	0.739	0.607		
SFL	0.815	0.218	0.715	0.691	0.631	

Note: A0 stands for Agency, BFL stands for Bricolage, CFL stands for Cultural factor, FA stands for the Financial Attitude, FB stands for Financial Behavior and SFL stands for Socialization factor

Note: The off-diagonal values (bold) in the above matrix are the squares correlations between the latent constructs and diagonals are AVEs. HTMT <0.85 (Kline, 2005)

	A0	BFL	CFB	FA	FB	SFL
A0	0.946					
BFL	-0.132	0.925				
CFB	-0.558	0.177	0.949			
FA	-0.607	0.101	0.655	0.900		
FB	0.456	-0.182	-0.706	-0.563	0.898	
SFL	0.800	-0.218	-0.695	-0.656	0.609	0.949

Table 3: AVE (Average Variance Extracted)

Note: A0 stands for Agency, BFL stands for Bricolage, CFL stands for Cultural factor, FA stands for the Financial Attitude, FB stands for Financial Behavior and SFL stands for Socialization factor



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Structural Model



Figure 1: Structural Model

Table 4: Structural Model

	Original Sample	S.E.	T Statistics	Remark	R Square	VIF	F Sq.
CFB >- FA	0.387	0.191	2.021***	Sig	0.527***	1.939	0.163
CFB>-	-0.493	0.210	2.351***	Sig	0.538***	2.255	0.233

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FB						
SFL>-FA	-0.220	0.225	0.976	Not Sig	3.784	0.027
SFL>- FB	0.262	0.206	1.270	Not Sig	3.887	0.038
BFL>- FA	-0.045	0.090	0.498	Not Sig	1.057	0.004
BFL>- FB	-0.039	0.113	0.349	Not Sig	1.061	0.003

(*** denotes significance level is 97.5%)

7. Structural Model

The next step in the assessment of the structural model is to validate the hypothesized relationship, (Hair et al., 2017). The data showed that there is no multi-collinearity issue in the data, with the VIF (Variance Inflation Factor) all below the value of 5. At the same time, I evaluated the significance of the path coefficients, the R square, and the predictive relevance of the Q square. The data from the bootstrap analysis shows that the direct relationship between *cultural factors and financial attitude* (β =0.387; t=2.021; p=0.043); cultural factors and financial behavior (β =-0.493; t=2.351; p=0.019); *socialization and financial attitude* (β =-0.220; t=0.976; p=0.329); *socialization and financial behavior* (β =-0.262; t=1.270; p=0.204); bricolage and financial attitude (β =-0.045; t=0.498; p=0.619); bricolage and financial attitude (β =-0.045; t=0.498; p=0.619); bricolage and financial 4.

8. Mediation Analysis

Table 5: Mediation Analysis

	Mean	Standard deviation (STDEV)	T statistics	P values
A0 -> FA -> FB	0.03	0.071	0.421	0.674

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BFL -> FA -> FB	0.006	0.022	0.28	0.78	
CFB -> FA -> FB	-0.052	0.075	0.692	0.489	
SFL -> FA -> FB	0.03	0.061	0.487	0.626	

The transmittal approach is used for evaluating the mediation relationship, (Rungtusanatham et al., 2014). The transmittal approach mainly aims to develop the hypothesis that M mediates the effect of X on Y or that X has an indirect effect on Y through M without needing to articulate hypotheses relating to X to M and M to Y, ((Rungtusanatham et al, 2014). As suggested by (Hair et al., 2017), a bootstrapping with 10,000 subsamples was used to estimate the 95 percent bias-corrected confidence interval of the indirect effect. Further, the decision tree suggested by (Nitzl et al, 2016) has been used for the mediation classification. The results of the mediation analysis show that there is no mediation effect in the model. None of relationships are mediated by the financial attitude. Thus, the cultural factors, social factors, bricolage and agency factors directly impact the financial behavior in the case of indigenous tribes and native people. These factors are really not impacting the financial attitude. Maybe this is because of lack of financial literacy and there is need for more sensitization to build the financial attitude and then impact the financial behavior.

9. Discussion and Analysis

From the PLS-SEM analysis, it becomes apparent that cultural factors have an impact on the financial attitude and financial behavior of the members of the indigenous groups and natives and tribals. The cultural factors or the beliefs, attitude of the members have an impact on the financial behavior of the members of the group. Indigenous groups and tribes generally have their own culture, in terms of norms, social beliefs, social norms, languages, dressing norms which has an impact on the financial attitude and financial behavior of the members of the group of tribals and natives.



