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Editor's Note

Since Volume 6, Issues 2 (September – October 2018), the Journal of Perspectives on Financing and Regional Development has been nationally accredited with SINTA (Science and Technology Index) score of S2, based on the Decree of the Director General of Development and Research Enhancement, Ministry of Research, Technology & Higher Education of the Republic of Indonesia, Number 10/E/KTP/2019 concerning the Ranking of Scientific Journal.

In Volume 8 Issue 4, 2020 is presented ten articles that come from Universitas Jambi (Indonesia), Jimma University (Ethiopia), Universitas Jember (Indonesia), Politeknik Jember (Indonesia), University of Maroua (Cameroon), University of Dschang (Cameroon), Karatina University (Kenya), Ambo University (Ethiopia), National Population and Family Planning Board (BKKBN) Jambi Province (Indonesia), Diponegoro University (Indonesia)

Hopefully in the next issue can be presented articles with issues and from more diverse circles.

Happy joy reading

Editorial

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Cash management practice, SACCO size and Kenya's deposit taking saving and credit co-operatives financial sustainability

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Abstract

Deposit taking Savings and Credit Co-operatives (SACCO) are solution to social dilemmas like abject poverty, living standards and unemployment. Nevertheless, 14 percent do not maintain sound cash management practices despite SACCOs oversight authority in Kenya offering guidelines and supervision to the enterprises that would assist in maintaining their financial sustainability. This necessitated for the evaluation of the moderating effect of SACCO size on cash management practice and financial sustainability. A descriptive cross-sectional survey design with a positivism philosophical paradigm was adopted. Emailed questionnaire and data collection sheet were used in data collection which registered a 95 percent response rate. A binary logistic regression results established that with presence of a moderator for the predictor sub-variables, the strength of the relationship between variables registered an insignificant change but with introduction of interaction term, the strength of relationship between variables changed. The study concluded that SACCO size portrayed a statistically significant moderating effect on predictor sub-variables and response variable. The study thus recommends that the management need to consider increasing their SACCO sizes through merging, acquiring the non-performing SACCOs or even conducting intensive marketing since large size SACCO have low chances of being financially unsustainable.

INTRODUCTION

Cash management practice entails managing the cash inflows and outflows in an effort to maintain an optimal cash balance in the organisation at a particular time. Organisations should hold sufficient cash balances but should also evade redundant cash balances (Khan & Jain, 2007). The level of cash balances held can be attributed to transaction, precautionary or speculative motives (Waweru, 2011). Therefore, an organisation has to evaluate its need for cash keenly so as to avoid shortage or excess cash. Cash is a crucial asset in the finance sector, thus its effective and efficient management is important (Mutesi & Mulyungi, 2018). Its prudent management contributes to the achievement of financial sustainability of financial institutions like

Savings and Credit Co-operative Societies (SACCOs) since it will enhance operations continuity (Eton, Uwonda, Mwosi, Ongwel, & Obote, 2019). Globally, in the post financial crisis of 2007/8, SACCOs have been encouraged to hire professionals in the effort of maintaining suitable cash management practices for their sustainability (Bamidele, Adigun, Folayan, & Ibrahim, 2018). However, they still recruit unskilled volunteers who are involved in making important financial decisions. This has seen fraudsters misuse SACCOs through diversion of its resources such as cash into personal investments or pyramid schemes, leading to financially unsustainable enterprises (Cuevas & Buchenau, 2018). Thus, the need for effective and appropriate cash management is due so as to safeguard the enterprise from closure (Muriuki, 2019).

SACCOs are of much importance more so in Africa in its fight against poverty. Their financial sustainability will facilitate reduction of the continent poverty level, which has increased by 48 percent since 2010 (Omilola & Lerven, 2019). This is because they operate on the assumption that they exist to the foreseeable future to solve social dilemmas like abject poverty, living standards and unemployment. In addition, they are autonomous and independent institutions that need to manage the generated cash effectively for their financial sustainability (Duguma & Han, 2018). Nevertheless, their cash has been reducing overtime, thus leading to additional borrowing to cater for operational needs (WOCCU, 2014).

In Africa, Kenya has been leading in SACCOs performance and has been awarded for being in the forefront in the continent. It has also improved in the global ranking to the 11th position (WOCCU, 2014). This has been made possible by the highly supervised Deposit Taking Savings and Credit Co-operative Societies (DT-SACCOs) unlike the non-Deposit Taking Savings and Credit Co-operative Societies (Mugo, Muathe, & Waithaka, 2018). Non-Deposit Taking Savings and Credit Co-operative Societies offer back office services activities and are supervised by the Commissioner for Co-operatives. On the other hand, those that offer front office services activities are licensed and regulated by SACCO Societies Regulatory Authority (SASRA) but they have to be fully registered under the Cooperative Societies Act CAP 490 (FinAccess, 2016).

DT-SACCOs facilitates financial intermediation, financial deepening and financial inclusion to majority of Kenyans particularly in the rural areas (Mumanyi, 2014). They are also essential in solving social dilemmas like abject poverty, living standards and unemployment. Nevertheless, 14 percent do not maintain sound cash management practices (SASRA, 2018). They are characterized by low liquidity ratio which is less than the prescribed 15 percent, poor cash control, inefficient cash plans and have implemented models susceptible to liquidity risks (Matianyi & Ndirangu, 2019). This exposes DT-SACCOs to economic shocks that can eventually lender them financially unsustainable. Thus, denying 4.97 million members achievement of their common financial, social, and cultural goals through a mutually owned and democratically controlled venture (SASRA, 2019). Despite, SACCOs oversight authority offering guidelines and supervision to the enterprises that would assist in maintaining their financial sustainability there is still a mystery as the DT- SACCOs are still facing liquidity challenges. Members' may end up losing their trust and confidence in them since they lack a lender of last resort and may paralyze the operations leading to financial unsustainability and eventually delicensing of the enterprise (Financial Sector Development Trust [FSD], 2017). Nonetheless, large size DT-SACCOs experience financial sustainability more than the small ones since they are exposed to sufficient resources for conducting effective cash control, cash planning and managing liquidity

risks as opposed to others (Matianyi & Ndirangu, 2019). Small sized DT-SACCOs has been experiencing closure of business attributed to cash mismanagement practices (Muriuki, 2019). Thus, a need still exists to carry out the study so as to experience the benefits of a financially sustainable sub-sector. Since if a solution is not sought the sub-sector will collapse leading to a loss in the economy. Thus, the main aim of the study was to find a solution in reversing this trend.

Many empirical studies existing globally are largely incoherent and have not looked at the moderating effect of SACCO size on cash management practices and financial sustainability of DT-SACCOs. Researchers such as, Abad, Sánchez-Ballesta, & Yagüe (2017) observed that SACCO size has a significant moderation effect on the response variable. Mutunga & Owino (2017) observed that firm size has a significant moderating effect on financial performance while Onwonga (2016) indicated that size has no moderating effect between the cash handling practices and financial performance. However, there are no conclusive studies to indicate whether there is a relationship between SACCO size and financial sustainability of DT-SACCOs. Thus, there was need to find out whether SACCO size have a moderating effect on cash management practices and financial sustainability.

LITERATURE REVIEW

Cash management theory is accredited to the work of Baumol (1952) who acknowledged that there is need for a firm to provide a formal approach for defining an optimum cash balance under certainty. The theory is based on the assumption that the firm's cash needs are known with certainty. There is a tendency of firm's cash imbursement to occur homogeneously over a certain period of time and the opportunity of holding cash is evident and remains constant. Furthermore, a similar transaction cost will be incurred when converting securities into cash (Baumol, 1952).

Cash management is essential for any entity that wishes to prosper financially. Hence a need arises for development of ways of maintaining an optimal cash balance. The theory main aim was to reduce the cost involved in holding cash balances that don't yield return. This cost encompasses opportunity cost of storing idle cash balance and converting marketable securities. A firm should hold sufficient cash balances but should also evade redundant cash balances. Therefore, the firm has to evaluate its need for cash keenly and cash budgets are responsible for stating the cash needs and estimating the payments over a certain period of time so as to avoid shortage or excess cash (Khan & Jain, 2007).

Matianyi and Ndirangu (2019) carried out a study where cash management theory was tested. It was noted that there are other factors that affects SACCO optimal cash balance apart from return on idle cash holding time and the transaction cost. SACCOs' assets and liabilities are also essential in balancing the cash. The easier a SACCO have access to cash the higher the amount of fund it will hold and hence sufficient cash. Prudent planning of cash flows is achieved by matching maturity of assets against liabilities maturities. However, maturities for assets must be before those of liabilities so as to have cashflow without shortages (Saunders & Cornett, 2005). Attaining an optimal cash balance is experienced differently in regard to enterprise size and optimal cash balance is highly attained by large enterprise as compared to small enterprises (Ahuja, Dawar, & Arrawatia, 2016). This may be necessitated by the ability of large DT-SACCOs possessing economies of scale merit in sourcing for better expertise in control and planning for cash flows.

Empirical review concerning the objective of the study was carried out. Wadesango, Tinarwo, Sitcha and Machingambi (2019) conducted a study to find out the impact of cash flow management on financial sustainability of small and medium enterprises in Zimbambwe. A qualitative and quantitative approach of the study was considered in the study with a target population of fifty five participants from small and medium businesses situated in Gweru and Harare. Using the yamane formula and statification a sample of fifty respondents were considered in the in the interviews and questionnaires. Chi square test results established that cash mangement practices exhibited a significant effect on financial sustainability of the small and medium enterprises. On the other hand, the descriptive statistics results indicated that the owners were familiar with cash management practices and internal controls of a business. They kept records of cash inflows and out flows though majority of them did not develop cash budgets in their enterprises which is a major tool of cash controls. Also majority had no bank accounts and it's a good indication of weaknesses in cash management. The good picture was that segration of duties on cash handling was practiced by the enterprises and it is a sign that appropriate cash management was practiced. The study recommended that there is need for the enterprises to adopt effective internal controls, cash controls, cash planning liquidity manangement as the affect fiancial sustainability which is key to the ever changing world. Nevertheless, the study was not based on any theory as no theory was discussed.

A descriptive research design was adopted by Matianyi and Ndirangu (2019) who did a research on influence of cash management practices on financial performance of DT-SACCOs in Kakamega County. The measurements of cash management practices consisted of cash budgets, monthly members contributions and liquidity management policy. Liquidity management theory anchored the study. The study target population comprised of branch manager, operational managers and loan managers of the four SASRA licensed Savings and Credit Co-operative Societies. The sampled population respondend to the self administered questionnaire. Pearson correlation results indicated that cash management practices and financial performance were significant. The study concluded that regular cash budgeting should be carried out to make the Savings and Credit Co-operative Societies liquid. The study recommended that more training is necessary on cash management to all employees of Savings and Credit Co-operative Societies. An enterprise that keeps records of cash inflows and out flows, develops cash budgets and segrates duties on cash handling is an indication that it has better cash management practices (Wadesango, Tinarwo, Sitcha & Machingambi, 2019). The goal of the firm and financial resources scarcity makes cash management practices most significanct practice in an organisation. It consists of cash budgetting or planning, cash surplus investment and management of cash flows (Eton, Uwonda, Mwosi, Ongwel, & Obote, 2019).

Sylvie, Mulyungi and Shukla (2018) on their study on cash management practices noted that cash management is a necessity in firm while mismatching between payment timings and cash availability. The study aimed at evaluating the cash management effect on financial sustainability of small and medium enterprises in Rwanda. It was established that cash management has a significant relationship with financial sustainability. In conclusion, the study advocated that there is importance of controlling cash so as to ensure optimal cash that maintains a financially sustainable firm. On recommendations small and medium enterprises need to strengthen avenues for cash collection by advocating for use of mobile money platforms or commercial banks which gives evidence of transaction took place. In addition, there is need for segregation of

duties in the enterprises so as to create responsibilities. On the other hand, Wickramasinghe and Gunawardane (2017) tested the nexus between liquidity risk management practices and financial sustainability of Sri Lanka quoted companies. Regressed data results established that liquidity risk management practices had a positive significant connection on financial sustainability of quoted firms in Sri Lanka. However, the research design for the study was not indicated and no recommendations were made. The choice of annual reports period was not justified as well as how the study arrived at a sample size of sixty-five and this may not give a true picture of the study variable's relationship. In addition, as guided by the regression model the study was required to carry out a data analysis for each independent variable on the response variable but this was not witnessed. Thus, the study is incomplete.

Abioro (2013), did a study on the impact of cash management on the financial sustainability of manufacturing companies in Nigeria, a study of Cadbury Nigeria Plc. A structured questionnaire was used to collect data and secondary data was collected from the annual financial statement of Cadbury Nigeria Plc from 2002 to 2011. From the correlation analysis results it was concluded that there exist a significant positive relationship between cash management and financial sustainability. Hence, carrying out effective cash management activities would lead to superior financial sustainability of manufacturing companies. However, Anthonia (2014), argued through the impact of cash management on firms' financial sustainability in selected manufacturing firms in Nigeria where an ex-post facto research design was employed. Results from the correlation analysis indicated that cash management was negatively related to financial sustainability of manufacturing firms. Nonetheless, it is not clear how the study arrived at 16 Northern Nigeria flour mills as sample size as there was no target population and sampling design.

METHODS

The study adopted a descriptive cross-sectional survey design with a positivism philosophical paradigm. Descriptive cross-sectional survey research design was appropriate for this study as it assisted in gaining knowledge of the influence of cash management practices on financial sustainability of DT-SACCOs in Kenya and thus reply the what, how, where and when question of the study. Consequently, the research philosophy was used since the researcher was objective, the research possessed an observable social reality and the results observed was used in generalization of the situation. Moreover, knowledge is achieved through facts gathering that can offer laws basis (Zikmund, Babin, Carr, & Griffin, 2010).

Five clusters of DT-SACCOs based on original field of membership; the government based DT-SACCOs, teachers based DT-SACCOs, farmers based DT-SACCOs, private based DT-SACCOs and community based DT-SACCOs (SASRA, 2017) were used in selecting the sample size. The cluster random sampling resulted to 119 respondents out of which 95 percent responded. The primary quantitative data was collected by use of an emailed questionnaire while secondary data was collected from the audited DT-SACCOs financial statements and SACCO reports. Questions based on cash management practice measures (cash planning, cash control and liquidity risk management) in DT-SACCOs were posed. Respondents were required to indicate the frequency of occurrence of various cash management practices. A Likert scale was used which was from 5 to 1 where 5 was very often, 4 was often, 3 was sometimes, 2 was rarely and 1 was never. The computed Cronbach's Alpha Coefficient of 0.711 attested the reliability of the questionnaire.

A hierarchical Binary logistic regression model was used to test the moderating effect of SACCO size on cash management practice and financial sustainability as shown in equation 1, 2 and 3.

$$Logit\ [p] = \beta_0 + \beta_1 cp + \beta_2 cc + \beta_3 lrm + \varepsilon. \quad\text{...(1)}$$

$$Logit\ [p] = \beta_0 + \beta_1 cp + \beta_2 cc + \beta_3 lrm + \beta_4 SZ + \varepsilon. \quad\text{..(2)}$$

$$Logit\ [p] = \beta_0 + \beta_1 cp + \beta_2 cc + \beta_3 lrm + \beta_4 SZ + \beta_5 crp * SZ +$$
$$\beta_6 cc^* SZ + \beta_7 lrm^* SZ + \varepsilon. \quad\text{...(3)}$$

Where: β_0 is a constant; β_1, β_2 β_3, β_4, β_5 β_6 and β_7 are coefficients

P is the probability that a DT-SACCOs will be financially sustainable

cp.cc and lrm = are the predictor variables (cash planning, cash control and liquidity risk management)

SZ= Sacco size

cp*SZ= cash planning * Sacco size

cc*SZ= cash control * Sacco size

lrm*SZ= liquidity risk management * Sacco size

Nagelkerke's R-Square change tested the strength of the association between predictor variable and response variable. Wald test was carried out to test the significance for individual predictor variable at 5% significance level for the P-values.

