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Determinants of Financial Inclusion in Namobuddha Municipality, Nepal

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Abstract

Financial inclusion is a priority agenda in countries like Nepal. The study seeks to determine the access to financial services, financial innovation and quality of financial services to the financial inclusion. The study is based on questionnaire survey data with 363 household respondents using a convenient sampling technique, and carried out in Namobuddha Municipality of Nepal. The moderating effect of financial literacy and control variable of demographic items have been analysed using generalised regression model. The results show that financial innovation and quality of financial services are the significant determinants of financial inclusion; financial literacy is found significant and it plays a moderating role between the variables under study. The findings revealed that the tendency of higher level of financial inclusion was influenced by gender, education level and monthly income.

Keywords: : financial inclusion, financial innovation, financial literacy, quality of financial services

Background of the study

The financial inclusion is a major issue in the context of underdeveloped country like Nepal. The financial inclusion found positive relationship with access to financial services (Noureldin & Shusha, 2019), financial innovation (Akileng, Lawino & Nzibonera, 2018), quality of financial services (Katoroogo, 2016), financial literacy (Noureldin & Shusha, 2019). It indicates financial inclusion can be increased by increasing the supply related factors: financial services, financial innovation, quality of financial services, and financial literacy.

Kumar and Philip (2011) argued thattheeconomic empowerment of the people will reinforce financial development, when adequate financial needs of people are legitimately met by the financial system. The supply side of financial inclusion focuses on providing financial products and the economic empowerment of the people by establishing financial institution. Although there is growth in economy, some groups of the population are still poor and particularly rural people's likelihood is still same.

The financial inclusion in Nepal is not satisfactory, as many of the peoples do not have bank accounts. The rural area still lacks on financial awareness. Pant (2016a) argued that the geographical structure, lack of infrastructures, and concentration of formal financial institution in city areas has lead rural people for

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away from banking services. Similarly, Chaulagain (2015) and Pant (2016), studied on financial inclusion but none of them measure the impact of access to financial services, quality of financial services and financial innovation with the effect of financial literacy on financial inclusion. In this context, the objective of this study is to examine the determinants of financial inclusion, and to examine the moderating effect of financial literacy on the relationship between access to financial services, financial innovations and quality of financial services with financial inclusion.

The next section reviews the earlier study in financial inclusion. The methodology of the study is discussed on the third section. The fourth section presents the empirical resultsand discussions, and final section provides conclusion and implications of this study.

Literature Review

There is no universal definition of financial inclusion (Pant, 2016). Greater financial inclusion can be achieved when all economic activities and segments of the society have access to financial services with ease and at minimum cost. Financial inclusion is delivery of banking services at a reasonable cost to the huge sections of underprivileged and low-income groups (Nandru&Rentala 2019). It ensures that ranges of proper financial services are available to every individual and that the individual understands and accesses those services. Financial inclusion means people can afford the financial services in order to uplift their livelihood.

World Bank (2014) defined financial inclusion as “the share of the population who use financial services”. Further, Naceur et al.(2015) supported the definition as “useful definition because it can be measured and incorporated easily into theoretical and empirical work”. Financial inclusion defines a situation where people around a territory use the financial products offered by different types of financial institution.

Use of financial services

Mialouand Amidzic(2017) examined measures of four pillars of access; they have the access to credit, access to savings, access to banking and access to insurance as the core pillars of financial inclusion. Whereas, World Bank (2018) revealed that financial inclusion means having access to affordable financial products that meet the needs associated with transactions and payment, savings, credit, and insurance.

Migration and subsequent sending of remittance can be the first personal interaction with the global economy (Toxopeus & Lensink, 2008). On the contrary, Mashayekhi (2015) mentioned that remittance is the major source of external private financial inflows into developing countries, and a promising source of demand for financial services. Hence, safer, faster and less costly remittances could contribute significantly to financial inclusion.Remittance plays an important role in access toformal financial institution for the people who are unbanked in rural areas.