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10. Conclusion

The analysis of the study shows that cultural factors have an impact on the financial attitude and financial behavior of the members of the self-help groups or the indigenous tribes or the natives. Thus, the cultural dispositions, social norms, beliefs have a strong impact on the behavior of the groups.

Further Reading

- Aamodt, A., & Nygård, M. (1995). Different roles and mutual dependencies of data, information, and knowledge—An AI perspective on their integration. *Data & Knowledge Engineering*,, 191-222.
- Adam, A.; Sizemore, B. (2013). Parasocial Romance: A Social Exchange Perspective. Interpersona Int. J. Pers. Relatsh, 7, 12-25.
- Aggarwal, P., & McGill, A. L. (2012). When brands seem human, do humans act like brands? *Journal of Consumer Research*, *39*(2), 307-323.
- Alan M Rubin and Mary M Step . (2000). Impact of motivation, attraction and parasocial interaction on talk radio listening . *Journal of broadcasting and electronic media*, 635-652.
- Andersen, K., & Clevenger, J. T. (1963). A summary of experimental research in ethos. *Communication Monographs*, *30*, 59-78.
- Andrew R Chow. (2023, Feburary 23). AI-Human Romances Are Flourishing—And This Is Just the Beginning. *TIME*. Retrieved from https://time.com/6257790/ai-chatbots-love/
- Antheunis, M. L., Valkenburg, P. M., & Peter, J. (2012). The quality of online, offline, and mixed mode relationships among the users of social networking site. *Cyberpsychology: Journal of Psychological Research on Cyberspace*, 6(3), Article 6.



- Auter P.J. (1992). TV that talks back : An experiment validation of the Parasocial Interaction S. *Journal of Broadcasting and Electronic Media*, *36*, 173-181.
- Aw, E.C.X.; Labrecque, L.I. (2020). Celebrity endorsement in social media contexts: Understanding the role of parasocial interactions and the need to belong. *Journal of Consumer Marketing*, 37, 895-908.
- Banwari Mittal and Walfried M Lassar. (1996). The role of personalization in service encounters. *Journal of Retailing*, 95-109.
- Bartneck, C., Kulić, D., Croft, E., & Zoghbi, S. (2009). Measurement instruments for the anthropomorphism, animacy, likeability, perceived intelligence, and perceived safety of robots. *International Journal of Social Robotics*, 1(1), 71-81.
- Bearden, W.O.; Netemeyer, R.G.; Teel, J.E. (1989). Measurement of consumer susceptibility to interpersonal influence. *J. Consum. Res.*, *15*, 473-481.
- Becker, J. M., Klein, K., & Wetzels, M. (2012). Long range planning, 45(5-6), 359-394.
- Becker, J. M., Ringle, C. M., & Sarstedt, M. (2018). Journal of Applied Structural Equation Modelling, 2(2), 1-21.
- Bhattacharjee A and Sanford C. (2006). Influence processes for information technology acceptance : an elaboration likelihood model. *MIS Quarterly*, *30*(4), 805-825.
- Blut, M., Wang, C., Wünderlich, N.V. et al. (2021). Understanding anthropomorphism in service provision: a meta-analysis of physical robots, chatbots, and other AI. *Journal of academic marketing sciences*, 49, 632-658.
- Bond, B. J. (2021). he development and influence of parasocial relationships with television characters: A longitudinal experimental test of prejudice reduction through parasocial contact. *Communication Research*, 48(4), 573-593.



