



BUILDING SOCIAL CAPITAL IN THE FISHERY COMMUNITIES OF THE SOUTH-WEST REGION OF CAMEROON: THE CASE OF LIMBE MUNICIPALITY

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Abstract

Recently, the role played by social capital in stimulating the level of economic activities in a country is being increasingly recognized. Production has often employed land, labour, capital and technology as key the resource inputs, social capital being largely ignored. Social capital designates social relations/connectedness. The women fish processors of the Limbe fisheries communities have recognized that starting up fish trade does not necessarily require a huge bank loan but could depend on social relationships. This study therefore aims at assessing the role played by social capital on women's economic activities in the fisheries communities of Limbe. The purposive sampling technique was used to sample 350 women fish processors selected from among Cameroonians, Beninese, Nigerians and Ghanaians who are resident in the fisheries communities of Idenau, Batoke, Mabeta and Down Beach, Limbe. Multiple regression analysis was used in analysing the data. Results indicate that social networks are an inevitable factor that enhances the start and maintenance of their fish processing business. Recommendations are made to the Government authorities in the Limbe area to find out strategies on how to eradicate these ethnic differences.

1. INTRODUCTION

Recently, the contribution of social capital in influencing economic activities and the welfare of individuals has been increasingly recognized. In time past, literature has often identified physical capital, labour, natural capital and technology as key inputs influencing how much output is produced, with the neglect of social capital. This has been associated with the works of Solow (1957) and subsequent contributions such as those made by Mankiw *et al.* (1992), Barro (1991) and Nonneman and Vanhoudt (1996). However, nowadays, a large number of government agencies, social welfare organizations, researchers and community development practitioners have

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shown renewed interest in analysing the roles of both formal and informal social networks, social relations, civic engagement, group membership, norms and trust on economic outcomes. Thus, social capital has become one of the most important drivers of the world's economic development. To possess social capital, a person must be related to others. This capital does not only enable us to have an understanding of social functioning but also to underscore the way in which social networks can improve the welfare for the individuals and the entire community.

Social capital is a concept covering economic and sociological dimensions and is widely used in multidisciplinary research, with empirical works attributing differences in rate of economic and social development between regions and countries to differences in social capital stocks. Some of these studies include the works of Bronisz and Heijman (2009), Iyer *et al.* (2005), Rose (2000), Uphoff (2000), Krishna and Uphoff (1999), Knack and Keefer (1997), Brown and Ashman (1996) and Heller (1996). Due to the difficulties in measuring social capital at a broad level, and considering how it affects aggregate economic activity, this study follows a micro-perspective, with focus on a particular community and a specified economic activity. It is in this light that the current study investigates in to the effects of social capital on fishery communities in Limbe.

Women are often placed at the centre of community life by mainstream social capital and their active participation is evident in the fishery sectors of fishing nations (Franklin, 2005). Vunisea (2007) recognizes that in some cases, women play significant but unarticulated and unrecognized roles in all aspects of fisheries, including artisanal, small-scale and commercial sectors. In some cases, these roles include activities previously forbidden by gender norms, especially giving that the fishing sector is increasingly monetized. It has been observed that more women fish alongside their husbands or other women. In many developed countries, women participate in commercial fishing thus significantly contributing not only to the workforce in the industrial fish processing sector but to the national workforce also. Most work as crew and/or skippers on family-owned as well as on industrial vessels. It was noted during the Karlsdottir Conference (2004) that in Canada and Nunavut, women made up three quarters of 55 workers in a fish processing facility. This is similar in the Philippines where 50%-70% of women participate in fish processes ranging from fish handling to distribution. The implications of these women involvement is an improvement in their status within their respective families and communities.

In Cameroon, few Cameroonians are involved in fishing activities. Most economic operators in the sector are foreigners mostly made up of Nigerian, Ghanaian, Togolese and Beninese citizens (Wétohossou & Satia, 1996). Women act as intermediaries between fishermen and consumers of fish and also provide financial assistance to fishermen. For women to perform these functions, they rely on the relationships they have built with fishermen and fish traders, considering the difficulties in obtaining loans from the bank. Most economic activities of women remain small-scale due to lack of capital. Most women have turned to social capital in carrying out businesses that will help generate physical and human capital to ensure continuity.

