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IMPACT ASSESSMENT OF MICROCREDIT ON THE WELL-BEING OF WOMEN IN GHANA

A CASE OF ATWIMA MPONUA DISTRICT, GHANA

ANITA DANSOWAA AWUAH [a] and CHARLES AMOAKO [b]

[a] (*erst*) Department of Economics, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana.
[b] University of Phoenix Business School, Maryland Campus, USA.

Abstract

The World Bank and other development agencies recognize the importance of women's access to financial resources as an important strategy in poverty reduction. Donors, therefore, continue to direct microfinance services and resources to women as a way of encouraging productivity. In spite of the proliferation of Microfinance Institutions and services (MFIs) in Ghana, poverty is still ubiquitous especially in the rural areas among women. Using a sample of 400 women in the informal sector from Atwima Mponua District of Ghana, and Ordered logistic regression analysis, this study was basically conducted to find the impact of MFI microcredit's or loans received by women on their well-being using four well-being indicators in Ghana. The major finding was that women utilised the services of microfinance institutions, but few have access to credit or loans. The women who accessed credits had improved well-being in relation to their ability to afford quality healthcare, children's education and comfortability in current accommodation than non-beneficiaries. This study therefore recommended that policies must be adopted to encourage the MFIs to grant more loans to more women.

Keywords: Microfinance, microcredit, poverty-reduction, Ghana.

INTRODUCTION

According to the World Bank report (2000), almost half of the world's population lives on US$2 a day or less and the number living on less than one dollar has increased over the past 15 years. According to Asiamah and Osei (2007), private sector workers are characterized by lack of access to credit, which retards the development and growth of the private sector of the economy partly due to the higher cost of screening and monitoring the activities of the people in the private informal sector and of enforcing their contracts. However, in the late 1980s, the poor in developing countries, including Ghana, heaved a sigh of relief as they gained access to small loans with the help of microfinance programmes. Most microfinance firms, such as the Grameen Bank in Bangladesh, provided small loans and savings services profitably on a large scale as they received continuing subsidies to make their services fully sustainable, and attain wide outreach to clients (Robinson, 2001).

Micro-finance refers to the provision of a broad range of services such as deposits taking, loans (microcredit), payment services, money transfers and insurance to the poor and low-income households and their micro-enterprises (Khawari, 2004). As part of microfinance, micro-credit is the extension of small loans/credits to the unemployed, poor entrepreneurs and others living in poverty, and are not considered bankable because such individuals lack collateral, steady employment and a verifiable credit history and therefore cannot meet even the most minimal qualifications to gain access to traditional credit (Malarvizhi and Rani, 2011).Over the years, Ghana has undertaken some initiatives to drastically reduce, if not eliminate absolute poverty in the country. These include the Structural Adjustment Programme (SAP), Economic Recovery Programmes (ERP 1&2), Financial Structural Adjustment Programme (FINSAP) and the Ghana Poverty Reduction Strategy 1&2 (GPRS 1&2). These initiatives have attempted

making living condition in the country better.
This paper therefore attempts to uncover the impact of access to credit facilities or loans from microfinance institutions for women in the Atwima Mpounua district in Ghana and how such credit facilities has helped such women to afford quality healthcare, afford their children's education, afford three square meals daily and finding comfortability in accommodation.

