නව සපිරි ග්‍රාමීය ණය යෝජනා ක්‍රමය සහ දේශිය වී නිෂ්පාදනය අතර පවත්නා සබඳතාවය පිළිබඳ අධ්‍යයනයක් (මහවැලි බී කලාපය ඇසුරිනි)

පි පි ඩි නෙළුම් කුමරි
ආර්ථික විද්‍යා අධ්‍යයනාංශය. කැලණිය විශ්ව විද්‍යාලය, ශ්‍රී ලංකාව

මූල පද: *ණය ක්‍රමය, වී නිෂ්පාදනය, ගොවින්ගේ ආදායම සහ ඉතුරුම් ප්‍රමාණය*

හැඳින්වීම

ශ්‍රී ලංකික ජනතාවගෙන් 80%ක් පමණ වන ග්‍රාමීය ජනතාවගේ ප්‍රධාන ජීවනෝපාය කෘෂිකර්මය වේ. ඒ අනුව මොවුන්ගෙන් බහුතරයක් ප්‍රධාන වශයෙන් නියැළී සිටිනුයේ වී වගාවෙහි ය. 2011 වර්ෂයේ මහ බැංකු වාර්තාවට අනුව වී නිෂ්පාදනය දළ දේශිය නිෂ්පාදිතයට 1.5% කින් පමණ දායකත්වය සපයා ඇත. මෙ ලෙස කෘෂිකාර්මික කටයුතු වල නිරත වන බහුතරයක් ගොවීන් තුළ පවත්නා දිළිඳුභාවය හේතුවෙන් උද්ගත වී ඇති මූලධන හිඟය නිසා ඔවුනට කෘෂිකාර්මික කටයුතු නිසි ලෙස පවත්වා ගැනිම දුෂ්කර වී ඇත. මෙ නිසා බොහෝ ගොවීහු කෘෂිකාර්මික කටයුතු වර්ධනය පිණිස විධිමත් හා අවිධිමත් මූලාශ්‍රවලින් ණය ලබා ගනිති. නමුත් මෙ ලෙස ලබාගන්නා විවිධ ණය හේතුවෙන් ගොවීන් බොහෝ දුෂ්කරතා වලට මුහුණ දී ඇති නිසා එම තත්ත්වයෙන් මුදවා ගැනිම උදෙසා සහ ග්‍රාමීය දිළිඳු බව තුරන් කර යැපුම් මට්ටම ඉහළ නැංවීම වෙනුවෙන් දේශිය කෘෂිකර්මාන්තය සංවර්ධනය කිරීම උදෙසා කෘෂිකාර්මික ණය යෝජනා ක්‍රමය රජය විසින් දියත් කරන ලදි.

20 වන සියවසේ ප්‍රථම භාගයේ සිට විධිමත් ආකාරයට කෘෂිකාර්මික ණය සැපයුම් ක්‍රියාවලිය ආරම්භ වූ අතර එහි ආරම්භකයා ලෙස 1906 දී දුම්බර පිහිටුවන ලද "ප්‍රථම සමූපකාර ණය දෙන සමිතිය" හඳුනාගත හැකි ය. මෙ ලෙස සමූපකාර සමිති ආශ්‍රයෙන් ආරම්භ කරන ලද ශ්‍රී ලංකාවේ කෘෂිකාර්මික ණය ප්‍රතිපත්තිය සඳහා පසුකාලීනව ඉඩම් කොමසාරිස් දෙපාර්තමේන්තුව, ආහාර දෙපාර්තමේන්තුව, ගොවි ජන සේවා දෙපාර්තමේන්තුව වැනි රාජ්‍ය දෙපාර්තමේන්තු රාශියක සහයෝගය ලැබී ඇත. මෙය පසු කාලිනව රාජ්‍ය හා පෞද්ගලික බැංකු මගින් සිදු විය. 1967 දී ග්‍රාමීය ණය සැපයුම සඳහා නව වැඩ පිළිවෙලක් ලෙස නව කෘෂිකාර්මික ණය යෝජනා ක්‍රමය හඳුන්වා දෙන ලදි. වගා කටයුතු සිදු කිරිමට පෙර මෙ මගින් ණය ලබා ගැනිමට අවස්ථාව සලසා දෙන ලදි. ඉන් පසු මෙම ණය යෝජනා ක්‍රමය 1974 දී සපිරි ග්‍රමීය ණය ක්‍රමය ලෙස ද 1986 දී නව සපිරි ග්‍රාමිය ණය ක්‍රමය ලෙස ද තවදුරටත් වර්ධනය විය. මෙම ක්‍රමය යටතේ මහ බැංකුව විසින් වාණිජ බැංකු වලට ප්‍රතිමූල්‍ය පහසුකම් සැපයන ලද අතර 1994 දී එය ඉවත් කරන ලදුව ඒ වෙනුවට වාර්ෂිකව 75% ක් වූ සහන පොලී අනුපාතයන් සහිත ණය ක්‍රම රජය විසින් හඳුන්වා දෙන ලදි. ඒ අනුව වර්තමානය වන විට මහජන බැංකුව, ලංකා බැංකුව, හැටන් නැෂනල් බැංකුව, කොමර්ෂල් බැංකුව, සම්පත් බැංකුව, සෙලාන් බැංකුව, සණස බැංකු සහ ප්‍රාදේශීය සංවර්ධන බැංකු යන රාජ්‍ය හා පෞද්ගලික බැංකු මගින් ගොවීන් වෙත බීජ රෝපණයේ සිට අස්වැන්න දක්වා අවශ්‍ය ණය බෙදා හරිනු ලබයි. 2010/2011 මහ කන්නයට අදාළව රුපියල් මිලියන 4127ක ණය ප්‍රමාණයක් ගොවීන්හට ලබා දී ඇති බව 2011 මහ බැංකු වාර්තාව සඳහන් කරයි.

මෙම ණය ක්‍රමය ගොවියාට සහනශිලී වුවත් ගොවීහු අවිධිමත් අංශය කෙරෙහි ද වැඩි නැඹුරුතාවයක් දක්වති. ඒ අනුව නැදෑ හිතවතුන්, උගස් බඩු ගන්නන්, වෙළඳුන් සහ වෘත්තීය ණය දෙන්නන් වැනි අංශ වෙතින් අවිධිමත් ආකාරයට ණය ලබා ගැනීමෙමට ඔවුහු

පෙළඹෙති. එම නිසා ඔවුන් ගේ ණය පරිමාව දිනෙන් දින ඉහළ යන අතර එම තත්ත්වයෙන් ඔවුන් මුදවා ගැනිම සඳහා නව සපිරි ග්‍රාමීය ණය ක්‍රමය ව්‍යාප්ත කිරිම වඩා වැදගත් වේ.

එහෙත්, මෙ ලෙස විවිධ ණය මූලාශ්‍ර ක්‍රියාත්මක වුව ද, වර්තමානය වන විටත් කෘෂිකාර්මික අංශයට අදාළ අපේක්ෂිත ඉලක්ක කරා ළඟා වීමට අපොහොසත් වී ඇත. එම නිසා මෙම නව සපිරි ග්‍රාමීය ණය ක්‍රමය යටතේ ගොවීන් ලබා ගන්නා ණය ඵලදායි කටයුතු වල යෙදවෙන්නේ ද, එම ණය මඟින් කුටුම්භ ආර්ථිකයෙහි වර්ධනයක් සිදු වේ ද යන්න පිළිබඳව මෙන්ම මෙම ණය යොදා ගැනිමේ සාර්ථක භාවය පිළිබඳව අධ්‍යයනය කිරිම වැදගත් වේ.

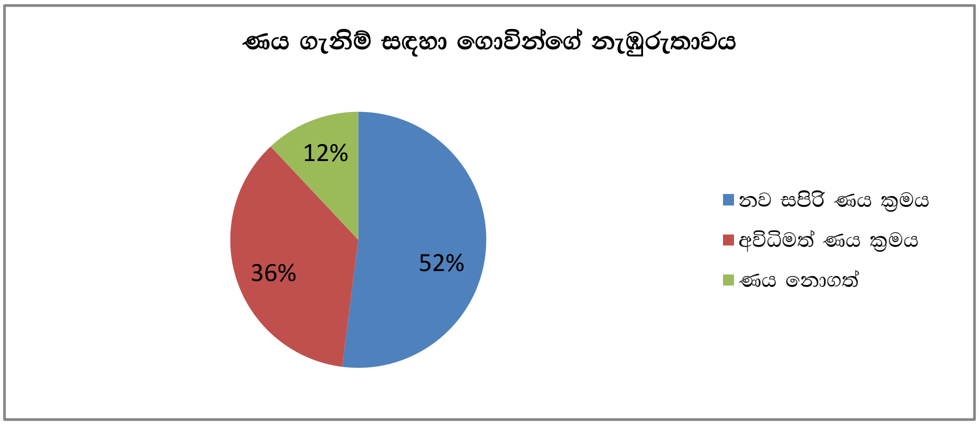
ක්‍රමවේදය සහ දත්ත

වී නිෂ්පාදනය බහුලව සිදු කෙරෙන මහවැලි බි කලාපයට අයත් බිම් පොකුණ, මහදමන, නව මිල්ලානගම සහ මැදගම ආදි ප්‍රදේශවලින් ගොවීන් 100 ක අහඹු නියැදියක් යොදා ගනිමින් මෙම ණය ක්‍රමය නිසා ගොවීන්ගේ ආර්ථිකය වර්ධනය වී පවති ද යන්න සොයා බැලිම මෙම පර්යේෂණයේ අරමුණ විය. එ සේ ම මෙම ණය ලබාගත් ගොවීන් ගේ ආර්ථික මට්ටම සහ අවිධිමත් මුලාශ්‍රවලින් ණය ලබා ගත් ගොවීන් ගේ ආර්ථික මට්ටම අතර පවත්නා වෙනස කෙරෙහි අවධානය යොමු කෙරිණි. ඒ අනුව මෙම ණය ගැනිමට හේතු සහ නිෂ්පාදන ධාරිතාව වර්ධනයට මෙම ණය හේතු වී ඇති අයුරු පිළිබඳව සොයා බැලිම සඳහා ක්ෂේත්‍ර සමීක්ෂණයක් මඟින් ප්‍රශ්නාවලි සහ සම්මුඛ සාකච්ඡා ක්‍රමයෙන් ප්‍රාථමික දත්ත රැස් කරන ලදි. මහ බැංකු වාර්තා, පොත් පත්, සඟරා සහ අන්තර් ජාලය මඟින් ලබා ගත් ද්විතියික දත්ත ද මේ සඳහා යොදා ගැනිණි. මෙම දත්ත ඉදිරිපත් කිරිම සහ විශ්ලේෂණය කිරිම සඳහා සහසම්බන්ධතා විශ්ලේෂණය සහ කෛ වර්ග පරික්ෂාව වැනි සංඛ්‍යාන ක්‍රම ද වගු, ප්‍රස්ථාර වැනි සංඛ්‍යානමය නො වන ක්‍රමද භාවිතා කර ඇත.

විශ්ලේෂණ සහ ප්‍රතිඵල

අධ්‍යයනය සඳහා බඳුන් වූ නියැදිය අනුව නව සපිරි ණය ක්‍රමය කෙරෙහි ගොවීන් ගේ නැඹුරුතාවය පහත දැක්වෙන ප්‍රස්ථාර සටහන් අංක 1 න් නිරූපණය වෙයි.