Access to finance is a key factor for economic activities. However, because of low levels of income and savings and the absence of acceptable collateral securities, complex bureaucratic procedures involved in the acquisition of loans especially for women with poor educational background, women most at times do not have access to credit facilities. This has deterred their economic activities and prevented most of them from moving away from subsistence to profit-oriented activities. This explains the dependence of most women on informal financial institutions such as Rotating Service groups, commonly called 'Njangi', or borrowing from wealthy family relatives. Though obtaining funds from family relations may relatively be the cheapest way to finance women's activities, this source of finance is often limited.

The economic status of women in Cameroon has reduced because of women's limited access to credit and education. The vast majority of Cameroonian women, regardless of educational status

are disadvantaged in the economic sphere and this has affected the overall development of the country negatively (Nana-Fabu, 2006). Economic activities undertaken by women in fisheries communities in Cameroon contribute significantly to the economic welfare of many families. Women of these communities stay poor, not because they are lazy but because they lack access to capital. Women in the Limbe fishery communities are able to start and run their fishery business because of the existence of social capital. In the face of the challenges faced by these women in raising loans, they have developed different strategies to generate capital that will enable them survive in the fish processing activity. Thus, they have largely depended on social networks for financing their activities.

Based on the above, the main bone of contention in this paper is that social capital does not have any significant effect on women's economic activities in Limbe, South-West region of Cameroon. Specifically, the main argument is that trust and network, education, cohesion and average daily income have no significant influence on the fish volume harvested by women in the Limbe fishery community. This study therefore seeks to investigate whether trust and network, education, cohesion and average daily income have any effect on the quantity of fish harvested by women in the Limbe fishery community of the South-West region of Cameroon.

The first section of this paper introduced the study. The rest of the paper rest is organized along the following lines; the relevant empirical literature is reviewed in section two, section three discusses the analytical methodology adopted in the paper. In the fourth section, results are presented and discussed while policy suggestions and conclusion are made in section five.

2. LITERATURE REVIEW

A study done by Narayan and Pritchett (1999) in rural Tanzania with data extracted from the Social Capital and Poverty Survey (SCPS) of Tanzania concluded that village social capital, measured by association membership and trust in individual organizations and institutions is positively affected by household incomes. Grootaert (1999) using a similar measure for social capital also reached the empirical finding that household welfare in Indonesia was positively and significantly affected by social capital. The study identified that social capital impinged on welfare through three mechanisms which included reducing opportunistic tendencies or behaviour, sharing information among members in the association and improving collective decision making. Also, Rupasingha *et al.* (2000), using U.S county-level data and employing regression analysis reached a conclusion that the effect of social capital on per capita income growth is positive and statistically significant. In another study by Maluccio *et al.* (2000) in South Africa, using panel data from the largest South African Province collected in South Africa's largest province, no influence of social capital on per head expenditure was found in 1993 but in 1998, a significant effect was noticed.

The effects of social capital at village level on poverty in the South Western part of Nigeria was investigated by Adeyeye (2004). Poverty was strongly influenced by social capital. The study also found that differences in social capital exist between poor and non-poor male or households headed by females though such results remained inconclusive. From the findings of this study, it was recommended that the government of Nigeria should invest heavily in the building of social networks as a means of urgently, rapidly and effectively fighting village poverty effectively.

Johannes (2005) investigated whether the schooling decisions of children in Cameroon is affected by social capital at the household level using data from the 2001 Cameroon National Household Survey. Using the binary logit estimation technique, empirical results suggested that parent's decisions towards their children's schooling is strongly determined especially by female related social capital, education of their mothers as well as income. It was also noticed that both male and female children had an equal chance to school and there was no bias in gender nor rural-urban

differences in children's schooling when their parents belonged to a network. It was recommended that local community social networks should be strengthened by building social capital.