LITERATURE REVIEW

Savings and credit groups have operated for centuries, some of which include the "susus" in Ghana, "chit funds" in India, "tandas" in Mexico, "arisan" in Indonesia, "cheetu" in Sri Lanka, "pasanaku" in Bolivia as well as numerous savings clubs and societies found all over the world (Yahaya et al, 2011). Formal credit and savings institutions for the poor have also been around for decades, providing customers who were traditionally neglected by commercial banks a way to obtain financial services through cooperatives and development finance institutions (Asiamah and Osei, 2007). The realization that women who are relatively poor can borrow, use and repay loans has generated a great deal of interest in microfinance among policy makers and development practitioners as strategies for poverty reduction (Khandker, 2001).
Several studies have been conducted in the field of microfinance, ranging from impact assessment on poverty among women to women empowerment. Maheswaranathan and Kennedy (2010) examined the relationship between the Micro-Credit programs and elimination of economic hardship among women beneficiaries of Bangladesh Rural Advancement Committee (BRAC)in Sri Lanka using descriptive statistics. The study found a strong positive relationship between Micro-Credit Programs and Elimination of Economic Hardship of women in that women beneficiary had improved quality of life than existed earlier. Pitt et al., (2003), studied credit programs for the poor and the health status of children by gender in rural Bangladesh using a multipurpose household experimental survey conducted in 87 villages. The study found that credits given to women had large and statistically significant impact on healthiness of children (both boys and girls). Thus female credits had significant positive effect on the health status of children than male credits, and thereby improving their livelihoods. Again, MkNelly and Dunford (1999) examined the impact of credit with education on mothers and their young children's nutrition in Bolivia using quasi-experimental design. The study was to evaluate how credit and education services, when provided together to groups of women, can increase income and savings, improve health/nutrition knowledge and practice, and empower women. The study found that participants were able to augment household assets (chiefly animals) and smooth consumption needs by purchasing food in bulk and meeting other basic needs. Income increased about 5-fold under the Credit with Education Program. In addition, assets (animals for family needs) and savings increased significantly.
Marcus et al., (1999) also contend that microfinance can help reduce poverty and vulnerability when they conducted a study on Save the Children's microfinance projects. The study found that microfinance contributes to improvements in children's welfare through improved nutrition, housing, health and school attendance, and reductions in harmful child labour resulting from increased incomes. They however recount that improvements to livelihood security are usually more incremental than the dramatic success stories sometimes quoted but concede for the people concerned; small changes in livelihoods may be significant.

MATERIALS AND METHODS

This paper uses primary data in the form of structured interviews (using questionnaire) as the means of data collection for400 women (predominantly traders) in the Atwima Mponua district in the western part of the Ashanti Region of Ghana. Purposive and snowballing types of sampling were used to identify respondents who patronise the microfinance programmes to be able to assess the impact on their lives. STATA 11.0 was used in the analysis process to thoroughly analyse the data collected.

Empirical Estimation

Ordered logistic regression was used in this study to determine the impact of credits received by the women on their wellbeing by accounting for respondents' age, education, income among other variables in the sampled population. The qualitative nature and the absence of natural numerical values of the dependent variables called for the use of the Ordered logistic regression where the probabilities of each outcome conditional on the independent variables are modelled based on the cumulative normal distribution (Stock and Watson, 2007).

This model is appropriate due to its ability to identify statistically significant relationship between the independent variables and the dependent variable. It also discerns unequal differences between ordinal categories in the dependent variable (Greene, 2002).

In all, a total of four Ordered logistic regression models were estimated;

- Model 1 (Impact of loans or credit access on women's ability to afford quality healthcare)
- Model 2 (Impact of loans or credit access on women's ability to afford children's education)
- Model 3 (impact on loans or credit access on ability to afford three square meals daily)
- Model 4 (impact on loans or credit access on comfortability in accommodation)

The models had the purpose of finding out the effect of education, income, age, employment status, and most importantly credits received by women on their ability to afford quality health care, affordability of their children's education, affordability of three square meals a day and access to comfortable accommodation.

ANALYSIS & RESULTS

Table 1: Socio-Economic Characteristics

Variable	Mean value	Std. Dev.	Min. value	Max. Value
Age	41.86	12.27261	23	70
Income (monthly)	226.395	162.5403	70	520
Number of dependants	3.05	2.940939	0	14
Months with MFI	6.039216	4.642748	1	24
Credit received	1480.357	1680.181	300	8000
Freq. of service use	2.797101	1.130938	1	5

The age structure of the sampled women ranged between 23 years and 70 years. On average, a respondent was aged 42 years (approximated). Concerning their income levels, the lowest earner in the sample earned an amount of GH¢70.00 per month whiles the highest earner received an amount of GH ¢520.00 per month. On the average, a respondent earned a mean income of GH¢226.40. With regard to the number of dependants the respondents had, a mean value of three dependents was recorded whereas the mean period of affiliation with a microfinance organisation was six months. Furthermore, the mean value of credit received from such institutions was pegged at GH¢1,480.