1 වැනි ප්‍රස්ථාර සටහන



මුලාශ්‍රයඃ සමීක්ෂණ දත්ත, 2011

තව ද, ගොවින් ගෙන් බහුතරයක් වගා ණය ලබාගෙන ඇති අතර ගොවින් ගේ කෘෂිකාර්මික වියදම සහ මෙම ණය ලබා ගන්නා ප්‍රමාණය අතර ධන සහසම්බන්ධතාවයක් පවතින බව නිරීක්ෂණය වීමෙන් කෘෂිකාර්මික වියදම් වැඩි වීම මෙම නැඹුරුවට පාදක වී ඇති බවට ද ඉඟි කෙරෙයි.

කෙ වර්ග පරික්ෂාවට අනුව නව සපිරි ණය ලබාගත් ගොවීන් ගේ ආදායම සහ අවිධිමත් ණය ලබා ගත් ගොවින් ගේ කෘෂිකාර්මික ආදායම අතර වෙනසක් පවතිනු දක්නට ලැබෙන අතර නව සපිරි ණය ලබාගත් ගොවින් ගේ ආදායම් මට්ටම වර්ධනය වීමක් පෙන්නුම් කෙරෙයි. එ සේ ම, ගොවින් ගේ ඉතුරුම් ප්‍රමාණය සහ කෘෂිකාර්මික ආදායම අතර ධන සහසම්බන්ධයක් පවතින අතර මෙම ණය ලබා ගත් ගොවින් ගේ ඉතුරුම් ප්‍රමාණය අවිධිමත් ණය ලබාගත් ගොවින්ට වඩා වර්ධනය වී ඇත. තව ද, නැවත ණය ලබා ගැනිමේ අවශ්‍යතාවය පිළිබඳව අදහස් දැක්විමේ දී මෙම ණය ලබාගත් ගොවින් ගෙන් 23%ක් පමණක් නැවත ණය ලබා ගැනිමට අවශ්‍ය බව සඳහන් කළ ද, අවිධිමත් ණය ලබාගත් ගොවින් අතරින් 77%ක් පමණ නැවත ණය ලබා ගැනිමට අවශ්‍ය බව ප්‍රකාශ කර ඇත. ඒ අනුව අවිධිමත් ණය ලබාගත් ගොවින් ගේ ණය ප්‍රමාණය ක්‍රමිකව වර්ධනයවන බව නිගමනය කළ හැකි ය. මේ ආකාරයට මෙම ණය ලබාගත් ගොවින් ගේ ආර්ථික මට්ටම අවිධිමත් ණය ලබා ගත් ගොවින් ගේ ආර්ථික මට්ටමට වඩා යහපත් වී ඇති බවට අනුමාන කළ හැකි ය.

නිගමන

මේ අනුව නිගමනය කළ හැකි වන්නේ සා මෙම ණය ක්‍රමය තවදුරටත් ප්‍රචලිත කිරීම ප්‍රයෝජනවත් විය හැකි බව ය. එය ව්‍යාප්ත නොවූ ප්‍රදේශ කරා ව්‍යාප්ත කිරිම, සුළු ගොවියාට ගැළපෙන ආකාරයට ණය කොන්දේසි ලිහිල් කිරීම, අවිධිමත් ණය මුලාශ්‍ර විධිමත් කිරිම සඳහා අවශ්‍ය නීති රීති සම්පාදනය කර ක්‍රියාත්මක කිරීම, එම ණය වගා කටයුතු සඳහා යොදන ආකාරය පිළිබඳව ගොවින් දැනුවත් කිරිම සහ ඔවුන් අධික්ෂණය කිරිම මෙහිදී වැදගත් වනු ඇත.

ආශ්‍රිත ග්‍රන්ථ නාමාවලිය

ඊරියගම, තිස්ස (2006), ***ව්‍යවහාරික ආර්ථික විමර්ශන***, සී/ස සරසවි පොත්හල, නුගේගොඩ.

ගුණසේන, එම්.එල්. (1974), ***ශ්‍රී ලංකා සමූපකාර ක්‍රමය සහ ගොවි ණය,*** මාර්ග අධ්‍යයන 03, මාර්ග ප්‍රකාශන,

ප්‍රනාන්දු, වින්සන් මර්වින් (2008), ***60 වසරක ශ්‍රී ලංකා ආර්ථිකය***, යුනිවර්සල් ප්‍රින්ටින් සමාගම, කොළඹ.

සේනානායක, ඩී.එස්. (2001) (පරි) ගුණසේකර ලීල්, ***කෘෂිකර්මය හා ස්වදේශාභිමානය,*** දේවින්ද සේනානායක ප්‍රකාශන, දෙහිවල.

ශ්‍රි ලංකා මහ බැංකුව (2011), ***වාර්ෂික වාර්තාව***, ශ්‍රි ලංකා මහ බැංකුව ,කොළඹ.

Impact of Credit-plus Approach of Microfinance on Poverty Reduction

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Key words: *Income-poverty, microfinance, credit-plus approach, empowerment*

Introduction

Microfinance (MF) is a strategy to address the institutionalised exclusion of the poor from formal financial systems. Over the past three decades, Microfinance Institutions (MFIs) have innovated in adopting a 'credit-plus' approach - providing services such as skills development, training, educational activities, marketing assistance, supply of inputs and business development services to the poor in addition to provision of credit (Remenyi 2002). These services are being increasingly recognised as an important component of MF intermediation as they are associated with the viability and sustainability of the enterprise (or 'economic empowerment').

The impact of MF on poverty reduction has not been empirically established unambiguously. Several studies find access to MF as potentially or actually reducing poverty (e.g. Gunathilake and de Silva 2010, Swain et al. 2008, Khandker 1998, Husain 1998) and conferring "socioeconomic benefits" (e.g. Remenyi 1997), raising per capita consumption/income (e.g. Cuong et al. 2007, Chowdhury 2007, Khandker 2005), and "income empowerment" (Javed et al. 2006, Abbas et al. 2005). However, other studies (e.g. Daley-Harris and Zimmerman, 2009, Banerjee et al. 2009, Morduch 1998, Buckley 1997) find that MF has a negligible impact on poverty reduction and Kabeer (2001) shows small-scale credit leading to negative empowerment and a debt- trap for women.

Studies of MF in Sri Lanka show the same division of opinion as above. MF clients' socio-economic condition is seen as improving due to MF by Mithrarathna (2003), and Dias (2001), Colombage (2004) and Thilakarathne et al. (2005). Colombage et al (2008) extend this finding beyond the household/family to the business, community and individual. Gunathilake and De Silva (2010) find loan ownership increasing a woman's control over the loan-assisted project, and through that, significantly increasing her level of empowerment.

In line with the above, Ministry of Finance and Planning, Sri Lanka and GTZ (2008) conclude that poorer income groups are not as able as the rich to derive the benefits of utilising financial services, implying a large unmet demand for credit by the poor. While, Colombage (2004) found that some internal and external variables adversely affect clients' socioeconomic development. De Mel et al. (2008) found that returns to capital were zero among female-owned microenterprises but in excess of 9% per month for male-owned enterprises.

This study seeks to contribute to assessing the role of MF in empowering the poor in Sri Lanka through a field study.

Objectives

The objectives of the study are:

- To investigate the impact of MF on income-empowerment of households
- To examine the impact of credit-plus services with reference to cumulative credit amount received by households.

Methodology

Two leading MFIs, Thrift and Credit Cooperative Society (SANASA) and *Sarvodaya Economic Enterprise Development Services* (Guarantee) Limited (SEEDS)**,** operating in Kandy District, were selected as case studies. *Sarvodaya* is the most prominent and largest local NGO in Sri Lanka and its financial arm is SEEDS. *SANASA* serves the highest number of clients among semi-formal MFIs in Sri Lanka. Kandy District was purposively selected because it has a relatively high poverty rate and has several MF programs being implemented.

268 households were surveyed covering 50 selected MF units of SANASA and SEEDS in Kandy District and a multistage random sampling approach was adopted. Out of the total number of clients, 5% were chosen from each institution.

Three OLS regression models were estimated to investigate the impact of MF on income-empowerment. Total Household Monthly Income (after taking microcredit) was chosen as the dependent variable.

The estimated model is as follows :

$$Y^a = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 D_1 + \beta_{10} D_2 + \beta_{11} D_3 + Ui$$

Among the independent variables distance, Cpemp, Timeyrs, Interest, Credit and Mkts are identified as credit related variables in the analysis. X_1, Members, Age, Education and Ownership are household related independent variables.

The Table 1 provides details of the variable definitions.

Table 1: Variables definitions of regression models

Variable	Definition
Yafter = Y^a	Household's total monthly income after microcredit taken (Rs.)
Ybefore = Y^b	Household's income level before borrowing microcredit (Rs.)
$\Delta Y = Y^a - Y^b = X_1$	The difference between after microcredit and before microcredit income levels
Distance = X_2	Distance to closest MFI (meters)
Members = X_3	Number of family members in the household
Age = X_4	Age of the household head in years
Timeyrs = X_5	Number of years the credit has been taken
Interestr = X_6	Rate of interest on credit (percentage)
Credit = X_7	Credit amount (Rs.)
Education = X_8	Education level of the household head (No. of years of schooling)
Cpemp = D_1	Cpemp = 1 if credit-plus services affected to income-empowerment, otherwise Cpemp = 0
Ownership=D_2	Ownership = 1 if the household head is an owner of a micro enterprise when credit was taken, otherwise Ownership = 0
Mkts = D_3	Markets=1, if markets are available for products, Markets= 0, otherwise
Cpempsmall	Credit ≤ 40824: households who have received credit with credit-plus services but cumulative credit amount is less than or equal to average credit. They are empowered with the services.
Cpempbig	Credit > 40824: households who have received credit with credit-plus services but cumulative credit amount is larger than the average. They are empowered with the services.
cpemp0small	Credit ≤ 40824*: households who have taken the credit with credit-plus services but not empowered. Their cumulative credit amount is less than or equal to the average

The impact of credit-plus services on income empowerment across different credit amounts, were investigated based on the average credit amount (Rs. 40824) to households. Accordingly, we have categorised households who have taken the credit with credit-plus services into four groups. (a) credit ≤ 40824: (Cpempsmall), (b) credit > 40824: (Cpempbig), (c). credit ≤ 40824*: (Cpemp0small), and (d) credit > 40824*: (Cpemp0big). Based on these, two regression models were estimated to analyse the impact of credit-plus services on income-empowerment. Cpempsmall, Cpempbig and Cpemp0small were included into the model as explanatory variables. Omitted group was Cpemp0big - If credit > average (Rs.40824): respondents who have taken the credit with credit-plus services but not empowered.

Results

According to the estimated regression model 1, eight explanatory variables ($\Delta Y = Y^a - Y^b = X_1$, distance to closest MFI, credit-plus services, number of years the credit has been taken, credit amount, education level of the household head, household head being an owner of a micro enterprise or not, and availability of markets, were statistically significant. Results indicate that credit-plus services benefited households to enhance their income from MF. The difference of income increases between the households who owned a micro enterprise when taking credit and households who did not have an ownership was significant. Similarly, if markets were available the possibility of income-empowerment would be greater than when market facilities for the product were not available.