[Sabatini \(2007\)](#) empirically assessed the causal relationship between social capital and level of economic development in Italy by decomposing social capital in to three main dimensions; bridging, linking and bonding social capital. Synthetic indicators of the different dimensions of social capital were developed by the method of principal components and developmental quality was proxied by public services, gender equality, state of health of urban ecosystems, labour markets and social protection. Employing structural equation models in the analysis, it was realized that social capital, captured by engagement in civil society organizations had a positive effect on economic development.

The household welfare implications of social capital were examined in Kwara State by [Yusuf \(2008\)](#). Using probability proportionate sampling, 315 households were sampled from the six local government areas (LGAs) which make up the Kwara State. Descriptive statistics, social capital indices and regression analysis were employed to analyse the data. The disaggregated components of social capital such as organizational membership and active participating in household decision making in associations affected welfare. It was concluded that social capital has a positive effect on the welfare of household. No reverse causality was observed.

[Johannes \(2009\)](#) examined how household poverty in Cameroon is affected by social capital with data sourced from the Cameroon National Household Survey of 2001. The study used an index for decision making, solidarity or support for the social network and membership in the network as the measures for social capital. Employing the Ordinary Least Squares technique, after controlling for observed endogeneity and reverse causality bias, it was realized that the decision making index indicator and association membership correlated positively with the per capita household expenditure. Results also suggested that network solidarity mitigated household poverty significantly implying that there is a tendency for households with higher incomes to group together. It was recommended that social capital be encouraged as a means of combating poverty.

The social capital-economic growth causal relationship was established by [Zhang \(2010\)](#). The study distinguished between bridging and bonding social capital and then examined how each impacted on future economic wellbeing and how individual welfare in turn affected each type of social capital. From the National Survey of Families and Households, 3,198 non-student adults were drawn and analysed using multivariate analyses. Empirical results indicated the positive association of only individual bridging capital with future wellbeing. The findings also revealed that individual economic wellbeing influenced bridging social capital positively but not future bonding social capital. It was recommended that social service agents as well as policy makers should take in to consideration potential financial barriers encountered by low income earners in building bridging social capital.

A multidimensional analysis of social capital and household welfare measures was conducted in Cameroon by [Johannes \(2011\)](#) using the instrumental variables estimation technique with cross section data obtained from the Cameroon National Household Survey of 2007. Social capital was measured by people's membership in associations, in which six were considered. The study found evidence to conclude that at the aggregate level, an increase in social capital affected the level of household poverty in Cameroon in the opposite direction and that at the individual level, an increase in social capital translates to increased participation of the labour force. The policy implication of the study was that social capital should be promoted in order to reduce poverty by half.

[Idris and Agbim \(2015\)](#) examined how social capital affected alleviation of poverty amongst taking women entrepreneurs in Nasarawa State, Nigeria. Specifically, the study assessed how

belonging to a social network would affect training and acquisition of skills, education, self-employment, and economic empowerment. A sample of 343 respondents was selected from a population of 2,396 female entrepreneurs in the thirteen local government areas using the systematic sampling technique. Regression analysis was used in analyzing the data. Results pointed to the significant effect of social capital poverty indicators, on the basis of which it was recommended that policy should focus on creating more awareness on the importance of social capital to female entrepreneurs. It was also suggested that creating associations and cooperative societies for women entrepreneurs would encourage the building of social capital and social networks.

3. METHODOLOGY

This work employs primary data and some information gotten from secondary source. Self-administered and interviewer administered questionnaires were used in collecting primary data. Interviewer administered questionnaires were applied to mostly the women who are not well educated. The majority of them are illiterate, meaning they have not even been through primary education. Some respondents could neither read nor write since they just completed just primary school. The self-administered approach was used for the few literate women in these fisheries communities. To facilitate data collection Pidgin English was used most often since because it is commonly spoken among these women, despite the fact that English and French are the official languages. An interpreter was used to facilitate understanding for those who could not communicate in Pidgin but could do only in their mother tongue. French was used sometimes for Beninese women and some French speaking Cameroonian women fish processors. All these languages enhanced proper data collection to some level.

