
Motivation, Opportunity and Risk-Taking Propensity Influence on LCIs' Policy Formulation Ability and Engagement Behaviour: Extension of the MOA Model

Robinah Nabafu

Department of Applied Computing and Information Technology, Faculty of Computing and Informatics, Makerere University Business School, Uganda

Email: rnabafu@mubs.ac.ug

Alain Vilard Ndi Isoh 

Information and Communication Technology University, Cameroon

Email: alainvilard.isoh@ictuniversity.edu.cm

Geoffrey Mayoka Kituyi 

Department of Computer Science and Engineering, Faculty of Computing and Informatics, Makerere University Business School, Uganda

Email: gkituyi@mubs.ac.ug

Musa Bukoma Moya

Department of Applied Computing and Information Technology, Faculty of Science Education, Makerere University Business School, Uganda

Email: mmoya@mubs.ac.ug

Oneurine Ngwa

Information and Communication Technology University, Cameroon

Email: oneurine@ictuniversity.edu.cm

Victor Mbarika

Information and Communication Technology University, Cameroon

Email: victor.mbarika@ictuniversity.org

Abstract

Local Council Ones (LCIs) in Uganda are considered key in giving realistic and representative views for policy formulation following their continuous interaction with community members yet their engagement levels are still low. Low engagement in policy formulation could be attributed to limited research done in their context to know what could influence their engagement. This paper examined the role of motivation, opportunity, and risk-taking propensity in improving their ability and engagement behaviour. This study postulated that; motivation, opportunity and risk-taking propensity influence ability and engagement and the relationship between risk-taking propensity and engagement are moderated by gender. A quantitative research method was used to collect data from 185

Motivation, Opportunity and Risk-Taking Propensity Influence on LCIs' Policy Formulation Ability and Engagement Behaviour: Extension of the MOA Model

Robinah Nabafu, Alain V. N. Isoh, Geoffrey M. Kituyi, Musa B Moya, Oneurine Ngwa & Victor Mbarika

LCIs in four cities and four districts in Uganda using a survey questionnaire. Validity and reliability of the study instrument was tested using SPSS while structural equation model for testing the formulated hypothesis was designed using SEM. Results reveal that; motivation, opportunity and risk-taking propensity influence ability. Ability, risk-taking propensity and motivation influence engagement while ability partially mediates the relationship between motivation, risk-taking propensity and engagement but fully mediates the relationship between opportunity and engagement. Gender does not moderate the relationship between risk-taking propensity and engagement. This study extended the Motivation, Opportunity, and Ability (MOA) model by adding risk-taking propensity which has a partial influence on engagement. The practical implication is that these findings can be used to improve LCIs' engagement in policy formulation. Policy formulators should therefore put much emphasis on increasing LCIs' motivation and risk-taking propensity by considering their views and formulating inclusive and representative policies.

Keywords: Citizen engagement, MOA model, local council ones (LCIs), e-participation and policy formulation.

<https://dx.doi.org/10.4314/udslj.v17i2.10>

Introduction

There has been increased citizen use of e-participation initiatives in both developed and developing countries given its potential to improve citizen engagement in policy formulation through increased access to participatory information, convenience, and cost-effectiveness (Hassan & Hamari, 2019). However, citizens' engagement levels in policy formulation through e-participation in developed countries have been higher and more successful than in developing countries yet the realization of e-participation benefits and formulation of inclusive and representative policies depend on citizens' engagement levels (Nabafu et al., 2021; Yuan & Gasco-Hernandez, 2021). The variance in engagement levels through e-participation between developed and developing countries was witnessed most during COVID-19 when citizens in developed countries engaged more in crisis management through e-participation than developing countries after social distancing and isolating citizens in their respective homes (Cem et al., 2021; World Development Reports, 2021). However, amidst low citizen engagement levels in developing countries, in Uganda, some LCIs partly used e-participation to work hand in hand with the District task force to manage Covid-19. Their engagement played a key role in representing their communities by giving practical views on crisis management given that they knew more about the problems affecting their communities than top-level officials (Macaulay et al., 2022). Thus, their engagement through e-participation led to the successful management of Covid-19 in Ugandan communities (Macaulay et al., 2022). The successful experience in managing COVID-19 with the engagement of LCIs in giving views through e-participation made it necessary to have them continuously engage in the formulation of policies and



interventions for crisis management in other important activities like water, health, and education field (Liu & Wen, 2021; Sakurai & Murayama, 2019). However, the dilemma of continuity of LC1 engagement through e-participation in giving views and opinions for policy formulation is limited knowledge of key factors capable of continuously influencing their engagement behaviour given limited research carried out in their context. Yet their engagement could continuously lead to the formulation of representative policies and interventions that would make all community members feel part of governance, own and comply with the policies formulated and build trust in the government (Liu & Wen, 2021).

Much as scholars like the World Development Reports, (2021) and Mohamed et al., (2018) have reported that the limited engagement of citizens in policy formulation and crisis management in developing countries like Uganda could be attributed to problems like the digital divide as a result of a lack of reliable and affordable access, limited resources to acquire the required engagement devices like Smart Phones and Internet bundles, lack of clear roles, and failure by policy formulators to include their views and opinions during policy formulation, almost no research has been done in the context of LC1s. This study, therefore, extended the MOA model of motivation, opportunity, and ability with risk-taking propensity and gender to predict their influence on LCIs' ability and engagement behaviour (MacInnis, Moorman, & Jaworski, 1991). Thus, this study examined the influence of motivation, opportunity, and risk-taking propensity on LCIs' ability and engagement behaviour, the mediating role of ability in the relationship between motivation, opportunity, risk-taking propensity, and engagement, and lastly the moderating role of gender in the relationship between risk-taking propensity and engagement. The key hypothesis tested were: H1a, H1b, and H1c stating that; There is a significant influence of motivation, opportunity, and risk-taking propensity on LCIs' ability, H3a, H3b, H3c, and H3d stating that; There is a significant influence of motivation, opportunity, risk-taking propensity and ability on LCIs' engagement, H2a, H2b and H2c stating that; Ability mediates the relationship between motivation, opportunity, risk-taking propensity, and engagement and lastly, H4a stating that; Gender moderates the relationship between risk-taking propensity and engagement.

Empirical Literature Review

E-participation is defined as citizens' use of Information and Communication Technology tools like Smart Phones to engage in policy formulation and decision-making (Nabafu et al., 2021). E-Participation is also defined as the willingness of a government to use ICTs to provide high-quality information and effective communication tools for the specific purpose of empowering people to be able to participate in consultations and decision-making, in their capacity as consumers of public services and as citizens (UNDESA, 2015).