Results of the second model reveal that seven independent variables, $\Delta Y = Y^a - Y^b = X_1$, distance to closest MFI, Cpempbig (Credit > 40824), number of years the credit has been taken, education level of the household head, household head being an owner of a micro enterprise or not, and availability of markets, were statistically significant affecting income-empowerment. If cumulative credit with credit-plus services is greater than the average cumulative credit, the probability of empowerment is significantly high. Therefore, if MFIs provide loans with credit-plus services, the amount of credit should be large. If not, credit-plus services may not be a significant tool for the empowerment of the poor.

The third model was set up purposely to investigate the significant level of explanatory variables without credit amount. Dependent variable and all independent variables except credit were as same as in model 2. Compared to model 2 there is no considerable difference in the significance level of explanatory variables.

Conclusion and Policy Recommendations

Regression results indicate that MF has a positive and significant impact on household's income. Also, while credit-plus services help households enhance their income through the micro projects, the impact would be significantly higher for the group of households who obtained a cumulative credit amount above the average level of Rs. 40,824, relative to the group of households who obtained a cumulative credit amount below the average. Therefore it can be concluded that whenever MFIs provide credit with credit-plus services, the amount of credit should be considerably large. If not, credit-plus services may not be a meaningful tool for the empowerment of poor and reducing income-poverty.

References

Colombage, S. S., A. Ahmad and A. S. Chandrabose (2008). Effectiveness of Microfinance in Reducing Rural Poverty: A case Study of Selected Districts Sri Lanka. VISTAS, Journal of Humanities and Social Sciences, 4, 1-37.

Daley-Harris, S. and Zimmerman J. (2009) Microfinance does not usually serve the very poor, for whom it can represent a route into debt rather than a way out of poverty. Enterprise Development and Microfinance 20(2): 79–85.

Gunathilake, R., & de Silva, D. (2010). Microfinance and Women Empowerment, The Impact of Loan Ownership on Women's Empowerment in Microfinance Households in Sri Lanka, Colombo, Centre for Women's Research (CENWAR).

Khandker, S. R., and M.M. Pitt (2005) Microfinance and Poverty: Evidence using panel data from Bangladesh, The Wold Bank Economic Review 19 (2): 263-286.

Swain, R.B., Sanh, N.V., and Tuan, V.V. (2008). Microfinance and poverty reduction in the Mckong Delta in Vietnam. African and Asian Studies 7(2): 191-215.

New Frontiers in Micro-insurance Distribution
Exploring the Feasibility of Farmers' Organisations for Insurance Delivery

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Keywords: *Farmers' Organssations, Financial Intermediaries, Insurance Delivery, Micro-insurance*

Introduction

Risk is an unavoidable but manageable element through insurance. A growing body of literature on agricultural financial markets in developing countries reveals opportunities for innovative agricultural insurance and delivery channels. Micro-insurance is increasingly gaining attention agricultural risk management (Churchill, 2006; Dercon, Kirchberger, Gunning and Platteau, 2008; Giné, Townsend, & Vickery, 2008: Roth and McCord, 2008). However, in developing countries, it would be difficult for the insurers to establish a vast network for distribution of micro-insurance products. They need to utilise existing organisations (Hartell, & Skees, 2009).

Objectives

The main objective of this study is to explore the feasibility of farmers' organisations as a vehicle for micro-insurance delivery for small scale farmers cultivating paddy to protect against risk of production loss caused by natural disasters.

Methodology

Ampara district, on Sri Lanka's eastern plain was selected to conduct the field survey. The selection of the study area was carried out through a multi-staged screening process based on multi-hazard risk and paddy production.

A sample of 180 farmers was chosen for the study. Principal Components Analysis was used to elicit the group dynamic and the capacity of farmers' organisations as a stakeholder in the insurance supply chain. Varimax rotation with Kaiser normalisation procedure was used to achieve an identical factor structure in which each variable loads highly on one and only one factor. Items loading heavily on components were selected to interpret the factor content.

Results and discussion

Descriptive statistics pertaining to dynamic behavior of farmers indicate how to develop local ownership and linkages with micro-insurance schemes. The results indicate that 87 percent (SD=2.3%) of farmers identify the farmers' organisation as convenient and the most suitable structure to work with as a stakeholder in the insurance supply chain. The statistics pertaining to group size farmers' organization provide useful information in determining insurable units of paddy farmers in Sri Lanka.

Factor analysis explained the relationships between several correlated variables while reducing them to four factors. Firstly, "Structure and cooperation", the variables which facilitate creation of cohesion among people in a community, have high positive loadings. According to loading values, homogeneity factor in factor structure implies that the farmer association has high uniformity among the farmers in the organisation. Decision making factor also indicates high loading values, implying the active involvement of paddy farmers in decision making in farmers' organisations and its democratic behavior. Farmers' contributions take many forms, including meeting attendance, cash and labour contributions, and these factors are with high positive loadings. The evidence therefore is that farmers do actively participate in farmers' organisation activities.

The emergence of the second factor, "trust, local norms and values" with high positive loadings could be related to intergroup behavior. Variables loading onto this factor include vertical trust, horizontal trust, and reciprocity. Trust is the most widely used indicator of social capital. The more group members trust one another, the more likely they are to expose themselves to the risk of being exploited that reciprocity entails. Since trust had already been established, the possibility of joining the collective activities in the future was expected.

Factor called "Financial activities" is defined based on activities of farmers' organisations such as the initiatives, transactions, loans, and supplies, employed and undertaken in order to achieve their economic objectives. Farmers' organisations have established funds, have done fund raising activities, and have got involved in keeping financial records, credit and saving activities, marketing and distribution, negotiating with financial institutions for the credit needs, and providing farm machinery to the members at affordable prices. Some "group savings" projects have also been initiated by a number of farmers' organisations. All members of the farmers' organisations have their common deposit in the bank in the name of their organisation. Farmers' organisations are legally mandated to negotiate with other entities such as banks, and cooperative societies. Therefore, this study finds that farmers' organisations have been capable of handling financial activities in a transparent manner and display healthy financial habits.

The fourth factor identified as "Other functional activities" mainly covers items related to water distribution activities, coordinating agricultural activities, construction works, community-based risk management, participation in loss assessment, conduct training and education programmes as well as natural resource management activities. All these variables have organisational capacity aspects. The farmers' organisations organisations bridge and make expected/implied links across groups, across communities, and work with other organisations. Training and risk management capacities are also demonstrated.

Conclusion and Policy recommendations

This study provided insights into non-insurance or community-based delivery channels which can be used for the benefit of paddy farmers. The farmers' organisation appears to be the most widespread, familiar and trustworthy institutional setup among paddy farmers. In theory, the ideal combination would be an insurer-agent partnership between farmers' organisations and commercial insurance companies (together with microfinance institutions or alone). Insurance companies can provide insurance products and marketing. Farmers' organisations can provide the delivery mechanism, premium collection mechanism and services to the clients. The farmers' organisations demonstrated high trust, which, in turn, improves the efficiency of insurance delivery. The results indicated that most of the farmers actively contribute toward the activities initiated by the farmers' organizations. Empirical evidence confirmed that farmers' organisations have a democratic decision making behavior, where farmers resorted to participatory approach in making insurance designs based on their own requirements. Therefore, we can conclude that farmers' organisation is a suitable platform for the micro-insurer, that can be used for education and insurance design, and to negotiate with farmers with regard to their requirements. This platform provides information to help strengthen client relationships, and can better meet farmers' insurance demand. These group processes can mitigate or eliminate the asymmetric information problem and reduce transaction cost. Farmers' social capital and the inherent capacity of farmers' organizations to manage risk will facilitate micro-insurance schemes. In this context, it could be concluded that multi-stakeholder partnerships could/should be made imperative in insurance delivery for paddy farmers, in view of achieving widespread coverage and large-scale implementation.

References

Churchill, C. (Ed.). (2006). Protecting the poor: A microinsurance compendium. Geneva: International Labour Organization.

Dercon, S., Kirchberger, M., Gunning, J.W. & Platteau, J. (2008). Literature review on microinsurance, Geneva: International Labour Organization.

Hartell, J., & Skees, J. R. (2009). Pre-feasibility analysis: Index-based weather risk transfer in Mali. Washington, DC: United States Agency for International Development (USAID).

Giné, X., Townsend, R. M. & Vickery, J. (2008). Patterns of rainfall insurance participation in rural India, World Bank Economic Review, 22, 539-566.

Roth, J., & McCord, M. J. (2008). Agricultural microinsurance: Global practices and prospects. Appleton, Wisconsin: Microinsurance Centre.

Interlocking Factor Market in Agrarian Economy of Sri Lanka

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***Key words**: informal credit, interlinked credit transaction, rural sector, hidden costs*

Introduction

Informal credit market plays a crucial role in the rural sector in developing countries. Prices of goods and services, in general, in the competitive markets are determined by the market forces but, prices of factors of production in agrarian economy are interlinked, thus reward of land, labour and credit are determined by the interlockers. The interlocking factor market in agriculture sector is now broadly observed in all over the world. Interlinked credit transactions can broadly be classified into four categories, namely those involving linkage of land, labour, inputs and output of farm households (Sarap, 1991). An interlinked transaction is one in which the parties trade in at least two markets on the condition that the terms of all trade between them are jointly determined (Bell and Srinivasan, 1989). The credit transaction in the rural markets is not similar to transactions in other markets such as the goods market (Lianto, 1989). Many theoretical and empirical studies have explained different types of linkages in the rural sector such as land and labour markets, land and input markets, land and output markets, labour and output markets, input and output markets. The credit linkages between poor borrowers and lenders may be cash-to-cash (C-C), kind-to-cash (K-C), kind-to-labour (K-L) cash-to-labour (C-L), input-to-cash (I-C) , input-to-output (I-O) and cash-to-output (C-O).

Agriculture sector is the foremost economic activity in Sri Lanka. Nearly 70 percent of total population living in rural areas depends completely or partially on agriculture sector. The paddy crop in Sri Lanka contributes to 15 per cent of agricultural output, which is the highest contribution made by any single agricultural commodity. Ampara district is one of the major paddy cultivating regions of Sri Lanka and contributes to around 20 per cent of the total paddy production of the Island. This district has 16 per cent of the total cultivable land in Sri Lanka (Planning Secretariat, Ampara, 2007) and nearly 68 per cent of the population is involved in paddy cultivation. Sammanthurai is the hub of paddy cultivation area in the Ampara district. Two-thirds of the total land area is used for paddy cultivation, which is 23.8 per cent of the total agricultural lands of the district. It is necessary to note that every year more than 16,000 ha are brought under paddy cultivation in Sammanthurai area.

Objectives of the Study

The main objective of the study is to examine the incidence of different types of linkages prevalent between developed and backward paddy farming villages in Sammanthurai Divisional Secretariat area of Ampara district, Sri Lanka.

Method of Data Collection

This study is based on primary data pertaining to the years 2011-2012 (2011 Yala and 2011-2012 Maha). The field survey was conducted in Malwatta, Walathappity and Mallikaithivu backward villages and Sammanthurai town area (GSN,1,2 3) and Block "J" East developed villages. A random sample of 60 households was drawn from the developed villages and 60 households from the backward villages thus making a total of 120 sample households for the study. Paddy farmer households were classified into four groups according to the paddy operation such as attached labourers, small, medium and large farmer household.

Results and Discussion

The share of respondent households with interlinked and non-interlinked credit transactions in the informal credit market of the study area are shown in Table 1.