- Bonus, J. A., Matthews, N. L., & Wulf, T. (2021). The impact of moral expectancy violations on audiences' parasocial relationships with movie heroes and villains. *Communication Research*, 48(4), 550-572.
- Burleigh, T. J., Schoenherr, J. R., and Lacroix, G. L. (2013). Does the uncanny valley exist? An empirical test of the relationship between eeriness and the human likeness of digitally created faces. *Comput. Hum. Behav.*, 29, 759–771.
- Burnkrant, Robert E. and Alain Cousineau. (1975). Informational and Normative Social Influence in Buyer Behavior,. *Journal of Consumer Research*, *2*, 206-215.
- Ciechanowski, L., Przegalinska, A., Magnuski, M., & Gloor, P. (2019). In the shades of the uncanny valley: An experimental study of human-chatbot interaction. *Future Generation of Computer Systems*, 92, 539-548.
- Cohen, J. (2013). Statistical power analysis for the behavioral sciences. Academic press .
- Conway J.C. & Rubin A.M. (1991). Psychological predictors of television viewing motivation. *Communication Research*, 18, 443-463.
- Conway, J. C., & Rubin, A. M. (1991). Psychological predictors of television viewing motivation. *Communication research*, *18*(4), 443-463.
- Croes, E. A., & Antheunis, M. L. (1972). Can we be friends with Mitsuku? A longitudinal study on the process of relationship formation between humans and a social chatbot. *Journal of Social and Personal Relationships,*, *38*(1), 279-300.
- Crolic, C., Thomaz, F., Hadi, R., & Stephen, A. T. (2022). Blame the bot: Anthropomorphism and anger in customer-chatbot interactions. *Journal of marketing*, 86(1), 132-148.
- Dai, Y., & Walther, J. B. (2018). Vicariously experiencing parasocial intimacy with public figures through observations of interactions on social media. *Human Communication Research*, 44(3), 322-342.



- Dai, Y., & Walther, J. B. (2018). Vicariously experiencing parasocial intimacy with public figures through observations of interactions on social media. *Human Communication Research*, 44(3), 322-342.
- Darics, E. (2017). E-leadership or "How to be boss in Instant Messaging?" The role of nonverbal communication. *International Journal of Business Communication*, *X*, 1-27.
- De Cicco, R., Silva, S. C., & Alparone, F. R. (2020). Millennials' attitude toward chatbots: An experimental study in a social relationship perspective. *International Journal of Retail and Distribution*, 48(1), 1213-1233.
- Deutsch, Morton and Harold B. Gerard. (1955). A Study of Normative and Informational Influence Upon Individual Judgement, *Journal of Abnormal and Social Psychology*, 51, 629-636.
- Díaz-Boladeras, M., Saez-Pons, J., Heerink, M., and Angulo, C. (2013). Emotional factors in robot-based assistive services for elderly at home,. *EEE RO-MAN: The 22nd IEEE International Symposium on Robot and Human Interactive Communication*. Gyeongju.
- Dixson, M. D., Greenwell, M. R., Rogers-Stacy, C., Weister, T., & Lauer, S. (2017). Nonverbal immediacy behaviors and online student engagement: Bringing past instructional research into the present virtual classroom. *Communication education*, 66, 37-53.
- Donghee Shin. (2021). The effects of explainability and causability on perception, trust, and acceptance: Implications for explainable AI. *International Journal of Human Computer Studies*, 146.
- E. Indriasari, F. L. Gaol and T. Matsuo. (2019). Digital Banking Transformation: Application of Artificial Intelligence and Big Data Analytics for Leveraging Customer Experience in the Indonesia Banking Sector,. 2019 8th International Congress on



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Advanced Applied Informatics (IIAI-AAI), Toyama, Japan, (pp. 863-868). 10.1109/IIAI-AAI.2019.00175.

- Edwards, C., Edwards, A., Stoll, B., Lin, X., & Massey, N. (2019). Evaluations of an artificial intelligence instructor's voice: Social Identity Theory in human-robot interactions. *Computers in human behaviour*, 357-362.
- Epley, N., Waytz, A., & Cacioppo, J. T. (2007). On seeing human: A three factor theory of anthropomorphism. *Psychological review*, *114*(4), 864-886.
- Epley, N., Waytz, A., & Cacioppo, J. T. (2007). On seeing human: A three-factor theory of anthropomorphism. *Psychological Review*, *114*(4), 864-886.
- Erebak, S., & Turgut, T. (2019). Caregivers' attitudes toward potential robot coworkers in elder care. *Cognition technology and work, 21*, 327-336.
- Esposito et al. (2021). Elder user's attitude toward assistive virtual agents: the role of voice and gender. *Journal of Ambient Intelligence and Humanized Computing*, *12*, 4429-4436.
- F. Faul, E. Erdfelder, A. Buchner, A.G. Lang. (2009). Statistical power analyses using G* Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41(4), 1149-1160.
- Ferrario, A., Loi, M., & Viganò, E. (2020). In AI we trust incrementally: A multi-layer model of trust to analyze human-artificial intelligence interactions. *Philosophy & Technology*, 33(3), 523-539.
- Fetscherin M. . (2014). What type of relationship do we have with loved brands? *Journal* of Consumer Marketing , 430-40.
- Field A . (2009). Discovering statistics using SPSS . London : Sage .



