

Dynamic capabilities and enterprise growth: the mediating effect of networking

Dynamic capabilities and enterprise growth

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Abstract

Purpose – Enterprise growth drives competitiveness, innovations, employment creation, income generation and social inclusion in societies. The purpose of this paper is to examine the mediating effect of networking on the relationship between dynamic capabilities and enterprise growth of financial cooperatives.

Design/methodology/approach – This is a cross-sectional survey and quantitative study of 269 financial cooperatives based on structural equation modelling and bootstrapping techniques analysis.

Findings – The results reveal that dynamic capabilities are vital in promoting the growth of financial cooperatives. In addition, networking partially enhances the contribution of dynamic capabilities to the growth of financial cooperatives. Therefore, dynamic capabilities and networking play a key role in promoting the growth of financial cooperative enterprises.

Research limitations/implications – This was a cross-sectional survey. It did not trace the changes in behavioural and attitudinal aspects of enterprise growth over time. A longitudinal approach is recommended.

Practical implications – It is imperative that managers of financial cooperatives enhance their coordination, learning and competitive response capabilities through consultation, exchange and sharing of information among staff and other stakeholders, to increase the membership, capital and income volumes, depicting growth of financial cooperatives.

Originality/value – This study provides an insight on the mediating effect of networking on the enterprise growth of financial cooperatives in developing countries founded on networks theoretical framework. Unlike previous studies that modelled direct relationship of enterprise growth.

Keywords Dynamic capabilities, Enterprise growth, Networking, Financial cooperatives

Paper type Research paper

1. Introduction

World over, the growth of financial cooperatives (FCs), also referred to as savings and credit cooperatives (SACCOs) or credit unions (World Council of Credit Unions, 2012), continues to attract the attention of practitioners and academicians. This is because enterprise growth is a key driver of firm competitiveness, employment, innovation, economic development and social inclusion (Pfeifer *et al.*, 2016; Akingunola, 2011). The experience regarding the growth of FCs in the developed world indicates that they are protected from market globalization,

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international competition and benefit from favourable country specific legislation. However, in the developing countries, they have been left to face stiff competition from national commercial banks and multinational financial institutions which partly leads to slow growth (Perilleux *et al.*, 2016). A global analysis show that the growth rate of financial cooperatives in the USA stood at 51.74% compared to 9.25% for Africa and 3.76% for Uganda (WOCCU, 2017). In terms of the capital base of financial institutions, again there are notable discrepancies, with the USA being on top with USD 1.42 trillion compared to USD 7.9bn in Africa and USD 83.4m for Uganda (WOCCU, 2017). In terms of membership, the USA had 122 million compared to 30 million in Africa, while Uganda had 776,664 (WOCCU, 2017). A critical review of the above growth indicators on the financial cooperatives: it is evident that Uganda growth trends are the lowest and a cause of concern to policy makers who desire to build a well-capitalised financial cooperatives sector. This dismal performance trends could be attributed to deficiencies in coordination, learning, competitiveness and networking systems in their business operations. This adversely affects the growth of FCs in a period when government is vigorously pursuing financial inclusion efforts. This study is motivated by these developments and seeks to investigate the impact of the different dynamic capabilities and networking attributes to the growth of financial cooperatives in particular SACCOs.

The extant literature demonstrates that studies on enterprise growth are mainly based on the life cycle model and analyse the growth patterns of firms in a linear approach (Gupta *et al.*, 2013; Greiner, 1998; Penrose, 1952). However, other scholars focus on the determinants, processes, challenges and strategies of firm growth (Achtenhagen *et al.*, 2010). Furthermore, Kreutz *et al.*, 2014; Li De Zubielqui and O'Connor, 2015 and Teece *et al.*, 1997 investigate the contribution of available resources and capabilities of firms to their enterprise growth.