Table 1 : Extent of Interlinked and Non-Interlinked Credit Transactions in Backward and Developed Villages in Sammanthurai DS. Area

Paddy Farmers Household Categories (1)	Number of Sample Household (2)	Number of interlocked Household (3)	Number of Non-interlocked Household (4)
Backward Villages			
Labourer	15	14 (93.33)	01 (06.66)
Small	15	15 (100.00)	-
Medium	15	13 (86.66)	02 (13.33)
Large	15	15 (100.00)	-
Total	60 (100)	57 (95.00)	03 (05.00)
Developed Villages			
Labourer	15	13 (86.66)	02 (13.33)
Small	15	07 (46.67)	08 (53.33)
Medium	15	08 (53.33)	07 (46.67)
Large	15	11 (73.33)	04 (26.67)
Total	60 (100)	39 (65.00)	21 (35.00)

Source: Computed from the primary data.

Note: Figures in the parentheses denote percentage of Column No.2.

According to the results, 95 per cent of the households in backward villages are involved in interlinked credit transactions. In terms of developed villages it is 65 per cent. Thus the non-interlinked transaction is around 05 per cent and 35 per cent in backward and developed villages respectively. The result exhibits that interlinked credit transactions are higher in backward villages than that of developed villages.

Table 2: Types of informal credit linkages in Developed and Backward Villages in Sammanthurai Divisional Secretariat Area

Paddy Farmers Household Categories	Number of interlocked Household	C-C	C-L	K-L	K-C	I-C	I-O	C-O
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Backward Villages								
Labourer	14	06 (42.8)	-	-	09 (64.3)	-	-	01 (07.1)
Small	15	05 (33.3)	-	-	06 (40.0)	08 (53.3)	06 (40.0)	04 (26.7)
Medium	13	06 (46.2)	-	-	04 (30.8)	07 (53.8)	05 (38.5)	04 (30.7)
Large	15	04 (26.7)	05 (33.3)	05 (33.3)	03 (20.0)	07 (46.7)	07 (46.7)	09 (60.0)
Total	57 (100.0)	22 (38.6)	05 (08.8)	05 (08.8)	21 (36.8)	24 (42.1)	20 (35.1)	18 (31.6)
Developed Villages								
Labourer	13	04 (30.8)	08 (61.5)	02 (15.4)	-	-	-	01 (07.7)
Small	07	04 (57.1)	-	-	-	02 (28.6)	-	03 (42.9)
Medium	08	05 (62.5)	02 (25.0)	02 (25.0)	-	04 (50.0)	-	04 (50.0)
Large	11	06 (54.5)	06 (54.5)	03 (27.3)	-	06 (54.5)	-	05 (45.4)
Total	39 (100.0)	19 (48.7)	16 (41.0)	07 (17.9)	-	12 (30.8)	-	15 (38.5)

Source: Computed from the primary data.

Note: 1.This table refers to different types of interlinked credit transactions. Since some households entered into more than one interlinked credit transaction, the total number of interlinked transactions is larger than the total number of interlocked households.

2. Figures in the parenthesis denote percentage of Col. No.2.

Table 2 shows important types of interlinked credit transactions mainly linking with labour, inputs, and output markets in the study area. Cash to Cash transactions are the most important transactions in both developed and backward villages in the study area. These transactions contribute to 39 per cent and 49 per cent of linkages between backward and developed villages respectively. In the backward villages there are no cash to labour and kind to labour transactions as all farmers in these villages directly involve in paddy cultivation without employing attached labourers. Only large farmers engage in these transactions.

The survey results further show that C-L and K-L transactions in developed villages are allowed free of charge. The loan advanced by the landlord or Podiyar to the attached labourers during the period of cultivation is repaid through reduction of wages of the attached labourers during the harvest period. In general, the landlord or the Podiyar of the study area does not collect any interest for this loan. In addition, some landlords do not even recover the credit given by them to their labourers.

K-C (K include only consumption goods from retail good sellers) transactions are only seen in backward villages. But, I-C transactions are shown in both villages. However, involvement in these transactions is higher in backward villages than that of developed villages. I-O transactions (35%) are shown only in backward villages in the study area and is not in practice in developed villages. Finally, farmers in both types of villages engage in C-O transaction. But this transactions are comparatively higher in developed villages.

Conclusion and Policy Recommendations

In this study an attempt has been made to find out the incidence of different types of linkages prevalent in the developed and backward villages among paddy farming households in Sammanthurai DS area of Ampara district in Sri Lanka. The analysis shows that the interlinked credit transactions are less in the developed villages, while such transactions are widespread in the backward villages. K-C and I-O transactions are only seen in the backward villages. I-O market links that dominant the backward villages is found to be exploitative of the weaker parties due to the hidden costs collected by the monopolist traders by over-valuing the prices of agricultural inputs supplied for the paddy and under-pricing the paddy output purchased by them. As the interlinked credit transactions and the informal credit markets are larger in backward villages, policy makers should pay attention to setting up more formal sector facilities in Sammanthurai, and other backward villages.

References

Bardhan, P.K. and Rudra, A. (1978), "Interlinkage of Land, Labour and Credit Relations: An Analysis of Village Survey Data in East India", Economic and Political Weekly, Vol.13, Annual Number, February.

Bell, C. and Srinivasan, T.N. (1989), "Interlinked Transactions in Rural Markets: An Empirical Study of Andhra Pradesh, Bihar and Punjab", Oxford Bulletin of Economics & Statistics, Vol.51, No.1, pp.73-83.

Narayana Reddy, M.V. (1992), "Interlinkages of Credit with Factor and Product Markets: A study in Andhra Pradesh", Indian Journal of Agricultural Economics, Vol.47, No.4, pp.618-630.

Sarap, K. (1991), Interlinked Agrarian Markets in Rural India, Sage Publication, New Delhi.

Subbarao, (1989), Agricultural Marketing and Credit, Indian Council of Social Science Research, New Delhi.

Financial Deepening and Economic Development in South Asia

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Key Words: *Financial deepening, South Asia, Fixed effects, random effects, Panel corrected standard errors*

Introduction and Justification

Schumpeter (1911) emphasizes that financial system, which plays an intermediary role to bring depositors and lenders together in the traditional financial system, is an engine of growth, as well as is a key factor which stimulates the economic growth. Financial intermediaries collect deposits from savers and transmit them to borrowers. Hence, the main function is to facilitate resources to the investors for productive investments which promote long run economic growth. McKinnon (1973) and Shaw (1973) provide a theoretical relationship between financial deepening and economic growth in a broader way. They argue that, basically, the growth of real money balances is a good predictor of economic growth and the economic growth depends on the extent of financial development of the country. Among various researches, King and Levine (1993) empirically proved that the bank based financial deepening factors highly correlate with economic growth.

In the modern system, the role of financial system has broadened in the growth process because of the technological innovation. The technological innovation became a part of production process that accelerates economic growth combining with the traditional factors of production. On the other hand, only well-developed financial system is capable of introducing innovation in the production process that enhances productivity growth by capital mobilization and risk sharing.

No doubt, financial system plays a vital role to facilitate financial services in the economy and thereafter fosters the growth. However, its reform is essential to operate freely and to adopt changes of technologies and innovations in the economy because it can provide its services under considerably free conditions. In the liberal system, financial intermediaries can implement their new instruments in the economy to facilitate their products more easily and more competitively. Therefore, liberalized financial system has been playing a pivotal role in financial development of both developed and developing countries since the 1980s. And, most of the developing countries like South Asian countries are following the liberalisation policies since the 1990s.

Countries in South Asia have understood the importance of financial reforms in their economies during the late 1980s.The rapidity in the implementation of policy reforms has taken place during the 1990s and it has been continuing till date. As a result, South Asian countries have experienced drastic changes in their monetary and macroeconomic structures with these policies. However, from the late 1990s, more attention has been given to the short run microfinance activities which emphasized on household financial activities, poverty reduction and other welfare activities. It resulted to slow down the reform policies in the region. In such condition, it is needed to examine the long run impact of the formal financial sector on the economic development.

Conceptualisation and Objectives

King and Levine (1993) have used an endogenous technological change model as a function of financial development indicators and other variables which contribute to economic growth. The role of financial factors has been incorporated with endogenous growth to analyse the interaction between financial development variables and long run economic growth. The function is :

$$y = \alpha + \beta_i F_i + \gamma_j X_j + \varepsilon,$$

where:

y is economic development
F represents the financial development variables
X stands for the other variables and ε the errors terms.

Some works such as Acemoglu and Fabrizio (1997) and Obstfeld (1994) suggest that, by promoting cross-country risk-diversification, financial liberalization fosters specialization that increases efficiency in capital allocation and ultimately promotes growth. In addition, some time series empirical evidences try to explore the relationship between financial development and economic growth. Under the techniques of unit roots tests and the long-run Granger non-causality test Deb and Mukherjee (2008) have found the strong supply leading causal relationship between economic growth and financial development for the case of Indian economy. In addition, through a panel data analysis, Khan and Senhadji (2000) find that the growth performance of a country through financial development depends on the level of financial development of that country. On the microeconomic approach, Rajan and Zingales (2003) showed the link between financial dependence and industry-level growth across the countries.

The main objective of the present study is to empirically investigate the impact of financial deepening on the economic development of six South Asian countries.

Methodology

Different from the previous studies, three distinct perspectives are followed in this study. First, to test the impact of financial deepening on economic development we use GDP per capita PPP as development variable. Secondly, the area of research is South Asian region where the researches relating to this topic are very few and lastly it relies on cross country time series analysis

The methodology employed is mainly related to the panel data analysis. Using the WDI data from 1981 to 2008, we regress financial deepening proxies and other control on the variable 'economic development' (proxied by GDP). The fixed effects model, random effects model and panel corrected standard errors are considered.

Results

The Table 1 (below) presents the empirical results.

The panel fixed effects, random effects and panel corrected standard errors methods show that the financial variables and the per capita GDP have a positive and highly significant relationship implying that financial development has significant role in the South Asian economy.

The PCSE method is mainly used to correct the problem of heteroscedasticity associated with the data. Countries with deeper financial development are more likely to have higher development levels.

Our results are in line with the expectations of Schumpeter (1911) and the findings of King and Levine (1993).

Table 1: Regression Results for Panel Data Set (Dependent Variable: lGDP PPP)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Variables	FEM	REM	PCSE	FEM	REM	PCSE	FEM	REM	PCSE
cps	0.016*** (0.003)	0.016*** (0.002)	0.025*** (0.003)						
inv	0.017*** (0.004)	0.017*** (0.004)	0.012*** (0.002)	0.002 (0.004)	0.003 (0.003)	0.000 (0.002)	0.007* (0.004)	0.007* (0.004)	-0.001 (0.002)
open	0.008*** (0.002)	0.008*** (0.002)	0.012*** (0.001)	0.004** (0.002)	0.004*** (0.002)	0.013*** (0.001)	0.010*** (0.002)	0.010*** (0.002)	0.016*** (0.001)
pop	-0.031* (0.017)	-0.031* (0.017)	-0.021 (0.020)	-0.044*** (0.014)	-0.044*** (0.014)	-0.058*** (0.017)	-0.006 (0.016)	-0.006 (0.016)	-0.016 (0.024)
m2				0.020*** (0.002)	0.020*** (0.002)	0.019*** (0.002)			
qm							0.017*** (0.002)	0.017*** (0.002)	0.018*** (0.002)
Constant	6.188*** (0.097)	6.178*** (0.197)	5.862*** (0.134)	6.344*** (0.080)	6.336*** (0.285)	6.028*** (0.094)	6.227*** (0.088)	6.217*** (0.307)	6.137*** (0.093)
No of obs	159	159	159	158	158	158	159	159	159
R Sq.	0.633	0.588	0.618	0.753	0.482	0.604	0.701	0.507	0.534

***, **, * represent significant level at 1%, 5% and 10% respectively.

Value in the parentheses represents the standard errors.

lGDPPPP = log of GDP PPP   inv = investment as percentage of GDP
open = total trade volume as percentage of GDP
cps = domestic credit to private sector as percentage of GDP
bm = broad money as percentage of GDP
qm = quasi money as percentage of GDP   FEM = fixed effects model
REM = random effects model   PCSE= panel corrected standard errors

Conclusion and Policy Recommendations

This paper aimed at analysing the impact of financial deepening on economic development proxied by per capita GDP of five South Asian countries. The results based on panel data analysis and the use of PCSE supported the importance of financial deepening on the development level on the countries in general.