E-participation is one of the three concepts of e-government which has drawn little attention in Uganda due to several barriers and ignorance of the likely success factors. Its major objectives include; improving access to information, promoting participation in policy formulation, and empowering individual citizens to benefit society as a whole (Tajedo-Romero et al., 2022). E-participation is associated with benefits like; acting as a mechanism that allow citizens in a country to collect information, share knowledge, and increase the quality of government processes (Tajedo-Romero et al., 2022). Citizen engagement on the other hand is defined as individual or group activity aimed at addressing issues of public concern in either political or non-political areas (Macaulay *et al.*, 2022). Citizen engagement once successfully embraced by citizens can lead to the enhancement of democratic engagement, improvement in the quality of decisions made and policies formulated, and development of the knowledge and capacity of citizens (Macaulay et al., 2022)

State of E-Participation in Developed and Developing Countries

The use of e-participation began in southern Brazil and has equally spread to African countries Uganda inclusive. In Brazil, citizen participation led to decentralization with municipalities put in charge of nearly 15% of all public spending under participatory budgeting. This participatory budgeting helped to move past the confines of representative democracy and allowed equal participation, solidarity, fair representation and allocation of public resources, and gave citizens a chance to identify and select projects deemed significantly arguent in their communities (Wampler & Touchton, 2017). In Indonesia, participatory budgeting followed a consensus-based model of decision-making, and where consensus failed voting became the next option (Wampler & Touchton, 2017). In Kenya, participatory budgeting just like in Indonesia embraced the consensus-based model of decision-making to unite disparate communities, overcome differences and create shared ownership of the programs. Priority was given to small-scale projects like health, water, education and agriculture (Wampler & Touchton, 2017). In Uganda, e-participation initiatives like Uganda Watch, Me and My leader, and National Government Portal were put in place to support citizen engagement through e-participation. These platforms are being used in areas like e-informing, e-decision-making, and e-policing. These initiatives were meant to support e-participation by decentralizing and shifting the policy formulation power from the national government to citizens at local governments and community levels (Nilsson & Barbutiu, 2019). According to Wampler, McNulty, and Touchton, (2021), participatory budgeting programs have helped to enhance governance, improve social well-being, and empowered the people in countries it has been embraced.



It's however noted that, though many countries around the globe have adopted e-participation, its adoption in developing countries is still low and challenging due to the digital divide, high illiteracy levels, and poverty faced during implementation and adoption (Mishra, Sen, & Kumar, 2017). Munoz and Bolivar (2021) in their study of comparison of e-participation between developed and developing countries reported that developed countries have implemented and adopted more e-participation initiatives than developing countries with developed countries undertaking the highest number of smart projects and making more e-participation tools available for citizen engagement in public decisions than developing countries. Thus e-participation implementation and adoption in developed countries is at the macro level while developing countries' e-participation focus is on the micro level though there is hope for improvement given the determination exhibited (Munoz & Bolivar, 2021).

Potential of E-participation in Increasing Engagement of Citizens in Policy Formulation

E-participation has got a high potential of increasing citizen engagement in policy formulation in developing countries like Uganda through enhancing public problem definition and identification of acceptable policy options, facilitating dialogue to support policy inclusiveness, and ensuring receipt of feedback while monitoring and evaluating public policy programs and their outcomes (Macaulay et al., 2022). In addition to that, the Tajedo-Romero et al., (2022) also emphasized that e-participation has the potential of enabling broader participation of citizens in matters concerning them. This could be through, reaching a wider audience, acquiring diverse technical and communicative skills, informed contributions through providing relevant information in a format that is both more accessible and understandable to the target audience, and a variety of ideas through deliberative debate with a wider audience (Tajedo-Romero et al., 2022). These interactions could be strengthened through; e-information, e-consultation, and e-decision-making to empower citizens through the co-design of policy options and the co-production of service components and delivery modalities (UNDESA, 2015). The application of the MOA model of motivation, opportunity, and ability by MacInnis, Moorman, and Jaworski, (1991) was deemed fit to support LCIs use of electronic tools like Smartphones under the arrangement of e-participation to ensure effective engagement in policy formulation in Uganda.

Role of Local Council Ones (LCIs) in their Communities in Uganda

Elected local Council Ones (LCIs) are also known as village chairpersons and these are leaders locally elected by communities and care deeply about helping the community and having influence over the people of their community (Oiko et al., 2019). The LCIs in Uganda have the role of organizing the village administration, carrying out village developments, leading and representing their communities by engaging in community

activities and encouraging them to participate in government-related activities like decision-making. These LCIs provide education, social care, domestic safety, and waste and recycling services. Thus, LCIs' engagement in policy formulation through e-participation is very crucial in Uganda (Abdul & Woods, 2015).

Theoretical Perspectives of the Study

There are many theories of information systems designed to guide users in different aspects of user behaviour and among them include; the UTAUT model by Venkatesh et al., (2012) with performance expectancy, effort expectancy, social influence, facilitating conditions, behavioural intentions, and user behaviour variables, Technology Acceptance Model by Davis (1989) with perceived usefulness and perceived ease of use, attitude, intention, and user behaviour variables, MAPS model by Sykes, Venkatesh, and Gosain, (2009) with Network Density, Network Centrality and User Behaviour, COM-B model by Michie, Stralen, and West, (2011) with capability, opportunity, motivation, and behaviour change and MOA model by MacInnis, Moorman, and Jaworski, (1991) with variables of motivation, opportunity and ability, and many others. This study adapted the MOA model by MacInnis, Moorman, and Jaworski, (1991) with three variables of motivation, opportunity, and ability. The justification for its choice is the clarity and simplicity in explaining how citizens' behaviour is influenced. The model postulates that motivation, opportunity, and ability factors influence user behaviour. Motivation according to Tweneboah-Koduah, Mann, and Adams, (2020) is defined as citizens' readiness, willingness, interest, and desire to engage in policy formulation through e-participation. Opportunity is an external environmental factor that favours or constrains a behaviour (Lai, Hsiao, & Hsieh, 2018) while ability is the existence of necessary resources required for citizens to engage in policy formulation through e-participation (Tweneboah-Koduah, Mann, & Adams, 2020). This Model's strength is in explaining the factors that influence users' technology adoption behaviour in a more understandable way though it has a weakness of not giving a deeper analysis to understand people's confidence in the engagement process.

Hypothesis Testing

Influence of Motivation on LCIs' Ability and Engagement Behaviour

Motivation according to MacInnis, Moorman, and Jaworski, (1991) is defined as citizens' readiness, willingness, interest, and desire to engage in policy formulation through e-participation to achieve self-related and social-related benefits of self-esteem and social status. Motivation requires putting effort to ensure that direction of users' behaviour is in line with what they want to achieve. It is one of the important factors for understanding and managing users' behaviour because it explains why people behave in a particular way (Bergstrom & Martinez, 2016). Motivation is categorized into intrinsic and extrinsic



motivation whereby intrinsic motivation means stable personality traits and is supported by access to necessary resources (Pellikaan, 2021). While extrinsic motivation is generated through the external factors that drive a user and are short-term because they are connected with specific, tangible outcomes and can only improve productivity under certain conditions (Pellikaan, 2021). Motivation has a direct influence on user behaviour (Syed Zwick, 2019; Bergstrom & Martinez, 2016). Motivation and abilities are the key factors that influence user behaviour (Benedjma & Mahimoud, 2021). Findings of MacInnis, Moorman, and Jaworski, (1991) found that motivation, opportunity, and ability influence user behaviour. However, they contradict with results of Naranjo- Zolotov, Oliveira, and Casteleyn, (2019) which revealed that motivation influences behavioural intentions. This study tested the influence of motivation on LCIs' ability and engagement behaviour by hypothesizing that:

- H1a. Motivation has a significant influence on LCIs' ability.
- H1b. Motivation has a significant influence on LCIs' engagement behaviour.
- H1c. Ability mediates the relationship between motivation and engagement.

This implies that motivation influence both ability and engagement and ability partially mediate the relationship between motivation and engagement behaviour.