Financial inclusion and access to financial services

Lin,Xuejun and Yuexiang(2020) stated that micro and macro financial inclusions are different,active and passive financial exclusions are different, and that the inclusive financial system does not mean universal finance for everyone everywhere. The main purpose of financial inclusion is to mitigate the potential barriers, so that individuals for whom the marginal benefit of being banked exceeds its marginal cost may access this type of services without being affected by market faults (Camara &Tuesta, 2014; Churchill, Nuhu & Smyth, 2020).

Financial Inclusion and financial innovation

Akileng, Lawino,and Nzibonera, (2018) have found financial innovation is positively significant with financial inclusion, which makes significant contribution about the relationship between the various factors that affect financial inclusion. Innovative financial inclusion as the delivery of financial services outside conventional branches of financial institutions by using information and communication technologies and non-bank retail agents and other new institutional arrangements to reach those who are financial excluded. (Laeven, Levine, &Michalopoulos, 2015; Beck, Senbet, &Simbanegavi, 2014)

Financial inclusion and quality of financial services

Sarma (2008) defined financial product design and delivery traits that enhance the value of the financial products and services to clients. Roa (2015) revealed that regulators and supervisors are responsible for, as well as in the reforms that countries are implementing regarding financial inclusion matters. For quality dimension, the bodies responsible for the topic of financial inclusion agree that framework of reference for measuring this dimension should include proper regulation and supervision of financial products and services, as well as effective financial consumer protection and financial education policies. The quality of financial services affected by the cost of services, consumer awareness, the effectiveness of redress mechanisms and consumer protection services, the security of funds, transparency and competition in the market, and even intangible features like consumer trust (Alliance for Financial Inclusion, 2016; Dupas et al.,2013).

Moderating role of financial literacy

Chaulagain (2015b) found financial literacy and access to finance are closely related each other. Higher level of financial inclusion leads to good financial behaviour in comparative ways (Chaulagain, 2015a).

Mobile banking plays an important role to lead financial inclusion. Hence, partnerships should be established between and among commercial banks as well as between mobile network operators providing mobile money services to fast-track interoperability (Donovan,2012; Yawe& Prabhu, 2015). Literate people are more financial awake and they are more likely to prefer quality of financial services. There is positive association between financial inclusion and quality of financial services (Burjorjee& Scola,2015; Katoroogo,2016).

Role of demographic variables

Nandru, Anand, and Rentala(2015); Nuzzo and Piermattei, (2019) stated that key demographic characteristics such as gender, age, education, income, and rural residence between specific sub-groups of disadvantagedsegments of population and the overall population have significant relationship with financial inclusion. Further, Abdu et al. (2015) found that age, better education, and high income played major role in financial inclusion.Whereas, female, old age, and low income were the promoters ofhousehold to financial inclusion. The result confirmed that there exists relationship between demographic variables and financial inclusion.

Conceptual framework

The framework and relationship among exploratory variables and dependent variable along with moderating and controlling variables is used to carry out the objectives of study. Figure 1 represents the conceptual framework of the study based on the literature review.