Therefore, the South Asian countries might consider continuing reforms and liberalising their financial systems to further and sustain economic growth and thereby, economic development.

References

Acemoglu, D. and Fabrizio, Z. (1997), 'Was Prometheus Unbound by Chance? Risk, Diversification and Growth', *Journal of Political Economy*, 105(4): pp. 709-752.

Deb, S.G. and Mukherjee, J. (2008), 'Does Stock Market Development Cause Economic Growth? A Time Series Analysis for Indian Economy', *International Research Journal of Finance and Economics*, Issue 21: pp. 142-149.

Khan, M. S. and Senhadji, A. (2000), 'Financial Development and Economic Growth: An Overview, *IMF Working Paper*, No. 00/209.

King, R.G., Levine, R. (1993), 'Finance and Growth: Schumpeter Might be Right', *Quarterly Journal of Economics*, 108(3): pp. 717-737.

McKinnon, R.I. (1973), *Money and Capital in Economic Development*, Brookings Institution: Washington DC.

Obstfeld, M. (1994), 'Risk-Taking, Global Diversification, and Growth', *The American Economic Review,* 84(5): pp. 1310-1329.

Rajan, R.G. and Zingales, L. (2003), 'The Great Reversals: the Politics of Financial Development in the Twentieth Century', *Journal of Financial Development*, 69(1): pp. 5-50.

Schumpeter, J. A. (1911), *The Theory of Economic Development*, Cambridge: Mass Harvard University Press.

Shaw, E.S. (1973), *Financial Deepening in Economic Development*, New York: Oxford University Press.

Investor Choice, Market Securities and Portfolio Theory Examination

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Key Words : *Choice Theory, Portfolio Diversification, Capital Market Securities, Stock Exchange and Informed Investor*

Introduction

The Capital Market Securities investment has grown to be the most popular investment opportunity world-wide. The market often has opened the floor for interaction between the issuers and buyers of securities. Choices could be made available for informed investors to invest in various investment options which could be debt securities such as bonds/debentures and derivatives; ownership securities (equity) such as common stocks; and/or debt-equity security such as preferred stocks.

Observations on the Nigerian Stock Exchange (NSE) and the Colombo Stock Exchange (CSE) over the years have shown that equity shares and debt securities are the most prominent; which means that the actual practice on the real market seems divergent from the theoretical perspective where preferred stocks are considered as a bridging security between the equity stocks and the debt securities. This therefore induce the study to examine portfolio diversification in the light of the available securities listed and traded on the NSE and the CSE to determine whether the informed investor's ability to diversify his investment choices could assist him to achieve an efficient and equitable portfolio. Although an efficient portfolio according to Markowitz (1952) is that bundle of assets and securities that dominates others of its kind based on minimum risk or maximum expected returns. However, in this paper, we intend to postulate that, making all required capital market securities available will be a better way to assess their viability to know whether a given security dominates the other based on minimum risk or maximum returns; otherwise the investor is only left with what he/she sees available, ceteris paribus.

There is grape vine gossip from corporate executives, more often than not, that the preferred stock, when offered to the market, will not be patronised by the investor. How could this be true when firms who have issued in some countries such as the USA, India, and UK etc have seen the rush for them by investors? In the last two decades, for

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instance, adjustable or floating-rate preferred stock has become popular in the United States where in some years accounting for about half the new issues (Bodie, Kane, Marcus & Mohanty, 2005). Here, the dividend rate is linked to a measure of current market interest rates and is adjustable at regular intervals.

Kurfi (2003:149) observe that the returns of a common stock consist of cash dividends and capital gains (or losses) that are highly unpredictable. Thus, the uncertainty associated with returns from common stock makes its valuation rather difficult. On the other hand, Neveu (1985:562) asserts that preferred stock is frequently called a hybrid security because it contains characteristics of both debt and equity.

Osaze (2007:189) stressed that fixed income securities are those investment instruments that earn the investor a fixed and almost certain return throughout the period the securities are held by the investor. The assertions describe preferred stock as a fixed income and hybrid security that could give a dimension better and far above the common stock and bonds/debentures when it comes to multiple advantages. This is because their holders are certain of fixed income which is determined by their perpetuity and at the same time possess some equity rights.

This study is anchored on two theoretical assumptions:

The Blume and Easley (2008) Rational Choice theory or the Rational Action Theory is a framework for understanding, and often formally modeling, social and economic behavior. Rationality here is equated with "wanting more rather than less of a good" and is widely used as an assumption of the behavior of individuals in microeconomic models. This theory applies to the investor such as :

a. Strict preference when an individual prefers a1 to a2, but not a2 to a1.
b. Weak preference when an individual has a preference for at least aj, similar to the mathematical operator ≤.
c. Indifference when an individual does not prefer a1 to a2, or a2 to a1.

Rational choice theory uses a specific and narrower definition of "rationality" simply to mean that an individual acts as if balancing costs against benefits to arrive at action that maximises personal advantage (Milton, 1953:15).

Arrow's (1950) Impossibility Theorem states that there is no social choice mechanism which satisfies such reasonable conditions and which will be applicable to any arbitrary set of individual criteria such as:

1. Non-dictatorship: The preferences of an individual should not become the group ranking without considering the preferences of others.

2. Individual Sovereignty: each individual should be able to order the choices in any way and indicate ties
3. Unanimity: If every individual prefers one choice to another, then the group ranking should do the same
4. Freedom From Irrelevant Alternatives: If a choice is removed, then the others' order should not change
5. Uniqueness of Group Rank: The method should yield the same result whenever applied to a set of preferences. The group ranking should be transitive.

This study postulates the following assumptions:

a) The common and preferred stocks have no holding period hence, the secondary market doesn't exist;
b) The investor invests in securities for purpose of annual income and financial security now and in the future; hence no capital gains;
c) All investors, whether small, large or institutional, are risk averse.

These assumptions suggest that the dividend is not computed as $d_n = E_n(1\text{-}R)^n$, but instead, as $d_n = r \times N_s$ where r= fixed dividend rate per share; and N_s= No. of paid-up preference shares.

Objective of the Study

The objective of this study is to examine the realities of a portfolio selection theory as a relation to varieties of securities traded on the Nigerian Stock Exchange and the Colombo Stock Exchange for an efficient capital market. This is to identify opportunities provided for security investors to make appropriate choices of securities that could help withstand their systematic risks so as to maximize returns on the investments thereby, proving the efficiency of the theories of choice and the portfolio theory of diversification in different corporate securities.

Methodology

The method used in this research is much of historicity and purely descriptive because the study use the average listing of an 11-year time series of securities on the NSE and the CSE from 2002-2012; thereby ascertaining the average percentage listings of the various securities on the market to assess whether the percentage of each security type listed on the exchange can help the average investor to make the various portfolio combinations as described by Osaze (2007). By doing so, the theory of choice in its application to the securities market will be assessed to see if the securities traded on the markets provide a combination that models portfolio theory to satisfactorily meet investors' interest to withstand economic, financial and market conditions (systematic risk) for an efficient capital market.

Results

The average 11-year listed securities on the NSE shows that the informed investor has the options to invest in 75% common stocks, and/or 25% debt securities in the absence of the preference shares (see Table 1 in App. II) , While on the CSE, common stock average 82% and debt security 18% (see Table 2 in App. II). Preferred stock has never been listed before on the CSE since its inception although NSE had one during mergers and acquisition in the 1980s. These results, Compared to the Appendix I (portfolio types), it is evident that investors do not have the adequate combinations of the capital market securities to achieve an ideal portfolio diversification, all things being equal. This means that, investors can partially be able to create a portfolio type enough to counter the risk of economic, financial and market conditions. Hence, the results are not consistent with the Arrow's Impossibility theorem and the Rational Choice theory because it deprives the investor to exercise his right to make choice from required securities as such the practice has relegated the power of choice of the informed investor in the capital market, a compulsorily skewed to common stocks and debt securities, ceteris paribus.

Conclusion and Policy Recommendation

Varieties of securities on the capital market is the best practice for an efficient market that guarantees the power of choice so that the informed investor is better off when it comes to diversifying his/her portfolio. The study finds that the NSE and CSE do not have all the capital market instruments listed on them for investors to compare their choices. It is also discovered historically that, NSE had once traded preference shares in the 1980s during mergers and acquisition program. Conversely, the CSE has never had preference shares listed on its floor. This result indicates a defect in making available all securities on the stock exchange to give room for informed investors to compare expected returns on each, and to make wise combinations that can withstand systematic (non-diversifiable) risk as supported by the portfolio types suggested by Osaze (2007).

It is therefore paramount for the regulatory agencies and authorities of the capital markets in Nigeria and Sri Lanka to device a policy framework that will either coerce or persuade companies to spread their securities offerings on the three major securities-common, preference and debt.

References

Arrow, K. J. (1950) A Difficulty in the Concept of Social Welfare, The Journal of Political Economy, Vol. 58 No. 4, pp. 328-346.

Blume, L. E. and David, E (2008) Rationality. The New Palgrave Dictionary of Economics, 2nd Edition. Abstract & pre-publication copy

Kurfi, A. K (2003) Principles of Financial Management. Benchmark Publishers Ltd, Kano, Nigeria, Pg 148-162.

Markowitz, H (1952) Portfolio Selection, The Journal of Finance, Vol. 7 No. 1, pp. 77-91.

Neveu, R. P (1985) Fundamentals of Managerial Finance. 2nd ed. South-Western Publishing Co., Cinccinati, Ohio.

Osaze, E. B (2007) Capital Markets: African and Global. Bookhouse Company, Nigeria. Pg 189-230.