- Foster G. (2005). Making friends: A nonexperimental analysis of social pair formation. *Human relations*, 58(11), 1443-1465.
- G Anthony Gorry and Robert A Westbrook . (2011). Once more, with feeling: Empathy and technology in customer care. *Business Horizons*, 125-134.
- Geisser, S. (1974). A predictive approach to the random effect model. *Biometrika*, *61*(1), 101-107.
- George D. & Mallery, M. (2010). SPSS for Window Step by Step : A Simple Guide and Reference 17.0 update (10a ed.). Boston : Pearson .
- Giles, D. C. (2002). Parasocial interaction: A review of the literature and a model for future research. *Media Psychology*, 4(3), 279-305.
- Go, E., & Sundar, S. S. (2019). Humanizing chatbots: The effects of visual, identity and conversational cues on humanness perceptions. *Computers in human behavior*, *97*, 304-316.
- Gobron, S., Ahn, J., Thalmann, D., Skowron, M., and Kappas, A. (2013). Impact study of nonverbal facial cues on spontaneous chatting with virtual humans. *J. Virtual Reality Broadcast*, 19, 1-17.
- Gong, L., and Nass, C. (2007). When a talking-face computer agent is half-human and half-humanoid: Human identity and consistency preference. *Human research communication*, *93*, 163-193.
- Grant, Guthrie & Ball Rokeach. (1991). Television Shopping: A Media System Dependency Perspective. *Communcation research*, 18(6), 773-768.
- H.C. Kim, T. Kramer. (2015). Do materialists prefer the "brand-as-servant"? The interactive effect of anthropomorphized brand roles and materialism on consumer responses. *Journal of consumer research*, 284-299.



- Hair, J.F., Risher, J.J., Sarstedt, M. and Ringle, C.M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, *31*(1), 2-24.
- Han S, Yang H. (2018). Understanding adoption of intelligent personal assistants: a parasocial relationship perspective. *Indus Manage Data Syst.*, *118*(3), 618-36.
- Han, S.; Yang, H. (2018). Understanding adoption of intelligent personal assistants. *Ind. Manag. Data Syst, 118*, 618-636.
- Heider, F. (1958). The psychology of interpersonal relations. New York : Wiley.
- Hellweg, S.A.; Andersen, P.A. (1989). An analysis of source valence instrumentation in the organizational communication literature. *Management Communication Quartely, 3*, 132-159.
- Henkel AP, Čaić M, Blaurock M, Okan M. (2020). Robotic transformative service research: deploying social robots for consumer well-being during Covid-19 and beyond. J Serv Management, 31(6), 1131-48.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the academy of marketing science*, 43(1), 115-135.
- Hertzog, M. (2008). Considerations in Determining Sample Size for Pilot Studies. *Research in Nursing & Health, 31*, 180-191.
- Horton, D., & Wohl, R. R. (1956). Mass communication and para-social interaction. *Psychiatry*, 19.
- Huang, D.-H., & Chueh, H.-E. (2021). Chatbot usage intention analysis: Veterinary consultation. *Journal of Innovation & Knowledge*, 6(3), 135-144.
- Huang, M. H., & Rust, R. T. (2021). A strategic framework for artificial intelligence in marketing. *Journal of the Academy of Marketing Service*, 49(1), 30-50.