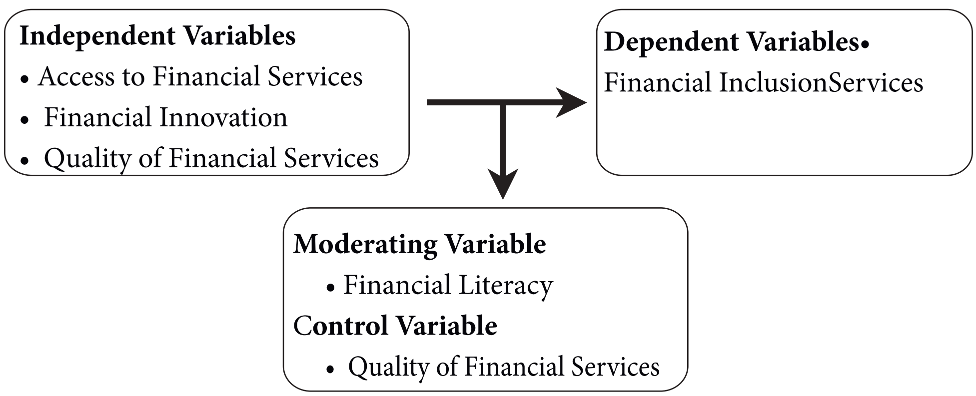

Figure1:Conceptual Framework

Research Methods

The study is based on quantitative research method with descriptive research design. The population for this study was households of Namobuddha Municipality. A convenient sampling has been used and distributed 400 structured questionnaires after pilot testing in May and June, 2020. The questionnaire was prepared on Nepali language, and distributed physically to representative member of household. However, 363 valid responses were collected, i.e., 91 per cent response rate.

Table 1

Reliability test

Items	No. of Statements	Cronbach's Alpha
Access	6	0.923
Financial Innovation	6	0.874
Quality	7	0.910
Financial Literacy	6	0.936

Note: Calculations based on survey, 2020

The reliability of data was measured using Cronbach alpha as shown in Table 1. The value for Cronbach alpha for each variable is more than 0.7, which means each of the variable is reliable and fit for further statistical tests. The overall alpha value is found 0.897 when all items taken into consideration.

The study models for the data analysis are as follows:

$$log\frac{P(F\leq j)}{P(F>j)} = \propto +\beta 1A + \beta 2I + \beta 3Q + \varepsilon \ldots\ldots (1)$$

$$log\frac{P(F\leq j)}{P(F>j)} = \propto +\beta 1A + \beta 2I + \beta 3Q + \beta 4(A * I * Q * L) + \varepsilon \ldots\ldots (2)$$

$$log\frac{P(F\leq j)}{P(F>j)} = \propto +\beta 1A + \beta 2I + \beta 3Q + \beta 4(A * I * Q * L) + \beta 5FS + \beta 6G + \beta 7EDU + \beta 8AGE + \beta 9INC + \varepsilon \ldots (3)$$

Where,

j= Category of inclusion, F= Financial Inclusion, $\propto$= Intercept, $\beta 1$- $\beta 4$= regression coefficients

A= Access to Financial Services, I= Financial Innovation, Q= Quality to Financial Services L= Financial Literacy, FS = Family size, G = Gender, EDU = Education level, AGE = Age group, INC = Monthly income, ε= Error term

Expected relationship between dependent and independent variable

Table 2 represents relationship between variables and source of relationship between variables.

Table 2:Variables and their expected relation

Variables	Relation	Reason
Financial inclusion and access to financial services	Positive(+)	Noureldin and Shusha (2019) found there is positive relationship between access to financial services and financial inclusion.
Financial inclusion and financial innovation	Positive(+)	Akileng, Lawino, and Nzibonera (2018) found financial innovation and financial inclusion has positive relationship.
Financial inclusion and quality of financial services	Positive(+)	Katoroogo (2016) found there is positive relationship between quality of financial services and financial inclusion
Financial Inclusion and financial literacy	Positive(+)	Noureldin and Shusha (2019) found there is significant relationship between financial inclusion and financial literacy
Financial literacy and exploratory variables	Positive(+)	Chaulagain(2015b) found that access and financial literacy are positively significant. Yawe and Prahu(2012) found financial innovation and financial literacy are positively related. Katoroogo (2016) found positive association between quality of financial services and financial literacy.

Results and Discussion

Demographic Statistics

Table 3 shows the association between financial inclusion and demographic variables. The variables, such as, gender, age, educational level, monthly income have statistically significant association, but family size does not have any significant association with financial inclusion.It shows difference between male and female inclusion in financial activity. Male inclusion was 96.10% while female inclusion was only 77.22%. It indicates males have more inclusion in financial activity than compared to women.