This study contributes to knowledge by examining the mediating effect of networking on the relationship between dynamic capabilities and enterprise growth of FCs. The inclination to networking is because the FCs are member-based organizations, are interactive and there is high level of collaborative behaviours that impact their operations, outcomes and growth in a dynamic and complex business environment. Theoretically, enterprise growth is deeply rooted in the life cycle theory (Kazanjian, 1988; Adizes, 1979; Greiner, 1998), and the enterprise growth of firms is explained by dynamic capabilities theory (Teece *et al.*, 1997) founded on the ability of firms to reconfigure resources to attain sustainable competitive advantage. Therefore, the study addresses the following questions:

- (1) What is the relationship between dynamic capabilities and enterprise growth of financial cooperatives?
- (2) Does networking mediate the relationship between dynamic capabilities and enterprise growth of financial cooperatives based on the networks theory?

The rest of the paper is systematically aligned as follows; Section 2 presents the related literature and development of hypotheses. Section 3 describes the methodological structure of study, followed by Section 4, which highlights the results. The next Section 5 discusses the findings, while in Section 6, we draw the conclusions and implications of the study.

2. Literature review and hypotheses development

2.1 Study concepts and theoretical foundation

Enterprise growth refers to a development process that keeps the tendencies of balanced and stable growth of total performance level expressed as output, sales, volume, profits and asset gross (Mao, 2009). Dobbs and Hamilton (2007) posit that growth of a firm is about changes in the size during a specified time span. Indeed, in the context of financial cooperatives, Lassoued (2017) argue that many microfinance institutions in Africa have become the main means of offering financial services to the poor. However, their operations remain a challenge, as evidence point to

their inability to attain financial self-sufficiency and operation self-sufficiency, the key parameter for dynamic growth. Therefore, the enterprise growth implies steady increases in the membership, savings, loan portfolio, capital and income over time. This growth cannot be achieved without tapping into the dynamic capability, which conceptually refers to the ability of firms to integrate, renew and re-configure internal and external resources. If well-articulated, the firm can attain competitive advantage to address rapidly changing environment (Teece *et al.*, 1997). In context of this study, dynamic capabilities include capacity of financial cooperative to integrate, renew and reconfigure their internal and external resource in dynamic business environment. As a mediator, the study adopted networking which conceptually refers to the ties, interaction and interdependence between actors, which allows information and resource sharing as well as flow in an organization (Katz *et al.*, 2005; Okten and Osili, 2004). Networking is crucial for the financial cooperatives operations because it acts as catalyst to growth. Further, if well nurtured networks can shape the development of the financial institutions and systems that are ideal for providing financial services to the marginalized in the society. In the case of this study, networking is collaboration, exchange and sharing of information/ideas within the institutions and other stakeholders.

The networks theory posits that node of centrality, density, robustness and transitivity enhance its strength and level of interactions between actors, which affects degree of information flow and sharing (Katz, *et al.*, 2005; Granovetter, 2004). In the same perspective, networks theory emphasizes dyadic relations and interdependence among actors (Gretzel, 2001; Wasserman and Faust, 1994). Hence, in the present study, the networks theory helps to explore on the networking functions in FCs growth process.

2.2 Dynamic capabilities and enterprise growth

According to Breznik and Lahovnik (2016), firms which are able to identify new opportunities transform available resources and abilities to produce competitive and innovative products that match the changes in the business environment. In addition, related evidence posits that coordination of actions and resources as well as the role of managers is important in fostering the dynamic capabilities of small and medium-sized enterprises (D'annunzio *et al.*, 2015). Indeed, dynamic capabilities are about renewing, reconfiguring, recombining and identifying opportunities and threats in a business, leading to competitive advantage and growth of firms in dynamic environment. These foundations lead to long run enterprise growth and prosperity (Teece *et al.*, 1997). Similarly, Obi *et al.* (2018) in their study reveal that dynamic capabilities contribute to competitive advantage of a restaurant business through sensing, learning and reconfiguration capabilities. More so, dynamic capability theorists emphasize the benefits of keeping organizational structures aligned to the changing demands of the environment in order to achieve growth in enterprises. Further, Koryak *et al.* (2015) infer that functional and dynamic capabilities influence firm performance and growth as supported by (Adebisi and Ogunkoya, 2014). This means that functional capabilities, such as, key processes, alliance and joint venture, formation and management, general functional and strategic management are important in firm growth process. Scholars suggest that firms have different coordination, learning, innovation and response capabilities at the different stages of life cycle that firms follow to growth (Yung *et al.*, 2016). Similarly, Roach *et al.* (2018) emphasise the value of dynamic marketing capabilities in fostering innovations that in turn affect the performance and growth of firms. In conclusion, we can assert that the reviewed literature underscores that re-organization, integration, renewal and reconfiguration of resources are crucial to the study objectives. In addition, when coordination, learning and competitive response capabilities are embraced by firms, then the growth of enterprises can be achieved. Therefore, it is hypothesised that:

H1. Dynamic capabilities and enterprise growth are significantly related

2.3 The mediating role of networking

Brink (2019) argues that collaboration through innovative means is vital across all business networks to foster dynamic capabilities. In addition, in developing economies, small business enterprises benefit and profit more from networking activities compared to large businesses in developed markets that benefit more in terms of value. Networks engagement emphasise that concentration and closeness engagements in socioeconomic activity, depending on the scale, size of ties and relationships within a given sector, improves the firm performance (Hung *et al.*, 2017). This is complemented by the Li De Zubielqui and O'Connor (2015) position of the relevancy of clusters in communities that facilitates interaction, exchange and access to knowledge and information among the actors profiting the firm. The recent works of Mbugua *et al.* (2019) support the early views particularly the significant role of social networks in community enterprises like financial cooperatives. Forkmann *et al.* (2018) contend the existence of enormous opportunities for further knowledge generation with regard to capabilities and networks hence supporting the significant importance of the relationship between dynamic capabilities and networks for business performance (Cisi *et al.*, 2016; Eisenhardt and Martin, 2000). The insights in the explored literature are significant in explaining the importance of closeness and interdependence in resource and information sharing in enterprises generally. Steven *et al.* (2017) discuss the mediating role of technological innovations on the relationship between dynamic capabilities and performance of a business as a true opportunity to embrace technology and innovations in firms. In this study, we discuss the mediating role of networking in the relationship between dynamic capability and enterprise growth of financial cooperatives. Networking is crucial to the organisational changes and success of the financial cooperatives, and therefore it is necessary for the leaders of these firms to approach growth strategies in a comprehensive manner by integrating networks at the different levels of the organisations. Therefore, we hypothesize:

- H2. Networking mediates the relationship between dynamic capabilities and enterprise growth.

3. Methods

3.1 Design and sample size

This study employed a cross-sectional survey design to collect quantitative representative data in given timeframe (Creswell, 2009). From a population of 2065 registered and active financial cooperatives (UCA report, 2015), a sample of 335 was derived based on (Yamane, 1973). However, the response rate was at 269 SACCOs, accounting for 80% above 70% acceptable recommended by Draugalis *et al.*, 2008. We used simple random sampling to select the FCs and purposively selected three respondents (either managers, credit officers, treasurers and board members) based on the important roles in the management and governance of the organisations in line with Melen and Nordman, 2009.

3.2 Measures and data management

Dynamic capability measures are hinged on the components of coordination, learning and competitive response capabilities of resources to create sustainable competitive advantage (Wang and Ahmed, 2007; Winter, 2003). The question items on a six-point scale modified to suit the study context like previous scholars (Mafabi *et al.*, 2012; Kagaari, 2010). For the enterprise, growth was assessed in terms of change in business income, business volumes, profitability, employee size and expansion (Achtenhagen *et al.*, 2010; Anyandike-danes *et al.*, 2009). The measurement items on a six-point scale were adjusted to fit the FCs perspectives in Uganda. Networking was measured by the degree of ties, interaction and interdependence between actors which allows information and resource sharing as well as flow in an

organization (Katz *et al.*, 2005; Okten and Osili, 2004). Therefore, question items on a six-point scale were modified to fit the study context.

We controlled for common methods bias to eliminate type I and type II errors (Lamoureaux *et al.*, 2006). The question items were carefully constructed, precisely defined terms, using simple, specific, questions and avoiding double barrelled questions (Tourangea *et al.*, 2000). The data entry process included several checks to avoid errors arising from incorrect data entry, out of range values, outliers, missing values, normality and provided remedies (Field, 2009). The MCAR test results showed that $\chi^2 = 39,203.641$, $df = 4,345$, $Sig. = 0.046$, meaning that the p -value was within the acceptable range of less than 0.05. The missing values were replaced using linear interpolation method (Little and Rubin, 2002). The outliers in the data were corrected using Z-score analysis method. We tested for parametric assumptions in addition to correlation analysis, exploratory factor analysis and confirmatory factor analysis.