- Hulland, J., Baumgartner, H., & Smith, K. M. (2018). Marketing survey research best practices: evidence and recommendations from a review of JAMS articles. *Journal of the Academy of Marketing Science*, 46(1), 92-108.
- Janarthanam, S. (2017). ands-on chatbots and conversational UI development: build chatbots and voice user interfaces with Chatfuel, Dialogflow, Microsoft Bot Framework, Twilio, and Alexa Skills. Packt Publishing Ltd.
- Joseph, W.B. (1982). The credibility of physically attractive communicators: A review. *Journal of advertising*, *11*, 15-24.
- Keller, E.; Berry, J. (2003). *The Influentials: One American in Ten Tells the Other NINE how to Vote, Where to Eat, and What to Buy;*. New York : Simon and Schuster.
- Keller, E.; Berry, J. (2003). *The Influentials: One American in Ten Tells the Other NINE how to Vote, Where to Eat, and What to Buy.* New York : Simon and Schuste.
- Kepuska V, Bohouta G. (2018). Next-generation of virtual personal assistants (microsoft cortana, apple siri, amazon alexa and google home. 2018 IEEE 8th Annual Computing and Communication Workshop and Conference (CCWC). Las Vegas, NV (pp. 99-103). Las Vegas : IEEE .
- Kim J and Rubin AM. (1997). The variable influence of audience activity on media effects. *Communication Research*, 24, 107-135.
- Kim, J.; Song, H. (2016). Celebrity's self-disclosure on Twitter and parasocial relationships: A mediating role of social presence. *Comput. Hum. Behav.*, 62, 570-577.
- Kim, K.S. (2018). The effects of interpersonal attraction on service justice. *Journal of service marketing*, *32*, 728-738.
- Kompatsiari, K., Ciardo, F., Tikhanoff, V., Metta, G., & Wykowska, A. (2019). It's in the eyes: the engaging role of eye contact in HRI. *International Journal of Social Robotics*, 1-11.



- Kong, H. (2013). Face interface will empower employee. *IJACT*, *5*, 193-199.
- Kulathunga, J. C. (2018). Factors Affecting Online Purchase Intention: Effects of Technology and Social Commerce. *International Business Research*, 11.
- Labrecque, L. I. (2014). Fostering consumer-brand relationships in social media environment: The role of parasocial interaction. *Journal of interactive marketing*, 28(2), 134-148.
- Lee, M., & Park, J. (2017). Television shopping at home to alleviate loneliness among older consumers. *Asia Marketing Journal*, 113-134.
- Lee, M., & Park, J. (2017). Television shopping at home to alleviate loneliness among older consumers. *Asia Marketing Journal*, *18*(4), 113-134.
- Levinger G. (1980). Toward the analysis of close relationships. *Journal of Experimental Social Psychology*, *6*, 510-544.
- Lim, C. M., & Kim, Y.-K. (2011). Older consumers' tv home shopping: Loneliness, parasocial interaction, and perceived convenience. *Psychology & Marketing*, 28(8), 763-780.
- Lo, S. K. (2008). The nonverbal communication functions of emoticons in computermediated communication. *Cyberpsychology and behaviour*, *11*, 595-597.
- Lunardo, R. (2016). The interacting effect of virtual agents' gender and dressing style on attractiveness and subsequent consumer online behavior. *Journal of retail consumer services*, *30*, 59-66.
- M. Ashfaq et al. (2020). I, Chatbot: Modeling the determinants of users' satisfaction and continuance intention of AI-powered service agents. *Telematics and Informatics*, 54.
- McCarthy, J. (2007). What is artificial intelligence.



- McCroskey L. L., McCroskey J. C., Richmond V. P. (2006). Analysis and improvement of the measurement of interpersonal attraction and homophily. *Communication Quarterly*, 54(1), 1-31.
- McCroskey, J. C., & McCain, T. A. (1974). The measurement of interpersonal attraction. Speech Monographs, 261-266.
- McCroskey, J. C., & Young, T. J. (1981). Ethos and credibility: The construct and its measurement after three decades. *Communication studies*, *1981*, 24-34.
- McCroskey, J. C., Hamilton, P. R., & Weiner, A. N. (1974). McCroskey, J. C., Hamilton, P. R., & Weiner, A. N. *Human Communication Research*, 42-52.
- McCroskey, J.C.; Hamilton, P.R.; Weiner, A.N. (1974). The effect of interaction behavior on source credibility, homophily, and interpersonal attraction. *Human Communication*, 1, 42-53.
- McCroskey, J.C.; Larson, C.E.; Knapp M.L. (1981). *An introduction to Interpersonal Communication*. Cliffs, New Jersey, USA : Prentice Hall.
- McCroskey, L. L., McCroskey, J. C., & Richmond, V. P. (2006). Analysis and improvement of the mesaurement of interpersonal attraction and homophily. *Communication quarterly*, 54(1), 1-31.
- McCruskey, J.C.; McCain, T.A. (1974). The measurement of interpersonal attraction. *Speech monograph*, *41*, 261-266.
- McCruskey, J.C.; McCain, T.A. (1974). The measurement of interpersonal attraction. *Speech Monogr, 41*, 261–266.
- McCruskey, J.C.; McCain, T.A. (1974). The measurement of interpersonal attraction. *Speech Monogr, 41*, 261-266.