The purposive sampling technique was used to construct social capital measures in various Limbe fisheries communities. The targeted study population was women fish processors. Three Hundred and fifty women fish processors were selected for data collection. That is the 119 Cameroonians, 87 Beninese, 51 Nigerian and 97 Ghanaian women fish processors. The networks that were mapped out for this study are the Idenau, Batoke, Mabeta and Down Beach Fisheries Communities out of the fisheries communities of the Limbe area. In order to capture the effects of social capital measures on economic activities, the following functional relationship was specified;

$$\text{Economic Activity} = f(G_N, T_S, C_{AC}, I_C, S_{CI})$$

$$E_A = a_0 + a_1GN + a_2Ts + a_3C_{AC} + a_4Fs + a_5Ed + a_6Labc + a_7Rev + a_8St + U$$

Where,

E_A = Quantity of fish produced as a proxy of Economic Activity

G_N = Groups and net works

T_S = Trust and Solidarity

C_{AC} = Cohesion (Collective Action and Cooperation)

Fs = Family size

$Labc$ = labour expenditure

Rev = Revenue from economic activities

St = Family status

Ed = level of education

U = Stochastic Term

The variables in the model are defined and measured below;

Economic activity

This is a scale variable measured in terms of the baskets of fish.

Social network

It is a dummy, with 1 representing an individual who belongs to a network and 0 otherwise. It is expected that this variable will be positive to support the idea that social network increases economic activity.

Cohesion

This is a scale variable measuring the feelings of togetherness in the community. The scale ranges from 1-6. An increase in cohesion is a priori expected to stimulate the level of economic activities are expected to trend together

Loan

This is a dummy variable and indicates whether an individual acquires loans to start up her fishery activities. We expect that acquisition of loan will increase capital investment and hence economic activity in the fishery communities.

Family size

It is scale variable. This variable would also be positive. This is because large family sizes provide for labour and will thus reduce hired labour expenditure.

Family status

This variable is also a dummy, 1 representing a single individual 0 otherwise. The variable is expected to be negative.

Revenue

This is the average daily revenue obtained from fishery activities. The higher the revenue from fishery activities, the more motivated the women are and thus the higher the economic activities.

Labour expenditure

This is the average yearly expenditure that is spent on hired labour. The higher the amount of labour hired, the higher the expenditure and the higher the quantity of economic activities.

Level of education

This is also a scale variable. The higher the scale on this variable, the more educated the individual. It is expected that many educated individuals will not engage in fishery activities. Thus, the higher the education level, the lower the economic activity in the fishery communities. It is therefore expected that this variable should be negative.

This study uses both descriptive and inferential statistics tools to analyse the data collected. Summary tables bar and pie charts were used to describe the data. In addition a pair wise correlation for the variables was estimated. A Linearized Standard Error technique was used to capture the non-linearity nature of the surveyed data. To assess the validity of the model estimated, the coefficient of determination (r) was used to measure the goodness of fit of the regression line. It determines the degree of relationship between economic activities of women in the fisheries communities and social capital. This coefficient assumes values lying between zero and one, that is, ($0 \leq r \leq 1$). If $r = 0$, then there is no relationship between economic activities of women in the fisheries communities and social capital. If (r) is close to 0, and then there is very little variation in y due to β . If (r) is close to 1, the regression line gives a goodness of fit to the observed data. That is, there is a greater relationship between them. The t-test was also useful in making statistical inferences about the statistical significance of the variables estimated in equation (1).

4. RESULTS AND DISCUSSION

Most respondents appreciated the importance of social and family ties when they started up as fish processors. The minority of them (15.7%) obtained a loan to start up the fish trade activity while the majority (84.2%) were handed over the business by a relative. Results show that 83% of the women inherited the business from their mothers, 10% from aunt, and 5% from cousin and 2% from grandmother. It is worth while noting that they enjoyed this privilege of starting up a trade without any physical capital due to this family ties. This is one of the advantages of social networks. It was observed that 47% of the business loan came from ‘Njangi’ groups”, 22% from friends, 14% from credit union, 15% from other sources including personal savings, and only 2% from commercial banks.

Results of the pairwise correlation (table 1) confirms the presence of a significantly strong positive correlation between economic activity and revenue (with a correlation coefficient of 0.87) but a weak and significantly positive correlation between economic activity and labour expenditure (with a coefficient of correlation of 0.11).