RESULTS AND DISCUSSIONS

Cash management practice descriptive results

Cash management practice was assessed through cash planning, cash control and liquidity risk management parameters. The respondents were expected to indicate the frequency of occurrence of various cash management practices with 5 being the highest frequency and 1, the least frequency. The descriptive results are shown in table 1, revealed that the parameter that had the highest score was on the DT-SACCOs frequency of recoding cash inflows, which had a mean score of 4.88. It was followed by frequency of recording of cash outflows which had a mean score of 4.86. The frequency of bank reconciliation of the DT-SACCOs had a mean score of 4.31 while frequency of cash expenses payment, cash budget preparations and cash surplus investment had a mean score of 4.40, 4.06 and 3.73 respectively. The frequency of cash surplus occurrence had a moderate mean score of 3.20 while the frequency of cash shortages occurrences received the lowest mean score of 2.37.

Table 1. Occurrence frequency of cash management practices

Cash Management Practices	Mean Statistic
Cash budget preparations	4.06
Cash surpluses occurrences	3.20
Cash shortages occurrences	2.37
Cash inflows recording	4.88
Cash outflows recording	4.86
Cash surplus investment	3.73
Bank reconciliation	4.31
Cash expense payment	4.40

The results from Table 1, indicates that DT-SACCOs maintain proper cash management practice like conducting bank reconciliation, preparing cash budget, recording cash inflows and outflows, settling cash expenses, investing cash surpluses

and increasing cash surpluses. However, cash shortages were maintained at a low level. The findings were supported by Pandey (2015) who described cash management practice as involving receipts, payments, investment of surpluses and forecasting of cash necessities.

Efficient and effective cash management practice improves DT-SACCOs ability to meet emergency needs and have a better hand in approaching immediate cash offers and investment opportunities that arise, thus maintaining financial sustainability in the short run (Gyebi & Quain, 2013). Moreover, cash management practice consists of cash budgetting or planning, cash surplus investment and management of cash flows (Eton, Uwonda, Mwosi, Ongwel, & Obote, 2019).

The results further indicated that only branch managers, finance managers and chief executive officer who were preferred in authorizing the cash transactions of DT-SACCOs as stated by 49.6 percent, 40.7 percent and 9.7 percent of the respondents respectively. The results are presented in the Figure 1.
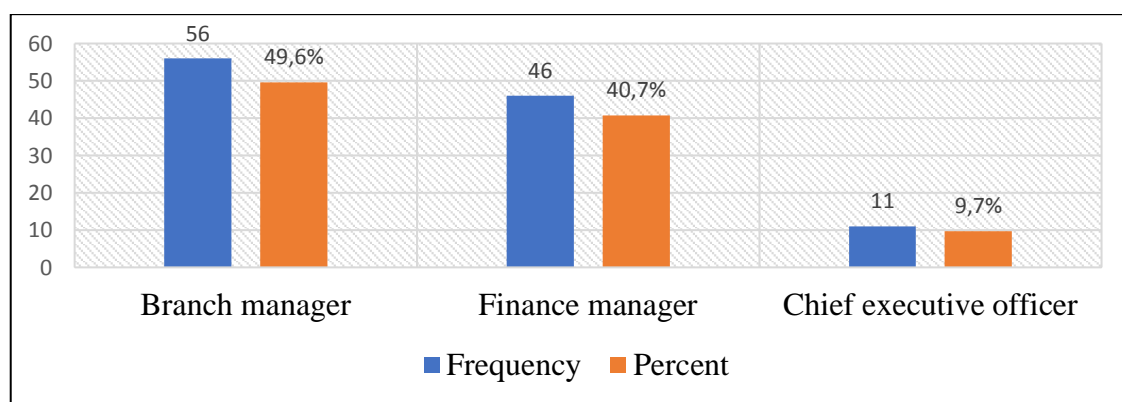
Figure 1. Preferred cash transaction signatories

As shown in Figure 1, the results indicate that branch managers were preferred more than the finance managers and chief executive officer in authorization of cash transaction. This was a sign that the DT-SACCOs were not bureaucratic when handling cash. This could be due to need of having just in time service to their members in the branches. The others who had a preference for finance managers and chief executive officer signatories may be the DT-SACCOs with no branches and they did not have a branch manager. Thus, they preferred finance managers and chief executive officer carrying out the role. This further shows that there is segregation of duties in relation to cash handling.

Further analysis was done on constructs that were being measured by parameters used in the study. To improve construct validity, principle component analysis was used to condense observed variables into factors. Test for multicollinearity was first carried out. The calculated correlation matrix determinant was 0.113 which is more than prescribed value of 0.00001 thus, indicating absence of multicollinearity between variables. Kaiser-Meyer-Olkin and Bartlett's measure of sampling adequacy was used to determine whether factor analysis is appropriate for the study.

Table 2. KMO and Bartlett's test of cash management practices

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.589
Bartlett's Test of Sphericity	Approximated. Chi-Square	236.125
	Df	36
	Sig.	0.000

The calculated value as shown in Table 2, for the Kaiser-Meyer-Olkin measure of sampling adequacy was 0.589 while Bartlett's test of Sphericity was at approximated Chi-square of 236.125, 36 degrees of freedom and was highly significant with a P value of 0.000, hence suitable for factor reduction. Principal components method of extraction and varimax rotation was further conducted. All the components were found to be highly loaded on only three factors as shown in Table 3.

Table 3. Principal Component Analysis Results for Cash Management Practices

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.794	31.046	31.046	2.094	23.270	23.270
2	1.440	15.997	47.043	1.847	20.527	43.797
3	1.168	12.978	60.022	1.460	16.224	60.022
4	.923	10.258	70.280			
5	.805	8.949	79.229			
6	.788	8.754	87.983			
7	.486	5.403	93.386			
8	.364	4.043	97.429			
9	.231	2.571	100.000			

The components with an Eigen value greater than one were retained (Field, 2013). Three factors (cash control, cash planning and liquidity risk management) were extracted which explained 60.022 percent of the variance of cash management practice. The variables were further used in the logistic regression.

Cash management practice, SACCO size and financial sustainability

To test the relationship between the variables, the study tested the null hypothesis that there is no significant relationship between cash management practice and financial sustainability of DT-SACCOs. Moderation effect of SACCO size was also tested on independent sub-variables and financial sustainability (Table 4).

Table 4. Hierarchical regression results

Predictors	Model 1			Model 2			Model 3		
	Beta[a]	Wald	P	Beta[a]	Wald	P	Beta[a]	Wald	P
(Constant)	-1.408	.082	.775	4.142	.156	.693	25.814	.020	.888
cp	-.011	.001	.977	-.015	.001	.970	-7.412	.297	.586
cc	.611	3.925	.048	.802	3.066	.080	7.371	.945	.331
lrm	-.376	.964	.326	-.292	.537	.464	-1.508	.651	.420
SZ				-.927	.354	.552	-2.771	.018	.894
cp*SZ							.811	.286	.592
cc*SZ							-.735	.765	.382
lrm*SZ							.146	.387	.534
Nagelkerke R^2	.209			.215			.237		

As shown in Table 4, the binary logistic regression model 1 for the study; Logit of (Financial sustainability) = -1.408 – 0.011 cash planning + 0.611 cash control – 0.376 liquidity risk management. The log of odds of a DT-SACCO being financially sustainable was negatively related to cash planning and liquidity risk management while it was positively related to cash control. Thus, an increase in one unit of cash control will lead to an increase in financial sustainability by its coefficient. While, an increase in one unit of cash planning or liquidity risk management lead to a decrease in financial sustainability by its coefficient. The odd ratio Exp (B) indicates the overall effect on response variable of increasing the predictor variables.

The study established that cash planning was not statistically significant in prediction of DT-SACCOs financial sustainability (Wald statistic value = 0.001 with a P value of 0.977 and an odd ratio of 0.989). The results supported the research carried out by (Kang'aru & Tirimba, 2018) while it was in divergent to the study conducted by Sylvie, Mulyungi and Shukla (2018) who established that cash planning has a significant relationship with financial sustainability. On the other hand, cash control was established to be significant in predicting the response variable (Wald statistic value =3.925 with 1 degree of freedom, a P value of 0.048 and an odd ratio of 1.843).

The study finding thus, supports the work of Wadesango, Tinarwo, Sitcha and Machingambi (2019) who also found cash control having a significant relationship with financial sustainability. The results further established that liquidity risk management was not statistically significant in response variable prediction (Wald statistic value = 0.964 with 1 degree of freedom, a P value of 0.326 and an odd ratio of 0.687). This is in agreement with the study conducted by (Kigunda, 2018). Nonetheless, the findings were in disagreement with the research carried out by Wickramasinghe and Gunawardane (2017) who concluded that liquidity risk management practices had a positive significant connection on financial sustainability.

To find out the effect of moderator, the study evaluated whether there was change on the strength of association between the variables where Nagelkerke R square was used. The addition of a moderator in Model 2 resulted to an insignificant change in Nagelkerke R square (from 20.9 percent to 21.5 percent). Thus, the moderating effect of SACCO size did not explain significant variation on independent sub-variables and financial sustainability. However, with introduction of interaction term, Nagelkerke R Square changed from 20.9 percent to 23.7 percent. This means that there was significant increase in the variations which was determined by the study variable. Therefore, from the study results it is evident that the relationship improved as interactions effects were introduced in the models.

A continued improvement of the Nagelkerke R Square with the introduction of a moderator and the interactions in the model indicates the significance of the moderator in the study (O'Connell, 2006). The study therefore rejects null hypothesis that, SACCO size is not statistically significant in moderating predictor sub-variables (cash planning, cash control and liquidity risk management) and financial sustainability of DT-SACCOs in Kenya. This in agreement with Abad, Sánchez-Ballesta, and Yagüe (2017) who observed that SACCO size have a significant moderation effect on the response variable. (Mutunga & Owino, 2017) observed that firm size has a significant moderating effect on response variable no matter the sector they are operating in. In contrary Onwonga (2016) indicated that size has no moderating effect between the independent variable and dependent variable.

CONCLUSION AND RECOMMENDATION

Conclusion

The study assessed the effect of cash management practices on financial sustainability of DT-SACCOs In Kenya. Cash management practices was evaluated through cash control, cash planning and liquidity risk management parameters. Based on the study findings DT-SACCOs in Kenya conduct bank reconciliation, prepare cash budget, record cash inflows and outflows, pay cash expenses and invest cash surpluses. Thus, they exercise prudent cash management. Furthermore, SACCOs oversight authority offer them continued guidelines and supervision on prudent cash management practices in an effort to maintain financial sustainable enterprises. However, based on

results of the analysis, it was concluded that cash control has statistically significant relationship towards financial sustainability while cash planning and liquidity risk management has an insignificant relationship. On the other hand, the moderation effect of SACCO size has a significant moderating effect on cash management practice and financial sustainability.

Recommendations

Recommendations are offered in an effort to enhance financially sustainability of enterprises in the sub-sector in Kenya. A deposit protection facility set up by the government is needed to cushion DT-SACCOs members in times of failures. On the other hand, a central liquidity facility should be established to act as lender of last resort to DT-SACCOs in case of cash shortages.

DT-SACCOs need to improve their cash management practices such as cash planning, cash control and liquidity risk management so as to maintain a financially sustainable enterprise. This can be done by fully adhering to the recommended liquidity assets to savings deposits ratio of 15 percent while making cash investments. Further, the management need to consider increasing their SACCO sizes through merging, acquiring the non-performing SACCOs or even conducting intensive marketing since large size SACCO have low chances of being financially unsustainable.

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Are aids enough to empower: case of peatland Liberica Coffee farmer in Indonesia

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Abstract

Many agents have been involved to empower peatland farmers who cultivate Liberica Cofee. They have the same general purposes to save farming practices, but they have different programs and activities. Many agents involved had worried to blur focus and targets. Hence, the purpose of this study is to reveal empowering practice and performance. The study is located in Mekar Jaya village, the center of peatland Liberica Coffee, and used a qualitative method where field notes, observation, and in-depth interviews were used. Data collection was conducted in conjunction with the empowerment activities carried out by the research team in 2017-2019. The results showed the importance of empowering focus, coordination between groups, real participation of all groups and its members, and the need for local government intervention. Neglecting those will diminish the peatland farming environment function and farming roles to the farmer. In the future, the practice of empowerment will be more complex due to the global demands on the sustainability of peatlands increase. Hence, empowering could be started from farming improving, increasing productivity, and followed by increasing farmer's and group's capacity to manage both on economics and environmental value of peatland farming.

Introduction

Liberica Coffee is a local indigenous commodity that belongs to West Tanjung Jabung Regency, Jambi Province, Indonesia. Based on the three-year sub-district report it was found that the area of coffee plantations is around 400 ha (BPS Kabupaten Tanjung Jabung Barat, 2019). As an indigenous commodity, the Minister of Agriculture of the Republic of Indonesia issued decree No. 4968 / SR.120 / 12/2013 which determine that Liberica Coffee obtained the MPIG certificate (*Society for the Protection of Geographical Indications*). This appreciation is commonly established to encourage the local government to develop the indigenous community as the broad-based for local economic consideration.

Legal recognition caused various institutions involved to empower program with various activities and different reasoning. In doing so, this commodity is expected to contribute greater to the surrounding farmers.

The reasons for local government, provincial, and regional to enlarge and develop that coffee mainly is based on local politics and economic policy (Esparcia, & Serrano,

2015). So, that coffee is even intended to be the basis of export commodities. Furthermore, several firms and state-owned corporations surrounding involved in a kind of CSR (*Corporate Social Responsibility*) and others for different reasons. Mainly, the corporation aims to brand itself for public purposes.

For academicians and other environmentalist institutions, the challenge of improving coffee plantation focuses on knowledge development. They examined everything related to the coffee; its origin, seed purity, low productivity, and its ability to survive in peatlands. In this connection, they found 9 types of coffee that are caused by cross-seeding between one seed and another in the plantation. They want farming in the peatlands to remain sustainable to keep the environment function.

Peatlands plantations are supported by unique water management that had been implemented by the local community for a long time. To enable watering two trenches large and small is build. The small trench connects the farm to a large one that connects to the rivers. The trench water level is affected by the tides, so as the tide rises the large trench delivers water to the plantation through a small trench. Conversely, when the tide is down, farmers will set up the water level by setting up the floodgates that have been installed to keep the water level afloat. Such practices will protect the irrigated peatlands, thus avoiding the threat of fire.

Farmers plant Liberica Coffee intercrops it with   Areca Nut plants. They consider the two plants complement each other both socially and economically. Additionally, these two commodities can produce yield together where Areca Nut gives a different taste to the coffee, which made coffee has a unique taste. Areca Nut functions as a coffee shading plant. However, the coffee researchers are not recommended Areca Nut but Lamtoro (*Leucaena*).   It belongs to tropical trees where it functions as a shade crop as well as a soil fertilizer that is needed naturally by the plantations.