- Miller, D. T., Downs, J. S., & Prentice, D. A. (1998). Minimal conditions for the creation of a unit relationship: The social bond between birthmates. *European Journal of Social Psychology*, 28, 475-481.
- Montaño, D.E.; Kasprzyk, D. (2015). Theory of reasoned action, theory of planned behavior, and the integrated behavioral model. *Health Behav. Theory Res. Pract.*, 70, 231.
- Mori, M. (1970). The uncanny valley. *Energy*, 7, 33-35.
- Mou, Y., (2017). he media inequality: Comparing the initial human-human and human-AI social interactions. *Computers in Human Behavior*, 72, 432-440.
- Nass, C., & Moon, Y. (2000). Machines and mindlessness: Social responses to computers. *Journal of social issues*, 56, 81-103.
- Newberry, C.R.; Klemz, B.R.; Boshoff, C. (2003). Managerial implications of predicting purchase behavior from purchase intentions: A retail patronage case study. *J. Serv. Mark*, *17*, 609-620.
- Ng et al. (2020). Simulating the Effects of Social Presence on Trust, Privacy Concerns & Usage Intentions. *IEEE European Symposium on Security and Privacy workshops*, (pp. 190-199).
- Niculescu, A., Hofs, D., van Dijk, B., and Nijholt, A. (2010). "How the agent's gender influence users' evaluation of a QA system. *Proceedings of the International Conference* on User Science and Engineering (i-USEr 2010). . Shah Alam, Selangor, Malaysia: IEEE.
- Noor, N., Rao Hill, S., & Troshani, I. (2022). Artificial intelligence service agents: role of parasocial relationship. *Journal of Computer Information Systems*, 1009-1023.
- Novak, T. P., & Hoffman, D. L. (2019). Relationship journeys in the internet of things: A new framework for understanding interactions between consumers and smart objects. *Journal of the Academy of Marketing Science*, 47(2), 216-237.



- Novikova, J. (2016). *Designing emotionally expressive behaviour: Intelligibility and predictability in human-robot interaction.* England: University of bath.
- Pelachaud, C. (2009). Modelling multimodal expression of emotion in a virtual agent. *Philosophical Transactions of the Royal Society B: Biological Sciences, 364*, 3539-3548.
- Pornpitakpan, C. (2004). The effect of celebrity endorsers' perceived credibility on product purchase intention: The case of Singaporeans. *Journal of international consumer marketing*, *16*(2), 55-74.
- Price, L.L., Feick, L.F. and Higie, R.H. (. (1987). Preference heterogeneity and coorientation as determinants of referent influence in the choice of service providers. *Working paper, Department of Marketing, Katz Graduate School of Business, University of Pittsburgh*, University of Pittsburgh.
- Putri, A. (1998). WHAT SAMPLE SIZE is "ENOUGH" in INTERNET SURVEY RESEARCH? Interpersonal Computing and Technology: An Electronic Journal for the 21st Century AECT. 6. New Zealand: AECT.
- Rawlins W. K. (2017). Friendship matters: Communication, dialectics and the life course.
- Rihl, A., & Wegener, C. (2019). YouTube celebrities and parasocial interaction: Using feedback channels in mediatized relationships. *Convergence: The International Journal of Research in New Media Technologies*, 25(3), 554-566.
- Ring, L., Utami, D., and Bickmore, T. (2014). The right agent for the job? The effects of agent visual appearance on task domain,. *Proceedings of International Conference on Intelligent Virtual Agents (IVA 2014)*, (pp. 374-384). Springer International Publishing.
- Ringle, C. M., Wende, S., and Becker, J.-M. (2015). SmartPLS 3." Boenningstedt: SmartPLS GmbH. Germany. Retrieved from http://www.smartpls.com.