Table 1: Pairwise Correlation Results

	Econ. Activity	Revenue	Lab. Exp.	Cohesion	Loan	Trust	Education	Family size	Family status
Econ. Activity	1								
Revenue	0.87***	1							
Labour. Expenses.	0.11**	0.08	1						
Cohesion	0.07	0.03	0.05	1					
Loan	0.02	0.01	0.08	-0.07	1				
Trust	0.018	-0.04	-0.03	0.10*	-0.01	1			
Education	-0.08	-0.09*	-0.05	-0.01	0.06	-0.16**	1		
Family size	0.004	-0.02	0.01	-0.03	0.06	0.13	-0.17***	1	
Family status	-0.04	0.10*	-0.01	-0.03	0.06	-0.08	0.004	-0.01	1

***, **, * significant at 1, 5 and 10 percent respectively

Source: Computed by Authors based on Data from Field Work

The relationship between economic activities and cohesion, loan, trust, and family size is also positive, though not significant. However, there is a negative but insignificant relationship between economic activity and education and between economic activity and family status. To support the pairwise correlation results above, table 2 presents the regression results of this study, estimated using linearized standard errors.

The results indicate that the main variables of interest are significant and positive. The variable trust and membership of social network is found to influence the economic activity positively. Precisely, the results show that trusting and belonging to a social network will lead to an improvement in economic activity by 0.02 units. This result is significant at 10% level. Social network is therefore an important factor influencing economic activities of women in the fisheries communities in Limbe and should be strongly considered for purpose of policy recommendation.

Table 2: The multiple regression results

Dependent variable: Quantity of fish (measured in baskets)	
Variable	Coefficient (t – statistics)
Family status	-0.126* (-1.92)
Size of household	0.023** (2.27)
Trust and network	0.021* (1.67)
Loan	0.053 (0.57)
Education	-0.002 (-0.09)
Labour expenditure	0.021 (1.52)
Cohesion	0.071* (1.71)
Average daily income	1.587*** (27.14)
Constant	-13.916*** (-22.47)
F – distribution	118.58***
Adjusted R – square	0.754
Sample size	350
Number of strata	4

***, **, * significant at 1, 5 and 10 percent respectively

Source: Computed by Authors based on Data from Field Work

The degree of cohesion in the organization is also positive and significant at 10% level of significance, implying that the greater the feeling of togetherness and cooperation within the network, the greater the level of economic activities in the fishery community. Precisely, a 1 unit rise in the feeling of togetherness will result to an increase in the economic activities by 0.07 units of baskets.

The level of average daily income is also found to positively impact on economic activities in the fishery communities. The daily return will act as a motivation to production, hence the higher the daily return the higher the level of economic activities. The results show precisely that if the level of average daily return increases by 1 FCFA the level of economic activity will increase on average by 0.02 units. This result is significant at 1% level.

The results also reveal that family status influences economic activities negatively within the fishery communities. The result precisely shows that within the fishery communities, being single will reduce the volume of economic activities by 12.63%. At 1% significance level, this finding is significant. This result is further supported by that of the variable, family size. The family size variable is significant at 5% and has a positive relationship with the level of economic activities. The results show that increase in family size will bring about an increase in economic activities. Precisely, if the family size was to increase by one level, the level of economic activities will increase by 2.2 units. The acquisition of loans to carry out economic activities is also found to be positively related with economic activities. Though insignificant at 10% level, this result shows that those who obtain loans in the community did experience more production than those who did not obtain loans.

Other results show that the relationship between level of education and level of economic activity is negative. This implies that an increase in the level of education will reduce the level of economic activities. Unfortunately, this influence is not significant. The relationship between labour expenditure and economic activity is positive. This simply implies that an increase the spending on labour will increase the level of economic activities. However, this effect is not also significant.