3.3 Measurement models

We run measurement models for the dynamic capability, enterprise growth and networking variables in this study and the findings are shown in Table 1 and Appendix. The baseline comparisons model fit indices for dynamic capability are: incremental fit index (IFI) = 0.997; Tucker-Lewis index (TLI) = 0.996; comparative fit index (CFI) = 0.997 and root mean square error of approximation (RMSEA) = 0.012. Therefore, all the model fit indices met the accepted cut-off points above 0.95, indicating that the extracted measurement items combined appropriately to explain dynamic capability. Further, Table 1 shows the enterprise growth baseline comparisons model fit indices: IFI = 0.986; TLI = 0.977; CFI = 0.985 and RMSEA = 0.030. Since all the model fit results were above the recommended cut-off point of 0.95, it means the retained items adequately explain the measurement variable-enterprise growth. Table 1 also shows the baseline comparison model fit indices for networking, meeting the threshold of 0.95 with the IFI = 0.992; TLI = 0.983; CFI = 0.997 and RMSEA = 0.026. Thus, the extracted measurement items correlated well with the latent variable networking.

3.4 Hypothesis testing

Table 2 shows the results of the structural equation model analysis on whether networking mediates the relationship between dynamic capability and enterprise growth. The baseline comparative indices are: IFI = 0.963, TLI = 0.956 and CFI = 0.964. The RMSEA was 0.027 and below the recommended cut off of 0.05. All the retained items met the cut-off

NPAR	CMIN(χ^2)	df	p	IFI	TLI	CFI	RMSEA
<i>Dynamic capability</i>							
23	33.163	32	0.410	0.997	0.996	0.997	0.012
<i>Enterprise growth</i>							
26	36.060	29	0.175	0.986	0.977	0.985	0.030
<i>Networking</i>							
10	5.927	5	0.313	0.992	0.983	0.997	0.026

Source(s): Model fit results

Table 1.
Measurement models

NPAR	CMIN(χ^2)	df	p	IFI	TLI	CFI	RMSEA
57	159.929	132	0.049	0.962	0.956	0.963	0.028

Source(s): Model fit results

Table 2.
Dynamic capability,
networking and
enterprise

requirements of 0.95 and converged to explain the relationship of dynamic capability, networking and enterprise growth of FCs.

4. Results

4.1 Demographic statistics

Table 3 illustrates statistical summaries regarding location, operation period, membership, savings and loan portfolio of the financial cooperatives. The majority 71% operates in urban/peri urban areas and that 65.4% had operated for over five years, hence providing evidence of growth opportunity over time. About 66.5% had members below 1,000 and for the majority of 77.9% had less than Ushs 500m which compares well with the 47.6% had disbursed loans of 1-Ushs 500m, showing that FCs disburse small amount of loans.

4.2 Correlation results

Table 4 shows the Fornell–Larcker criterion test for the association between the study variables. The results are all positive and significant between dynamic capabilities and enterprise growth ($\beta = 0.415, p = 0.001$); dynamic capabilities and networking ($\beta = 0.508, p = 0.001$); networking and enterprise growth ($\beta = 0.438; p = 0.001$). Therefore, positive changes in dynamic capabilities and networking contribute to a positive change in enterprise

Items	Frequency	Percentage (%)
<i>Location</i>		
Urban	105	39.0
Peri-Urban	85	30.5
Rural	82	30.5
Total	269	100.0
<i>Period of operation</i>		
1–5 years	93	34.6
6–10 years	89	33.4
11–20 years	83	30.5
More than 20 years	04	1.5
Total	269	100.0
<i>Membership</i>		
1–500	202	75.1
501–1,000	46	17.1
More than 1,000	21	7.8
Total	269	100.0
<i>Total Savings</i>		
1–500 million	210	77.9
501 million-1 billion	46	17.3
More than 1 billion	13	4.8
Total	269	100.0
<i>Loan portfolio</i>		
1–100 million	128	47.6
101–500 million	82	30.5
501 million-1 billion	47	17.5
More than 1 billion	12	4.5
Total	269	100.0

Table 3.
Descriptive
characteristics

Source(s): Primary data

growth, respectively. Equally, a positive change in dynamic capabilities contributes to a positive change in networking and both are found to be important in the growth of financial cooperatives.