The cross-tab between demographic variables and financial inclusion shows that the family size is not significant with financial inclusion. Majority of the respondent's family size was 4-5 and 6-7 persons; among them, 9.33% and 15.11% have no inclusion in financial activity respectively. While family sizes with 2-3 persons, and 8 and more persons, were 13.63% and 11.53% are devoid of financial inclusion. Among the age groups of 16-21, the number of financially included people is 80%. Since, majority of the respondent falls the age group of 22-27 consists 81% financially included. Likewise, the age group of people between 28-33 have 100% inclusion in financial activity. Similarly, 94% people of age group 34-40 have inclusion in financial activity. It indicates that working age people are more likely to use financial services. When the inclusion comes to the educational level, respondents who hold the postgraduate are likely to have full inclusion in financial activity, whereas, who holds graduate education have 98% inclusion in financial activity.

Table3

Cross tabulation of financial inclusion with demographic variables

Categories		Financial Inclusion						Total	Percent	Pearson Chi-Square
		.0	.2	.4	.6	.8	1.0			
Gender	Female	36	5	20	31	18	48	158	43.53	
	Male	8	8	1	55	90	43	205	56.47	86.03**
Family size	2-3	3	1	1	4	9	4	22	6.06	
	4-5	14	6	11	30	44	45	150	41.32	
	6-7	21	5	7	37	37	32	139	38.29	
	8 & more	6	1	2	15	18	10	52	14.33	10.56
Age Group	16-21	5	0	3	1	9	7	25	6.89	
	22-27	25	6	11	25	34	28	129	35.54	
	28-33	0	1	0	22	12	20	55	15.15	
	34-40	6	4	4	29	29	26	98	27.00	
	40 & above	8	2	3	9	24	10	56	15.43	49.598**
Education Level	Graduate	1	3	4	14	11	17	50	13.77	
	Postgraduate	0	0	0	3	8	7	18	4.96	
	Primary	33	5	6	47	64	37	192	52.89	
	Secondary	5	2	11	20	22	27	87	23.97	
	Uneducated	5	3	0	2	3	3	16	4.41	55.771**
Expected Monthly Income (NRs. in thousands)	10-20	6	2	0	1	52	16	77	21.21	
	20-30	0	0	18	30	8	2	58	15.98	
	30-40	0	2	2	19	19	2	44	12.12	
	40 & above	0	0	0	1	11	14	26	7.16	
	Below 10	38	9	1	35	18	57	158	43.53	263.723**
Total		44	13	21	86	108	91	363	100	-

Note:**Values significant at the 0.01 level

Respondents who hold the secondary level education have 94% inclusion in financial activity and primary level education holders have 83% inclusion in financial activity. Moreover, respondents who are uneducated are likely to have 69% of inclusion in financial activity. It indicates that higher the education level, higher the financial inclusion.

Studies by Abdu et al. (2015) supported that increment in income size leads to financial inclusion. Among the respondent people who earns more than NRs. 20,000 per month are supposed to have full inclusion in financial activity whereas respondent who earns below NRs. 10,000 per month have 76% inclusion in financial activity. While whose monthly income lies between NRs.10, 000-20,000 have 92% inclusion in financial activity. It shows that higher the income size, higher the financial inclusion level.

Financial Inclusion

Table 4 represents that 87.88% of respondents have account in financial institution. The result exhibits that the majority of respondents are aware about the financial institution and they hold bank account. Whereas, only 85.58% of respondents' uses their account to loan purpose. The payment purpose, 84.01% of respondents' uses their account. Among the respondents, 35.42% of peoples are currently using insurance related services. In addition, majority of the respondents (85.89%) uses financial institution for remittance services. The result indicates that most of the respondents are aware about the financial institution and they are using and maintaining their accounts in financial institution. In addition, people who do not maintains an account and reason for not maintaining accounts in formal financial institution has been illustrated in Table 5.