Table 2: Demographic Characteristics of the respondents

Scale		N	%
Occupation	Farmers Traders Artisans	72	18.59 65.71 15.71
Education	Basic Education		56.00
	Senior High school		16.75
	Tertiary		10.50
	Uneducated		16.75
Marital Status	Married		54
	Single		21
	Divorced		13
	Widowed		12

Majority of the respondents representing 65.71 % were into trading with the rest being farmers and artisan's whiles on educational attainments, majority of the respondents had been educated only up to the basic level representing 56%. Thus, majority of the respondents have very little education. On the marital status of the respondents, majority were married representing 54% with singles following at 21%.

Table 3: Women's access to loans or credits on Quality Healthcare

Explanatory variable	Coefficient	P-value
Age	-.004551	0.627
Income	.0014639	0.015*
Number of dependants	-.144837	0.000*
Employed	1.144686	0.000*
Accessed Loan or credit	.5948602	0.005*
Education		
- Basic	.3230395	0.222
- Secondary/Vocational	1.12136	0.001*
- Tertiary education	.7170296	0.063
Marital status		
- Single	-.7971838	0.055
- Divorced	-.5897286	0.008*
- Widowed	.1891388	0.571
Cut1	-.5866078	
Cut2	1.323695	
Cut3	3.762644	

*Number of obs = 400, LR chi2 (11) = 97.85, Prob> chi2 = 0.0000, Pseudo R^2 = 0.0967, P-value < .05**

The results showed a positive significant relationship between earning income and being able to afford quality healthcare at 95% confidence level. Thus, for the respondents who reported to be earning income had the means to afford quality health care as compared to those who were not earning income in the controlled group. Thus, increasing income levels can lead regular consultation services, laboratory, ability to live in good and healthy homes and environment and easy access pharmaceutical services among others. This is consistent with the findings of Braveman (2008).

A significant inverse relationship was also established between respondents having dependants and their reduced ability to afford quality healthcare at 95% confidence level. Thus, the more dependents one has, the higher the pressure on especially financial resources hence less the

person can afford quality health care. More dependents means that the overall budget also rises which works to lower the ability to afford quality healthcare. This puts women with more dependants in a very poor economic condition and also limits their ability to afford quality healthcare.

Furthermore, the employed had improved well-being in relation to their ability to afford quality healthcare. Being employed means having a constant source of income and thus, women who were employed had higher ability to afford quality healthcare. Therefore employment status was significant at 95% confidence level in influencing one's ability to afford quality healthcare. This suggests that the effect of being employed on health is positive (Morris et al., 1994; Bambra and Eikemo, 2009)

On the main variable, the results showed a positive significant relationship between having access to a loan or credit facility and being able to afford quality health care at 95% confidence level. This is similar to the findings of Adjei et al., (2009) and Pitt et al., (2003), who found that credit programs for the poor, particularly women improves health status through their improved ability to pay or afford quality healthcare as compared to those without access to credit facilities in the controlled group.

Being divorced was also realised to impact negatively on the affordability of quality health care on the respondents at 95% confidence level. This means that the divorced respondents were severely affected as compared to those who were married (control group) in terms of quality healthcare. This could be due to the single parent role imposed on them which leaves little resources for healthcare expenses

In addition, women who have secondary or vocational education had higher quality healthcare as compared to the uneducated (control group).This implies that with educational attainments, a person becomes more conscious of health-promoting behaviours such as exercising regularly, refraining from smoking, and obtaining timely health care check-ups and screenings (Ross and Wu, 1996).

Table 4: Women's access to loans or credits on Quality Education for their Children

Explanatory variable	Coefficient	P-value
Age	.0214032	0.028*
Income	.0025546	0.000*
Number of dependants	-.1945315	0.000*
Employed	.8665331	0.001*
Accessed Loan or credit	.7360766	0.001*
Education		
- Basic	-.0817014	0.769
- Secondary/Vocational	.7722568	0.023*
- Tertiary education	1.874774	0.000*
Marital status		
- Single	-.1477992	0.614
- Divorced	-.2886589	0.396
- Widowed	-.1799953	0.584
Cut1	1.364459	
Cut2	3.215144	
Cut3	5.827724	

*Number of obs = 400, LR chi2 (11) = 125.68, Prob> chi2 = 0.0000, Pseudo R^2 = 0.1287, P-value < .05**

With regard to the age of the respondents, the results showed positive significant relationship

between age and ability to afford quality education for their wards at 95% confidence level. Thus, the relatively older respondents were seen to be more capable of affording quality education for their children as compared to the younger ones. Such old folks could at worst fall back on their savings to educate their wards. Another significant positive correlation between increasing income and the ability to cater for the educational needs of the respondent was also realised at 95% confidence level. Thus, as income rises, it improves a woman's ability to afford quality education for her children.