University of Jambi's research team in 2015 reported that the productivity of peatland coffee is very low, it was 400 kilograms per year. This is only one-tenth of the maximum yield of good quality that reaches   4 tons yield per year. It is caused by unsecured seed, pest and disease attacks, and the dry season.

The dried   season occurs once in two years which causing fires and damage plantation on peatlands. The fire damaged the plantation prevent good yield. Based on the observation, it is proofed that good gardens avoid fire, while the poor will repeatedly burn in the dry season. Therefore, it is argued that to reduce fires occurrence is to maintain farmer plantation for they protect the plantation themself.

Farmers in   Mekar Jaya are mostly local independent immigrants who still uphold a sense of kinship and continue their home activities. They started farming together with the government's efforts to prepare peatland for new settlements. The construction of the main trenches and worms is the requirement for farming and settlement. Land clearing at the beginning of settlement and farming has collaborated with local government programs especially to prepare large trenches and worm trenches.

Residents are self-employed who came from the East Java, the others are Bugis and Banjar tribes who were known as experts in managing peatlands for agricultural activities. Mekarjaya is quite prominent in terms of cultivating coffee and Areca Nut plants, several people have obtained certificates as seed producers. Furthermore, in the village, some residents have produced Luwak coffee which is known as export coffee. To keep sustain peatland plantation mainly is depending on the commodities selection.   Accordingly, Nazemi, et al. (2012) reported that the selection of local plants that varied from one location to another is the key to the sustainability of plantations on peatlands.

Peatland researchers so far have focused more on technical cultivation issues, how to maintain their environmental functions. Widiawaty (2011) reminded the importance of water governance, Agus & Tinning 2008 argued that mistakes in water management would lose the function of peat to maintain global warming. Researchers who revealed

the behavior of farmers such as Firmansyah, et al. (2017) Noor, et al. (2014) emphasized the need for a harmonious relationship between researchers and farmers.

In contrast, studies on farmers empowering in terms of aid practices are still rarely conducted, even though it is important to reveal that the success of the empowering program is mainly determined by beneficiaries' behavior. Accordingly, this study is intended to provide a broad perspective of empowering farmers on peatlands which contributes to the consideration of stakeholders to develop Liberica coffee in peatland.

METHODS

As the nature of qualitative research, the motivation is to reveal problems that still require scientific exploration with various scientific sides (Yin, 2011). Sarah & Alan (2009) mention the reason is to guide the direction of the next scientific approach. Accordingly, the method used includes participatory approaches, observations, and in-depth interviews with various sources: group leaders, farmers, traders, and involved stakeholders (Knox & Burkard, 2009).

Several subjects used as sources of information consider the fulfillment of information that has been collected (Marshall, & Fontenot, 2013). This is confirmed that the strength of qualitative research is to reveal an in-depth understanding of an event without having to do a hypothesis test. So research tools are 1) participatory, 2) FGD, and 3) observation. Sampling in qualitative research is determined purposively in which researchers independently determine the informants (Anderson, 2010; Robinson, 2013).

RESULT AND DISCUSSION

General description

Liberica plantation is found in the Betara sub-district, Province of Jambi, Indonesia. Betara consists of 12 villages where the larger plantation is found in three respectively villages: Mekar Jaya (400 ha), Bunga Tanjung (353 ha), and Muntialo (260 ha). Each plantation area was organized by a farmer group that has a function as a farmers' forum to arrange their annual program. The research location is shown in Figure 1. Each group is administratively accompanied by a field officer (PPL) to direct the planning of farming every year. A group is a requirement for receiving any aids that deliver by the government and other agencies. Groups prepare rules to their member including to any aids received such as machines and post-harvest equipment, how to use them on a rolling basis and cost to be paid.
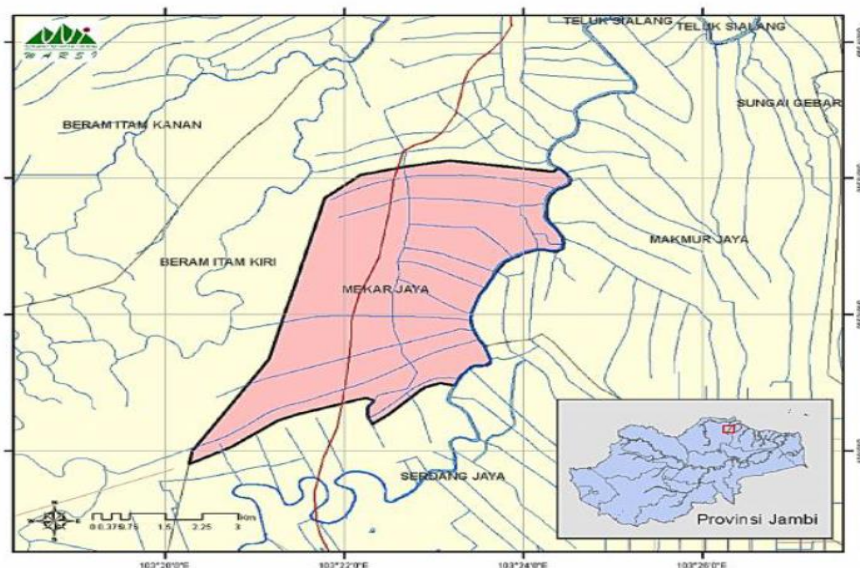
Figure 1. The site of Mekar Jaya Village

. According to the peatland expert, Mekar Jaya village consists entirely of peat where its depth reaches 1.4 meters. Such conditions require special competence so farming practices do not damage and functions and keep maintained the plants. In general, fibrous-rooted plants can grow on peatlands. Hence, farmers perceived coffee as a good choice for their plantation and they believed that Liberica only could grow in peat.

Environmentalists are aware of the risks that threaten peat farming mismanagement so that incentives are needed to empower the farmers. Accordingly, Wichmann, (2010) emphasized the global climate impact requirement so farmers require more appropriate incentives, not in the form of finance but a network where they can teach one another. Dzeco, et al. (2010) identified such incentives as a field school need where beneficiaries could teach each other for group action. Additionally, Bartlett (2008) mentioned the consideration is not based on technical criteria and site feasibility, but the importance of empowerment due to the local complex consideration

The quality of coffee plantation until 2019 gradually decreases due to the oil palm expansion by farmers themself and firms. Farmer perceived oil palm plantation is better than coffee because it provides a regular income and easy market. The plantation is worsened by the presence of private companies that plant oil palm by "destroying" peatlands. They also bought farmers' yield to make marketing practiced be easier compare to coffee marketing.

Empowering Practices

Black's review on empowering practices (2000) classified intervention to be 4 types: 1) top-down line of transfer of technology; 2) participatory "bottom-up" approaches, 3) one-to-one advice or information exchange, and 4) formal or structural education and training. Generally, it is recognized that the most appropriate approach is the participatory type that provides some advantages: 1) recognizing local ways, 2) support local innovation, 3) consistent with ethical principle, 4) providing an environment that allows complex landscape problems, 5) acknowledging farmers value sharing, 6) encourages producer ownership, 7) prepare process group.

Meanwhile, Padel (2001) argued the importance of empowering effectiveness, the role of innovator in every empowering process, especially in terms of technology. He added hence that innovators who belong to the group beneficiaries have a pattern function to the imitators who could learn success points from an innovator. However, he added that the outsider is not easy to follow because of its complex substance. In this case, one of the success points is participation that is not easy to be recognized. Iqbal, (2007) hence identified a quasi-participation where participants were only active at the initial of intervention when assistance was prepared. After that, the level of participation declined and paid less attention to the group goals establishing. At this point, Umesh et al. (2010) emphasized the three succeed empowering determination: (a) empowered the groups, (b) increased stakeholder interaction and involvement within the clusters, and (c) the group will be enabled to fulfill market requirements.

Based on in-depth interviews, regarding the aids, Mr. Supardi, one of the beneficiaries, emphasized the importance of aids. He said:

> *It's okay if I'm expelled from MPIG caused they don't provide me any aids. They demanded me to pay dues, but they gave nothing*

MIPIG is a group that receives certificates from the government. They have the responsibility to maintain the supply and quality of the indigenous commodity. To support operational expenses, they charged members. Conflict emerges With Mr. Supardi due to his practice producing Luwak coffee employee Wild Mongoose to ferment cherry coffee. MIPIG in this case does not allow Moongoose in the coffee production process.

Mr. Supardi is an advanced farmer, partnering with Bank Indonesia and Jambi University and he is an innovator who sells beans and he has regular buyers.   It is a premium taste that is intended to be exported. According to Mr. Supardi, only institutions that provide aids should be followed.

In terms of empowering, the group has an important role. There are two dominant groups, Sidomuncul and Sriutomo which are located in a different village and they received different aid resources. Sido Muncul received a coffee shop building and other aids from Petrochina. Aids are intended to serve customers and promoting coffee. The two groups have conflict in terms of bean quality.

> *Mr. Edi focused on producing coffee powder. Otherwise, Mr. Badrin focused on produce different quality beans that enabling them to sell at different prices. In doing so, coffee should be processed in a good way. Processing should be started from harvest activities and brings yield to the doom for dying. Mr. Edi does not approve that practice does, he does not ensure yield differentiation will affect farmers income*

Other conflicts were also found in the use of machinery and equipment among members of the beneficiary group. Members who are supposed to share equipment usage are not going well. The tendency is that the use of the means of production is used by the recipient, not by the members in turn.

In the function of the group, de Loë, *et al.,* (2015) reported that the collaborative perspective of the group is needed especially in the situation more agents involved. He reminded the personal (actor) role who can communicate with everyone could be the succeded factor. In a broader perspective   Demos (2011) noted the importance of social entrepreneurship who can direct group action that can benefit even group people.

The problem is also found in using machines-aid. Several machines failed to be used for these reasons: 1) the size of the machines (breaking machines, sorting) did not match the size of Liberica beans due to Liberica coffee was bigger than Arabica and Robusta coffee, and 2) automatic machine did not work due to lack of demonstration. This includes aids prepared by BRG (*Badan Restorasi Gambu*), Peat Restoration Agents that established by the Indonesia government to restore the function peatlands for global purposes. Some institutions and activities involved to empower farmers are shown in Table 1.

The results of the interview on their goals and activities in the empowerment activities are as follows.

1) Indonesian Bank (BI). BI empowering purpose is to strengthen the group to become MSME's, called LKMA (*Agribusiness Microfinance Institutions*). Simply said, BI wants the group to be bankable. Hence, BI delivers drying houses for coffee and Areca Nut and roasted machine. Until 2019, it does not use any more due to broken condition. It is worth mentioning LKMA guidance from BI that succeed to prepare LKMA Mekar Sejahtera in a different village in Betara Subdistrict. BI's perception of the aids progress was told by one of its staff as follows.

> *BI perceived that delivering assistance to farmers is more than enough. According to them, farmers' problems now are more about their motive and creativity in developing farming so they can provide better results*

2) Provincial government. Jambi Provincial government's purpose is to promote indigenous local products, including Liberica coffee with others through promotional activities. Hence they involve groups participating in the trade exhibitions conducted both by the private sector and government agencies. It is hoped that the exhibition will create demand. But, when the demand for coffee is obtained, the group cannot fulfill because it does not get sufficient yields.

3) Local Government. The local government's purpose is to increase the area of coffee plantations by providing fertilizer seeds, and others. However, efforts to expand coffee plantations were unsuccessful due to land constraints that were often inundated with water and the tendency of farmers to plant oil palm.
4) Corporations. One of the corporations involved is Petrochina. It used the CSR (*Corporate Social Responsibility*) program to provide machines, coffee bean grinders, and buildings to process coffee beans. In 2019, they built a coffee shop as a resting place for the traveler to promote coffee. Recently,   they provide plantation as an environment-based tourist destination by preparing the bicycle route.
5) BRG. It is established in 2014 and the purpose is to restore peatlands function both technically and economically. Attention to peatlands is increasing especially after frequent fires on peatlands, that occurs at least once in two years. Peatland fires not only damage the ecosystem but also the image of the Indonesian globally. BRG's activities are briefly derived from their slogan namely: rewetting, revegetation, and revitalization of the socio-economic village in the related peatland region. In this connection, Mekarjaya receives drying houses, and automated machines to produce sachet coffee.
6) NGO. NGO empowering farmers and communities for environmental protection reasons by keep peatland in a good cultivated manner. Their activities include expanding coffee plantation to other peatlands area,   East Tanjung Jabung regency.
7) The University of Jambi. Certain lecturers conduct research and community services together with students. They received government competitive funds to improve the plantation quality on a small scale so that productivity and income hope to increase. Their orientation is to empower farmers by requiring farmers to prepare the land as a partnership plot.   Farmers are encouraged for the yield produced by the partnership owned by the partner farmers.

Table 1. Some involved institutions on empowering and their activities

No.	Institution	Aids Type	Goals description
1	Bank of Indonesia	• Post-Harvest Improvement • Drying house, coffee grinder machine	1) To make the group bankable, known as the Agribusiness Microfinance Institution 2) Improving farmers yield quality
2	Provincial Government	• Post-harvest machine • Promotions	1) Introducing and promoting products to market both nationally and internationally 2) Provide product exhibition
3	Local government, West Tanjung Jabung	• Seeds, • Compost, • Coffee crushing machine	1) Increase the area and quality of coffee plantations 2) Group empowerment
4	Corporations, Petrochina	• Post-harvest machine • Establishing coffee outlets • A tracking road to several farmers' plantation	1) Promoting coffee quality 2) Market expansion
5	BRG (*Peat Restoration Agency*)	• Dried house • Sorting machine • Sachet machine	1) Peatland revitalization so its function be sustainable 2) Farmer Socioeconomic revitalization
6	NGO (*Non-govern- mental Organization*)	• Seed preparing	1) Farming Expansion to another peatlands area
7	University of Jambi	• Post-harvest machine • Seed improvement • Organic fertilizer	1) Farm Revitalization 2) Group capacity building

Source: Field Observation, 2019

Based on Table 1 and in-depth interviews with parties involved, some important point is explained.

Empowerment is a process that is more human-oriented rather than technical assistance or providing equipment. In this connection, each party involved provides assistance, equipment, and technology with different capacities and objectives. It caused the purpose of empowerment **blurred**. Farmers as beneficiaries are positioned as parties that have been lost participatory chance. This is found in the case of the fault of the machine aids an automatic sachet coffee machine which is not appropriate with the Liberica Cofee requirements, the two machines are stored at the farmer houses. In this connection, Friis-Hansen, & Duveskog (2012) emphasize that empowerment is the focus of the process between the agent and the beneficiaries. Those fault for example occurs due to the lack of beneficiaries chance to say what they need. Furthermore, Sumane, et al., (2017) in this case suggested a necessity of the knowledge process synthesizing between recipients and aid providers so they complement each other.

Lack of coordination is found due to different empowering agent backgrounds and competence. Accordingly, Rogers & Singhal (2003) emphasized that activities of empowerment and communication are inseparable. Communication will encourage transformation to achieve goals, especially for small groups. Practically the institutions involved can communicate, but not coordinate. This refers to the limitation noted by Hall, et al. (1976) in Bouckaert, et al. (2010), the basic principle of coordination is communicating what is being done to other fields so that they consider it in the role of each institution.

One of the poor group coordination performance described below:

 Mr. Badrin, head of the Sri Utomo, group suggested that each group produce different coffee bean quality. So, the farmer will serve different buyers according to the quality they want. He hoped that inter-group competition will not occur because farmers have their respective buyers. This is difficult to be practiced due to the lack of communication between farmer groups.