Influence of Opportunity on LCIs' Ability and Engagement Behaviour

Opportunity is the extent to which external circumstances facilitate the performance of a behaviour (Tweneboah-Koduah, Mann, & Adams, 2020). In the context of this study, an opportunity is defined as the availability and existence of all the necessary resources in terms of ICT infrastructure, support of political Institutions, time, and social capital to enable user behaviour. Opportunity is depicted in form of financial resources, cultural exposure, career opportunities, availability of relevant information, and income to enable change in intentions and user behaviour (Ou-Yang *et al.*, 2014). Benedjma and Mahimoud, (2021) in their study reported a strong influence of opportunity on behavioural intentions. On the contrary, Ukenna and Nkamnebe, (2017) findings reported a direct influence of opportunity on user behaviour while Syed Zwick, (2019) findings reported that opportunity mediates the relationship between behavioural intentions and user behaviour. This study tested the influence of opportunity on LCIs' ability and engagement by hypothesizing that;

- H2a. Opportunity has a significant influence on LCIs' ability.*
- H2b. Opportunity has a significant influence on LCIs' engagement Behaviour.*
- H2c. Ability mediates the relationship between opportunity and engagement.*

This implies that opportunity has a significant influence on both ability and engagement and ability partially mediates the relationship between opportunity and engagement.

Influence of Risk-taking propensity on LCIs' Ability and Engagement Behaviour

Risk-taking propensity are behaviour and willingness of individuals to openly undertake potential risks for a positive outcome in a situation where negative consequences are expected (Jung, Kang, & Choi, 2020). It refers to individuals taking chances in any decision they make (Razak *et al.*, 2020). This risk-taking propensity is likely to increase if there is a favourable condition in place created by the government (Jung, Kang, & Choi, 2020). Risk-taking propensity mediates the relationship between social capital and user behaviour (Jung, Kang, & Choi, 2020). Besides that, Zhang and Cain, (2017) found a positive relationship between risk-taking propensity and ability. On the contrary, Razak *et al.*, (2020) findings found that risk-taking propensity has a strong influence on intentions. While Gerry *et al.*, (2008) reveal that risk-taking propensity has a significant influence on motivation toward user behaviour. Yet, Pavlou, (2003) results revealed that perception of risk does not affect engagement. This study tested the influence of risk-taking propensity on LCIs' ability and engagement behaviour by hypothesizing that;

H3a. Risk-taking propensity has a significant influence on LCIs' ability.

H3b. Risk-taking propensity has a significant influence on LCIs' engagement behaviour.

H3c. Ability mediates the relationship between Risk-taking propensity and LCIs' engagement.

This implies that risk-taking propensity has a significant influence on both ability and LCIs' engagement, and ability partially mediates the relationship between risk-taking propensity and engagement.

Influence of Ability on LCIs' Engagement Behaviour

Ability is an individual's internal capacities, knowledge, proficiencies, and skills toward the performance of a behaviour (Tweneboah-Koduah, Mann, & Adams, 2020). Implying that an individual's skills and capabilities influence them to engage in certain behaviour. Thus, citizens who possess IT skills and have strong social networks are more capable and likely to engage in a behaviour than their counterparts. Ability has a direct influence on user behaviour (Amosun *et al.*, 2022; Benedjma & Mahimoud, 2021; Newman *et al.*, 2019). On the contrary, the findings of Rahbargazi, Morteza, and Baghban, (2020) report that ability influences motivation. This contradicts the findings of Tweneboah-Koduah, Mann, and Adams, (2020), which reported an indirect influence of ability on user behaviour through behavioural intentions. This study tested the influence of ability on LCIs' engagement behaviour by hypothesizing that:



H4a. Ability has a significant influence on LCIs' engagement behaviour.

H1c, H2c, H3c. Ability mediates the relationship between motivation, opportunity, risk-taking propensity, and engagement.

This implies that ability has a significant influence on LCIs' engagement, and it partially mediates the relationship between motivation, opportunity, risk-taking propensity, and engagement.

Moderation of Gender in the relationship between LCIs' Risk-taking Propensity and Engagement

Moderation factors are confounding variables that strengthen the relationship between the independent variables and dependent variables (Naranjo- Zolotovu, Oliveira, & Casteleyn, 2019). According to Venkatesh et al., (2003) different gender are favoured differently in different circumstances and activities depending on what is involved in performing that particular task in terms of energy, abilities, and persistence. This study tested the influence of gender on the relationship between LCIs' risk-taking propensity and engagement by hypothesizing that:

H4c. Gender moderates the relationship between LCIs' risk-taking propensity and engagement.

This implies that gender strengthens the relationship between risk-taking propensity and engagement.

Conceptual Framework

The conceptual framework in figure 1 shows the hypothesized influence of independent variables on the mediating and dependent variable

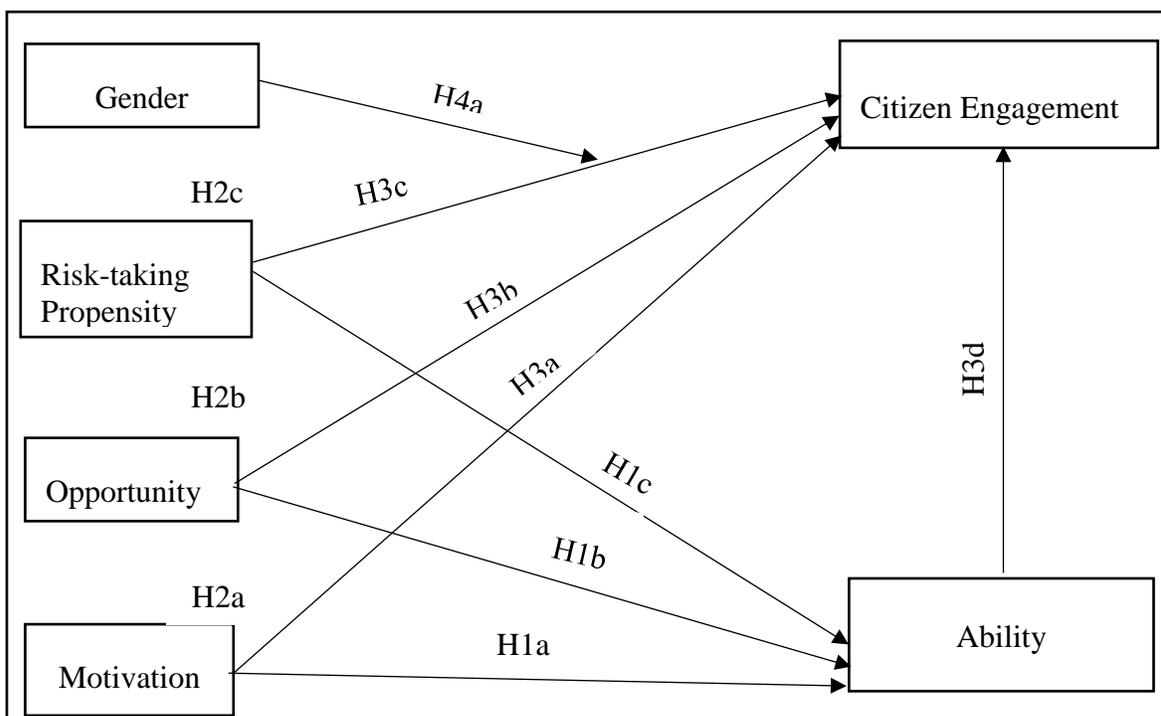


Figure 1: Conceptual Framework of the Study Variables

Figure 1 shows that motivation, opportunity, and risk-taking propensity are independent variables (IV), ability is a mediating variable (MV) while engagement is a dependent variable (DV). These study variables were derived from the MOA model of MacInnis, Moorman, and Jaworski, (1991) and literature. The relationships between the study variables are reflected in the study hypotheses H1a, H1b, and H1c that; there is a significant influence of motivation, opportunity, and risk-taking propensity on LCIs' ability, H3a, H3b, H3c, and H3d; there is a significant influence of motivation, opportunity, risk-taking propensity and ability on LCIs' engagement, H2a, H2b, and H2c that; ability mediates the relationship between motivation, opportunity, risk-taking propensity, and LCIs' engagement behaviour and H4a that; gender moderates the relationship between risk-taking propensity and engagement. Thus, this study aimed at finding out whether these hypotheses are supported or not supported by the study findings.