4.3 Direct path regression estimates

Table 5 present the structural equation model results for direct relationship between the study variables. The direct path relationships are significant; dynamic capabilities and enterprise growth ($\beta = 0.260, p = 0.001$), dynamic capabilities and networking ($\beta = 0.508, p = 0.000$) and networking and enterprise growth ($\beta = 0.306, p = 0.000$). Therefore, constructs of dynamic capabilities contribute to enterprise growth (members, capital, portfolio and incomes). More so, dynamic capabilities contribute to the networking in the organisations, and networking contributes to enterprise growth. The networking $R^2 = 0.258$ and enterprise growth $R^2 = 0.242$ mean that model explains 25.8% of networking and 24.4% enterprise growth, respectively, hence supporting hypothesis H1 of the study.

4.4 Bootstrapping mediation test

Table 6 indicates mediation test results using bootstrapping method (Hair et al., 2017). The assumption is that mediation exists when the direct path is significant and the computed variance accounted for (VAF) is between 20 and 80%. The results show a significant direct relationship between dynamic capabilities and enterprise growth ($\beta = 0.198, p = 0.001$). It is observed that networking partially mediates the relationship between dynamic capabilities and enterprise growth ($\beta = 0.356, p \leq 0.05$) and (VAF = 64.3 %). This implies that networking is a conduit through which dynamic capabilities relates to enterprise growth of FCs, hence supporting hypothesis H2.

Study variables	Dynamic capabilities	Enterprise growth	Networking
Dynamic capabilities	0.631		
Enterprise growth	0.415***	0.537	
Networking	0.508***	0.438***	0.727

Note(s): ***Correlation significant at 0.001(two tailed), $N = 269$

Table 4.
Fornell-Larcker
criterion correlation
results

	β	Mean	Std	t stat	p values	95% confidence intervals bias corrected
Dynamic capabilities → Enterprise growth	0.260	0.255	0.076	3.406	0.001	0.100–0.401
Dynamic capabilities → Networking	0.508	0.511	0.045	11.283	0.000	0.407–0.587
Networking → Enterprise growth	0.306	0.312	0.070	4.402	0.000	0.159–0.435

Quality criteria	R^2	Adj. R^2	f^2
Networking	0.2580	0.2550	0.92

Source(s): Primary data

Table 5.
Direct path results

Table 6.
Results for mediation
effects

	Dynamic capability	Networking	Enterprise growth
<i>Standardized total effects</i>			
Networking	0.695***	0.000	.000
Enterprise growth	0.554***	0.512*	.000
<i>Standardized direct effects</i>			
Networking	0.695***	0.000	.000
Enterprise growth	0.198*	0.170*	.000
<i>Standardized indirect effects</i>			
Networking	0.000	0.000	.000
Enterprise growth	0.0356*	0.000	.000
Note(s): *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, $n = 26$			

5. Discussion

In this study, we examine dynamic capabilities, enterprise growth and the mediating role of networking. Three constructs of dynamic capabilities – coordination, learning and competitive response were identified, and we argue their role are important in enterprise growth. The results reveal that if financial cooperatives coordinate their internal and external resources, they can achieve optimal operations and hence the strategic objectives of the organizations. When the internal resources (equity, savings and interest earned) is supplemented with external funding from agencies and governments, the financial cooperatives can have a solid loanable fund base to support a flourishing business. However, this can only be possible if the staff are visionary, knowledgeable, skilled and experienced to efficiently structure the loans to the right borrowers. Attaining a large loan portfolio position, the financial cooperatives become competitive in a highly volatile business environment. This argument finds support from (Girod and Whittington, 2017; Steven *et al.*, 2017; MacLean *et al.*, 2015) that emphasise coordination, learning and innovativeness in the growth of enterprises.