The empowering practice is not simple due to vague beneficiaries' participation. Iqbal, M., (2007) identified it as **pseudo participation** where the beneficiaries participate just in the presence of an agent in the group. It is caused by the motivation to get aids as soon as possible.

The role of the group to transform resources to achieve shared goals is important in the empowering process (Rogers & Singhal, (2003). Iqbal (2007) confirmed emphasized the importance of groups participating in the farm planning process to achieve shared goals. Additionally, Attanandana, et al*.,* (2007) emphasized the importance of the leadership's role to improve the quality of empowerment practices. With a different point of view, Umesh, et al., (2010) identified groups as a cluster where beneficiaries and agents can learn from each other. Hence, Aberra (2004) noted the problem of empowerment due to the small plantation scale, so the cluster approach is needed to enforce the empowerment process.

Furthermore, Touri, (2016) emphasized the importance of communication which enabling beneficiaries to internalize global problems. De Loë, et al. (2015) identified it as a collaborative approach, while Mudege, et al. (2015) indicated the importance of joint action between partners involved in empowerment, and Hassink, et al. (2010) required a combination or varied approach on empowering: such as formal versus informal, and individual versus group approaches.

The problem empowering in the future will increasingly complex due to global demands on the peatland sustainability principle. Hence, Surahman, et al. (2017) said that peatland management in Indonesia must consider its environmental function because it contains rich organic material where poor land management will eliminate the

environmental function. It will be a big issue for several large companies to turn peatlands into oil palm plantations. Planting is done by digging and then collecting excavated land to be planted with oil palm. Such practices are not allowed for it seriously damage peatlands function.

The problem of the institutional form of beneficiary groups in the future will be potentially problematic due to the dynamics of business organizations in rural areas. Since 2014, the Indonesian government has introduced BUMDES (village-owned companies) as an economic institution in the message and has facilitated this institution to develop. In this connection, Groups in Mekarjaya has an opportunity to be institutionalized in the form of BUMDES, but it is difficult to decide due to the aids ownership.

The issue of empowerment, however, must consider environmental and economic interests, especially local economy communities. Farmers, however, do not fully understand this, their considerations are more economic than environmental.

In terms of climate considerations, Wichmann, (2010) reminded the importance of farmer's incentives, not in the form of money, but networks that allowed them to learn from each other. Rawlins, & Morris (2010) identified the environmental benefit as the non-used value of peatland is more prevalent to be considered globally. Bullock, & Collier, (2011) made an analogy of environmental function as public good where people globally could experience it.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Farmer's empowerment in peatland will be more complex in the future, it is not caused by resource scarcity but due to the lack of coordination. If the agencies involved don't prioritize strengthening, every action seems to solve the problem. The local government in this case could direct them so that each different party can receive empowerment priorities. In the future, coordination is increasingly important because of the presence of BUMDES as a local business institution that facilitates by the Government in the villages.   It is hoped that farmer groups can be integrated with BUMDES, however, this is difficult to happen because of different understandings and interests. Until 2019, farmers could process coffee yields for they have received various aids and trained through different institutions. However, due to low coffee yields, production equipment, and machinery cannot function optimally and large and demand could not be fulfilled.

Recommendations

The empowering focus should start from the downstream sector, improving plantations that affect productivity increasing. Attention to peat will continue to increase due to global awareness to improve the quality of plantations on one side, but it must be accompanied by controls to limit the expansion of oil palm plantations on peatlands. For this reason, a form of strengthening is needed through empowering farmers and their groups.

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Effects of leadership on the effective performance of Ethiopian banking industry

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Abstract

The aim of the study was to examine the effect of leadership on organizational performance with specific reference to Commercial banks operate in Jimma Town. To achieve the objectives the study causal type of research and panel design was used to examine effect that leadership exert on the bank's performance. The primary data sources were leaders on different levels and their subordinate employees while, the secondary data sources were annual report of individual banks. Multifactor Leadership Questionnaire was adapted for collecting the data. The descriptive and inferential analyses was conducted to analyze the collected data. Subsequently, the Random Effect Model was used to investigate the extent of relationship between variables. The study results revealed that the existing leadership brings changes in working environment by inspiring and motivating employees for changes, creation, innovation, to go beyond from what they actually think they can; and reward employees and make recognition in exchange for the work they perform, giving close directions and guidance have positive and significant effect in promoting the performance of the bank. Hence, the leaders of banks should focus on playing a role model and stakeholders in the industry should consider taking banking in a non-traditional.

INTRODUCTION

For the last half century the field of leadership has struggled to under-stand what exactly leadership is, under what contexts or situations it is effectively exercised, and how to explain leadership processes in addition to leader traits, skills and competencies (Bass, 1990; Yukl, 2006). Although no ultimate definition of leadership exists, however, leadership research spans a variety of approaches and has sometimes had mixed findings as one area of leadership that is agreed upon is that leadership does not affect a single person, but rather it affects many people (Dienesch & Liden, 1986) & so also the majority of definitions of leadership reflect some basic elements, including "group" "influence" and "goal" (Bryman, 1992).

In other words, the essence of leadership is not found in the leader per se, but in the relationship that exists between the leader and his or her subordinates and it is the process

of influencing others towards achieving some kind of desired outcome. Leadership, as defined by Northouse (2004), is a process whereby an individual influence a group of individuals to achieve a common goal. Leadership style is the way in which that process is carried out. Performance is the accomplishment and execution of tasks. According to Albrecht (2011), performance is the extent to which an organization achieves a set of pre-defined targets that are unique to its mission. Leadership style is a key determinant of the success or failure of any organization. Thus, ensuring the effective leadership is becoming a critical issue for the success of modern business organization and the focus on it is increasing recently as the challenge of running business is enormous. So far, several theories had emerged and paved the way for the coming of modern leadership styles that can be understood in the organizational context.

Despite the fact that the impact of leaders seems intuitively appealing, most behavioural leadership studies look at performance or effective outcomes to extant theories of leadership which has been proposed over the past half-century and are exclusively on behaviour and interactions (i.e. doing) or traits, competencies or styles (i.e. having) (Daft, 2008). Leadership style is the way in which that process is carried out. Performance is the accomplishment and execution of tasks. According to Albrecht (2011), performance is the extent to which an organization achieves a set of pre-defined targets that are unique to its mission. Leadership style is a key determinant of the success or failure of any organization. Thus, ensuring the effective leadership is becoming a critical issue for the success of modern business organization and the focus on it is increasing recently as the challenge of running business is enormous. So far, several theories had emerged and paved the way for the coming of modern leadership styles that can be understood in the organizational context.

Transformational and transactional are the two recent leadership styles that researchers have been suggesting for organizational success in different circumstance. Compared to others, the financial sector in Sub Saharan Africa is lagging behind (Kefela, 2008). Ethiopia is no exception to it. The less infrastructure facilities (technology, service delivery, less capital) and ineffective management system have been the main reason among others that makes Ethiopian banking industry to remain closed for foreign investors and continue to operate in unique business environment even from its neighboring East African countries like Kenya, Tanzania, and Uganda. The least development of social and economy signifies the malfunctioning of banking sector in the country. However, Kefela (2008), points out that the loose in management system within individual banks is the cause for all problems in the banking sector.

In modern organizations such as banks, a hypercompetitive and hyperchanging business environment imposes a need for permanent improvement of quality of products, services, and business processes, as well as the need for conducting continuous training and development of their employees. Thus, for example, banking institutions pay special attention to the so-called "quality of service", which implies kindness, sensibility, and welldeveloped skills of verbal and non-verbal communication, referring to the general art of communication of banking offirs with bank clients (Tomašević-Lišanin, 1997).
Research in the leadership fild illustrates a positive correlation between the applied style of leadership, employee/followers job satisfaction (along with their performance) and the profiability of organizations (Odom & Green, 2003; Harris, Harris, & Eplion, 2007; Yahaya & Ebrahim, 2016).

The banking industry is the most important financial institution in Ethiopia, dominating most of financial activities. Moreover, the sector is not well developed and less integrated with global financial market and the market is not competitive (ILO, 2009).

Less infrastructure development: technology, service delivery, less capital, and ineffective management system are discernible features in Ethiopian banking sector. Banks in Ethiopia sticks to traditional ways of doing things. Engaging on daily routine work is the common duties of both managers and employees. Most of managers are spending their time on routine duties like attendance and dress code monitoring, writing related rules and regulations that urges the following of punishment for any deviation happened against the outlined rule. This high focuses on irregularities, mistakes, exceptions, and deviations are consuming much time of mangers and making them to be less effective on prediction about the future and relating the work at hand with the articulated vision of the bank. Moreover, wide gap is observed in understanding of the vision and the mission of the bank among the workers. There are only few managers that clearly communicate what the vision is and confident in attainment of it.

On the other hand, employees are complaining as their individualistic and communal need is not well considered and less room is given for their say. This discourages employees to feel belongingness to the bank which in turn leads to less productivity. Their voice is continued to be ignored and no room is being given for their say. They are not participating in the decision process that all policies and big decisions reveled to them after it is made at the top. There is visible bridge between managers and employees that no free discussion is possible and most employees are not comfortable to share what they think. These show the seriousness of leadership malfunctioning in Ethiopian banking industry. Ensuring the presence of effective leadership is one the critical strategies suggested by Bass & Avoilo (1999) to increase the performance and remain in business.

The leadership style drives the ability of an organization performance, to successfully implement business strategies, to gain a competitive advantage and optimize human capital (Teshome, 2011). The dependency of organizational performance on the leadership effectiveness has been demonstrated by several studies (Teshome, 2011; Cole et al., 2009; Wang et al. 2011). Even though some studies support the superiority of transformational leadership style over transactional leadership style, the other claim the superiority of transactional leadership style over transformational leadership style for better organizational performance; some still suggests the combination of both leadership styles with various degrees according to the situation. In line with this, the study will be examining the effect of leadership on organizational performance in case of Commercial banks operate in Jimma Town.

LITERATURE REVIEW

According to Sadeghi (2012) the major components of transformational leadership style are Idealized influence, Inspirational Motivation, Intellectual Stimulation and Individual Consideration. While, Bass (1985) distinguishes two leadership factors within transactional leadership, namely contingent reward and management-by-exception.

Idealized influence

Idealized influence is one of the components of transformational leadership style that the leader's employee to get superior results. It is a component where being a role model of a leader can be perceived by followers so as it inspires them (Moss & Ritossa, 2007). The followers can identify their role model easily and try to imitate as they admire, respect, and trust them (Bass et al., 2003). This is achieved by the fact that they share risks with their followers and, importantly, they are consistent, rather than arbitrary. Leaders with idealized characteristics are the role models that they walk first on the way they talk about (Avolio et al., 2004). Again, the transformational leader with an idealized

influence are highly disciplined who do not use power for their own personal gain; they display high standards of moral and ethical conduct. The idealized influence also relates to charisma which, for long has been held as a mystical gift that people possess. It is true that there is more to being a leader than being a charismatic person.

Inspirational motivation

Inspirational Motivation is a component of transformational leadership style that describes the degree that the leader states attractive and encouraging vision to followers. Transformational leaders motivate and inspire those around them by providing meaning and challenge to their followers' work. They also focus strongly on team spirit. Followers are included in developing inspiring future visions and the leaders are effective communicators. The transformational leaders communicate their expectations clearly with their followers. They also display commitment to goals and the shared vision. These leaders talk optimistically about the future and what needs to be done to achieve the vision.

Intellectual stimulation

Intellectual stimulation is a component of the transformational leadership that refers to the degree in which the leaders stimulate their followers to be innovative and creative. Transformational leaders stimulate their followers to be innovative and creative by questioning assumptions, reframing problems, and approaching old situations in new ways. They encourage creativity through the use of reasoning and evidence rather than unsupported opinion to solve such problems (Avolio et al., 1991). The transformational leader encourages the development of a culture of continuous questioning and thus continuous learning.

Individualized consideration

Individualized Consideration is a component of the transformational leadership style that explains the degree in which the leader pays attention to the need of individual employee. Transformational leaders pay attention to the individual employee and his or her needs rather than treating all followers alike and having the same needs. Time is spent teaching and coaching others in an effort to develop their strengths and promote self-development, by acting as coaches and mentors. The transformational leaders make sure that the employee has sufficient help and the resources necessary to complete the tasks at hand. In line with the above literature it hypothesized that:

H1: The components of Transformational leadership style have significant effect on effective performance of the banking industry in Ethiopia

Contingent reward

It refers to situations in which the leader gives compensation to employees when they perform according to contract or expectation. The leader will assign or get agreement on what needs to be done. The leader then promises rewards, or actually rewards others, in exchange for satisfactorily carrying out the assignment. Bass & Avolio (1994) contend that *contingent reward* has been found to be reasonably effective as a style of leadership. It is, however, not as effective as the transformational leadership factors, which will be discussed in the next section, in motivating others to achieve higher levels of development and performance.

Management-by-exception

It explains the degree in which a leader watches follower closely for mistakes or role violations (Northouse, 2004). Passive management-by- exceptions used by leaders who only interfere in the employees work if they do not meet the desired goals. The leader

waits passively for deviances, mistakes, and errors to happen and then take corrective action (Judge & Piccolo, 2004; Bass & Avolio, 1994). This type of leader avoids describing agreements, explaining expectations and standards to be achieved by subordinates, but will intervene after particular problems become apparent (Sadeghi et al. 2012).

Active management-by-exception refers intervening in people's work when they are not putting forth the effort expected of them. Leaders will arrange actively to monitor deviances from standards, mistakes and errors in the follower's assignments and will take corrective action as necessary. Bass & Avolio (1994) demonstrate that although management-by-exception is necessary in some situations, it is generally ineffective as it is a prescription for mediocrity. Managers who rely heavily on *passive management-by-exception,* usually only attempt to sort problems out when they become chronic, which in many instances is too late. Those who employ *active management-by-exception* on a regular basis tend to focus too heavily on mistakes and in this way demotivate the workforce. In line with the above literature it hypothesized that:

H2: The components of Transactional leadership style have significant effect on effective performance of the banking industry in Ethiopia

Effective performance

Performance is a multidimensional construct and therefore multiple measures of performance should be used (Lumpkin & Dess, 1996). Growth has been argued as an essential element to the attainment of sustainable competitive advantages and profitability (Markman & Gartner, 2002) and it is hard to associate sustained growth without profitability. Evaluation of bank performance traditionally includes the four performance measures: ROA, efficiency ratio, net interest margin, and return on equity (Cole, 2009). Return on total assets (ROA) is known to measure the effectiveness of managerial performance and one of the most frequently used financial ratios by financial analysts. ROA measures the ability of bank management to generate income after all financial and non- financial costs and expenses for owners. Changes in ROA are usually the cause of the most important changes in banks' performance and need a more detailed analysis (Cole, 2009). Therefore, the measure of effective performance in this study is ROA.