Methodology

This study used a quantitative research method to collect data from 185 villages, sixteen parishes, sixteen sub-counties, sixteen counties, four cities comprising Kampala, Mbarara, Mbale, and Lira, and four rural districts comprising Buhweju, Buvuma, Kween, and Abim in four regions of Western, Central, Eastern, and Northern Uganda. A three-level multistage sampling method was used to arrive at the target study area. The first stage involved the division of the country into four regions Western, Central, Eastern, and Northern region in Uganda. Then, the classification of rural districts and cities was done using the stratified sampling method. This was followed by the selection of one rural district and one city from each region using a simple random sampling method. In the second stage, a simple random sampling method was used to pick two counties, two sub-counties, and two parishes from each selected district/city and the proportionate number of villages per parish. Thereafter, the total number of 359 villages from the selected parishes was determined based on National Population and Housing Census, (2014). A survey questionnaire designed on a 5-point Likert scale from a range of 1 to 5 where 1 meant Strongly Disagree and 5 meant Strongly Agree was used to collect data from a sample size of 185 LC1s in 185 villages.

The sample size was determined from the total population of 359 using Krejcie and Morgan's table (Krejcie & Morgan, 1970). The justification for the selection of all four regions was to ensure equal representation of all citizens in the entire country, to cater to urban-based and rural-based LC1s and the justification for use of multistage and stratified sampling methods was its ability to help in narrowing down from a bigger geographical area in form of regions and districts/cities to villages/wards in the selected study areas. The target respondents were LC1s. The purposive sampling method was used to select only



LCIs heading the selected villages. The justification for the selection of LCIs was the knowledge they have on most of the community-related problems following their connection and continuous interaction with community members (Mişcoiu, 2019). Out of 185 distributed survey questionnaires only 179 were returned and two were rejected because of being incomplete and having the likelihood of affecting the results. Thus, data from 177 questionnaires were analyzed using SPSS to test validity and reliability of the study instrument, MedGraph by Jose to determine mediation, and SEM to design a structural equation model to test the set hypotheses. Measurement of study variable motivation was done using items from Schouten, Valkenburg, and Peter, (2007), the opportunity was measured using items from MacInnis, Moorman, and Jaworski, (1991), Risk-taking propensity was measured using items from Josef *et al.*, (2016), and ability was measured using items from Martins *et al.*, (2018) and Simeonova *et al.*, (2017) while engagement was measured using items of Martins *et al.*, (2018), and Naranjo- Zolotov, Oliveira and Casteleyn, (2019). Ethical consideration was ensured by first obtaining permission from sub-county chiefs before collecting data and gender equality was ensured by allowing both male and female respondents to participate in the study.

Findings

The results obtained from primary data collected from the field are presented in the subsequent tables below;

Table 1: Assessment of Normality and Measurement of Reliability and Validity

Variable	Cronbach	AVE	DV	Skewness	c.r.	kurtosis	c.r.
Motivation	0.747	0.6760	0.8221	-1.339	-7.270	3.596	9.767
Opportunity	0.796	0.7026	0.8382	-0.432	-2.346	0.357	0.970
Ability	0.796	0.6164	0.7851	0.588	3.192	2.467	6.700
Risk-taking Propensity	0.711	0.6578	0.8110	-0.190	-1.031	0.385	1.045

Normality tests were conducted using skewness and Kurtossi and the results show that data was normally distributed since it was between -1 and +1 which is in the required acceptable range of George and Mallery, (2010). Reliability, Convergent Validity (AVE), and Divergent Validity (DV) were computed. The reliability for all study variables was 0.7 and above (0.74, 0.79, 0.79, 0.71) respectively, (Werts, Linn, & Joreskog, 1974). Convergent validity (AVE) for all variables was above 0.50 (0.67, 0.70, 0.79, and 0.71) respectively, (Hair, Babin, & Krey, 2017; Fornell & Lacker, 1981). And Divergent Validity was greater than the squared multiple correlations between the study constructs, (Fornell & Lacker, 1981).

Motivation, Opportunity and Risk-Taking Propensity Influence on LCIs' Policy Formulation Ability and Engagement Behaviour: Extension of the MOA Model

Robinah Nabafu, Alain V. N. Isoh, Geoffrey M. Kituyi, Musa B Moya, Oneurine Ngwa & Victor Mbarika

Structural Equation Model

Figure 2 presents the SEM model used to test the study hypotheses:

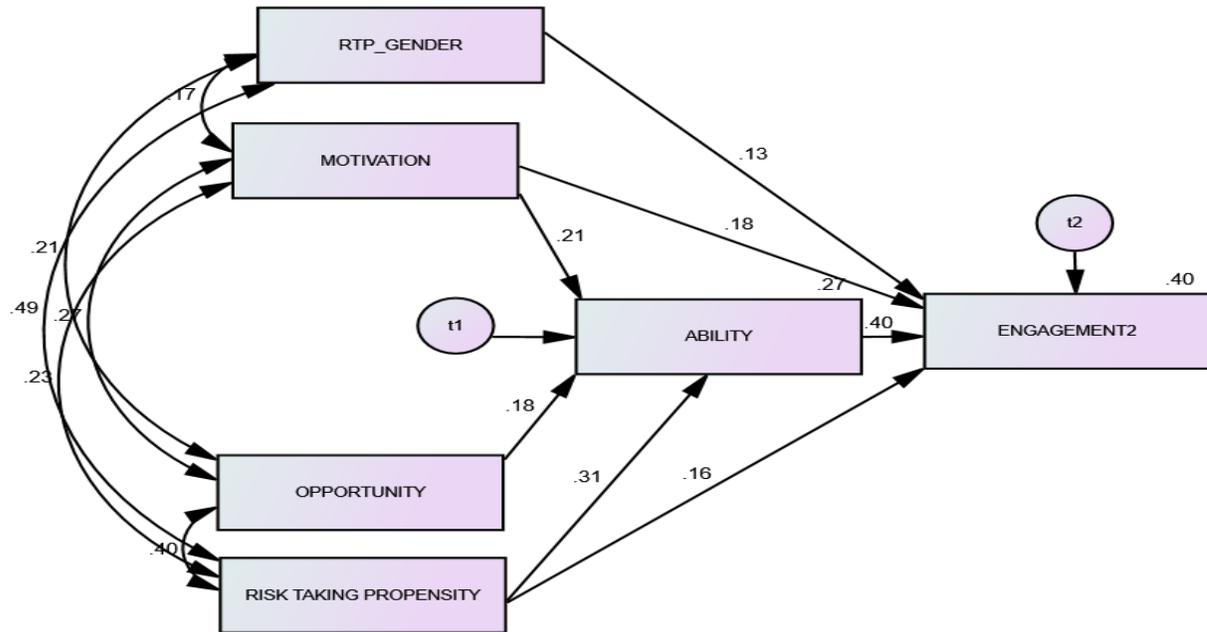


Figure 2: Final Structural Equation Model

The above SEM model depicts the relationship between the study's independent variables motivation, opportunity, and risk-taking propensity, mediating variable ability and dependent variable engagement.