The results further reveal that networking mediates dynamic capabilities and enterprise growth. Therefore, engaging in networks with various stakeholders can aid the choice of technology that is ideal for the operations of the organizations. The right technology enhances efficient information management systems that facilitate the decision-making process, promotes collaboration and interactive networking. Indeed, modern technology has improved the financial delivery interventions that counter the competitive pressures in sector.

It is also evident from the results that to have competent workforce in the financial cooperatives, networks provide the best avenue for external technical assistance and exchange programmes. Accordingly, national and international network frameworks are functional in Uganda and have contributed to better management of the institutions, thereby contributing to the desired growth.

Furthermore, the results show that competition in the industry can be mitigated by changing prices and policies to match what the market offers and containing the sensitivity of the members to the developments in the market. The above discussions are supported by studies underlining the impact of networking on firm performance (Cisi *et al.*, 2016; Hung *et al.*, 2017; Eisenhardt and Martin, 2000). The results support networks theoretical foundation, which posits that node/agent centrality, density, robustness and transitivity enhance its strength and level of interactions between actors, which affects degree of information flow and sharing (Katz, *et al.*, 2005; Granovetter, 2004). In the same perspective,

networks theory emphasizes dyadic relations and interdependence among actors (Katz, *et al.*, 2005; Granovetter, 2004).

6. Conclusions

Prior works that examine enterprise growth largely relied on the linear business cycle pattern of growth (Gupta *et al.*, 2013; Penrose, 1952). This paper focuses on dynamic capabilities effect on enterprise growth. It argues that dynamic capabilities when mediated by networking contribute to the growth of FCs (Hung *et al.*, 2017; Cisi *et al.*, 2016; Eisenhardt and Martin, 2000). Employing a sample of 269 FCs in Uganda, a cross-sectional survey and quantitative approach to collect the data and SEM for analysis, provides a strong evidence for the study argument. Specifically, the results demonstrate that networking among the stakeholders both within and external enhances the contribution of dynamic capabilities to the growth of FCs. The general conclusion is that the results confirm that coordination, learning and competitive response capabilities directly contribute to growth. However, it is evident that coordination capability leads to sharing of information, while learning capability and enterprise growth are equally related through exchange and sharing of information and resources. The competitive response capability promotes information exchange, hence eventually contributing to the growth of the institutions.

The findings of this study provide implications relevant to policymakers and financial cooperative practitioners. The significant impact of dynamic capabilities on enterprise growth and networking means that interventions are fundamental in strengthening and scaling up the technical and financial support by external stakeholders, such as, government and development partners. This will bridge the existing capacity deficiencies inherent in the FCs, hence encouraging collaboration, information exchanges at institutional level that then fosters sector development and innovations. SACCOs should also employ technological applications in their operations as means to foster coordination, learning and competitive response through networking with other stakeholders. This study results give financial cooperatives' stakeholders insights of networking as a precursor of growth.

Like any study, this study was without limitations especially the constraints associated with stakeholders' interventions may distort the strategic goals of the financial cooperatives. The failure to strike a balance between the interests of the stakeholders and the FCs can be real. Further, the FCs being member controlled, owned and member used may limit them from exploiting the dynamic capabilities and willingness to open to external interventions, hence deterring the growth associated with networks and dynamic capability. Future researchers can examine how behavioural aspects of the members may impact the enterprise growth of FCs, and whether the core principles of cooperative impede or foster business development.

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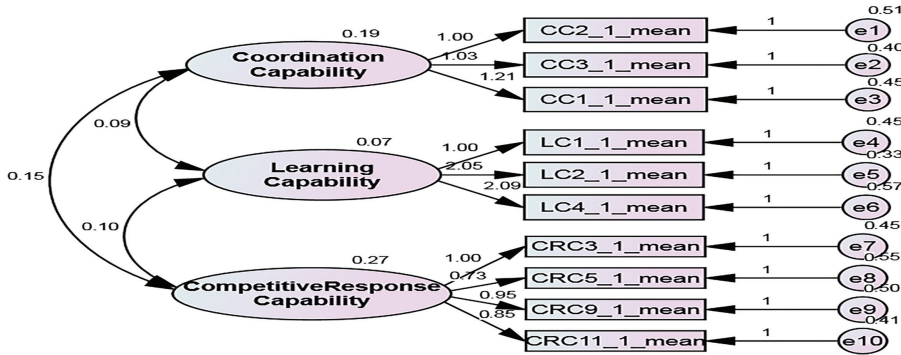
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Further reading

- Das, M. and Goswami, N. (2019), "Effect of entrepreneurial networks on small firm performance in Kamrup, a district of Assam", *Journal of Global Entrepreneurship Research*, Vol. 9 No. 1, p. 7.