Appendix I

Table- 1: Portfolio Types

S/N	Types of portfolio	Possible structure
1.	AGGRESSIVE: a portfolio that is predominantly made up of common equities	5% cash, TBs, savings account 10% industrial loans/preference shares 5% federal government development stock-15 yrs 80% diversified portfolio of common stock
2.	DEFENSIVE: a portfolio that places emphasis on securities that resist a decline in prices. E.g. bonds, preference shares, cash	20% cash, TBs, savings account 50% federal government development stock-8 yrs 20% industrial loans in blue chip companies 10% equities of blue chip companies
3.	AGGRESSIVE/DEFENSIVE: a portfolio which acts as a hedge to a rise or fall in stock market prices. It is also called a balanced fund.	10% cash, TBs, savings account 30% federal government development stocks-8 yrs 10% industrial loans/preference stock 20% equities in blue chip companies 30% growth stocks.
4.	INCOME FUND: a portfolio that emphasizes the optimization of current income. Capital gains and growth rate given minimum significance	20% cash, TBs, savings account 30% high yield short-term fund 30% high dividend securities 20% federal government development stock15 yrs
5.	GROWTH FUND: a portfolio which emphasizes the capital growth of the investment funds. It postpones current income so that the funds increase in value.	20% cash, TBs, savings account 20% federal government development stock-8 yrs 10% convertible stock of blue chip companies 50% high growth stock
6.	INCOME-GROWTH FUND: a portfolio that balances current income with some growth	20% cash, TBs, savings account 20% federal government development stock-8 yrs 20% high dividend stocks 40% high growth stocks

Source: Esosa Bob Osaze, 2007, Capital Markets (African & Global) pg. 383

Appendix II

Table-2: Listed Securities on the NSE from 2002-2012

Security /yrs	2002 %	2003 %	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %	2010 %	2011 %	2012 %
Equity	195 /76	200 /75	207 /75	214 /74	202 /70	212 /68	213 /71	216 /82	215 /82	203 /77	202 /72
Pref. shares	-	-	-	-	-	-	-	-	-	-	-
Debt Security	63 /24	65 /25	70 /25	74 /26	86 /30	98 /32	88 /29	49 /18	46 /18	60 /23	56 /28
Total	258 /100	265 /100	277 /100	288 /100	288 /100	310 /100	301 /100	265 /100	261 /100	263 /100	258 /100

Equity listing AVG. = 75%; Preference Shares AVG = 0% and Debt Securities AVG. = 25%

Source: Extracted from SEC Yearly Bulletins and percentages computed by researcher

Table-3: Listed Securities on the CSE from 2002-2012

Security/Yr	2002 %	2003 %	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %	2010 %	2011 %	2012 %
Equity	197/ 83	207/ 85	213/ 88	204/ 85	192/ 81	185/ 79	182/ 77	183/ 88	194/ 80	223/ 82	239/ 83
Pref. Shares	-	-	-	-	-	-	-	-	-	-	-
Debt	41 /17	37 /15	29 /12	35 /15	45 /19	50 /21	53 /23	48 /12	47 /20	49 /18	48 /17
Total	238/ 100	244/ 100	242/ 100	239/ 100	237/ 100	235/ 100	235/ 100	231/ 100	241/ 100	272/ 100	287/ 100

Equity listing AVG. = 82%; Preference Shares AVG = 0% and Debt Securities AVG. = 18%

Source: Extracted from SEC Yearly Bulletins and percentages computed by researcher

Determinants of Market Inefficiency in Emerging Capital Markets: Evidence From The Colombo Stock Exchange in Sri Lanka

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Keywords: *Efficient Market Hypothesis, Semi-Strong form market efficiency, Colombo Stock Exchange, Cointegration, Error Correction Model, Granger Causality Test.*

Introduction

The predictability of the behaviour of capital markets is one of the prominent areas of research in financial economics. Vidanage & Dayaratne-Banda (2012) found that the Colombo Stock Exchange (CSE) is weak form inefficient indicating that variables other than past securities price tend to determine the movements in stock prices. This finding provides the basis for empirically examining the macroeconomic and socio-political sources of stock price movements with a view to explaining the sources of information inefficiencies in emerging stock markets, which could eventually be used to predict the future movements of the prices. Previous studies on the semi-strong form on CSE (Wickramasinghe, 2006; Gunasekarage *et al* 2004), have been limited to identifying the possible causal relationships between selected macroeconomic variables and stock prices up to 2004, and did not focus on the prevailing economic and political situation though they provide important information. In this context, it is interesting and valid empirical question to investigate whether and to what extent socio-political factors and macroeconomic conditions help predict price movements in emerging capital markets, such as the CSE. In other words, this study intends to investigate whether the stock prices in the CSE exhibit the semi-strong form of the Efficient Market Hypothesis.

Objectives

This paper, therefore, aims to investigate whether the macroeconomic environment[2] and socio-political conditions of the country could explain the stock price movements in emerging capital markets.

[2] GDP growth and industrial output are important variables when examining the impact of macroeconomic conditions on stock prices. Yet, monthly data on those variables were not available at the time of data collection. Therefore, the behaviour of interest rate, exchange rate, inflation and money supply were made to represents the macroeconomic environment of the country.

Methodology

This study employed several quantitative techniques to test the long run relationship, causality, short run relationships and persistence of short run impacts: including Johansen and Juselius multivariate Cointegration test (JJMCT), the Error Correction Model (ECM), Granger Causality test, Impulse Response Function (IRF) test and Variance Decomposition test. Data for the following variables were collected on a monthly basis for the period from 1985(1) to 2011(5), and transformed into natural logarithms.[3] The sample includes 317 observations per variable. The main secondary data source was the various issues of the annual report of the Central Bank of Sri Lanka.

a) Monthly average United States dollar and Sri Lankan rupee exchange rate(USD),
b) Monthly inflation rate(INF) – this is calculated as the monthly change in the Colombo Consumer Price Index,
c) Monthly broad money supply(M2),
d) Monthly bank rate(B),
e) Monthly closing price of All Share Price Index(ASPI).

The following five dummy variables will be included to capture economic and political episodes occurred in the economy during the sample time period:

a) DER – the change in the floating exchange rate [2001(1)-2011(5)]
b) DFC – the impacts of the 1997 financial crisis [1997(4)-1998(12)][4]
c) DMOU – the information on peace agreement (MOU) between Sri Lankan government and the Liberation Tigres of Tamil Eelam (L.T.T.E.) [2002(2)]
d) DMR – the United Peoples' Freedom Alliance elected in 2005[2005(11)-2011(5)]
e) DWAR – the civil war and unstable political situation in the country[1985(6)-2009(05)]

Results

The results of the Augmented Dickey Fuller(ADF) test shows that at levels, only Rt [monthly returns on ASPI[5], calculated as the log difference of the ASPI at time t and

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[3] As in the existing literature, we also used monthly data to obtain more robust estimations, than using daily or weekly data.

[4] This time period was roughly estimated, as the crisis began in early May, 1997 and ended by 1998.

[5] Monthly returns are calculated using the following formular: $R_t = ln\{P_t|P_{t-1}\}$, where Rt is the returns for ASPI on month t; Pt and Pt-1 are the monthly closing price of ASPI at month t and month t-1, respectively.

time (t-1)] and INF are stationary and do not contain unit roots. Their order of integration is zero; *I(0)*. When testing for first difference form, all the other variables became stationary. This implies that these variables are integrated in order one; *I(1).*

The results of the JJMCT given in the Table 1 indicate that there is no more than one cointegration vector either at one percent or at five percent level. Based on the Eigen value and trace statistic, it can be concluded that there is one cointegrating relationship between ASPI returns and selected macroeconomic variables.

Table 1 : The Results of the Johansen & Juselius Test of Cointegration among ASPI and Selected Macroeconomic Variables

Maximum rank (r)	Maximum Eigen value (λmax)	Trace Statistic (λtrace)	Critical value (5%)	Critical value (1%)
0	89.76708	131.6418***	68.52	76.07
1	27.50875	41.87470	47.21	54.46
2	11.41609	14.36611	29.68	35.65
3	2.94158	2.95017	15.41	20.04
4	0.00857	0.00858	3.76	6.65

Note: Exogenous variables are DER, DFC, DWAR, DMR, DMOU.
*** implies significance at the 1% percent level.

Source: Authors' estimations based on data sources described in 'Methodology Section'.

$$R_t = 0.51704 - 0.046146LB_t + 0.24025LUSD_t + 0.00798LINF_t - 0.11084LM2_t \quad \ldots\ldots (1)$$

	LB_t	$LUSD_t$	$LINF_t$	$LM2_t$
	(0.03384)	(0.07954)	(0.00643)	(0.03199)
	(1.36345)*	(-3.02045)***	(-1.24094)	(3.46536)***

These values represent percentage changes, since log values of R_t, INF, B, USD and M2 are used. Values in parentheses are standard errors and t-statistics, respectively (*** - 1 percent, ** - 5 percent and * - 10 percent significance).

The above equation (1) yields negative relationships between ASPI returns and bank rate and money supply, while positive relationships between ASPI returns and USD exchange rate and inflation rate.

All the estimated coefficients are statistically significant, at least at ten percent level, except for the inflation rate.

Since the above result identifies the presence of at least one cointegration relationship between ASPI returns and selected macroeconomic variables, the following ECM was specified on the optimal lag length 02. In the presence of a one percent deviation from long-run returns on Rt in period t-1, the explanatory variables fall by 0.89428 percent. Hence, it is clear that 89 percent of the errors in time t are corrected in the next period. The significant non-zero error correction coefficient proves the cointegration results, i.e. that there is a long-run relationship between the ASPI returns and the selected macroeconomic variables. Interestingly, the dummy variable that represents the civil war and the unstable political situation, DWAR, is highly statistically significant even at the one percent level. Thus, the ECM results confirm the idea that political instability and the civil war had created negative impacts in the short-run as well as in the long run.

The direction of the short-run bivariate relationships between ASPI returns and the selected macroeconomic variables were assessed by using the Granger causality test, provided in the Table 2.

Table 2 : Results of Granger Causality Tests

Null Hypothesis (no Granger causality)	No: of lags	Probability	Rejection of Null Hypothesis	Direction of causality
M2→Rt Rt→M2	02	0.91467 0.30878	Cannot Reject H0 Cannot Reject H0	No Causality
Inflation→ Rt Rt→Inflation	02	0.82867 0.81732	Cannot Reject H0 Cannot Reject H0	No Causality
Bank rate→Rt Rt →Bank	02	0.82576 0.71563	Can not Reject H0 Cannot Reject H0	No Causality
USD →Rt Rt →USD	02	0.89892 0.00229***	Cannot reject H0 Reject H0	No Causality Reverse Causality

Source: Authors' estimations based on data sources described in 'Methodology Section'.

Level of significance : *** - 1 percent = 0.01, ** - 5percent = 0.05 & * - 10 percent = 0.1

There is no short-run causal link between bank rate and ASPI. Money supply as well as inflation do not show any significant impact on stock returns in the short-run. The inflation seems to be a less important determinant of stock returns in the CSE. This might be the case because of the fact that the government took certain measures to curb rising price levels in the last few years.

Conclusion and Policy Recommendations

The results of the JJMCT method show that there is a long-run relationship between stock returns and macroeconomic variables, namely interest rate, exchange rate, money supply and inflation. However, the results of the ECM and Granger causality tests reveal that there are no such causal links in the short-run. Socio-political variables also tend to affect the stock price movements. In addition, thirty-year long civil war in Sri Lanka has had significant impacts on stock market activities. These findings suggest that existing public information on macroeconomic conditions as well was socio-political conditions have a significant impact on shaping stock price movements in the CSE which is an emerging capital market in a developing country. The results indicate that macroeconomic variables along with socio-political variables can, to a considerable extent, predict the price movements in emerging capital markets. If the analysts could combine the results of the quantitative tests with qualitative analysis, the predictability can significantly be enhanced.

References

Fama, E. 1970. "Efficient Capital Markets; a review of theory and empirical work". *Journal of Finance*, 25(2): 383 -417.

Gunasekarage, A, Power, D M and Pisedtasalsai, A. 2004. "Macroeconomic Influence on the Market: evidence from an emerging market in South Asia". *Journal of Emerging Market Finance,* 3(3): 285-304.