Table 4

Response towards financial inclusion

Statements	Frequency		Percentage
Having an account in formal financial institution	Yes	319	87.88
	No	44	12.12
Uses an account for Saving	Yes	319	100.00
	No	0	0.00
Uses an account for Loan purpose	Yes	273	85.58
	No	46	14.42
Uses an account for Payments	Yes	268	84.01
	No	51	15.99
UsesInsurance services	Yes	113	35.42
	No	206	64.58
UsesRemittance services	Yes	274	85.89
	No	45	14.11

Since the 44 respondents said that they do not maintain any bank accounts in financial institution.The reasons for not having account is shown in Table 5.The minority respondents(27.27%) states that financial institution are too far away, while 22.73% argue that financial services are too expensive they think banks provides less interest comparing to lending informally. In addition, 79.55% respondents mentioned that they do not trust financial institution while 11.36% mentioned documentation related reason for not maintaining bank account. Each of the respondent agreed that they do not have any religious reason and another member of family already have bank account and they don't have any intention to maintain bank account. Whereas, 90.91% respondents think they do not have enough money to maintain an account in formal financial institution. The 40.91% of respondents argued that they do not need financial services at formal institution.

Table 5

Reason for not having account

Statements	Frequency		Percentage
Financial Institution are too far away	Yes	12	27.27
	No	32	72.73
Financial services are too expensive	Yes	10	22.73
	No	34	77.27
I do not have necessary documentation	Yes	5	11.36
	No	39	88.64
Do not trust financial institution	Yes	35	79.55
	No	9	20.45
Religious reasons	Yes	0	0.00
	No	44	100.00
No enough money to use financial institution	Yes	40	90.91
	No	4	9.09
Other family member already has an account	Yes	44	100.00
	No	0	0.00
No need of financial services at formal financial institution	Yes	18	40.91
	No	26	59.09

Regression Analysis

The regression coefficients and significance tests for each of the independent variables in the model has been presented in Table 6. The regression coefficients are the predicted change in log odds on the dependent variable. The threshold estimates that are given in the table are intercepts. Osborne (2017) states that these estimates can be interpreted as the "log odds of being in a particular group or lower when score on the other variables are zero."

Regression co-efficient

		Model-1			Model-2		
	Parameter	Estimate	Std. Error	Sig.	Estimate	Std. Error	Sig.
Threshold	[Inclusion = .0]	2.209	0.391	0.000	-3.783	0.757	0.000
	[Inclusion = .2]	2.781	0.404	0.000	-2.853	0.713	0.000
	[Inclusion = .4]	3.366	0.420	0.000	-2.080	0.696	0.003
	[Inclusion = .6]	4.738	0.454	0.000	-0.504	0.684	0.461
	[Inclusion = .8]	6.190	0.483	0.000	0.967	0.686	0.159
Variables	Access	0.610	0.143	0.001	0.154	0.148	0.296
	Innovation	0.930	0.171	0.001	0.660	0.173	0.001
	Quality	-0.122	0.235	0.602	-0.760	0.246	0.002
	A*I*Q*L	-	-	-	-0.314	0.045	0.001
-2 log likelihood		1066.92		0.001	1071.56		0.001
Chi-square		134.49		0.001	211.29		0.001
Nagelkere R-square		0.323			0.46		

Access to financial services was significant predictor in the model 1. As score increase in access, there is probability to increase family being in a higher level of financial inclusion. The result has indicated that access to formal financial institution is significant determinants of financial inclusion, however, most of the family have bank accounts in financial institution to receive government fund to reconstruction of houses, which was damaged by massive earthquake in April 2015. Although most of the family considered they have taken loan from financial institution to reconstruct their home. Financial innovation was a significant predictor of financial inclusion. As scores increase on financial innovation, there is probability of increase of family being higher category on financial inclusion. This indicates that the respondent (i.e., a family) using innovative financial tools were more likely to indicate higher level of financial inclusion. Quality of financial services was not a significant predictor more likely to indicate lower level of financial inclusion. Further, the proposed model is statistically significant as -2 log likelihood and chi-square both are significant at 5% level of confidence. Whereas naglelkere R-square shows 32.3% outcomes is described by the exploratory variables.