Conceptual framework
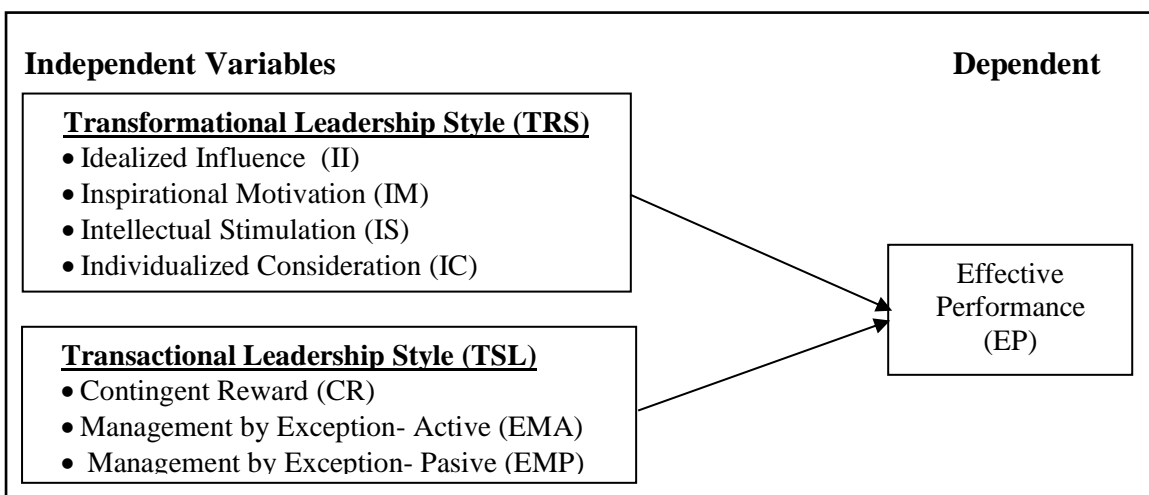
Source: Self developed based on literature review
Figure 1. Conceptual framework

METHODS

Research design

To achieve the objective of the study the causal type of research and panel design was employed.   The causal research type uses to assess the nature of relationship and its extent between independent and the depended variables. On the other hand, the panel data gives the advantageous that either time series or cross sectional does not controllers individual heterogeneity, reduce co linearity variables and track trends in the data (Baltagi 2005). The research method employed in the study is quantitative, used to describe trends or tendency between variables.

Target population and sampling design

There are 8 commercial banks that are operating in the Jimma town. The target banks are those operating more than five consecutive years. Hence, five commercial banks in Jimma town was fulfil the criteria. The target population became the leaders (CEOs, department level managers, and the team leaders or division managers) and their subordinate staffs of the selected commercial banks. Census were applied since the number of banks and target population within the selected banks are few in number.

Data type, sources and collection instruments

For the purpose of the study both primary and secondary data was used. The primary data sources was collected from target population by using Multifactor Leadership Questionnaire (MLQ Form 5X) that is a validated form (instrument) that contains eight subscales and 40 items (Avolio & Bass, 2004) will be adapted for collection of leadership styles representing questions. On the other hand, the secondary data source was the selected banks performance measurement, ROA directly from annual report of individual banks and from audit financial report of National Bank of Ethiopia (NBE). Participants were asked to rate the scale that consists 5 points, ranging from 0 to 4, as how they „""perceive that their leaders are the exhibiting or acting in accordance with the specific behavior explained in questions. The points are labeled as 0 = not at all, 1 = once in a while, 2 = sometimes, 3 = fairly often, 4 = frequently, if not always.

Method of data analysis

Both descriptive and inferential analyses was conducted by using STATA version 14 used to facilitate the analysis. The researcher employed Random Effect Model (LM) to investigate the extent of relationship between independent variables and dependent variables.

Validity test

The multifactor Leadership Questioner will be one of the most extensively used instrument by several researchers to assess individual and organizational success and to evaluate the leadership in different fields. Avolio & Bass (2004) pointed out as the instrument was used extensively in field and laboratory research to study transformational, transactional, and passive/avoidant leadership style. Again, they stated as the instrument has been in use for over two decades evaluating the leadership effectiveness in military, government, education, religion, and other areas. The MLQ was adopted by Avolio et al. (2004) and Gupta & Krishnan (2004) ''for determination of role of collective efficacy in the relations between transformational leadership and work outcomes" and ''to assist in providing an understanding of transformational leadership behaviors shown by leaders vary depending on the follower's socialization method" respectively.

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Reliability test

The questions are requiring 10 +2 education to complete and timeframe of 15minutes. This version of the MLQ has been updated to account for previous concerns and criticisms of the instrument (Cole 2009). Authors of this particular questionnaire have over 20 years of experience invalidating evidence for the MLQ and through that experience they have developed a strong foundation for what contributes to the success of such an instrument (Avolio & Bass, 2004). The MLQ (5X-Short Form), which is a validated instrument that contains 40 items, was used for the research.

The value of Cronbach's Alpha (0.884) is greater than 0.5 that suggests that Categorical Data used is Reliable for Linear Regression Analysis. On the basis of Reliability test, now the Regression analysis may be made to investigate the effect of Leadership styles on the organizational Performance.

RESULTS AND DISCUSSIONS

This section presents the analysis, discussion and inferences made on the basis of the responses obtained. The research instrument used in the study was survey questionnaire. The study population comprised the commercial banks' leaders and subordinates. Data was collected from all selected commercial bank's leaders and subordinates of 135 which comprises 85% of target population.

The descriptive statistics

Table 1 presented the Multifactor Leadership Questionnaire assessment of leadership based on seven leadership behaviors and two leadership outcomes. Through the components of transformational leadership, five leadership behaviors, assess the leader's transformational dimensions. It describes leadership behaviors that inspire, motivate, stimulate and are considerate of others' higher potential. The range of transformational leadership profile of managers were Idealized Influence - Attributed 11.4, Inspirational Motivation (8.33), Intellectual Stimulation (8.54), and Individualized Consideration (13.55). They also considered their follower's opinions and communicating to followers that the vision is achievable.

Table 1. Leadership styles behavior

Items	II	IM	IS	IC	CR	EMA	EMP	TRS	TSL
Mean	11.4	8.33	8.54	13.55	5.42	2.51	3.42	41.82	11.35
Std.	1.42	1.66	1.45	3.44	2.91	1.51	2.13	7.97	6.55

Source: Survey, 2019

Intellectual stimulation and Individualized Consideration behaviors of leaders are active one. Active transformational leadership is employed when the individual chooses leadership behavior designed to raise follower's consciousness about goals and values (Bass, 1996). Idealized influence behavior and inspirational motivation emphasize motivating followers to go beyond personal or individual interests for the good of the group (Burns, 1978). This is consistent with the findings of this study. More specifically, idealized influence is charismatic and seeks to inspire followers into action (Bass, 1996). The mean value of overall Transformational leadership behaviors of the managers is 41.82 and standard deviation is 7.97. It shows that they are also using Transformational style frequently. The leaders are monitoring and controlling outcomes at the mean time they are given the chance to follower's independent growth.

Further, transactional leadership describes Contingent Reward; Management- by-Exception (Active) and Management- by- Exception (Passive). The mean values of these

dimensions are 5.42, 2.51 and 3.42 respectively. The leaders are having considerable level of Contingent Reward behavior and Passive. The leaders are classifying role of followers and they also provide material and psychological reward contingent on the fulfillment of objective. They also helped to solve the problem when compliance has occurred. The leaders are occasionally involved with the followers work to correct them. Contingent reward, although transactional, seem to suggest a leadership behavior associated with motivating others to achieve higher level of development and performance.

Leader assigns or gets agreements on what need to be done, the leader set reward for the exchange of transaction like awards, medals, respect, team recognition (Bas 1996). Leaders are having both transformational and transactional behaviors, with the mean values of 41.82 and 11.35. The leaders are expected to show similar transformational and transactional leadership style. The present study result is consistent with others studies such as Bass (1985), and Avolio & Bass (1991) whose finding was that the leaders exhibit both transformational and transactional behaviors that differentiate leadership style. The leader then relates differently to colleagues, followers and supervisors. These differences encompass different behavior that is likely to emerge in different circumstances.

Furthermore, as evident from the empirical data, the findings indicate that the managers of public sectors organizations exhibited both transformational and transactional behavior. These are compelling findings since the literature (Avolio, Bass & Jung, 1999; Avolio & Locke, 2002; Bass, Avolio, Jung & Benson, 2003) indicates that the leaders exhibit transformational and transactional behaviors. These scholars examined the relationship of the transformational and transactional dimensions and found that leaders display the both leadership behaviour. Bass (1996) established that the leaders possessed both transformational and transactional leadership behaviours. Avolio & Bass (2004) have shown that leaders have both transformational and transactional leadership behaviours, regardless of their ethnic culture.

Effects of leadership on the effective performance of Ethiopian banking industry

Table 2 and 3 presented as the Adjusted R square of transformational and transactional leadership behavior are 85.2 percent and 86.2 percent respectively which indicated as the the model explains the cause up to 85.5% and 86.1 % and the model applied is reliable.

Table 2. Effects of transformational leadership on the effective performance of Ethiopian banking industry

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-17.955	4.658		-3.855	.000
II	.832	.711	.950	3.171	.004
IM	.740	.801	.790	3.109	.003
IS	.643	.849	.409	4.040	.000
IC	.730	.651	.826	3.761	.000
R Square = .857	*Adjusted R Square = .852*			*F= 194.035 (Sig.= 000)*	

Table 3. Effects of transactional leadership on the effective performance of Ethiopian banking industry

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	29.617	.938		31.562	.000
CR	3.363	.397	.780	8.473	.000
EMP	2.788	.416	.631	2.893	.006
EMA	2.302	.286	.518	2.623	.007
R Square = .864		*Adjusted R Square = .861*		*F= 277.721 (Sig.= 000)*	

The coefficients of determination ($R^2 = 0.857$ and $R^2 = 0.864$) show the relative importance of the two leadership styles in explaining organizational performance in the Banks. These model explanatory powers show that transactional leadership style bears some relevance in explaining performance in banks than transformational leadership style. The square roots of these coefficients ($R = 0.925$ and $R = 0.930$) indicate differing degrees of positive correlation between performance and leadership styles. That is, in the surveyed banks, performance is positively correlated with transactional leadership style than transformational leadership style. The result is also supported with the study of Bass & Avolio (1994), Akar (2010), Sadeghi, et al. (2012); those concluded the transformational behavior of leadership brings changes and improvement in the working environment and stir ups the employees to performance.

The regression coefficients of both model summary indicated as the components are positive effect on effective performance of banking industry in Ethiopia. Therefore, both hypothesis is accepted. The study result is consistence with expectation which is the considered components of leadership behavior's have positive effect on performance. The result also supported with the findings of Chung-Wen Yang (2008) and Amegayibor (2018) who state the existence of significant positive relationship between transformational leadership style and banks performance. Additionally, the study findings also supported with study of Arham & Muenjohn (2012) which stated as the existence of positive and strong relation between transactional leadership styles organizational performances.

Hence, it can be concluded as the reward in exchange for the extra effort, recognition of the work are common in Ethiopian banking sector; bonus, promotion, salary increment takes place when banks get profit that employee are committed and perform well to be rewarded. Therefore, contingent recognition/reward and management by exception rather than charisma, inspirational motivation and intellectual stimulation/individual consideration could be appropriate leadership behaviors and strategies to induce them to perform.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

The random effect regression was carried out to examine how and to what extent each type of leadership style relate to banks performance, which, is measured in terms, ROA. The result depicted that existence of positive relationship effective performance of the banking industry in Ethiopia have with the considered variables which are consistent with previous studies. Also, the existence of positive and strong relation of transactional leadership style on the ROA implies the reward and recognitions that leaders make for

fellow subordinates up on accomplishment of the given task has strong effect on the performance. Finally, this study concludes that both transformational and transactional leadership styles have positive and significant effect on bank performance that exhibiting or not exhibiting of both transformational and transactional leadership behaviors leads, respectively, to an increase or decrease on banks performance in Ethiopia.

Recommendations

Based on the results of the study the bank leaders in Ethiopia are recommended to exhibit the combination of both transformational and transactional leadership behaviors according to the ongoing work environment circumstances. The leaders of banks should focus on playing a role model by taking first step of what they talk about and keep consistent in their action in way that getting trust and loyalty from employees and in instilling confidence, commitment and vision in employees. In this way leaders can get employee's work commitment or improvement in their performance by assuring the psychological attachment of employees to the organization. They should encourage participation in decision making, leave much room for the employees say and delegate and make to feel full responsible. On the other hand the leaders in the bank should give attention to close guidance and close follow up or supervision to the employees when the employee seem new for the work at the hand. The leader should also tell clearly what is expected from the employee and attached rewards and recognition for the achievement to induce the improvement of the performance of employee and then bank as a whole.

Stakeholders in the industry should consider taking banking in a non-traditional direction by placing more emphasis on understanding leadership style and its effects on improving results. The leadership style is learnable that the stakeholders of the bank should consider the need to present training to leaders on leadership styles as a means to increase performance results. The stake holders might also consider holding national conferences on innovative leadership models used to support the vision of the banking industry and seminars might be warranted to show financial leaders how to apply leadership models to everyday activities and develop strategies that might goes with contemporary banking environment.

In future research, it would be interesting to assess causal relationships by taking more cross sectional data in different time using longitudinal design (e.g. observations or 59 interviews) to determine if the findings tested are likely to be sustained. Further research should also involve a larger sample size from survey covering whole population of the banks in Ethiopia. Future studies can also benefit by including leadership styles and other variables such as organizational culture and other environmental factors in determining the banks performance.

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Determinants of Long-Acting and Permanent Methods (LAPMS) of contraception use in Jambi Province, Indonesia

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Abstract

The use of long-acting and permanent methods of contraception (LAPMs) by couples of reproductive age in Jambi Province is still comparatively low. Long-term contraception users were only 18.26 percent in 2018. Based on these, the objective of the study is to analyze as follows: 1) the determinants of LAPMs and non-LAPMs used by couples of reproductive age; 2) the relationship between couples of reproductive age and use of LAPMs. Data is obtained from the 2018 Performance Monitoring and Accountability of Population, Family Planning, and Family Development programs. Data were analyzed using binary logistic regression, One-way ANOVA and Chi-Square Test. The results of the analysis found that the determinants of LAPM and non-LAPM selection by couples of reproductive age are woman's educational attainment, woman's employment status, the difference between ideal and actual number of surviving children, the desire for more children, the knowledge of contraceptive methods, economic conditions, and urban-rural residence. Furthermore, the characteristics of couples of reproductive age significantly related to the LAPM choice include woman's age, woman's educational attainment, the actual number of surviving children, the difference between ideal and actual number of surviving children, the desire for more children, the knowledge of contraceptive methods, economic conditions, and urban-rural residence.

Keywords: *Couples of reproductive age, Long-Acting and Permanent Methods, Program Performance and Accountability Survey*

JEL Classification: J12, J13

INTRODUCTION

A high rate of population growth will bring new burdens and problems to development. High population growth that is not accompanied by an improvement in human quality will hamper efforts to enhance welfare in various aspects of life. Consequently, controlling population is the priority that must be done in order to ensure the accomplishment of development goals and development sustainability.

Jambi Province is one of the regions with high population growth rate in Indonesia. In the period 2000 -2015, the population growth of Jambi Province reached 2.71 percent

per year and was higher than the national average of 1.58 percent per year.

There are three components of population growth: fertility, mortality, and migration. Fertility is the most decisive and possible component to be implemented in the context of policies and efforts to slow down population growth in the region (Hardiani & Junaidi, 2018).

Family Planning (FP) programs, officially known as Population, Family Planning, and Family Development Programs (Program Kependudukan Keluarga Berencana dan Pembangunan Keluarga/PKKBPK), coordinated by a government institution, called National Population and Family Planning Board (Badan Kependudukan dan Keluarga Berencana Nasional/BKKBN), are potential solutions to control population growth (Septalia & Puspitasari, 2016)

One of FP programs is using contraception to prevent unwanted pregnancies (Goldsmith et al. 2008), as well as to minimize maternal mortality and maternal morbidity associated with unintended pregnancy, to reduce the risk of infant mortality, to reduce the number of abortions, and to prevent HIV (Tsui et al., 2010; Glasier & Gebbie, 2016; Peipert et al., 2012; Mehra et al., 2012; Cleland et al., 2012; Espey & Ogburn, 2011) Delaying the first birth of young women is expected to increase the opportunities for education, training, and employment with increased productivity (Benagiano et al., 2007).