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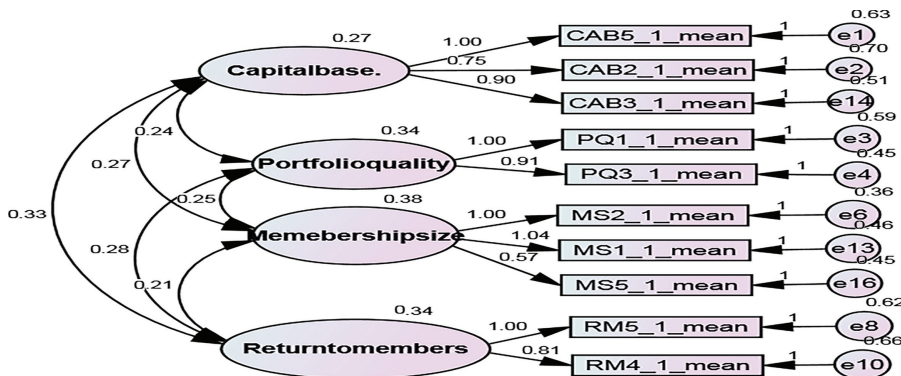
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Note(s): Chi-square = 33.163; Degree of Freedom(DF) = 32; Probability(P) = 0.410; Incremental Fit Index(IFI) = 0.997; Tucker Lewis Index(TLI) = 0.996; Comparative Fit Index(CFI) = 0.997; Root Mean Square Error of Approximation(RMSEA) = 0.012

Figure A1.
Dynamic capability
measurement model

In Figure A1 above, three components of dynamic capability (coordination capability; learning capability and competitive response capability) are used to construct the model. Coordination capability is explained by: our SACCO uses modern technological applications to improve performance over time (CC1); our SACCO uses both internal and external resources to enhance its outputs (CC2) and our SACCO always searches for opportunities and threats in the business (CC3). Meanwhile learning capability is defined by three items we often use ICT to learn new concepts and development (LC1); we are often share our experiences with other members during work (LC2) and we learn from each other during our routine activities (LC 4). Competitive response capability is measured by four items: we use cost reduction strategies to manage finance crises in our SACCO (CRC3); we designed and modified our products to meet the members' demands (CRC5); we adjust the pricing of the SACCO products to match the market rates (CRC9) and we change our behaviour of handling SACCO resources according to the market needs (CRC11).



Note(s): Chi-square = 36.060; Degree of Freedom(DF); Probability(P) = 0.172; Incremental Fit Index(IFI) = 0.986; Tucker Lewis Index(TLI) = 0.977; Comparative Fit Index(IFI) = 0.985; Root Mean Square Error of Approximation = 0.030

Figure A2.
Enterprise growth
measurement model

From Figure A2, four components (capital base, portfolio quality, membership size and returns to members) are modelled to explain institutional size. The change in capital base is explained by three measurement items: the grants to the SACCO have been increasing over time (CAB2); the total accumulated savings have been increasing over the years (CAB 3) and the share capital base of the SACCO has been increasing over the years (CAB5). The change in the portfolio quality is defined by two items (PQ1): the portfolio size has been increasing over the years and the portfolio quality has been improving over the years (PQ3). Whereas change in the membership size is explained by three measurement items: the membership size has been increasing over the years (MS1); the members' participation in SACCO activities has increased over time (MS2) and the members' attitude has improved over time (MS5). The returns to members are measured by two items: the sources of income have been increasing over time (RM 4) and the surplus income has always been increasing over the years (RM 5).