Moderating effect of financial literacy

Further, Table 6, Model-2 represents that financial literacy plays a moderating role between dependent and independent variables. When, the score on financial literacy increases, there is high probability of family falling at a higher level of financial inclusion. When financial literacy exists, financial innovation and quality of financial services are significant determinants of financial inclusion whereas, access to financial services is non-significant determinants. Hence, the result shows that when people are financially literate the probability of using innovative financial services increases along with quality of such financial services rather than convenient access. Further, this model is significant as -2 log likelihood and chi-square both are significant at 5% level of confidence. In addition, nagelkere R-square shows 46% of outcome is explained by exploratory variables.

Table 7:Regression coefficient with moderating and demographic variables

	Parameter	Estimate	Std. Error	Wald	df	Sig.
Threshold	[Inclusion = .0]	-2.408	0.884	7.416	1	0.006
	[Inclusion = .2]	-1.461	0.847	2.975	1	0.085
	[Inclusion = .4]	-0.660	0.835	0.624	1	0.429
	[Inclusion = .6]	1.018	0.834	1.489	1	0.222
	[Inclusion = .8]	2.561	0.844	9.198	1	0.002
Variables	Access	0.103	0.168	0.378	1	0.538
	Innovation	0.874	0.190	21.082	1	0.000
	Quality	-0.656	0.267	6.050	1	0.014
	A*I*Q*L	-0.291	0.046	39.779	1	0.000
	Family S ize	-0.034	0.132	0.068	1	0.794
	Gender	0.848	0.236	12.928	1	0.000
	Education Level	0.319	0.114	7.789	1	0.005
	Age G roup	0.042	0.087	0.232	1	0.630
	Monthly Income	-0.339	0.092	13.657	1	0.000
Pearson Chi-square		1469.94			1471	0.503
-2 log likelihood		1137.82			9	0.001
Chi-square		236.62			9	0.001
Nagelkere R-square		0.50				

Table 7depicts the impact of exploratory, moderating and control variables on financial inclusion.The access to financial services is non-significant predictor of financial inclusion while innovation, quality and literacy are significant. The family size and age group do not have significant relationship with financial inclusion.Whereas, p-value for the gender, education level and monthly income has less than 0.05 hence, they have statistically significant relationship with financial inclusion. In addition, nagelkere R-square shows 50% of outcome is described by exploratory variables.

Noureldin and Shusha, (2019) provided the evidence that access is a significant determinant of financial inclusion however; the result is not consistent with current study since access to financial inclusion is non-significant, but financial literacy is played important role in Namobuddha municipality. Akudugu, (2013) concluded that access to formal financial institution and financial literacy both are significant determinants of financial inclusion. This study affirms only financial literacy is significant determinants of financial inclusion while access is not significant determinants.

Further,Akileng, Lawino and Nzibonera, (2018) provided evidence that financial innovation had a positive relationship with financial inclusion. Therefore, the result is consistent with the current study. Katoroogo, (2016) provided an evidence that quality of financial services is positive significant with financial inclusion and consistent with current study result.

Akileng, Lawino and Nzibonera(2018);Katoroogo, (2016) concluded that financial literacy and financial inclusion had a strong positive relationship with financial inclusion. Therefore, the study is consistent with the current study. Nandru, Byram and Rentala (2016) provided an evidence that demographic factors are associated with financial inclusion. Whereas, current study exhibits gender, education and income are positive predictor. Family size and age group are not associated with financial inclusion. Therefore, the resultsare partially consistent with Nandru, Byram and Rentala(2016).