Johansen, S and Juselius, J. 1990. "Maximum Likelihood Estimation and Inference on Cointegration with Application to the Demand for Money".*Oxford Bulletin of Economics and Statistics*, 52(2): 169-210.

Vidanage, T N. and Dayaratna-Banda, O.G. 2012. "Does past information help predict future price movements in emerging capital markets? : evidence from the Colombo Stock Exchange". *South Asia Economic Journal* (forthcoming).

Wickramasinghe, G B. 2006. "Macroeconomic Forces and Stock Prices: some empirical evidence from an emerging stock market". *Working Paper for Faculty of Commerce –Accounting & Finance, University of Wollongong: Australia* (No: 06/14).

An Assessment of the Performance of Sri Lankan Commercial Banks

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Key words: *Bank Performance, Bank-Specific Factors, Panel Data, Commercial Banks, Sri Lanka*

Background

The financial sector in Sri Lanka underwent financial reforms in 1990s to strengthen the financial infrastructure, institutional, legal and supervisory framework for a sustainable economic development. According to theory and empirics, a sound and healthy banking system is a must for sustainable development of any country. The banks are the sole providers of funds and their stability is of paramount importance to the financial system because an efficient and profitable banking sector is better positioned to eliminate harmful shocks and to contribute to the stability of the financial system. Further, legal and macroeconomic environment surrounding the financial system also change over time, while the determinants of profitability of the banking sector also are subject to change.

The standard asset pricing models reveal that riskier assets are remunerated with higher returns. Thus, bank profitability should next reflect bank-specific risk, in addition to risks coupled with the macroeconomic environment, namely systemic risk. As such, both internal and external factors may impact their performance, and an understanding of such determinants on their profitability would be essential for the managers of the banks, and also for numerous stakeholders such as the Central Bank, Bankers Association, Government as well as researchers.

The banking literature reveals the major determinants of bank profitability, which have been empirically well investigated (Poseidon et al., 2005, Naceur, 2003, Vong and Chan, 2009, Sayilson, 2009, Guru et al., 2002, Athanasoglou, et al., 2006, Mamatzakis and Remoundos, 2003). Other studies seek analysing bank profitability in panels of countries (Flamini et al., 2009, Hassan and Bashir 2003, Panayiotis et al., 2006, Abreu and Mendes 2002, Abreu and Mendes, 2001, Staikouras and Wood, 2003, Goddard et al. 2004). However, the results of these studies vary significantly depending on variations in the environment, countries examined and data employed in the analysis.

Yet, there are common factors influencing profitability of commercial banks discovered by several researchers such as expense management, capital ratio, size, activity mix, credit risk and leverage. But, in Sri Lanka, such studies are rare, and the present research study will contribute immensely to fill that gap.

Objective and Methodology

The objective of the study is to identify the determinants of the profitability of commercial banks. In doing so, this study investigates the determinants of performance of Sri Lanka's domestic commercial banks during 2005-2011. Annual financial data are collected from the financial statements of commercial banks. Banks had to meet two conditions in order to be included into the sample, during the period of investigation: First, they had to be domestic commercial banks among the financial institutions operating in the banking sector. Second, they had to have data throughout the sample period between 2005 and 2011. This yielded a balanced panel data for 9 commercial banks, both in the State and private sectors, consisting of 63 observations.

Based on findings of literature review, the study opted to select eleven internal factors, namely size, credit risk, activity mix, leverage, capital ratio, efficiency, overhead ratio, experience, ownership, postwar activity mix interaction variable, liquidity and two external factors, namely, global financial crisis and postwar to be used in the models (see Table 2). We employ panel data regression approach with the least square method to a fixed effects (FE) model and employ the Breusch-Pagan test to check for residual heteroskedasticity.

Results

The results of the one way fixed time effect panel data regression, focusing on the performance of domestic commercial banks, are presented in Table 1. It is found that fixed effects regression model statistically outperform the random effects and pooled OLS models. The power of the model in explaining variations of profitability is also reasonably high, and F statistics for overall model and time effect are significant at five percent level.

The study finds that individual bank characteristics could explain a significant portion of variation in profitability. As can be predicted using theory, the overhead cost ratio appeared having a negative significant impact on profitability implying that there was lack of efficiency in overhead management and that profitability would improve whenever banks manage their overhead costs better. Further, the negative coefficient could also indicate a bank's inability to pass its expenses to customers because of competition. This finding is consistent with those of, Jiang et al. (2003), Hassan & Bashir, Ramadan (2011), and Panayiotis et al. (2005).

On the other hand, credit risk showed a positive significant influence on profitability of banks implying that the higher the rate of transforming deposits into loans, the higher would be the profitability. This suggests that risk-averse investors expect risk adjusted returns and look for better earnings to compensate for high credit risks compatible with the standard asset pricing arguments. This provides support to the earlier studies of Al-Haschimi (2007), Badola (2006) and Flamini et al. (2009) who reported a positive relationship between banks performance and credit risk.

The interaction variable, postwar activity mix ratio was negatively related to banks profitability and statistically significant implying that smaller bank activity diversification, as implied by lower shares of services in the banks activity mix, react negatively on bank performance. The effect is due to the fact that the fees represent a more stable source of income than interest income on loans, banks have realised a greater volume of interest income granting more loans by opening new branches and extension offices all over the Island after the war. This is as a result of rebalancing the business portfolios managed by commercial banks.

The coefficient of the efficiency ratio composed as the net interest income over total assets, had a statistically highly significant positive relationship with the performance of banks meaning that interest earnings being the major source of income, banks manage to increase profits by way of granting more loans through screening of credit risk. Further, this implies that banks have increased exposure to interest bearing activities, which are not much more volatile but essentially more profitable than non-interest-generating activities rather than becoming more diversified.

Conclusions

This paper investigates the determinants of domestic commercial banks performance for the period from 2005-2011 by employing the panel data regression approach. The empirical findings of this study suggest that four internal factors have a statistically significant impact on the profitability of the banks. During the period under study, the results suggest that credit risk is positively related to the profitability of banks, providing a forward-looking measure of bank exposure to loan default and asset quality deterioration. The efficiency had a positive impact on banks’ performance showing a greater interest generating power of banks’ assets. The operating management variable, which can be viewed as efficiency in expense management negatively impact profitability implying that higher the expense of the bank, the lesser the bank’s profitability would be. The postwar activity mix interaction variable has mostly negative and significant coefficient on the return on assets indicating that there is less diversification of banking activities during the post war period. Overall, the empirical results reveal that the profitability of commercial banks is determined by individual bank specific factors that are within the controlling purview of bank management.

The findings of this study are both of managerial and policy relevant. The management should pay attention on efficient cost management techniques since reinvestment of banks profits will lead to safer banks, thereby high profits promoting financial stability. Further, increasing loans leads to higher funding requirements and low quality of assets and low level of liquidity can have a negative impact on the banks' profitability, implying that banks should keep a trade-off between profitability and liquidity.

The success of the banking sector depends on its efficiency, profitability, and competitiveness and to increase and maintain the competition, the policy makers and bank managers would be more apt to discover means to best utilise their resources when producing banking products and services. Policy makers should be directed towards enhancing the efficiency and strengthening the financial stability of the financial sector.

References

Flamini, V., C. McDonald and L. Schumacher (2009).“The Determinants of Commercial Bank Profitabilty in Sub-Saharan Africa.”IMF Working Paper WP/09/15. Washington, D.C.

Kosmidou, K., Pasiouras, F. and Tsaklagkanos, A., (2005), “Factors influencing the profits and size of Greek banks operating abroad: a pooled time-series study”, *Applied Financial Economics*, 15, 731-738.

Panayiotis P. Athanasolglou&Matthaios D. Delis & Christos K. Staikouras (2006).Determinants of Bank Profitability in the South Eastern European Region, “Working Papers 47, Bank of Greece.

Goddard, J., Molyneux, P. and J.O.S. Wilson (2004). “Dynamics of Growth and Profitability in Banking,” *Journal of Money, Credit and Banking* 36, 1069-1090.

Hassan, M. K., & Bashir, A. H. M. (2003).Determinants of Islamic banking profitability. Paper presented at the *10th ERF Annual Conference*, Morocco, 16–18 December.

Table 1: Estimation Results Using Fixed Time Effects

Variables	Coeficient	Std. Err.	t	p
Credit risk	0.0065	0.0019	3.34	0.002*
Opemgt	- 0.3665	0.1649	-2.22	0.031**
Effieciency	81.2563	22.3277	3.64	0.001*
Powar activity mix	- 0.2010	0.0882	-2.28	0.027**
Constant	0.7582	0.9232	-0.82	0.415

*, and ** indicate significance levels of 1 and 5 percent respectively.

Nb. Observations: 63

R-sq: Within = 0.47
Between = 0.30
Overall = 0.28

F test that all u_i=0: F(6, 52) = 2.98 Prob > F = 0.01
LM Test: Random vs Pooled
Chi2(1) = 1.05
Prob > chi2 = 0.30

Table 2: Definition of Variables

VARIABLE	DEFINITION	FORMULA
ROA	An indicator of how profitable a company is relative to its total assets	Net Profit After Tax/ Total Assets*100
Operating Mgt.	The ratio of overheads to total assets can be viewed as efficiency in expense management.	OH. Expenses/Total Assets*100
Capital Ratio	Key financial ratio measuring a bank's Capital Adequacy or financial stability.	T.Equity/ Total Assets*100
Liquidity	The ability to convert an asset to cash quickly.	Cash & Cash equivalents/ Total Assets
Size	Value of total assets.	Natural logarithm of total assets
Efficiency	Efficiency typically used to analyze how well a company uses its assets and liabilities internally.	Net Interest Income/To. Assets
Credit Risk	This is a forward-looking measure of bank exposure to default and asset quality deterioration.	Loans/Deposits
Leverage	The amount of debt used to finance firm's assets.	Total liabilities/Total assets
Experience	Age of the bank from the inception.	Bank's age in years
Ownership	Whether the bank is state owned or private owned.	Dummy variable
Postwar Activity Mix	Banks activities diversification after the war.	Interaction variable
Global Financial Crisis	Financial crisis of 2007-2009	Dummy Variable
Postwar	Belonging to the period after the war(after 2008)	Dummy Variable
Activity Mix	This indicates that greater bank activity diversification, as implied by higher shares of services in the bank activity mix.	Net Interest Income / Other Operating Income

The Global Financial Crisis, its Impact on the Nigerian Banking System and Future Safeguards

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Key Words: *Banking sector, Financial Crisis, Financial Liberalization, Impact, Safeguards*

Introduction

The hurricane came with all speed, clearing anything on its path – that is what the recent global financial crisis (that got intensified 2009) did to nations and their economies especially in the developed countries and on the banking sub-sector. The banking sector of Nigeria was no exception. Nine banks were rescued in 2009 with an initial amount of over 620 billion naira (About 4 billion dollars) and much more after, nationalised and later sold out to new investors.

The root of the global financial crisis which started in the United States of America began with the collapse of American mortgage market when for several reasons the value of properties went down drastically, leading to inability to refinance individual home mortgage because the banks were reluctant to lend (Friedman and Friedman 2010, P.31). Banks that had a lot of money tied up in loans to house owners who were no longer able to pay went bankrupt or near bankrupt, with that came the credit crunch.