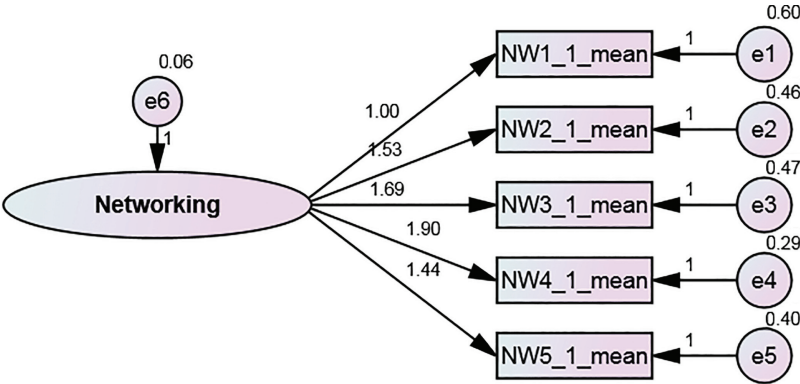
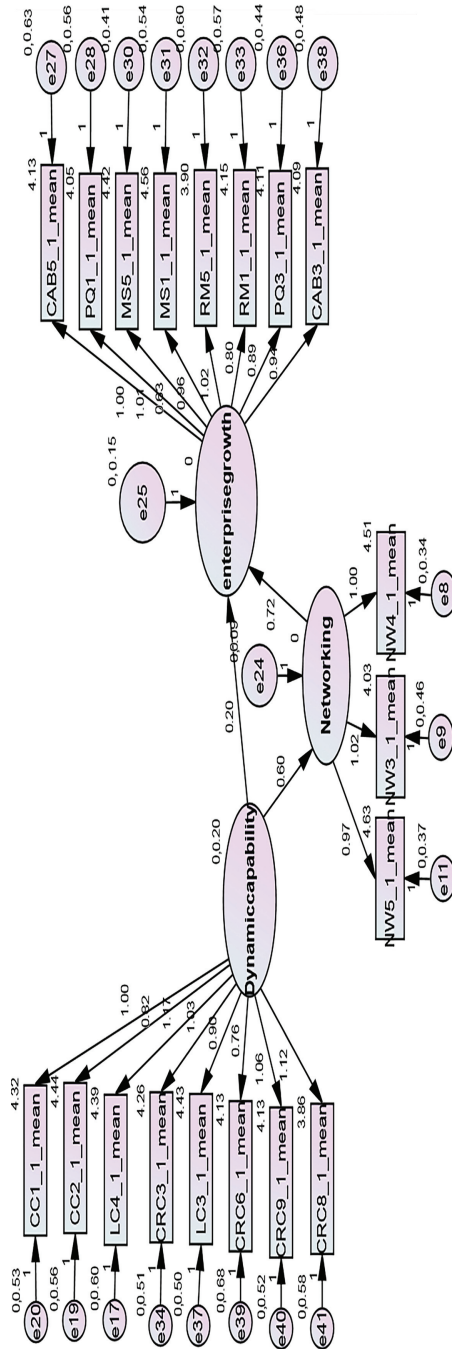


Figure A3.
Networking
measurement model

Note(s): Degree of Freedom (DF) = 5; Probability (P) = 0.313; Comparative Fit Index (CFI) = 0.992; Tucker Lewis Index (TLI) = 0.985; Incremental Fit Index (IFI) = 0.992; Rodom Maximization Standard Estimation Approximation (RMSEA) = 0.026

From Figure A3, the networking variable is explained the following measurement items: we coordinate SACCO activities through social media platforms (NW1); we get new information about SACCO developments from the Apex bodies (NW2); our members jointly solve problems in the SACCO activities (NW3); we support each other during routine activities in the SACCO (NW4) and we often work in teams during field activities (NW5)



Note(s): Degree of Freedom(DF) = 132; Probability(P) = 0.049; Comparative Fit Index(CFI) = 0.962; Tucker Lewis Index(TLI) = 0.956; Incremental Fit Index(IFI) = 0.963; Rodom Maximization standard Estimation Approximation(RMSEA) = 0.028

Figure A4.
Enterprise growth
structural
equation model