Conclusion and Implications

The issue of financial inclusion has received priority in Nepal. It was found that maximum households using banking services. The sample respondents found to be aware about those services in an effective manner. Their tendency to saving and lending habits are also uplifting higher level of financial inclusion. The result shows that the majority of the families arefinancially included, indicating, they are using at least one category of financial services among the five different categories of financial services. At household level of financial inclusion, it is found satisfactory in Namobuddha municipality. In this regards, financial innovation, quality of financial services and financial literacy are main determinants of financial inclusion. They are the main predictors that affects the decision of people to use services of formal financial institution and determines the saving habits; take loanat needs, payment of utility and transfer of funds and diversification of risks by using insurance services. Therefore, financial innovation and quality of financial services are the determinants of financial inclusion along with financial literacy. Since, the result shows access to financial services does not have significant impact on financial inclusion.It concludes that the financial innovation, quality of financial services and financial literacy are needed to focus to increase the financial inclusion in Nepal.

Local government need to design financial inclusion policies and programs that stimulate the capabilities for their financial inclusion. Further, this type of the study can be conducted in individual levels also to explore more about behavioural determinants of financial inclusion in local context, mainly in the rural area of Nepal.

References

Abdu, M., Buba, A., Adamu, I., & Muhammad, T. (2015). Drivers of financial inclusion and gender gap in Nigeria. *The Empirical Econometrics and Quantitative Economics Letters, 4*(4), 186-199.

Alliance for Financial Inclusion. (2016). *Guideline Note 22*. Indicators of the quality dimension of financial inclusion. Retrived from: https://www.afiglobal.org/publications/2351/Guideline-Note-22-Indicators-of-the-Quality-Dimension-of-Financial-Inclusion Akileng, G., Lawino, G. M., &Nzibonera, E. (2018). Evaluation of determinants of financialinclusion in Uganda. *Journal of Applied Finance and Banking, 8*(4), 47-66.

Beck, T., Senbet, L., &Simbanegavi, W. (2014). Financial inclusion and innovation in Africa: An overview. *Journal of African Economies, 24*(1), i3–i11. https://doi.org/10.1093/jae/eju031

Burjorjee, D. M., & Scola, B. (2015). A market systems approach to financial inclusion.*Washington, DC: Consultative Group to Assist the Poor.*

Camara, N., &Tuesta, D. (2014). Measuring financial inclusion: A multidimensional index. *BBVA Research Paper*, 14–26. doi:10.2139/ssrn.2634616

Chaulagain, R. P. (2015a). Contribution of financial literacy to behavior. *Journal of Economics and Behavioral Studies, 7*(6J), 61-71.https://doi.org/10.22610/jebs.v7i6 (J).618

Chaulagain, R. P. (2015b). Financial literacy for increasing sustainable access to finance in Nepal. *School of Education, Kathmandu University, Nepal.* Retrieved from: https://archive.nrb.org.np/ecorev/articles/Vol27-2-art3.Financial_Literacy_Ramesh_Chaulagain.pdf

Churchill, S. A., Nuhu, A. S., & Smyth, R. (2020). *Financial inclusion and poverty: Micro-level evidence from: Nigeria. In Moving from the Millennium to the Sustainable Development Goals* (11-36). Palgrave Macmillan, Singapore.

Donovan, K. (2012). Mobile money for financial inclusion. *Information and Communications for development*, 61(1), 61-73. Retrieved from: http://documents1.worldbank.org/curated/en/727791468337814878/pdf/722360PUB0EPI00367926B9780821389911.pdf

Dupas, P., Karlan, D., & Robinson, J. (2013). Expanding access to formal savings accounts in Malawi, Uganda, Chile, and the Philippines. *New Haven, Conn.: Innovations for Poverty Action*Retrieved from:*http://Poverty-action.Org/project/0477*

Katoroogo, R. M. (2016). *Behavioural determinants of financial inclusion in Uganda* (Doctoral dissertation, University of the Witwatersrand, 2016). Retrieved from: http://wiredspace.wits.ac.za/handle/10539/23819