The extent and severity of the crisis that began with the bursting of the housing bubble in the United States of America in August 2007 reflects the confluence of myriad of factors some of which are familiar from previous crises, while others are new (Sanusi 2010, p. 2).

The crisis manifested itself globally in the form of liquidity and credit crunch, breakdown of confidence in the banking system, de-leveraging and banks inability to improve capital adequacy, weak consumer demand, and fall in global output affected Nigeria through both the financial and real (trade, remittances and aid) channels (Ogunleye 2010, p. 253).

The cumulative effects of the crisis lead to distress in the banking sector.

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Objective

The main purpose of this study is to find out how the recent global financial crisis affected the banking sector in Nigeria. In addition, it will find what has been done to curtail it, and what should be done to stop future recurrence.

Methodology

Secondary data was used for this research, sourced from Central Bank of Nigeria publications. The method of analysis used for this research was descriptive and used simple percentages when necessary. The period covered in this study was between 2005 and 2012, which encompasses the phase of the major reform of consolidation of the banking systems in Nigeria and the period when the global financial crisis got intensified (beginning 2007).

Results

We found out that Nigeria was not insulated from the crisis, especially the second round effect. This was a result of the undiversified nature of the Nigerian economy and its high dependence on export of crude oil. The foreign capital inflows so generated compounded the impact of the external shocks arising from the crisis. In specific terms, Nigeria experienced low demand for its oil exports due to the recession in the economies of her major trading partners especially the United States of America. Hitherto, between 2004 and 2008 Nigeria experienced exceptional increase in oil price which resulted in huge inflow of foreign exchange and robust economic growth. This coupled with appreciable level of foreign direct investment flows resulted in excess liquidity in the banking industry which the real sector of the economy could not absorb. The result was that the excess liquidity in the banks found its way into stock market as shown in the extraordinary rally in the stock prices on the Nigerian stock exchange between 2006 and 2008, and the oil industry sector of Nigeria's economy. The bursting of the bubble resulted in these sectors to be affected the most and the banking sector got engulfed in the mess.

The Nigerian stock market was bullish between December 2005 and March 2008, it suddenly became bearish such that between 2007 and 2008 All Share Index at the Nigerian Stock Exchange declined by 43.5 percent, the market capitalisation for the corresponding period was 27.5 percent down (Sanusi 2010,p.9). The market downturn had negative impacts on bank balance sheets due to increased provisioning for bad debts and lower profitability. In the petroleum sector, Nigeria's Bonny Light Crude Oil Spot Price FOB which was $95.16 per barrel in January 2008 rose to $146.15 in July2008 before declining to $76.24 per barrel by October 17, 2008 (Sanusi 2010, p.8).Within six months it has lost 50% of its peak price. This, coupled with the collapse in the International price of oil, led to severe decline in foreign exchange receipts and consequently, government revenue contracted. Similarly, the exchange rate of the naira had witnessed consistent depreciation since the adverse effect of the crisis on the price of crude oil became manifested in the country. The implication of the falling oil prices and dwindling revenue for government plus naira depreciation were: less deposits for banks which depend on public sector for bulk of their deposit liabilities, declining capital inflows into the economy (this has the effect of worsening the problem of relatively high operating costs occasioned by decaying infrastructure like power because of the dearth of funds), loss of income from strategic business units in banks due to restrictive foreign exchange policies, capital market downturn leading to loss of investor confidence, loss of business income for key financial institutions that are directly dependent on the stock market and its implications to banks that are exposed to such institutions etc. The cumulative result was sharp deterioration in the quality of bank assets which immediately led to concerns over banks' liquidity.

Within a short period the Central Bank of Nigeria found out that nine banks have inadequacies in capital asset ratios and liquidity ratios as well as weaknesses in corporate governance and as well risk management practices. All the nine banks were discovered to be exposed to oil and gas transactions as well as capital markets which were experiencing turbulence as a result of the global financial crisis. The Central Bank took over the banks and injected N620 billion (about 4 billion dollars).

Conclusion and Recommendations

In conclusion it could be seen from the results that weaknesses of the banking sector coupled with macroeconomic instability lead to distress in the banking sector. This is because there were regulatory and supervisory failures on the part of the Central Bank of Nigeria and other agencies of government.

This study recommends that the Central Bank of Nigeria and other agencies of government should sit up and ensure proper, coordinated and proactive regulation and supervision of the banking industry in Nigeria, such that under-capitalisation, poor corporate governance, inadequacies in capital and other unwholesome practices are done away with. The issue of liberalization especially in the area of capital account opening should be revisited, because of the way funds are siphoned out of the country. Lastly, the economy needs to be re-engineered and diversified to reduce over-reliance on oil as the main foreign exchange earner for the country, as fluctuations in its price could result in macroeconomic instability, which inturn could result in a distressed banking sector.

References

Ganiyu Adewale Ogunleye (2010): “Perspectives on the Nigerian Financial Safety-Net”, Nigerian Deposit Insurance, Abuja Nigeria.

Ganiyu K. Sanni (2009): “The Global Financial Crisis and African Countries: Impact and New Perspective for Development” Bullion, Central Bank of Nigeria July – September, 2009.

Hershey H. Friedman and Linda W. Friedman (2010): “The Global Financial Crisis of 2008: What Went Wrong” In Lessons from the Financial Crisis - Causes Edited by Kolb, Robert W.

H. T. Sanni (2010): “Global Economic Crisis: The Need for Africa Government Interventions for Rapid Economic Recovery and Stability” Bullion, Central Bank of Nigeria April – June, 2010.

Sanusi L. Sanusi (2010): “Global Financial Meltdown and the Reforms in the Nigerian Banking Sector” Central Bank of Nigeria Governors Speech.

Global Banks and the Internationalisation of Retail Banking

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***Key Words**: Retail Banking, Global Banks, Financial Globalization*
JEL Classifications: G21, G34, F21, F23

Introduction

The late 1990s and 2000s saw many banks venture outside home market borders, becoming seriously engaged in foreign banking systems. A common characteristic has been the outright acquisition of local bank branch networks, commonly by large banks from developed nations. By transferring strategies to newly acquired subsidiaries, global banks are now contributing to the internationalization of financial services.

Important literature related to global banks, and their retail segments, includes works by Roy C. Smith and Ingo Walter (1997, 2012). They highlight shifts in corporate finance, deregulation, and technological development as vital factors in the expansion of retail banking, indicating retail as an important income source for many banks. From an international perspective, they stress globalization is hastening the pace of financial innovation. Innovation allows banks to quickly transfer retail strategies to foreign markets and exploit product and efficiency advantages. However, since financial products and services can be easily copied, maintaining advantages is difficult. Additionally, they stress on how attempting to grasp the intricacies of foreign banking markets is an ambitious, if not insurmountable, endeavor. Therefore, Smith and Walter (1997) concluded, “failures in international retail banking are perhaps more common than successes” (p. 110). That opinion has not faded with time. Other research, including Heffernan (2005), Grant and Venzin (2009), and Tschoegl (2005), express similar sentiment.

Justification

The global financial industry has experienced many ups and downs following the 2008 financial crisis. How banks have weathered the storm is an important question because their stability as global institutions is vital in preventing deeper international financial stress. If other large, international financial institutions were to collapse, the result would not only be a severe impact on emerging markets, it would worsen the recovery in developed countries. By demonstrating the significance of international retail in stabilising bank earnings, this paper's assertion is that the international financial climate could be improved through greater internationalisation of retail banking.

Objectives

The main purpose of this paper is to focus on global banks' international retail banking activities to decipher whether or not they can be *successful*. This paper questions Smith and Walter's assertion that international retail banking will likely be unsuccessful. This paper's goals are threefold: (i) to establish the role international retail banking activities play in global banking, (ii) to understand how domestic institutions respond to global bank entry, and (iii) where previous literature has stopped short, this paper adds to the literature by defining success in international retail banking.

Methodology

This study draws on the literature to define retail banking as the segment of commercial banking that provides financial services to individuals. Turning towards global banks, we make use of both the literature and data to focus in on banks with a truly global presence. Using a 2010 *Bank for International Settlements* (BIS) paper for assistance, we narrow the discussion down to financial activities conducted by banks with local affiliates within foreign countries. We implement a framework for employing statistics from *The Banker* to further focus the discussion on banks with wide international presence. The discussion emphasises the scale of global bank assets, ultimately focusing on four banks with significant foreign subsidiary holdings: HSBC, Santander, Citibank, and Unicredit.

Further, our study analyses data of four global banks to compare their *international* retail banking activities. From the global bank's vantage point, we qualitatively analyse *who*, *what*, *when*, *where*, and *why* of global banks' international retail banking segments, and then contribute meaningful conclusions to the current research. Statistical data employed are from *The Banker*, annual reports and financial statements from individual banks, IMF *Global Financial Stability Reports*, and *World Retail Banking* reports.

Results

This paper demonstrates that international retail banking is a hugely important segment of global banking. We show that international retail operations play a vital role in the lending and income structures for all four global banks observed, and increasingly for selected domestically owned banks as well. In fact, retail loans constituted the largest loan type, and the largest source of income for each global bank. Also, the four banks were industry leaders in the share of retail income sourced abroad. Ultimately, international retail operations were not only possible; retail provided global banks with a valuable source of earnings, especially after the financial crisis.

Conclusions and Policy Recommendations

Global banks can be successful in international retail banking. The main contribution this paper makes is to define success. Domestically owned banks can easily emulate global bank advantages, so global banks may not be able to grab huge market shares. Global banks require further incentive to remain committed to international retail. Banks with deep geographical diversification reap the benefits of more stable bank incomes during financial shocks. In order to maximise geographical diversification benefits, banks must be diverse across countries, regions, and types of economies.

After observing four global banks, we conclude which banks have been successful, according to this definition. Post-financial crisis, HSBC and Santander had much higher average return-on-asset performance than Unicredit or Citibank. The reason HSBC and Santander showed higher performance was because they were more *geographically diverse*. HSBC operates in a number of markets, including Asia, which became a huge source of income. Santander's operations appear concentrated, but upon further inspection, operations in the United Kingdom, the United States, Poland, and other continental Europe provided some diversity that supported income over the last five years. Citibank's presence was in too few markets; Unicredit's operations were overly concentrated in Central and Eastern Europe. Comparatively low diversity limited the countries Citibank and Unicredit could draw upon to support earnings.

Essentially, understanding international retail banking depends upon taking a panoramic view of its importance within bank income, and concluding geographical diversity is imperative to success. Since retail is a huge portion of bank income, future success in banking may rest with how global banks approach retail banking in emerging markets.

References

Bank for International Settlements. (2010). Long-Term Issues in International Banking. *CGFS Papers, Bank for International Settlements, No 41, 10*.

Grant R M, Venzin M (2009), Strategic & Organisational Challenges of Internationalisation in Financial Services. *Long Range Planning*, 42, 2009, pp. 561-587.

Heffernan, S. (2005). *Modern Banking*. West Sussex: John Wiley & Sons Ltd.

Smith, R. C., Walter, I. (1997). *Global Banking*. Oxford: Oxford University Press.

Smith, R. C., Walter, I., DeLong, G. (2012). *Global Banking*. Oxford: Oxford University Press.

Tschoegl, A. E. (2005). Financial Crises and the Presence of Foreign Banks. In P. Honohan and L. Laeven, eds. Systemic Financial Distress: Containment and Resolution, Cambridge: Cambridge Univ. Press, 2005.