The results further showed a significant inverse relationship between the number of dependents a respondent has on the respondents ability to afford quality education for their wards. Thus, at 95 % confidence level, respondents with more dependents were less likely to be able to afford quality education for their wards as compared to respondents with no dependents in the controlled group. Being employed was further shown to be positively correlated to having the ability to provide quality education for their wards. Thus, once a person is employed, they earn income and hence are more likely to be able to afford the needed education for their wards as compared to the unemployed in the controlled group at 95% confidence level.

The paper further realises that respondents who have access to credit facilities are also more likely to be able to provide quality education for their wards as compared to others who have no access to credit facilities in the controlled group at 95% confidence level. This further implies that women who received loans or the credit facilities had a higher ability to afford quality education for their wards than women who did not receive such credits in the controlled group. Indeed, some of the women indicated that they take such loans to pay for the cost related to their children's education. The implication is that loans or credits help the women in discharging their duties as parents with regards to securing their children's education. This confirms Arku and Arku (2009) and Marcus et al., (1999) findings that microcredit help women to be actively involved in their children's education.

Having higher levels of education also proved to be a positive influence on the ability of a respondent to provide quality education for their wards at 95%confidence level. Thus, owing to the benefits derived from higher education, such educated respondents put in a lot of effort to make their wards also acquire the benefits of formal education. This means that maternal education has a positive influence on the children. This could also be attributed to the efficiency with which they managed their credits to make significant returns due to their levels of education.

Table 5: Women's access loans or credits on three Square meals a Day

Explanatory variable	Coefficient	P-value
Age	.0245467	0.005*
Income	.0017904	0.002*
Number of dependants	-.0935781	0.009*
Employed	.4195753	0.083
Accessed Loan or credit	.262933	0.194
Education		
- Basic	.7954886	0.003*
- Secondary/Vocational	.2732052	0.404
- Tertiary education	.7877904	0.040*
Marital status		
- Single	.1741708	0.550
- Divorced	.4063683	0.208

- Widowed	-.0315731	0.916
Cut1	.3894444	
Cut2	2.424866	
Cut3	3.952065	

*Number of obs = 400, LR chi2 (11) = 43.73, Prob> chi2 = 0.0000, Pseudo R^2 = 0.0416, P-value < .05**

From table 5, the results showed that both age and income earned was positively related to affordability of three square meals a day at 95% confidence level. This implies that as a person ages, having three square meals a day do not become an issue. Also, the needs and wants of the elderly are very limited hence the little resources they possess can all be channelled into having three square meals in a day. On income, the aged who earn income were realised to be able to afford three square meals in any given day. Thus, the more one earns income, the better their chances of having three square meals a day.

Also, the results showed that the higher the dependents a person had reduced her ability to afford three square meals in a day at 95% confidence level. Taking into consideration other responsibilities such as clothing, utilities, transport among others, a higher number of dependents will mean a wider spread of family resources thereby leaving a small amount for three square meals a day. Furthermore, the results showed that having education (basic and tertiary) is a positive influence in determining the consumption of three square meals in a day at 95% confidence level.

Table 6: Women's access to loans or credits on Comfortability in Their Current Accommodation

Explanatory variable	Coefficient	P-value
Age	.0478874	0.000*
Income	.001325	0.039*
Number of dependants	-.1688018	0.000*
Employed	-.0594209	0.819
Accessed Loan or credit	1.127423	0.000*
Education		
- Basic	.6170506	0.024*
- Secondary/Vocational	1.042467	0.002*
- Tertiary education	.8397691	0.034*
Marital status		
- Single	.155344	0.587
- Divorced	.2653707	0.417
- Widowed	-.0006254	0.999
Cut1	.7959065	
Cut2	1.886636	
Cut3	4.914941	

*Number of obs = 400, LR chi2 (11) = 92.84, Prob> chi2 = 0.0000, Pseudo R^2 = 0.0982, P-value < .05**

The study revealed that age improves one's level of comfort in her current accommodation at 95% confidence level. When a person ages, their need for a sophisticated accommodation fades away and hence embrace the little comfort of their present accommodation. Again, the study revealed that income had positive significant impact on the level of comfortability in current accommodation at 95% confidence level. This is because as a person's income rises

they can be better placed to afford decent very comfortable accommodation Also, another significant inverse relationship between the number of dependants a woman had and the ability to find comfort in their dwelling at 95% confidence level. The implication is that women with more dependants were less likely to be very comfortable in their current accommodation. Congestion and overcrowding will erode away all the comfort in the dwelling.