Based on its period of effectiveness, contraceptive methods are divided into two types. First, LAPMs (long-acting and permanent methods) or long-term methods of contraception are contraceptives that can last three years to lifetime, including IUD, implants, female sterilization (FS), and male sterilization (MS). Second, non-LAPMs include condoms, pills, injections, and other methods other than LAPMs.

One of the determinants of the decreased total fertility rate is the use of contraception for a long period. It can be realized if couples of reproductive age use long-term contraception, namely IUD, implants, FS, and MS. At the national level, the number of modern method users did not meet the target for the 2014-2019 BKKBN Strategic Planning. It was 57.20 percent in 2017 (BKKBN, BPS, Kemenkes & ICF, 2018) which was below the targeted number of 61.30 percent in the BKKBN Strategic Planning (2019). The same is true of LAPMs, which was just 13.3 percent in 2017. The low percentage of LAPM use is due to higher costs (Septalia & Puspitasari, 2016)

Achievement rate of modern methods of contraception in Jambi Province is relatively good and the figure is above the national average rate. In 2017, the proportion of modern method users in Jambi Province was 63.5 percent, while at the national level there were 57.4 percent of modern method users. Nonetheless, the number of LAPM users in Jambi Province has not yet met the goal. LAPM users in Jambi Province were just 11.7 percent in 2017. This was not only below the national average but also far below the 2014-2019 BKKBN Strategic Planning of 23.5 percent in 2019 (BKKBN, BPS, Kemenkes & ICF, 2018)

As there is a high fertility rate in couples of reproductive age and low use of long-term contraceptive methods (LAPMs) in Jambi Province, it is important to study the profile and determinants of LAPM users in Jambi Province in the context of the formulation of appropriate policies to increase the use of LAPMs and decrease the birth rate.

The contraceptive selection determinants in this study are based on Green (1980) and Health Belief Model Theory (1950) developed by Godfrey Hochbaum and Irwin Rosenstock. Green Theory states that the determinants influencing an individual to take action are influenced by two factors: behavior causes and non-behavior causes. Furthermore, according to studies by Septalia & Puspitasari (2016) and Secura et al.

(2010), the significant factor influencing the contraceptive selection is non-material cost in terms of experience, cultural barriers, mental barriers and accessibility barriers. According to Secura et al. (2010), long-term contraception is the first choice if there is no cost barrier.

Referring to the two theories, Notoatmodjo (2014) suggested that there are several factors related to the use of LAPMs, namely the predisposing factors that facilitate and underlie certain behaviors. These factors include knowledge, attitudes, beliefs, and values. This also includes age, educational level, employment, and the number of surviving children. Enabling factors are variables that enable or facilitate behaviors or action. These factors include facilities and infrastructure for encouraging health behaviors, such as Community Health Centers (Pusat kesehatan masyarakat/Puskesmas), Integrated Services Posts (Pos Pelayanan Terpadu/Posyandu), hospitals, availability of medicines, availability of contraceptive devices, etc. Reinforcing factors are factors that encourage or reinforce behavior. Sometimes, someone does not have a healthy behavior even though he/she knows and is able to have it. These factors include the support of the husband, friends' influence, and the role of health workers. In this sense, the attitude of a person can determine his or her actions and behavior.

In their research in North Africa, Duze & Mohammed (2006) found that there are main factors related to contraceptive use, namely the level of welfare, the level of parity, the level of education, knowledge of contraceptive methods, and perceptions of birth control. Widyastuti & Mahmudah (2012) found, in their research in Tawangmangu, that knowledge, parity, age, decision-making, selection reasons, educational attainment, employment, and income are determinants of contraceptive selection.

Herlinawati, et al. (2013) in their research in Medan found that parity, attitudes, and family support had an impact on woman's decision to choose FS as their method of contraception. Family/husband support is particularly noticeable in the research conducted by Ningrum, et al. (2017). Meanwhile, Hartanto (2004) has shown that the use of injections can be influence by a number of factors, including age, educational attainment, employment, income, support from husband, and knowledge.

In addition, Aldriana (2013) found that the factors determining the use of IUD are support from husband, the actual number of surviving children, mothers' knowledge of IUD, and the attitude of FP officers. Similar results have also been found by Budiarti, et al. (2017). They reported that there is a significant correlation between age, occupation/ employment, and support from husband or partner, and the use of long-term contraceptive methods by FP acceptors. Sudarti & Kurniawidjaya (2013) have identified a significant relationship between educational attainment, occupation, the actual number of surviving children, knowledge, support from husband, and distance to the place of service, and the use of LAPMs. Rizani (2019) found that the use of long-term contraception is significantly affected by age, the number of surviving children, knowledge, attitudes, side effects, health status, and costs.

Research conducted by Dewi & Notobroto (2014) identified three factors significantly influencing the use of long-term contraceptive, namely maternal age, the number of surviving children, and mothers' knowledge of contraceptive methods. The influence of maternal age on the use of LAPMs was also indicated in the research of Mirawati, et al. (2019). Related to the knowledge of FP devices, there are two studies that specifically support these findings (Sari, et al. 2019; Canda, et al. 2018)

Research by Qurniyawati (2016) identified factors that significantly influence long-term contraception use, including the role of officers and the role of community leaders. The findings of this study are also consistent with those of Kumaladewi & Pelupessy

(2018). The latter found that support from husband, environmental factors, the role of health workers are significant factors in choosing implants by FP acceptors.

Better knowledge of contraceptive methods is not aligned with the number of contraceptive uses (Tilahun et al., 2013), a strategy is needed to improve understanding and knowledge. In addition, the presence of medical services can affect societal awareness in order to improve long-term contraception use Heard, et al. (2004). The best approach for reducing the prevalence rate of pregnancy is to encourage long-term contraceptive methods. It must be followed by counseling to raise awareness of the importance of delaying pregnancy, the side effects of contraceptives, and its substitution (Tilahun et al., 2013; Melka, et al. 2015). The existence of text messaging service may increase the knowledge of family planning (Johnson et al., 2017).

Based on these findings, it is important to study the profile and determinants of LAPM users in Jambi Province in the context of the formulation of appropriate policies to increase the use of LAPMs and decrease the birth rate. The objective of the study is to analyze as follows: 1) the determinants of LAPMs and non-LAPMs used by couples of reproductive age in Jambi Province; 2) the relationship between couples of reproductive age and use of LAPMs in Jambi Province.

METHODS

Main data used in this study are taken from raw data from the 2018 PMA of KKBPK (Performance Monitoring and Accountability of Population, Family Planning, and Family Development programs) in Jambi Province. The number of samples was 849 couples of reproductive age who used contraceptive methods / methods in Jambi Province.

Binary logit regression is used to analyze the determinants of the selection between LAPM and non-LAPM by couples of reproductive age as FP acceptors, using the following equation:

$$Y = \beta_0 + \beta_1 X_1 + \beta_{2.D1} X_{2.D1} + \beta_{2.D2} X_{2.D2} + \beta_{2.D3} X_{2.D3} + \beta_{3.D1} X_{3.D1} + \beta_{3.D2} X_{3.D2} + \beta_{3.D3} X_{3.D3} + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_{8.D1} X_{8.D1} + \beta_{8.D2} X_{8.D2} + \beta_9 X_9 + \beta_{10} X_{10} + \beta_{11} X_{11} + e_i$$

where:

Y = probability of FP acceptors in couples of reproductive age choosing LAPM (0 = Non-LAPM; 1 = LAPM)

X1 = woman's age (years), the base group category: <= 29 years old, so that
    X1.D1   1 = 30-39; 0 = others
    X1.D2   1 = 40 +; 0 = others

X2 = woman's educational attainment (the base group category: Primary School and below), so that:
    X2.D1   1 = Junior High School; 0 = others
    X2.D2   1 = Senior High School; 0= others
    X2.D3   1 = Higher Education; 0= others

X3 = partner's/husband's educational attainment (the base group category: Primary School and below), so that:
    X3.D1   1 = Junior High School; 0 = others
    X3.D2   1 = Senior High School; 0= others
    X3.D3   1 = Higher Education; 0= others

X4 = woman's employment status (0 = not employed, 1 = employed)

X5 = ethnicity (0 = Jambi Malay, 1 = non-Jambi Malay)

X6 = the actual number of surviving children (person)

X7 = the difference between the perceived ideal and actual number of surviving children

(person)

X8 = the desire for more children (the base group category: want no more children) so that:

  X8.D1   1= want more children; 0 = others

  X8.D2   1 = undecided; 0 = others

X9 = scores of knowledge of contraceptive methods

X10 = economic conditions (0 = lower-middle, 1 = upper-middle)

X11 = residence (0 = rural, 1= urban)

In the next stage, two approaches are used to examine the relationship between the characteristics of couples of reproductive age and the selection of one of the LAPMs. For continuous variables/characteristics (age, the actual number of surviving children, the difference between the ideal and actual number of surviving children, and knowledge of contraceptive methods), One-way ANOVA test (analysis of variance) was conducted. On the other hand, for categorical variables/characteristics (educational attainment, employment status, ethnicity, the desire for more children, wealth quintile, and urban-rural residence), Chi-square test was carried out.

RESULTS AND DISCUSSION

Contraceptive use based on its method in Jambi Province

Based on the methods of contraception, 5.42 percent of couples of reproductive age in Jambi Province use traditional methods (periodic abstinence, withdrawal, and other traditional methods), while 94.58 percent use modern methods.

Modern methods based on its period of effectiveness can be classified into two types: LAPMs (long-acting and permanent methods) and non-LAPMs. LAPMs are methods of contraception that can last three years to lifetime, including IUD, implants, FS, and MS. Non-LAPMs are methods other than LAPMs, including condoms, pills, injections, and others.

Of the total users of modern contraceptives, only 18.26 percent use LAPMs. Most of the others (76.33 percent) are non-LAPM users. Implants are the most commonly used long-acting and permanent method (LAPM) by FP acceptors. More than half (58.06 percent) of the users choose implant, followed by FS (23.87 percent) and IUD (18.06 percent). In addition, of non-LAPMs, the use of injections is prevalent. More than two thirds (66.82 percent) of non-LAPM users choose injections (for 1 and 3 months), followed by pills at 28.70 percent. The remaining small proportions are male condoms (4.17 percent) and Lactational Amenorrhea Method (LAM) (0.31 percent).

Profile of active FP acceptors of LAPM users in Jambi Province

The profile of LAPM users in Jambi Province was evaluated on the basis of user characteristics, including woman's age, educational attainment of couples of reproductive age (husband and wife), ethnicity, the actual number of surviving children, knowledge of contraceptive methods, economic conditions, place of service, and urban-rural residence.

Age

Age affects directly and indirectly the behavior and patterns of individual decision-making. The influence of age can be attributed to experience and maturity that accompany the increase in a person's age. In the sense of family planning, the younger the woman of reproductive age use LAPM, the more effective the effort in declining the birth rate.

The age of women using LAPM is typically older than non-LAPM users. The average age of LAPM users is 36.47 years, while the average age of non-LAPM users is 34.56 years (Table 1).

Table 1. Distribution of couples of reproductive age based on the woman's age and the contraceptive method in Jambi Province, 2018

Age group	LAPM			Total LAPM	Non-LAPM
	FS	Implants	IUD		
=< 29	2.70	28.89	17.86	20.65	10.65
30 – 34	13.51	14.44	17.86	14.84	16.36
35 – 39	40.54	26.67	28.57	30.32	21.45
40 – 44	24.32	13.33	21.43	17.42	23.92
45 - 49	18.92	16.67	14.29	16.77	17.90
Total	100.00	100.00	100.00	100.00	9.72
Average	39.11	35.34	36.61	36.47	34.56

Source: 2018 PMA (processed data)

Based on age distribution, the largest proportion of LAPM users is in the age group 35-39. Based on its type of LAPMs, the pattern is the same for FS and IUD. However, there is a small different in implants with the highest percentage in the age group 29 and under. In comparison, the average age of FS users is 39.11 years, followed by IUD users of 36.61 years, and implant users of 35.34 years.

Educational attainment

Education is one of the factors that affect one's decisions on various aspects of life (Yulmardi, Amir and Junaidi, 2020). In the context of family planning, the higher the individual's educational level is, the better the ability to make decisions on family planning.

Women of reproductive age who are also LAPM users have better education than non-LAPM users. As many as 39.20 percent of non-LAPM users have completed primary education or below, while just 27.74 percent for LAPM users. on the other hand, 30.32 percent and 14.19 percent of LAPM users have finished senior high school and higher education respectively. Conversely, for non-LAPM users, the percentage is just 25.15 percent for senior high school and 10.65 percent for higher education (Table 2).

Table 2. Distribution of couples of reproductive age based on the woman's educational attainment and the contraceptive method in Jambi Province, 2018

Educational Attainment	LAPM			Total LAPM	Non-LAPM
	FS	Implants	IUD		
=< Primary School	27.03	33.33	10.71	27.74	39.20
Junior High School	18.92	32.22	25.00	27.74	25.00
Senior High School	43.24	24.44	32.14	30.32	25.15
Higher Education	10.81	10.00	32.14	14.19	10.65
Total	100.00	100.00	100.00	100.00	100.00

Source: 2018 PMA (processed data)

The distribution of the contraceptive method based on the husband's educational attainment is presented in detail in Table 3.

Table 3. Distribution of couples of reproductive age based on the husband's educational attainment and the contraceptive method in Jambi Province, 2018

Educational Attainment	LAPM			Total LAPM	Non-LAPM
	FS	Implants	IUD		
=< Primary School	16.22	31.11	10.71	23.87	41.51
Junior High School	21.62	32.22	14.29	26.45	22.84
Senior High School	43.24	27.78	39.29	33.55	27.78
Higher Education	18.92	8.89	35.71	16.13	7.87
Total	100.00	100.00	100.00	100.00	100.00

Source: 2018 PMA (processed data)

Educational attainment of husband of couples in reproductive age who choose LAPM is also comparatively higher than that of non-LAPM users. Of the total non-LAPM users, 41.51 percent are husband in primary school or below group. On the other hand, LAPM users with husband in primary school or below group are only 23.87 percent. 33.55 percent and 16.13 percent of husband of couples using LAPM have completed senior high education and higher education, respectively. Conversely, only 27.78 percent and 7.87 percent of husband in non-LAPM group have completed senior high education and higher education, respectively.

Actual number of surviving children

The average actual number of surviving children of LAPM users is significantly higher than that of non-LAPM users. On average, LAPM users have 2.39 children, while non-LAPM users have 2.15 children (Table 4).

Table 4. Distribution of couples of reproductive age based on the actual number of surviving children and the contraceptive method in Jambi Province, 2018

Number of children	LAPM			Total LAPM	Non-LAPM
	FS	Implants	IUD		
0	0.00	0.00	7.10	1.29	0.62
1 – 2	16.20	77.70	50.00	58.06	71.76
3 – 4	78.40	21.10	35.70	37.42	24.38
> = 5	5.40	1.10	7.10	3.23	3.24
Total	100.00	100.00	100.00	100.00	100.00
Average	3.30	2.03	2.36	2.39	2.15

Source: 2018 PMA (processed data)

Based on the methods of contraception, it can be stated that couples who choose FS have an average of 3.3 children, followed by IUD users with 2.36 children, and implant users with 2.03 children. The largest proportion (78.40 percent) is FS group with 3-4 children.