Table 2: SEM estimates for Study Variables

			Estima	S.E.	C.R.	P
Ability	<--	Motivation	.361	.115	3.140	.002
Ability	<--	Opportunity	.181	.072	2.513	.012
Ability	<--	Risk Taking	.645	.146	4.430	***



Engagement	<--	Ability	.225	.038	5.960	***						
Engagement	<--	Risk Taking	.253	.075	3.368	***						
Engagement	<---	Motivation	.170	.060	2.845	.004						
Engagement	<---	RTP*Gender	1.445	.750	1.926	.054						
CMIN/DF	DF	P	CMIN	GFI	AGFI	NFI	RFI	IFI	TLI	CFI	RMSEA	
1.109	2	.330	2.219	.996	.956	.989	.915	.999	.991	.999	.025	

Abbreviated Indices in full: CMIN=Chi-square, P= P value, Df= Degree of Freedom, GFI= Goodness of Fit Statistic, AGFI= Adjusted Goodness of Fit Statistic, NFI= Normative-Fit Index, RFI= Relative Fit Index, IFI= Incremental Fit Index, TLI= Tucker Lewis Index, CFI= Comparative Fit Index, RMSEA= Root Mean Square Error of Approximation.

The structural equation model was used to determine the relationships between the study variables (Hair, Ringle, & Sarstedt, 2013). The model above is of good fit given that its chi-square = 2.219, degree of freedom =2, CMIN/Df = 1.109 and P= 0.330, RMSEA = 0.025, CFI = 0.999, GFI =0.996, AGFI =0.956, NFI = 0.989, RFI =0.915, IFI = 0.999, CFI=0.999 and TLI = 0.991 are all at acceptable levels (Beckett *et al.*, 2017; Fornell & Larcker, 1981). Implying that the model was fit. These results confirm that motivation, opportunity, and risk-taking propensity have a significant influence on ability with (Beta=0.361*, Beta=0.181*, and Beta=0.645**) respectively which supports hypotheses H1a, H1b, and H1c. On the other hand, ability, risk-taking propensity, and motivation have a direct influence on engagement with Beta and P<0.05 (Beta=0.225**, Beta=0.253** and Beta=0.170*) respectively which also supports the study hypotheses H3a, H3c, and H3d. However, study hypothesis H3b was rejected since it had P>0.05. Implying that ability partially mediates the relationship between motivation, risk-taking propensity, and engagement but fully mediates the relationship between opportunity and engagement. The results also indicate that the path coefficient for the risk-taking propensity*gender variable was not significant with a Beta of 1.445 and P>0.05 (0.054). Thus, gender does not moderate the relationship between risk-taking propensity and engagement hence H4a was not supported.

Mediation of Ability in the relationship between Motivation, Opportunity, Risk-taking Propensity and LCIs' Engagement Behaviour

The Sobel Z-value of Med graph by Jose was used to determine the mediating role of ability in the relationship between motivation, opportunity, risk-taking propensity, and citizen engagement as depicted in table 3 below;

Table 3: Mediation of Ability in the relationship between Motivation, Opportunity, Risk-taking Propensity and Engagement

Results	Motivation and Engagement	and Opportunity Engagement	and RTP and Engagement
Sobel Z-value	3.951477	4.245073	4.566886
Sig	0.000078	0.000022	0.000005
Lower Bound	0.077	0.05619	0.1267
Higher Bound	0.22858	0.15259	0.31722
a*b	0.15279	0.10439	0.22196
se	0.03867	0.02459	0.0486
Total effects	0.574 R ² =0.251	0.574 R ² =0.173	0.514 R ² =0.263
Direct effects	0.211 R ² =0.039	0.108 R ² =0.010	0.246 R ² =0.048
Indirect effects	0.29 R ² =0.211	0.308 R ² =0.163	0.267 R ² =0.214
Indirect to total Ratio	0.505 R ² =0.842	0.536 R ² =0.942	0.465 R ² =0.814

Mediation results in table 3 above show a significant mediation effect of ability in the relationship between motivation, opportunity, risk-taking propensity, and LCIs' engagement behaviour with a Sobel Z-value of (3.951477, 4.245073, and 4.566886) and a significant P value of (P=0.000078, 0.000022, and 0.000005) respectively. This implies



that ability mediates the relationship between motivation, opportunity, risk-taking propensity, and LCIs' engagement behaviour. In comparison to the total, direct and indirect effects of study variables, motivation has a direct effect of 3.9% on engagement and an indirect effect of 21.1% through ability giving a total effect of 25.1%. On the contrary, opportunity has a direct effect of 0.1% on engagement and an indirect effect of 16.3% through ability together giving a total effect of 17.3% while risk-taking propensity has a direct effect of 0.4% on engagement and an indirect effect of 21.4% through ability together giving a total effect of 26.3%. An indication that risk-taking propensity has a strong indirect influence on engagement through ability with (21.4%) and a weak direct influence (0.4%) compared to motivation and opportunity. Thus, there is full mediation of ability in the relationship between opportunity and engagement and partial mediation of ability in the relationship between risk-taking propensity, motivation, and LCIs' engagement behaviour.

Final Model based on Study findings

Below is the final model derived from the empirical study findings as per the primary data.

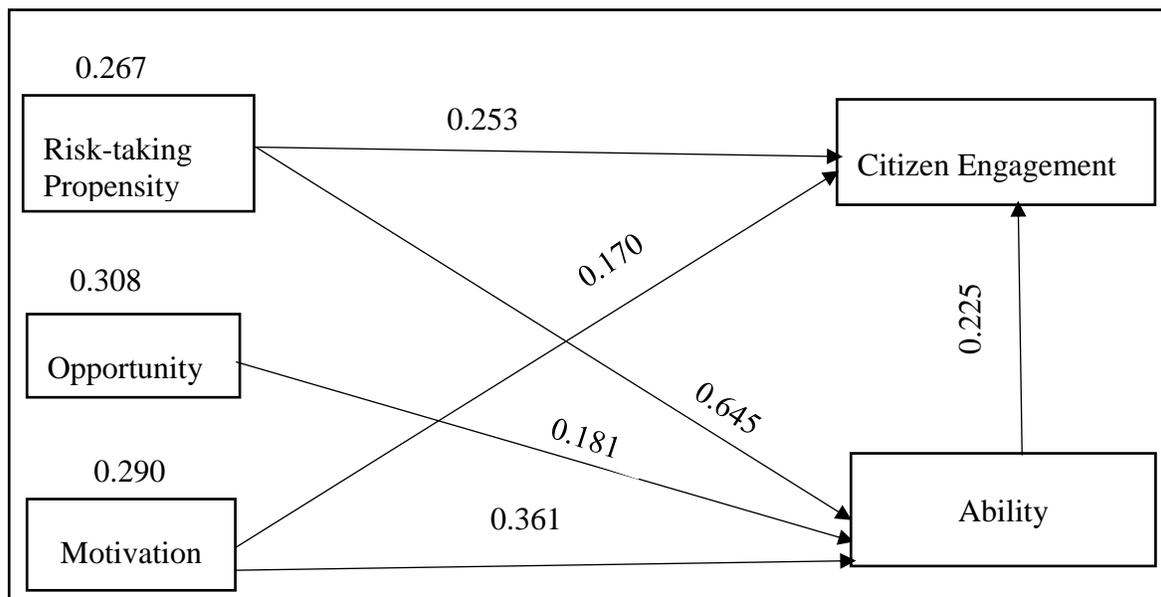


Figure 3: Final Model Based on Study Findings

The final model in figure 3 above shows the final findings which should be based on by the government and policy formulators to improve LCIs' engagement levels and the

quality of policies and interventions put in place. This model is vital because it specifies the contribution of each variable to engagement with risk-taking propensity having the highest contribution to both LC1s' ability and engagement and is followed by motivation on its influence on ability and ability on its influence on engagement. Implying that risk-taking propensity is very important and should be boosted by ensuring that the anticipated engagement outcomes are high to make LC1s engage in policy formulation.