- Rubin AM & Rubin RB. (1985). Interface of personal and mediated communication : A research agenda. *Critical studies in Mass Communication*, 2, 36-53.
- Rubin, R. B., & McHugh, M. P. (1987). Development of parasocial interaction relationships. *Journal of Broadcasting and Electronic Media*, *31*, 279-292.
- Rubin, R.B.; McHugh, M.P. (1987). Development of parasocial interaction relationships. *Journal of Broadcasting Electronic Media*, 31, 279-292.
- Rust RT. (2019). The future of marketing. Int J Res Mark., 7(1), 15-26.
- Rzepka, C., Berger, B., & Hess, T. (2022). Voice assistant vs. Chatbot–examining the fit between conversational agents' interaction modalities and information search tasks. *Information Systems Frontiers*, 24(3), 839-856.
- S. Fournier. (1998). Consumers and their brands: Developing relationship theory in consumer research. *Journal of Consumer Research*, 456-472.
- Salem, M., Eyssel, F., Rohlfing, K., Kopp, S., & Joublin, F. (2013). To err is human (like): Effects of robot gesture on perceived anthropomorphism and likability. *International journal of social robotics*, 5(3), 312-323.
- Sarstedt M, C. M. (2017b). Treating Unobserved Heterogeneity in PLS-SEM: A Multimethod Approach", in Noonan R and Latan H (Eds),. *Partial Least Squares Structural Equation Modelling: Basic Concepts, Methodological Issues and Applications*, 199-217.
- Sheehan, B., Jin, H. S., & Gottlieb, U. (2020). Customer service chatbots: Anthropomorphism and adoption. *Journal of business research*, *115*, 14-24.
- Shmueli, G., Sarstedt, M., Hair, J.F., Cheah, J.-H., Ting, H., Vaithilingam, S. and Ringle, C.M. (2019). Predictive model assessment in PLS-SEM: guidelines for using PLSpredict", *European Journal of Marketing*, 53(11), 2322-2347.



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Indexed in: Crossref, ROAD & Google Scholar

- Sienkiewicz, A. (2021, January 16). Chatbot Statistics and Trends You Need to Know in 2021. Retrieved from https://www.tidio.com/blog/chatbot-statistics/
- Sokolova, & Kefi. (2020). Instagram and YouTube bloggers promote it, why should I buy? How credibility and parasocial interaction influence purchase intentions. . *Journal of retailing and consumer services*.
- Sparrow, R. (2020). Do robots have race? Race, social construction, and HRI. *IEEE Robot. Automat. Magazine*, pp. 144-150.
- Stone, M. (1974). Cross-validatory choice and assessment of statistical predictions. *Journal of the Royal Statistical Society:Series B (Methodological),*, 36(2), 111-133.
- Straßmann, C., and Krämer, N. C. (2017). A categorization of virtual agent appearances and a qualitative study on age-related user preferences,. *Proceedings of International Conference on Intelligent Virtual Agents (IVA 2017)* (pp. 413-422). Springer International Publishing.
- Stroessner, S. J., & Benitez, J. (2019). The social perception of humanoid and nonhumanoid robots. *International Journal of Social Robotics*, *11*(2), 305-315.
- Su, B.-C.; Wu, L.-W.; Chang, Y.-Y.-C.; Hong, R.-H. (2021). Influencers on Social Media as References: Understanding the Importance of Parasocial Relationships. *Sustainability*, *13*, 10919.
- Tesser, A. (1988). Toward a self-evaluation maintenance model of social behavior. *Advances in Experimental Social Psychology*, 21, 181-227. doi:10.1016/S0065-2601(08)60227-0
- Thomas MJ, Wirtz B.W. and Weyerer J.C. (2019). Determinants of online review credibility and its impact on consumers purchase intention. *Journal of Electronic Commerce Research*, 1, 1-20.