Difference between the perceived ideal number (PIN) and the actual number (AN) of surviving children

In general, it can be stated that the average PIN of children of LAPM users is 2.46 children which is relatively lower than that of non-LAPM users of 2.53 children. In contrast, the AN of surviving children of LAPM users is higher than that of non-LAPM users (Table 5).

Table 5. Distribution of couples of reproductive age based on pin and an of surviving children and the contraceptive method in Jambi Province, 2018

Description	LAPM			Total LAPM	Non-LAPM
	FS	Implants	IUD		
PIN < AN	64.86	11.11	21.43	25.81	15.43
PIN = AN	29.73	53.33	39.29	45.16	45.37
PIN > AN	5.41	35.56	39.29	29.03	39.20
Total	100.00	100.00	100.00	100.00	100.00
Average PIN	2.62	2.36	2.61	2.46	2.53
Average AN	3.30	2.03	2.36	2.39	2.15
Difference between PIM and AN	-1.32	0.33	0.25	0.07	0.38

Source: 2018 PMA (processed data)

In terms of the difference between the PIN and AN, LAPM users have a smaller difference than non-LAPM users. In other words, the mean AN of surviving children of LAPM users is closer to the desired ideal number of children relative to non-LAPM users. Based on the type of LAPMs, couples in FS group have a lower desired ideal number

relative to the mean number of surviving children. In other words, they have more children than their PIN.

Based on its type of LAPMs, couples in FS group have lower PIN compared to the mean AN of surviving children. In other words, they have more children than their desired ideal number. Based on its proportion, almost one-third (64.86 percent) of couples in FS group have more children than their PIN. In addition, IUD users and implant users have more PIN than their AN of surviving children.

Desire for more children

Almost three-quarters (72.90 percent) of LAPM users stated that they did not want more children. The remaining 17.42 percent said they wanted more children and 9.86 percent had not decided.

Compared to non-LAPM users, the proportion of LAPM users who do not wish to have more children is relatively higher. Among non-LAPM users, only about half (54.91 percent) of them did not want more children. Almost one-third (30.86 percent) wanted more children, and the rest (9.72 percent) had not decided (Table 6).

Table 6. Distribution of couples of reproductive age based on the desire for more children and the contraceptive method in Jambi Province, 2018

Description	LAPM			Total LAPM	Non-LAPM
	FS	Implants	IUD		
Want no more children	94.59	66.67	64.29	72.90	54.91
Want more children	0.00	22.22	25.00	17.42	30.86
Undecided	5.41	11.11	10.71	9.68	9.72
Total	100.00	100.00	100.00	100.00	100.00

Source: 2018 PMA (processed data)

Based on the type of LAPMs, there is a common pattern between implants and IUD users on the desire for more children. About a third of implant users and IUD users said they wanted no more children. Moreover, especially due to its permanent nature, FS users are expected to have no desire for more children. However, the data reveals that there are still 5.41 percent who are either in doubt or have not yet decided whether or not they want to have additional children.

Knowledge of methods of contraception

In general, it can be argued that users of LAPMs have a better knowledge of contraceptive methods than non-LAPM users. The average score of knowledge (in contraceptive methods) in the LAPM user group is 8.39 (knowing 8-9 out of 15 methods), while the non-LAPM user group score is 7.58 (knowing 7-8 out of 15 methods).

Table 7. Distribution of couples of reproductive age based on the knowledge of contraceptive methods and the contraceptive method in Jambi Province, 2018

Score	LAPM			Total LAPM	Non-LAPM
	FS	Implants	IUD		
0 - 5	8.11	15.56	0.00	10.97	18.67
6 – 10	70.27	73.33	89.29	75.48	71.30
11 – 15	21.62	11.11	10.71	13.55	10.03
Total	100.00	100.00	100.00	100.00	100.00
Average score	8.92	8.03	8.82	8.39	7.58

Source: 2018 PMA (processed data)

Based on its type of LAPMs, FS users have the highest knowledge score of 8.92. IUD users are in the second place with a score of 8.83 and followed by implant users of 8.03.

Economic conditions

In general, it can be stated that LAPM users have better economic condition than non-LAPM users. Nearly half (47.74 percent) of LAPM users are in the upper middle and the highest wealth quintile, and just around one third (31.61 percent) are in the lower middle and the lowest wealth quintile. on the other hand, almost half (47.99 percent) of non-LAPM users are in the middle lower and lowest economic conditions (Table 8).

Table 8. Distribution of couples of reproductive age based on the economic conditions and the contraceptive method in Jambi Province, 2018

Wealth Quintile	LAPM			Total LAPM	Non-LAPM
	FS	Implants	IUD		
Lowest	13.51	18.89	3.57	14.84	25.93
Lower-middle	21.62	17.78	7.14	16.77	22.07
Middle	13.51	22.22	25.00	20.65	18.52
Upper-middle	18.92	27.78	25.00	25.16	20.22
Highest	32.43	13.33	39.29	22.58	13.27
Total	100.00	100.00	100.00	100.00	100.00

Source: 2018 PMA (processed data)

Based on its type of LAPMs, the economic conditions of FS and implant users do not present a clear pattern. In other words, they are fairly distributed in economic conditions. However, IUD users are dominated by couples with better economic conditions. About two-thirds (64.29 percent) of IUD users are in the upper middle and the highest wealth quintile, and only 10.71 percent are in the lower middle and the lowest wealth quintile.

Urban-rural residence

Based on residence, both the proportion of LAPM users and non-LAPM users in rural areas is greater than urban areas (Table 9). This is due to more rural areas (as well as population) than urban areas in Jambi Province. In 2018, there were 1,399 rural administrative areas and there were only 163 urban administrative areas in Jambi Province

Table 9. Distribution of couples of reproductive age based on the urban-rural residence and the contraceptive method in Jambi Province, 2018

Residence	LAPM			Total LAPM	Non-LAPM
	FS	Implants	IUD		
Urban	27.03	15.56	50.00	24.52	28.09
Rural	72.97	84.44	50.00	75.48	71.91
Total	100.00	100.00	100.00	100.00	100.00

Source: 2018 PMA (processed data)

Based on the proportion of each type of LAPM, it can be stated that the largest proportion of LAPM used in urban areas is IUD, followed by FS, and implants. In comparison, the most commonly used LAPMs in rural areas are implants, followed by FS, and IUD.

Model of LAPM and non-LAPM selection on active FP acceptors in Jambi Province

Overall model fit test of the model includes three approaches: Omnibus Test of Model Coefficients, Hosmer and Lemeshow, and Classificiation Table 2 x 2. Based on the Omnibust Test of Model Coefficients, the statistical value of Chi_square was estimated at 67.682 with a p-value of 0.000. Therefore, it can be inferred that the independent variables in the model concurrently affect the decisions and behaviors of active FP acceptors in the selection of contraceptive methods between LAPMs and non-

LAPMs. Based on the Hosmer and Lemeshow test, the Chi-square value was 7.507 with a p-value of 0.483. Because the Chi_square is not significant (p>0.05), it can be concluded that the predicted probability is consistent with the observed probability. In other words, there is no difference between the model and the data so the model is fit.

Table 10. Omnibus Test of model coefficients and Hosmer and Lemeshow for the model of LAPMS and Non-LAPMS selection

	Chi-square	df	Sig.
Omnibus Test of Model Coefficients	67.682	16	000
Hosmer and Lemeshow Test	7.506	8	.483

Source: 2018 PMA (processed data)

Classification table 2 x 2 (Table 11) shows how well the model groups cases into two categories (active FP acceptors using LAPM and non-LAPM). The overall accuracy of the prediction is 80.7 percent, while that of active non-LAPM acceptors is 98.6 percent and that of LAPM acceptors is 5.8 percent. In other words, the accuracy of the model in estimating the probability of active non-LAPM acceptors is relatively greater than the LAPM acceptors.

Table 11. Classification 2 X 2 for the model of LAPMS and Non-LAPMS selection

Observation	Predicting category		Accuracy of prediction
	Non-LAPM	LAPM	
Category			
Non-LAPM	639	9	98.6
LAPM	146	9	5.8
Total			80.7

Source: 2018 PMA (processed data)

The estimation of the coefficients and the partial hypothesis testing of the model are shown in Table 12. In terms of age, it can be stated that woman's age does not have a significant effect on the choice between LAPM and non-LAPM. In other words, there is no difference in the selection between LAPM and non-LAPM based on their age. This finding is not in line with some previous studies (Widyastuti, & Mahmudah, 2012; Budiarti, et al. 2017; Rizani, 2019; Dewi & Notobroto, 2014; Mirawati, et al. 2019).

There is no difference in the chances of LAPM or non-LAPM selection based on the educational attainment. This is demonstrated by the insignificant coefficients (X2.D1, X2D2, and X2D3) of the model. This finding is not in line with some previous studies (Duze & Mohammed, 2006; Sudiarti & Kurniawidjaya, 2013). But this finding is supported by research Fitrianingsih & Melaniani (2016)

However, husband's educational attainment has a significant influence on the preference. Based on the odds ratio, woman with husband who have finished junior high school education (X3.D1) have a 2.110 times (higher) chance of choosing LAPM relative to woman with husband in primary or lower education (base category). Woman with husband in senior high school group (X3.D2) and in higher education group (X3.D3) have a 2.077 times and a 3.219 times (higher) probability of preferring LAPM relative to woman with husband graduating from primary school and lower level education.

Furthermore, in terms of the employment status of the woman (X4), employed women tend to choose LAPM relative to unemployed woman. By having a significant positive coefficient and taking into account the odds ratio, working woman is 1.656 times (higher) likely to choose LAPM relative to unemployed woman. This result is in line with previous studies (Budiarti, et al. 2017; Sudiarti & Kurniawidjaya, 2013; Aryati, et al. 2019)

Ethnicity (X5) has no significant effect on the selection between LAPMs and non-LAPMs. In other words, there is no significant difference between Jambi Malays and other ethnic groups in Indonesia in the preference of LAPM and non-LAPM.

The number of surviving children (X6) does not significantly influence the selection between LAPM and non-LAPM. This finding is not in line with some previous studies (Duze & Mohammed, 2006; Widyastuti & Mahmudah, 2012; Sudiarti & Kurniawidjaya, 2013; Dewi & Notobroto, 2014).

However, the difference between the perceived ideal and actual number of surviving children (X7) shows a significant effect. Based on the odds ratio of 0.602 (smaller than 1), couples of reproductive age with greater positive difference value (the perceived ideal number is less than the number of surviving children) are less likely to prefer a long-acting and permanent method of contraception (LAPM).

Desire for more children (X8.D1) has a significant negative effect on the selection between LAPM and non-LAPM. This finding is also supported by several previous studies (Fitrianingsih & Melaniani, 2016)

The odds ratio of 0.602 indicates that couples who want another children have a 0.602 times (lower) chance of choosing LAPM relative to those that do not want another children (base category). It can be seen from the insignificance of the coefficient of X8.D2.

Table 12. Estimation of the model of LAPM and Non-LAPM selection

Variable	Coef.	S.E.	Wald	df	Sig.	Odds Ratio
X1	-.050	.165	.093	1	.760	.951
X2			1.219	3	.748	
X2.D1	.207	.268	.597	1	.440	1.230
X2.D2	.222	.316	.494	1	.482	1.249
X2.D3	-.034	.419	.006	1	.936	.967
X3			11.326	3	.010	
X3.D1	.747	.271	7.577	1	.006	2.110
X3.D2	.731	.295	6.120	1	.013	2.077
X3.D3	1.169	.400	8.522	1	.004	3.219
X4	.504	.225	5.021	1	.025	1.656
X5	-.079	.194	.167	1	.683	.924
X6	.019	.142	.019	1	.891	1.020
X7	-.275	.128	4.632	1	.031	.760
X8			3.211	2	.201	
X8.D1	-.507	.305	2.760	1	.097	.602
X8.D2	.053	.333	.026	1	.873	1.055
X9	.123	.048	6.603	1	.010	1.131
X10	.363	.222	2.684	1	.100	1.438
X11	-.854	.243	12.322	1	.000	.426
Constant	-2.931	.606	23.418	1	.000	.053

Source: 2018 PMA (processed data)

While woman's educational attainment does not have a significant impact, woman's knowledge of contraceptive methods (X9) clearly shows a significant and positive effect. Woman who knows more contraceptive methods are more likely to choose LAPM. Looking at the odds ratio, it can be stated that learning one more method would increase the chance of 1.131 times (higher) preferring LAPM. The same result is also found in previous studies including (Duze & Mohammed, 2006; Widyastuti & Mahmudah, 2012; Sudiarti & Kurniawidjaya, 2013; Dewi & Notobroto, 2014; Sari, et al. 2019; Canda, et al. 2018).

Economic condition (X10) has a significant effect. Based on its odds ratio, couples of reproductive age in middle to upper class have a 1.438 times (higher) probability of preferring LAPM relative to the middle to lower class (base category). This finding is also supported by several previous studies (Duze & Mohammed, 2006; Widyastuti & Mahmudah, 2012).

Furthermore, in terms of residence, there is a true difference in the selection between LAPM and non-LAPM by couples of reproductive age in urban and rural areas. The odds ratio of 0.426 shows that the probability of urban couples is 0.426 times (lower) to choose LAPM relative to rural couples (base category). Place of residence related to environmental factors. The influence of environmental factors on the selection between LAPM and non-LAPM is supported by previous research (Kumaladewi & Pelupessy, 2018).

Relationship between the characteristics of couples of reproductive age and the selection of the type of LAPMs in Jambi Province

Analysis of the relationship between the characteristics of the couples and the preferences of contraceptives used two different approaches. One Way ANOVA (analysis of variance) was used to evaluate continuous variables/characteristics (age, the number of surviving children, the difference between the ideal and actual number of surviving children, and knowledge of contraceptive methods). Meanwhile Chi-square test was used to analyze categorical variables/characteristics (educational attainment, employment status, ethnicity, the desire for more children, wealth quintile, and urban-rural residence). A summary of the test is given in Table 12, and the detailed output of the calculation is attached.

Table 13. Characteristics of couples in reproductive age and the selection of LAPMS

Characteristics	Analysis Method	Chi-Square/ F	Sig.
Age	ANOVA	3.791	0.025
Woman's educational attainment	Chi-Square Test	16.575	0.011
Husband's educational attainment	Chi-Square Test	19.908	0.003
Woman's employment status	Chi-Square Test	4.271	0.118
Woman's ethnicity	Chi-Square Test	1.738	0.419
Number of surviving children	ANOVA	24.318	0.000
Difference between the PIN & AN of children	ANOVA	18.550	0.000
Desire for more children	Chi-Square Test	12.634	0.013
Knowledge of contraceptive methods	ANOVA	2.950	0.055
Wealth quintile	Chi-Square Test	6.932	0.031
Urban-rural residence	Chi-Square Test	13.857	0.001

Source: 2018 PMA (processed data)

Based on Table 13, woman's age has a significant relationship to the selection of type of LAPMs. Table 1 confirms statistically that older woman has a higher tendency to choose FS, followed by IUD and implants.

The education of the wife and husband has a significant relationship with the choice of LAPM type. Referring to Table 2 and Table 3 in the previous section, it is statistically confirmed that couples of reproductive age (wife and husband) with higher educational level tend to use IUD, followed by FS and implants.