Discussion of the Study Findings

In response to the need to improve LC1s' engagement, this study extends the MOA model with risk-taking propensity and gender to understand factors that could influence their engagement behaviour. Our study findings indicate a significant positive influence of motivation on ability. This finding is in support of the study finding of Syed Zwick, (2019) while the finding that motivation influences engagement is in support of the findings of Benedjma and Mahimoud, (2021). However, they contradict the findings of Naranjo-Zolotovu, Oliveira, and Casteleyn, (2019) which revealed that motivation influences behavioural intentions, not ability. On the other hand, the finding that opportunity influence ability contradicts study findings of Ukenna and Nkamnebe, (2017) which report a direct influence of opportunity on user behaviour, and those of Benedjma and Mahimoud, (2021) who reports the influence of opportunity on behavioural intentions and Syed Zwick, (2019), found that opportunity mediates the relationship between behavioural intentions and user behaviour. Further, the finding that opportunity has no direct influence on engagement contradicts study findings of both MacInnis, Moorman, and Jaworski, (1991) in the MOA model and Michie, Stralen, and West, (2011) in the COM-B model which reported a direct influence of opportunity on user behaviour. According to Michie, Stralen, and West, (2011), opportunity in terms of availability of time, information, and other favourable conditions influence user behaviour but this study found that opportunity influences users' ability but not engagement.

This study's findings also indicate that risk-taking propensity has the strongest influence on both ability and engagement. The finding that risk-taking propensity influence ability is in support of the study findings of Zhang and Cain, (2017) which found a positive relationship between risk-taking propensity and ability, and the findings of Naranjo-Zolotovu, Oliveira, and Casteleyn, (2019), which reports that risk-taking propensity has an indirect influence on user behaviour. These results, however, contradict with study findings of Jung, Kang, and Choi, (2020) who report that risk-taking propensity positively mediates the relationship between social capital and user behaviour, and the findings of Razak et al., (2020) which found that risk-taking propensity has a strong influence on behavioural intentions. In addition to that, the finding that risk-taking propensity has a direct influence



on engagement contradicts with findings of Pavlou, (2003) which revealed that risk-taking propensity does not affect engagement since people focus more on the engagement benefit than the risks involved. This study also found a significant influence of ability on user behaviour. This finding supports the study finding of Amosun *et al.*, (2022) and Benedjma and Mahimoud, (2021) which revealed that ability has a direct influence on user behaviour but contradicts the research findings of Rahbarqazi, Morteza, and Baghban (2020) which report that ability influences motivation and further contradicts the study findings of Tweneboah-Koduah, Mann, and Adams, (2020), which reported an indirect influence of ability on user behaviour through behavioural intentions.

Our findings also reported partial mediation of ability in the relationship between motivation, risk-taking propensity, and engagement and full mediation of ability in the relationship between opportunity and engagement. This finding contradicts the study findings of Tweneboah-Koduah, Mann, and Adams, (2020), which reported that its rather behavioural intentions that mediate the relationship between ability and user behaviour. The moderation effect of gender in the relationship between risk-taking propensity and engagement was not significant. Meaning that both male and female LC1s are capable of taking risks to engage in policy formulation as long as the anticipated benefits are more than the risks. This finding is in support of the findings of Pavlou, (2003) which revealed that people regardless of gender focus more on the benefit of engagement than the risks involved. However, they contradict with findings of Alghamdi *et al.*, (2020) who reported that gender moderates the relationship between risk-taking propensity and engagement with females being more risk-averse than males.

Conclusion

In the conclusion, the study findings support research hypotheses (H1a, H1b, H1c) which state that; motivation, opportunity, and risk-taking propensity influence LCI's ability, (H3a, H3c, and H3d) which state that; there is a significant influence of ability, motivation and risk-taking propensity on engagement and (H2a, H2b, and H2c) which state that; ability mediates the relationship between motivation, opportunity, risk-taking propensity, and engagement. But do not support the hypotheses (H2b and H4a) which states that; opportunity influence engagement and gender moderates the relationship between risk-taking propensity and engagement. Implying that ability partially mediates the relationship between motivation, risk-taking propensity, and engagement but fully mediates the relationship between opportunity and engagement. This suggests that the existence of all the required favourable conditions in terms of motivation, opportunity, and risk-taking propensity would lead to the acquisition of abilities and LC1s' engagement in policy formulation regardless of gender. These findings are thus partly in support of the findings of MacInnis, Moorman, and Jaworski, (1991) in the MOA model which identified

motivation, opportunity, and ability as factors that influence behaviour change like engagement.

Theoretical and Policy Implications

This study made several contributions to the existing literature. The first contribution was the extension of the MOA model by MacInnis, Moorman, and Jaworski, (1991) with risk-taking propensity and gender to understand factors that influence LC1s' engagement behaviour better. Theoretically, this study's significant results above imply that the set hypotheses of this study are partly supported by the MOA model of MacInnis, Moorman, and Jaworski, (1991). An indication that the extended MOA model is applicable in Uganda in the LC1s' context and should therefore be used to improve LC1s' engagement behaviour. Particularly, the study reported the significant influence of motivation, opportunity, and risk-taking propensity on ability and engagement and the moderation effect of gender in the relationship between risk-taking propensity and engagement with risk-taking propensity having the most significant influence on both ability and engagement. The second contribution is the insignificant influence of gender in the relationship between risk-taking propensity and engagement. Implying that LC1s' engagement decisions are not influenced by gender but rather outcomes. Therefore, though the MOA model significantly predicts user behaviour, extending it with a risk-taking propensity and gender gives a better outcome. This study, therefore, has theoretical implications for improving citizen engagement in policy formulation in the context of LC1s by creating an understanding of factors that influence their engagement (Oiko *et al.*, 2019).

The policy implication is that the application of the extended MOA model would influence LC1s' engagement behaviour by identifying key factors that influence their engagement behaviour which in this case are risk-taking propensity, motivation, opportunity, and ability. Besides that, the study's position is that the extension of the MOA model with risk-taking propensity and gender make it more practical and influential in increasing engagement levels of LC1s and associated engagement benefits. Policy formulators should therefore consider those factors seriously while trying to increase LC1s' engagement levels.