Kumar,B. P., & Philip, P. J. (2011). Financial exclusion: A theoretical approach. *Munich Personal RePEc Archive*. Retrieved from: Https://mpra.ub.uni-muenchen.de/89864

Laeven, L., Levine, R., &Michalopoulos, S. (2015). Financial innovation and endogenous growth. *Journal of Financial Intermediation, 24*(1), 1–24. https://doi.org/10.1016/j.jfi.2014.04.001

Lin, T., Xuejun ,Jin , &Yuexiang, J. (2020, June 4). The supply-side and demand-side of financial inclusion: Survey data from the CHFS. *Journal of Zhejiang University, 3*(4), 215-230. doi: 10.3785/j.issn.1008-942X.CN33-6000/C.2016.08.303

Mashayekhi, M. (2015, February). Remittances and financial inclusion. *United Nations Conference on Trade and Development*. Retrieved June 16, 2020, from: https://www. un.org/en/development/desa/population/migration/events/coordination/13/documents/ presentations /13CM_Mina_MASHAYEKHI.pdf

Mialou, A., &Amidzic, G. (2017). Assessing countries' financial inclusion standing — A new composite index. *Journal of Banking and Financial Economics, 2/2017*(8), 105–126. https://doi.org/10.7172/2353-6845.jbfe.2017.2.5

Nandru, P., &Rentala, S. (2019). Demand-side analysis of measuring financial inclusion. *International Journal of Development Issues, 19*(1), 1–24. https://doi.org/10.1108/ijdi-06-2018-0088.

Nandru, P., Anand, B., &Rentala, S. (2015). Factors influencing financial inclusion through banking services. *Journal of Contemporary Research in Management, 10*(4), 1-30. Retrieved from: https://d1wqtxts1xzle7.cloudfront.net /45092943/Financial_ Inclusion_Nandru_et_al.pdf

Naceur, S. B., Barajas, A., & Massara, A. (2017). Can Islamic banking increase financial inclusion? In *Handbook of empirical research on Islam and economic life*. Edward Elgar Publishing.

Nuzzo, G., &Piermattei, S. (2019). Discussing measures of financial inclusion for the main Euro area countries. *Social Indicators Research, 148*(3), 765–786. https://doi.org/10.1007/s11205-019-02223-8

Osborne, J.W. (2017). R*egression and linear modelling: Best practices and modern methods*. Thousand Oaks, CA: Sage.

Pant, B. (2016). Financial inclusion in Nepal: Policy review and prescriptions. *Nepal Rastra Bank Working Paper Series*, (34), 1-18.

Pant. B. (2016a). Promoting financial inclusion in Nepal: Policy assessment and priorities. Nepal Rastra Bank Working Paper Series, (34), 1-19.

Roa, M. J. (2015). Financial inclusion in Latin America and the Caribbean: access, usage quality. CEMLA. Retrieved from: https://www.researchgate.net/profile/MariaRoa2 / publication/275334117_Financial_Inclusion_in_Latin_America_and_the_Caribbean_ Access_Usage_and_Quality/links/5537c3de0cf2239f4e779866.pdf

Toxopeus, H. S., &Lensink, R. (2008). *Remittances and financial inclusion in development. In Development Finance in the Global Economy* (236-263). Palgrave Macmillan, London.

World Bank (2014). *Global financial development report 2014*: Financial inclusion (2). World Bank Publications.

World Bank (2018). Financial inclusion: Overview. Retrieved from: http://www.worldbank.org/en/topic/ financialinclusion/overview

Yawe, B. L., & Prabhu, J. (2015). Innovation and financial inclusion: A review of the literature. *Journal of Payments Strategy & Systems, 9*(3), 215-228. Retrieved from: https://www.ingentaconnect. com/content/hsp/jpss/2015/00000009/00000003/art00002#