- Thomas, MJ, Mirtz BW and Weyerer JC. (2019). Determination of online review credibility and its impact on consumer purchase intention. *Journal of Electronic Commerce Research*, 20(1), 1-20.
- Tian Xie Xinyi Yang Donald Rose. (2023). Converse Task-Oriented Dialogue System Simplifies Chatbot Building, Handles Complex Tasks. *Salesforce AI Research*. Retrieved from https://blog.salesforceairesearch.com/converse-task-oriented-dialogue-system/
- Tillmann-Healy L. M. (2003). Friendship as method. *Qualititative Inquiry*, 9(5), 729-749.
- Winterich, K.P.; Nenkov, G.Y. (2015). Save like the Joneses: How service firms can utilize deliberation and informational influence to enhance consumer well-being. *J. Serv. Res.*, *18*, 384-404.
- Wünderlich, N.V., and Paluch, S. (2017). A nice and friendly chat with a bot. 38th International conference on information systems, Association for Information Systems, (pp. 1-11).
- Xiang, L., Zheng, X., Lee, M. K. O., & Zhao, D. (2016). Exploring consumers' impulse buying behavior on social commerce platform: The role of parasocial interaction. *International Journal of Information Management*, 36(3), 333-347.
- Xu, K., & Lombard, M. (2016). Media are social actors: Expanding the CASA paradigm in the 21st Century . *Presented at the Annual Conference of the International Communication Association, Fukuoka, Japan*, (pp. Presented at the Annual Conference of the International Communication Association, Fukuoka, Japan).
- Xuan Cu Le. (2003). Inducing AI powered chatbots use for customer purchase : the role of information value and innovative technology . *Journal of systems and information technology* .
- Yuan, C. L., Kim, J., & Kim, S. J. (2016). Parasocial relationship effects on customer equity in the social media context. *Journal of business research*, 69(9), 3795-3803.



- Zhang, T., Kaber, DB., Zhu, B., Swangnetr, M., Mosaly, P., Hodge, L. (2010). Service robot feature design effects on user perceptions and emotional responses. *Intelligent Service Robotics*, *3*(2), 73-88.
- Zhang, T., Kaber, DB., Zhu, B., Swangnetr, M., Mosaly, P., Hodge, L. (2010). Service robot feature design effects on user perceptions and emotional responses. *Intelligent service robotics*, *3*(2), 73-88.
- Zheng et al. (2020). Role of technology attraction and parasocial interaction in social shopping websites. *International Journal of Information Management*, *51*, 102-104.
- Zhou T. (2021). Understanding online health community users information adoption intention : an elaboration likelihood model perspective. *Online Information Review*, 46(1), 134-146.



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Reference

- Avolio, B. J., Yammarino, F. J., & Bass, B. M. (1991). Identifying common methods variance with data collected from a single source: An unresolved sticky issue. *Journal of Management*, 17(3), 571-587.
- Cheah, J. H., Roldán, J. L., Ciavolino, E., Ting, H., & Ramayah, T. (2021). Sampling weight adjustments in partial least squares structural equation modeling: guidelines and illustrations. *Total Quality Management & Business Excellence*, 32(13-14), 1594-1613.
- Sarstedt et al. (2018). The use of sampling methods in advertising research : A gap between theory and practice. *International Journal of Advertising*, *37*(4), 650-663.
- Yao, W., Baumann, C., Tan, L.P. (2015). Wine Brand Category Choice and Confucianism: A Purchase Motivation Comparison of Caucasian, Chinese and Korean Consumers. In: Martínez-López, F., Gázquez-Abad, J., Sethuraman, R. (eds) Advances in National Brand and Private Label Marketing. *Proceedings in Business and Economics. Springer*. Cham : Springer
- MacKenzie, S. B., & Podsakoff, P. M. (2012). Common method bias in marketing: Causes, mechanisms, and procedural remedies. *Journal of retailing*, 88(4), 542-555.
- Anshuman Sharma, Yogesh K Dwivedi, Vikas Arya and Muhammad Qutubddin Siddiqui
 . (2021). Does SMS advertising still have relevance to increase consumer purchase
 intention? A Hybrid PLS-SEM-Neural Network Modelling Approach. *Computers in Human Behaviour*.
- Ned Kock. (2015). Common method bias in PLS-SEM: A full collinearity assessment approach. *International Journal of e Collaboration*, 11(4), 1-10.
- Hair Jr, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2017). A primer on partial least squares structural equation modeling (PLS-SEM). Sage publications.



- Hair Jr, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2017). A primer on partial least squares structural equation modeling (PLS-SEM). Sage Publications .
- Hair, J F, G T M Hult, C M Ringle and M Sarstedt. (2017). A Primer on Partial Least Squares Structural Equation Modelling. California : Sage Publications.
- Rungtusanatham, M., Miller, J. W., & Boyer, K. K. (2014). Theorizing, testing, and concluding for mediation in SCM research: tutorial and procedural recommendations. *Journal of Operations Management*, *32*(3), 99-113.
- Nitzl, C., Roldan, J.L. and Cepeda, G. (2016). "Mediation analysis in partial least squares path modelling : Helping researchers discuss more sophisticated models. *Industrial Management & Data Systems*, 116(9), 1849-1864.