Useful Insights and Recommendations

Firstly, the study confirms that motivation, risk-taking propensity, and opportunity factors will positively influence LC1s' ability and engagement behaviour and lead to the formulation of inclusive and representative policies in the country. We, therefore, recommend that; the government focus on making LC1s understand the benefits of engagement to themselves and their communities at large. It should also provide favourable conditions needed to increase LC1s' ability and engagement behaviour like through social network friends under the arrangement of "ability to give help and ability to get help" where those with engagement abilities help those without (Sykes, Venkatesh, & Gosain,



2009) and also through continuous training and sensitization (Nabafu et al., 2021). Policy formulators should also focus on incorporating LCIs' views and opinions in the formulation of policies and give them feedback on what was incorporated and what was not and the reason for such actions to make them believe that the policies are consistent with their given views and community needs. Besides that, they should also create more opportunities in terms of time, availability of information and subsidization of prices for engagement devices like smartphones and the internet to support increased engagement even from those not doing well financially. If possible, the government should set up internet cafes and equip them with computers to enable those with no gadgets to use them to freely engage in policy formulation. Lastly, engagement information should be made available to LCIs to enable a proper understanding of what, when, and how to engage.

Study Limitations and Areas for Future Research

This study had the limitation of targeting only LCIs. It's not clear whether the findings would be the same if data were collected from many groups of citizens like Village Health Teams, Farmer Based Organizations, and others. Besides that, the selection of four districts and four cities in the entire country had some limitations, and lastly, the use of one model may not have given a better picture than a combination of models, and also cross-sectional research instead of longitudinal research could have biased the results. Thus, future research should incorporate many categories of respondents to compare and contrast the findings and use a combination of models, and longitudinal research to get more representative findings. Furthermore, besides gender, other moderation variables like income and education should be added in future research to predict moderation effects better.

References

- Abdul-Kader, S. A., & Woods, J. (2015). Survey on chatbot design techniques in speech conversation systems. *International Journal of Advanced Computer Science and Applications*, 6(7), 72-80.
- Alghamdi, A., Karpinski, A. C., Lepp, A., & Barkley, J. (2020). Online and face-to-face classroom multitasking and academic performance: Moderated mediation with self-efficacy for self-regulated learning and gender. *Computers in Human Behavior*, 102, 214-222. <https://doi.org/10.1016/j.chb.2019.08.018>
- Amosun, T. S., Chu, J., Rufai, O.H., Muhideen, S., Shahani, R., & Gonlepa, M. K. (2022). "Does e-government help shape citizens' engagement during the COVID-19 crisis? A study of mediational effects of how citizens perceive the government. *Online Information Review*, 46(5), 846-866. <https://doi.org/10.1108/OIR-10-2020-0478>

-
- Benedjma, I., & Mahimoud, A. (2021). Applying the MOA (motivation-opportunity-ability) model for the evaluation of residents' participation in built heritage rehabilitation: The case of Constantine. *Journal of Cultural Heritage Management and Sustainable Development*, 11(1), 18-38. <https://doi.org/10.1108/JCHMSD-08-2018-0055>
- Bergstrom, E., & Martinez, G. M. (2016). The influence of intrinsic and extrinsic motivation on employee engagement: A quantitative study of the perceptions of managers in public and private sector organizations, Umea, Sweden. <http://www.diva-portal.org/smash/get/diva2:944047/FULLTEXT01.pdf>
- Cem, D., Hubert, N., Love, E. G., & Kimberly D.J. (2021). GovTech Maturity Index: The state of public sector digital transformation. *International Development in Focus*; Washington, DC: World Bank. <http://hdl.handle.net/10986/36233>
- Davis, F. (1989). Perceived usefulness, perceived ease of use, and user acceptance of Information Technology. *MIS Quarterly*, 13(3), 319-339. <https://doi.org/10.2307/249008>
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50. <https://doi.org/10.2307/3151312>
- George, D., & Mallery, M. (2010). SPSS for windows step by step: A simple guide and reference, 17.0 update (10th ed.), Pearson, Boston.
- Hair, J. F., Jr., Babin, B. J., & Krey, N. (2017). Covariance-based structural equation modeling in the Journal of Advertising: Review and recommendations. *Journal of Advertising*, 46(1), 163–177. <https://doi.org/10.1080/00913367.2017.1281777>
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). Editorial—partial least squares structural equation modeling: Rigorous applications. Better results and higher acceptance. *Long range planning*, 46(1-2), 1-12. <https://ssrn.com/abstract=223379>
- Hassan, L., & Hamari, J. (2019). Gamification of e-participation: A literature review, Psychology, In Proceedings of the 52nd International Conference on System Sciences, (pp. 3077-3086). University of Hawaii, Manoa. <https://hdl.handle.net/10125/59744>
- Josef, K. A., Richter, D., Samanez-Larkin, R. G., Wagner, G. G., Hertwig, R., & Mata, R. (2016). Stability and change in risk-taking propensity across the adult life span, *Journal of Personality and Social Psychology*, 111(3),430-450. <https://doi.org/10.1037/pspp0000090>
- Jung K. B., Kang, S-W., & Choi, S. B. (2020). Empowering leadership, risk-taking behaviour, and employees' commitment to Organizational change: The mediated moderating role of task complexity. *Sustainability*, 12(6):2340. <https://doi.org/10.3390/su12062340>
- Krejcie, V, R & Morgan, W, D. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30, 607-610.
- Lai, H., Hsiao, Y., & Hsieh, P. (2018). The role of motivation, ability, and opportunity in University teachers' continuance use of intention for flipped teaching, *Computers & education*, 124(2018), 37-50. <https://doi.org/10.1016/j.compedu.2018.05.013>



-
- Liu, Q., & Wen, S. (2021). Does social capital contribute to prevention and control of the COVID-19 pandemic? Empirical evidence from China, *International Journal of Disaster Risk Reduction*, 64, 102501, <https://doi.org/10.1016/j.ijdr.2021.102501>
- Macaulay, B., Reinar, M., Wilson, G. M., & Kuchenmuller, T. (2022). Integrating citizen engagement into evidence-informed health policy-making in Eastern Europe and central Asia: Scoping study and future research priorities. *Health Research Policy and Systems*, 20(11). 1-12, <https://doi.org/10.1186/s12961-021-00808-9>
- MacInnis, D. J., Moorman, C., & Jaworski, B. J. (1991). Enhancing and measuring consumers' motivation, opportunity, and ability to process brand information from ads. *Journal of Marketing*, 55(4), 32-53. <http://www.jstor.org/stable/1251955>
- Martins, M., Farias, J. S., Albuquerque, M. P. H., & Pereira, D. S. (2018). Adoption of technology for reading purposes: A study of e-Books: *Brazilian Business Review*, 15(6), 569-588. <http://dx.doi.org/10.15728/bbr.2018.15.6.4>
- Michie, S. V., Stralen, M. M., & West R. (2011). The behaviour change wheel: A new method for characterizing and designing behaviour change interventions. *Implementation Science*, 6(42). <https://doi.org/10.1186/1748-5908-6-42>
- Mișcoiu, S. (2019). Never just a local war': Explaining the failure of a mayor's recall referendum. *Contemporary Politics*, 25(1), 47–61. <https://doi.org/10.1080/13569775.2018.1543923>
- Mishra, A. P., Sen, A., & Kumar, A. (2017). 'Exploring potentials and challenges in making smart cities in India: A Case study of Allahabad City, Uttar. In P. Sharma., & S. Rajput (eds.), *Sustainable smart cities in India, The book series*, (Vol. 12, pp. 123-142). New Delhi, Springer International Publishing. DOI: 10.1007/978-3-319-47145-7_8.
- Mohamed, F. S., Juma, P., Asiki, G., & Kyobutungi, C. (2018). Facilitators and barriers in the formulation and implementation of tobacco control policies in Kenya: A qualitative study. *BMC Public Health*, 18(1), 960. <https://doi.org/10.1186/s12889-018-5830-x>
- Munoz, A. L., & Bolivar, R. P. M. (2021). Different levels of smart and sustainable cities construction using e-participation tools in European and Central Asian Countries, *Sustainability*, 13(6), 3561. <https://doi.org/10.3390/su13063561>
- Nabafu, R., Ssekakubo, S., Nyesige, C., & Nantege, Z. (2021). Citizen engagement in policy formulation through e-participation: A case of the academic staff of Makerere University, *ORSEA Journal*, 11(2), 20-33.
- Naranjo-Zolotov, M., Oliveira, T., & Casteleyn, S. (2019). Citizens' intention to use and recommend e-participation: Drawing upon UTAUT and citizen empowerment. *Information Technology & People*, 32(2), 364-386. <https://doi.org/10.1108/ITP-08-2017-0257>
- Newman, A., Obschonka, M., Schwarz, S., Cohen, M., & Nielsen, I. (2018). Entrepreneurial self-efficacy: A systematic review of the literature on its theoretical foundations, measurement, antecedents, and outcomes, and an agenda for future