The adjusted R-square value is 0.754 implying that variations in the variables included in the model contributes to more than 75 percent of the variations in economic activities with less than 15 percent of the variations accounted for by the variations in the variables not included in the

model. Considering the F-statistics to measure the fit of the model, we realize that the F – statistics is 118.58, which shows a significant level of 1 percent. Thus, the variables in the model fit it well. From the resonances gotten from the respondents, we notice that social capital is very vital in the fisheries communities of the Limbe area. That is, many women have been able to provide their family needs through fish processing and thanks to the availability of social networks. Provision of capital from financial institutions has always been a problem and that is why most of them have been operating in small scales. These findings are in line with the studies carried out by [Narayan and Pritchett \(1999\)](#), [Grootaert \(1999\)](#), [Yusuf \(2008\)](#), [Idris and Agbim \(2015\)](#), [Sabatini \(2007\)](#), [Som \(1996\)](#) and a host of others which all have emphasized the important role played by social capital in stimulating economic activities. Women involved in fishing activities in the Limbe fishing communities face a main problem of capital for expansion of the fish trade. Social capital has helped to reduce this burden given that most of them start up the business thanks to their various social networks.

Secondly, results from this research work indicate that social capital or the social networks breeds forth proactivity, a theme proposed by [Bullen \(1998\)](#). That is, the women are creators, not victims in the fish processing domain. There is a sense of personal and collective efficacy that makes these communities very participative in this economic activity that sustains their families. This is partially in agreement with the study of [Johannes \(2005\)](#) who concluded that parent's decisions towards their children's schooling is strongly determined by female related social capital, education of their mothers as well as income.

In these communities of the Limbe area, trust is quite visible. This work suggests that about 7.7% of the respondents value social networks created in these communities given that this trust is vital in the start and continuation of the fish processing activity. This is in line with the work of [Woolcock \(2000\)](#) who acknowledges trust a social capital outcome. Therefore, most of the works on social capital indicate that trust, participation in networks, reciprocity, social norms and proactivity are all vital components innate in social capital. It is vital in many walks of life and that is why many scholars so far have carried out studies on this subject. This is just an opening of all in Cameroon, especially women to benefit from all that social capital offers. Many Cameroonians are therefore invited to carry out research in this domain that is so enriching.

5. POLICY RECOMMENDATIONS AND CONCLUSION

- Firstly, appropriate technology like the Solar Tunnel Dryer proposed by African Alliance for Developmental Action should be developed by government and non-governmental bodies to help accommodate climatic, ecological, social and cultural settings where they will be used. There is need therefore to introduce and educate women fish processors with respect to adoption of this modern fish smoking technology. This will lead to the improvement of smoked fish quality post-harvest losses will be minimized. The health hazards caused by the usage of the local ovens for processing will be reduced.
- The government authorities in the Limbe area need to create schemes to allow women access to the means for their improvement, including access to capital equipment, credit and loans, training and education. Women's access to all of these enabling factors lags far behind those of men in fisheries in every society.
- Fish marketing requires credit facilities to finance storage facilities such as freezers and generators to forestall spoilage in storage. The local government should allocate shops to fish traders where it serves both as outlets for their products and as ware houses where excess supplies could be kept.
- The Senior Divisional Officer for Fako should help to curb the differences generated from ethnic backgrounds or bonding Social Capital by talking amicably to the various groups of foreign fishermen. In this way, Ghanaians and Beninese fishermen will learn to

supply fish to all and not only to their women fish processors. The problems associated with fish supply during the lean season will be solved should this be done.

- Women fish processors should be educated by the Women Empowerment centres in the area on how to form and manage cooperative societies. This will them a good bargaining power for their products rather than working in different ethnic segregations.
- The Ministry in charge of Fisheries should conduct workshops on storage, processing and marketing techniques. This will curb discrepancies brought by the ignorance of women in these domains.
- The Government should open and affiliate the Fisheries School at Ngeme, Limbe so that many Cameroonians should be trained in fishing activities. This will help curb the problem of fresh fish supply that also causes the high prices of the processed fish.

This work sought to investigate the effects of social capital on the economic activities of women in Limbe. The key empirical result of this study is that social networks significantly plays a positive role in boosting women’s fishing activities. Therefore, the recommendations made within this research work need to be implemented for the betterment of the fishery sector, the improvement of standards of living of those involved in the fish processing and marketing activities and thus generate high living standards for all Cameroonians who profit from these services. This is an area that has a high potential curb to unemployment and needs to be developed to enhance living standards.

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