On access to credit or loans and its impact on comfortability in current accommodation, the paper revealed that women who accessed loans were more likely to be comfortable in their current accommodation than women who did not receive loans in the controlled group. This is because loans or credits accessed were significantly positive at 95% confidence level. This implies most of the loan beneficiaries had used their credits for housing projects and/or accommodation purposes including but not limited to furnishing, providing household items, or even pay rent advances.

With regards to the impact of education on comfortability in current accommodation, the paper has revealed that education significantly affected one's level of comfort in her residence also at 95% confidence level.

Thresholds Parameter Interpretation in the Ordered Logistic Models

In the Ordered logistic models estimated, well-being, y is an observed dependent variable. Well- being, y is a function of a continuous, unmeasured latent variable y* whose values determine what the observed ordinal variable y (well-being of women) equals. The continuous latent variable y* has various thresholds points (i.e. Cut1, cut2, and cut3 in the Tables 3, 4, 5 and 6 above). A respondent value on the observed variable y (well-being) depends on whether or not that respondent has crossed a particular threshold.

Ability to afford quality healthcare, children's education and quality three square meals were coded as 1, 2, 3, and 4 (very low, low, high, and very high respectively). Again, comfortability in current accommodation was also coded as 1, 2, 3, and 4 representing very uncomfortable, uncomfortable, comfortable, and very comfortable respectively. There are four possible values for ability to afford quality healthcare, children's education and quality three meals daily as well as comfortability in current accommodation as shown in table 3.

y = very low if $y^* \leq -.5866078$

y = low if $-.5866078 \leq y^* \leq 1.323695$ y = high if $1.323695 \leq y^* \leq 3.762644$ y = very high if $y^* \geq 3.762644$

Therefore in table 3 (Ordered logit results on women's access to loans on quality healthcare), Cut1 is the estimated cut point on the latent variable used to differentiate *very low* ability to afford quality healthcare services from *low, high,* and *very high* abilities when values of the independent variables are evaluated at zero.

This means that women with a value of -0.5866078 or less on the underlying latent variable that gave rise to quality healthcare affordability variable would be classified to have a *very low* ability to afford quality healthcare services.

On the other hand, Cut2 is the estimated cut point on the latent variable used to differentiate *very low* and *low* ability to afford quality healthcare services from *high* and *very high* abilities when values of the independent variables are evaluated at zero. Similarly, women having a value between -.5866078 and 1.323695 on the underlying latent variable would also be classified to have *low* ability to afford quality healthcare services.

Similarly, Cut3 is the estimated cut point on the latent variable used to differentiate *very low*, *low*, and *high* abilities to afford quality healthcare services from *very high* ability to afford quality healthcare services when values of the independent variables are evaluated at zero.

Women having a value between 1.323695 and 3.762644 on the underlying latent variable would be classified as to have *high* ability to afford quality healthcare services. Respondents or women whose value falls within 3.762644 or higher on the underlying latent variable would be classified to have a *very high* ability to afford quality healthcare services. The arrangements and interpretations for the cuts are derived the same way for Tables 4, 5 and 6 respectively.

CONCLUSION, RECOMMENDATIONS AND LIMITATIONS

The study therefore concludes that credit facilities from the various Microfinance institutions does have a positive effect on the well-being of women in terms of their ability to afford quality healthcare, children's education and comfortability in current accommodation.
It is therefore recommended that conditions for credit acquisition should be relaxed in order to get more women on board for the greater good of the economy.
The study also recommends an increase in enrolment for the girl child since educated women had improved well-being (ability to afford healthcare, children's education, and comfortability in current accommodation) than their uneducated counterparts.
The major limitation of the study had to do with the sample size which was not so high to provide a better picture of the underlying issues. This was mainly as a result of time and financial constraints. Furthermore, some of the target groups were not very corporative which also hampered the scope of the study.

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