- research. *Journal of Vocational Behaviour*, 110(B), 403-419. <https://doi.org/10.1016/j.jvb.2018.05.012>, 2019
- Nilsson, M., & Männikkö Barbutiu, S. (2019). E-participation For Increased Citizen Engagement? A Case from Uganda. *JeDEM - EJournal of E-Democracy and Open Government*, 11(1), 14–36, <https://doi.org/10.29379/jedem.v11i1.542>
- Oiko, D., Kitooke, P., Asaba, J., & Obonyo, J. (2019). *LongHorn The Comprehensive ATLAS for Social Studies in Uganda*. Longhorn Publishers.
- Ou-Yang, H., Ariphongphokin, R., & Trung, N. H. (2014). Adopting the motivation-opportunity-ability model to evaluate the intentions of Thai students to study abroad. *International Journal of Social Science & Education*, 4(2), 502-515. <http://ijsse.com/sites/default/files/issues/2013/v4i2/Paper-20.pdf>.
- Pavlou, A. P. (2003). Consumer acceptance of electronic commerce: Integrating trust and risk with the Technology acceptance model, *International Journal of Electronic Commerce*, 7(3), 101-134, DOI: [10.1080/10864415.2003.11044275](https://doi.org/10.1080/10864415.2003.11044275)
- Pellikaan, M. (2021). Engagement and motivation: How to boost employee and engagement and increase motivation? *Future Business Journal*, 2, 76-86. <http://dx.doi.org/10.1016/j.fbj.2021.05.003>
- Rahbargazi, M., Morteza, S., & Baghban, N. (2020). The link between social capital and political participation and its impact on Iranian youth, *TEORIJA IN PRAKSA*, 57(3), 909-927.
- Razak, N. A., Marmaya, N. H., Wee, N. M. B. M. F., Arham, A. F., Sa'ari, J. R., & Hafiza Harun, N. N. (2020). Causal inferences – Risk-taking propensity relationship towards Entrepreneurial intention among Millennials. *International Journal of Academic Research in Business and Social Sciences*, 10(3), 775-786. DOI:[10.6007/IJARBS/v10-i3/7091](https://doi.org/10.6007/IJARBS/v10-i3/7091).
- Sakurai, M., & Murayama, Y. (2019). Information technologies and disaster management – Benefits and issues, *Progress in Disaster Science*, 2(1), 100012. <https://doi.org/10.1016/j.pdisas.2019.100012>
- Schouten, A., Valkenburg, P., & Peter, J. (2007). Precursors and underlying processes of adolescents' online self-disclosure: Developing and testing an “Internet-attribute-perception” model, *Media Psychology*, 10(2), 292-315. <https://doi.org/10.1080/15213260701375686>
- Simeonova, I. J., Tisheva-Gospodinova, T. S., Todorova, M. Y., Hristova, A. P., Yanakieva, N. A., & Hristov, I. M. (2018). Assessment of cardiovascular risk in hospitalized patients with hypertension aged 40 and over. *Sciendo*, 10(2), 152-152. <https://doi.org/10.1515/jbcr-2017-0026>
- Syed Zwick, H. (2019). Motivation - opportunity – ability nexus: Application to regional Central Asian student mobility. Economics Department, IMPRA Paper No. 93051. <https://mpira.ub.uni-muenchen.de/93051/>.
- Sykes, T. A., Venkatesh, V., & Gosain, S. (2009). Model of acceptance with peer support: A social network perspective to understand employees’ system use. *MIS Quarterly*, 33(2), 371-393. <https://ssrn.com/abstract=4061349>

- Tajedo-Romero, F., Araujo, J. F. F. E., Tejada, A., & Ramirez, Y. (2022). E-government mechanisms to enhance the participation of citizens and society: Exploratory analysis through the dimension of municipalities. *Technology in Society*, 70(C), 101978. <https://doi.org/10.16/j.techsoc.2022.101978>
- Tweneboah-Koduah, Y. E., Mann, E. V., & Adams, M. (2020). Using motivation, opportunity, and ability model in social marketing to predict “Galamsey” behaviour in Ghana. *Social Marketing Quarterly*, 26(1), 28-46. <https://doi.org/10.1177/1524500419901254>.
- UNDESA. (2015). United nations department of economic and social affairs, population division. World population prospects: The 2015 revision, key findings, and advance tables. UN DESA.
- Uganda Bureau of Statistics (2014). National population and housing : Main report Census. https://www.ubos.org/wp-content/uploads/publications/03_20182014_National_Census_Main_Report.pdf
- Ukenna, S. L., & Nkamnebe, A. D. (2017). Sustainable consumption behaviour in Sub-Saharan Africa: A conceptual framework. *Thunderbird International Business Review*, 59(1), 33-50. <https://doi.org/10.1002/tie.21833>.
- Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. B. (2003). User acceptance of information technology: toward a unified view. *Management Information Systems Quarterly*, 27(3), 425-478.
- Wampler, B. & Touchton, M. (2017). Participatory budgeting: Adoption and transformation. Making all voices count research briefing. IDS Institute of Development Studies, Brighton.
- Wampler, B., McNulty, S., & Touchton, M. (2021). 'Where it all began: PB in Latin America', Participatory budgeting in global perspective. Online education, Oxford Academic. <https://doi.org/10.1093/oso/9780192897756.003.0004>.
- Werts, C. E., Linn, R. L., & Joreskog, K. G. (1974). Intraclass reliability estimates: Testing structural assumptions. *Educational and Psychological Measurement*, 34(1), 25–33. <https://doi.org/10.1177/001316447403400104>
- Yuan, Q., & Gasco-Hernandez, M. (2021). Open innovation in the public sector: Creating public value through civic hackathons. *Public Management Review*, 23(4), 523-544. <https://doi.org/10.1080/14719037.2019.1695884>
- Zhang, P., & Cain, W. K. (2017). Reassessing the link between risk aversion and entrepreneurial intention: The mediating role of the determinants of planned behaviour. *International Journal of Entrepreneurial Behaviour & Research*, 23(5), 793-811. <https://doi.org/10.1108/IJEBr-08-2016-0248>