As for the woman's employment status, while it affects the selection between LAPM and non-LAPM (Table 12), it does not influence on the selection of method between LAPMs. In other words, there is no significant difference between working woman and unemployed woman in the use of FS, IUD, or implants.

There is also no significant relationship between woman's ethnicity and the

selection of LAPM type. In other words, besides its insignificant influence on the choice between LAPM and non-LAPM, ethnicity is not correlated either with the type of LAPMs (FS, implants, and IUD).

The number of surviving children is relation to the selection of one LAPM type. Referring to Table 4 in the previous section, it is statistically confirmed that couples with more children tend to choose FS, followed by IU, and implants. In line with this fact, the difference between the perceived ideal and actual number of surviving children and the desire for more children also have significant relationships with the selection between FS, implants, and IUD.

Table 12 indicates that the selection between FS, implants, and IUD is also closely related to the economic conditions of couples. Referring to Table 8 in the previous section, the significant Chi-square probability of the variable has been statistically confirmed that IUD users tend to come from couples with better economic conditions than FS and implant users.

Knowledge of contraceptive methods also reveals a strong relationship to the preference of FS, implants, and IUD. This finding reinforces the trend seen in Table 7, which indicates that FS users have a better knowledge of contraceptive methods than IUD and implant users.

Based on urban-rural residence, there are variations in patterns in the use of LAPM devices between urban couples and rural couples. The significant Chi-square probability for the variable has statistically confirmed that the largest proportion in LAPM use in urban area is IUD, followed by FS, and implants. On the other hand, the largest use of LAPM type in rural area is implants, followed by FS, and IUD.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Based on the methods of contraception, 5.42 percent of couples of reproductive age in Jambi Province use traditional methods, while 94.58 percent use modern methods. Of the total users of modern methods, only 18.26 percent use long-acting and permanent methods of contraception. Most of the others (76.33 percent) are non-LAPM users. The most commonly used LAPM by FP acceptors is implants, followed by FS, and IUD. By comparing the characteristics of LAPM users and non-LAPM users, it can be inferred that LAPM users in Jambi Province are distinguished by comparatively older age, better educational level, more children, most of whom do not want more children, better knowledge of contraceptive methods, and better economic conditions. In addition, the proportion of urban couples of reproductive age using LAPMs tends to be smaller than non-LAPM users. By contrast, rural couples using LAPMs tend to be larger in number than non-LAPM users.

Factors that have a significant impact on the selection between LAPMs and non-LAPMs by couples of reproductive age in Jambi Province are husband's educational attainment, woman's employment status, the difference between the ideal and actual number of surviving children, the desire for more children, knowledge of contraceptive methods, economic conditions, and urban-rural residence. Characteristics of reproductive age couples that are significantly related to the selection of contraceptive devices (of modern methods) (FS, implants, and IUD) are woman's age, woman's educational attainment, the number of surviving children, the difference between the ideal and actual number of surviving children, the desire for more children, knowledge of contraceptive methods, economic conditions, and urban-rural residence.

Recommendations

In order to boost the effectiveness of contraceptive methods in the reduction of birth rates, the government, in this case BKKBN as the main stakeholder, should further increase the proportion of the use of LAPM. Policies or efforts to directly improve the use of LAPMs are proposed as follows: 1) increasing the number of FS and IUD socialization due to the low proportion of the use of these two methods; 2) increasing the number of LAPM socialization for young couples of reproductive age (34 years and under) due to the low proportion of LAPM use of this age group; 3) the education of the husband has a significant impact on the couples' preference in LAPMs. The socialization about the importance of family planning, contraceptive methods, and reproductive health must therefore be increased for husbands. In addition, woman's knowledge of contraceptive methods also needs to be improved as it is also a significant factor in LAPM choices; 4) the average ideal number of children in LAPM users is not as expected (above 2.0). This is one of the factors that prevents women from using LAPMs. There is therefore a great need to strengthen the socialization of the slogan 'two children are better' in Jambi Province.

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Sustainable coastal reclamation for community welfare in Bangkalan Regency, Madura Island, East Java

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Abstract

Rapid population growth and the market expansion in various sectors in Bangkalan Regency have contributed to a rise in land demand. Therefore, the creations of new areas through land/coastal reclamation projects are taken place in this region. Based on this phenomenon, this study aims to analyze the potential and benefits of reclamation in Bangkalan Regency. The study uses a socio-legal approach and is a field research with *verstehen* (hermeneutic) approach. Data were obtained from informants, especially residents who have benefited from reclaimed land, village apparatus, and related agencies. Data were analyzed using triangulation technique. The results of the study found that in Bangkalan Regency, tourism in reclaimed land involves coastal communities, including fishermen, to manage the area, and it can improve community welfare. Furthermore, reclaimed land is used to expand their current land for settlement and business, as well as for the development of natural resource conservation such as mangroves and fish ponds. Reclaimed land in Bangkalan Regency is used for tourist destinations and settlement areas for the communities with their business.

Keywords: Reclaimed land, Sustainable, Welfare

JEL Classification: O13, O18

INTRODUCTION

In the era of globalization, the demand for land is growing, both for residential and business purposes. The large demand for the land has prompted the government to try to meet the needs of the land. One alternative is to transform the coastal zone into a new land known as coastal reclamation.

In theory, reclamation means an attempt to form new land in order to meet the needs of the land by hoarding or filling the area with certain materials. Reclamation is also one of the measures in urban expansion (Ni'am, 2005). Furthermore, Law No. 27 of 2007 jo Law No. 1 of 2014 on Management of Coastal Zone and Small Islands stated that reclamation in the coastal zone may only be carried out if the social and economic benefit derived is larger than the social and economic cost.

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The purposes of reclamation are to provide new jobs/business areas, to engineer coastal zone for better use, to improve coastal environment quality, to provide public utilization area in the coastal zone, and to provide housing for all income brackets (Sidarta, 1998). Suhud (1998) argued that the aim of coastal reclamation is to cater more to economic development interests. The availability of new land would decrease the demand for land, potentially reestablish watercrafts, open up opportunities for high-value development, strengthen marine tourism, increase government revenue, and boost economic growth of coastal communities. Based on its purposes, Asiyah, et al., (2015) suggested that the coastal reclamation would have a positive impact, in particular on the increasing quality and economic value of the coastal zone, the reduction of unproductive coastal land, the prevention of erosion, the improvement of aquatic ecosystem conditions, and the labor absorption.

Nevertheless, reclamation also has detrimental consequences both physically and socio-economically. In the physical aspect, reclamation would lead to the rise of turbidity level, marine pollution, siltation, increased risk of floods and puddle in coastal zone, and destruction of marine habitat and their ecosystems. In social-economic context, reclamation would bring socio-economic changes to coastal communities. These changes include difficulties in public access to coast and reduced livelihoods (especially for fishermen) (Huda, 2013; Retnowati, 2011; Djainal, 2012).

The negative impacts of coastal reclamation may be prevented by various activities depending on the terms of the location permit, environmental permit, and reclamation project permit stipulated in applicable regulations. If a requirement for obtaining a permit is not implemented, the government might reject or even cancel the coastal reclamation project even if the reclamation work has been carried out. In his research, Ruslin (2017) discovered the negative impacts of reclamation on the Losari Beach, Makassar City. As it experienced marine pollution and suffered a decline in sea water quality, the reclaimed land on the coast of Makassar was not properly utilized.

A number of regions in Indonesia, including Bangkalan Regency, have been actively creating new areas through coastal reclamation. Reclamation project in Bangkalan Regency has been taking place for a long time. Therefore, it is necessary to study the potential and benefits of reclamation in Bangkalan Regency.

METHODS

Research approach

This research used a socio-legal approach (Rahardjo, 2009). Research reconstructed social reality, by prioritizing the interaction between researchers and the objects being studied by sources and informants, and by taking note of the context that influences input, research process and results, as well as the interpretations.

Sources of data

Data in this research were obtained from informants, in particular those who had benefited from reclamation, villages apparatus in the research location, officials of the National Land Authority, Culture and Tourism Office, and Marine Affairs and Fisheries Office in Bangkalan Regency.

Data collection methods

This study is a field research using the *verstehen* (hermeneutic) approach. Primary data were collected through unstructured interview with open-ended questions with respondents that were eligible to provide data for this study. Furthermore, observations were conducted with the aim of obtaining data on physical aspects of research locations, such as patterns of reclaimed land usage, land ownership, and behavior of residents in coastal zone towards reclamation.

This study is complemented by library research on benefit theory with regard to the progressive law for public welfare and the positive law in the form of coastal reclamation-related policies, laws, and regulations.

Data processing and analysis

Data were analyzed using triangulation technique. This technique was conducted by comparing the data and its sources to capture differences and similarities based on qualifications, conditions of the data source when providing data, and its conformity to the documents as the research data.

Methods triangulation was carried out by checking of the consistency of findings through data-collection methods of participant observation and in-depth interviews, especially data from the parties related to the coastal reclamation in Bangkalan Regency.

Field notes were used to provide descriptions and data reflections for performing an interactive analysis (Sutopo, 1990). Data is classified through the indexing, shorting, grouping, and filtering. The next step is to reconstruct and analyze the problem in an inductive and qualitative approach after obtaining the results deemed to be valid and reliable. From the observation of the specific problem, we draw general conclusions (Sudarto, 2002).

The data analysis techniques in this research follow the interactive analytical model covering three concurrent flows of activity: data reduction, data display, and conclusion drawing/verification. The conclusion in this context is not equivalent to generalization.

RESULTS AND DISCUSSION

Potential of reclamation in Bangkalan Regency, Madura Island

Bangkalan Regency is regency in Madura Island, East Java Province, Indonesia. The region is located at the westernmost tip of Madura Island and is adjacent to the Java Sea in the north. Since the inauguration of the Suramadu Bridge, Indonesia's longest bridge, Bangkalan Regency has been the main gateway of Madura Island.

In consideration of its strategic position with its extensive supporting activities, Bangkalan Regency is a coastal city that has many beaches potentially to be developed as tourist destinations. One of the efforts to boost coastal tourism is the reclamation activity in Bangkalan Regency.

Tourism activities in reclaimed land involve the surrounding communities, including fishermen, to manage the coastal zone. Reclaimed land for business and tourism will restore the economic activities. The results of this study showed that tourism development in coastal zone received a positive response from the government of Bangkalan Regency, both through the provision of various assistances and the provision of supporting facilities.

The development in the reclaimed land for tourism in Bangkalan Regency needs to be supported by several factors, including:

a. *Economic factors*

The development of the reclaimed land for tourism requires costs for the construction of service facilities such as sports tourism, restaurants, etc. and for providing a distinctive visual aesthetics of the coastal zone. It also requires funds for management related to local government policies and community capacity in managing reclaimed land for tourism. Therefore, it needs support and financial assistance from local and provincial governments by involving village-owned enterprises (*Badan Usaha Milik Desa/*BUMDES).

b. *Social factors*

The development in the reclaimed land should be informed clearly in transparent manner, and completely covered, among others, management, financing, and Environmental Impact Assessment (*Analisis Dampak Lingkungan/*AMDAL). The goal is to enable the public to give aspirations as government input in determining its policies.

c. *Cultural factors*

Reclaimed land for tourism should be characterized by local culture with specific characteristics. The history of local customs is a culture that provides a special identity to the region and brings out certain attractions with particular features.

d. *Environmental factors*

The development in the reclaimed land should strive to protect the environment by preventing negative impacts on the environment and to utilize less productive land. The key is to create an integrated and sustainable monitoring system of the reclaimed land based on natural resources and human resources in the surrounding area.

Benefits of reclaimed land in Bangkalan Regency, Madura Island

The management and utilization of reclaimed land are permitted by law as long as it takes into account the supporting capacity, sustainable development, ecosystem linkage, biodiversity, and environmental conservation. It is stipulated in Article 15 of Government Regulation No. 16 of 2004 on Land Use Management, which stated: "The use and utilization of land on islets and plots of land bordering on coasts, lakes, dams, and/or rivers shall observe public interests, supporting capacity, sustainable development, ecosystem linkage, biodiversity, and environmental conservation."

Utilization of reclaimed land in Bangkalan Regency aims not only to settle residents with their business either as fishermen or traders, but also to preserve aquatic ecosystem. The authority of the community to exploit and use land in coastal zone is explained in the Basic Agrarian Law Annex II point 2: "the State can grant such land to an individual or corporate body under a certain right, e.g. *hak milik* (right of ownership), *hak guna-usaha* (right to cultivate), *hak guna-bangunan* (right of use of structures), or *hak pakai* (right of use) according to the allotment or the need or grant it to a certain Power Body [e.g. a Department, *Jawatan* (Service), or *Daerah Swatantra* (Autonomous Region)."

Based on the explanation in the Basic Agrarian Law, state-owned land could be granted to the people who need it. Application for land rights from reclamation are addressed to the government either by individuals or legal entities under the prevailing

laws and regulations. The findings of the research related to the utilization of reclaimed land in Bangkalan Regency are given as follows.

- In Kamal district, Socah district, Labang district, Kwanyar district, and Modung district, the reclaimed land is used by individuals for settlement and by the private sectors (business entities) for their business. The community stated that they own the land of their parent's legacy, and sell or buy under private deed. Reclaimed land is used for tourism attractions run by local communities in cooperation with the local government, and also for expanding their land for specific purposes including stalls, fishponds, and stores. The community is enthusiastic if the reclaimed land is utilized to develop coastal tourism in their area because it could improve their quality of life.
- In Kwanyar district, Modung district, and Sreseh district, the reclaimed land is used to expand the business. In Kamal district, there was defunct sea port. After the reclamation, it serves as the place for ship unloading and repair. The positive impact to communities is that many people who were initially working as fishermen are now laborers in the ship repair and ship unloading places.
- In Socah district, Peti Kemas Port was built in an area of 100 ha with the acquisition of privately-owned lands. The reclaimed land for seaport area is used for unloading of imported goods and loading of export goods, settlements, fish ponds, and lighthouse. Despite the community's rejection in the beginning, they finally gave their land because it's beneficial for them. Reclamation in Socah district has given the local communities positive benefit in terms of social, economic, cultural, and legal aspects. It experienced an increase in the economic value of regional incomes in the form of import-export taxes and employment.

The findings of this research are in line with the results of the study conducted by Reflis (2017) in the coastal reclamation of *Kawasan Ekonomi Khusus* (KEK)/Special Economic Zone Tanjung Api-Api. The reclamation project, which added 200 hectares of land in Palembang, South Sumatra, had a positive impact for the central government, the government of South Sumatra, and the government of Banyuasin Regency. KEK Tanjung Api-Api is a strategic location because it is the economic gate of Sumatra, Java, Bangka Belitung, Kalimantan, and other ASEAN countries. Another similar study conducted by Suganda, et al. (2009) found that the sustainable development in the reclaimed land of KEK Tanjung Api-Api should meet three pillars, namely environmental, economic, and social aspects. They are carried out in a balanced and dynamic manner with local development and nonlinear, and include feedback processes.

Based on data from Marine Affairs and Fisheries Office in Bangkalan Regency (2019), most coastal zones in Bangkalan Regency have mangrove forests, with two types of management of mangrove ecosystem: (1) mangrove ecosystem as greenbelt for ponds; (2) mangrove ecosystem as rehabilitation zone of protected areas. Mangrove ecosystem on the southern coast of Bangkalan Regency is a natural mangrove forest and a protected forest. While the mangrove forest in Modung district is a natural forest, the forest in Kwanyar district is a forest rehabilitation area. Mangrove area in reclaimed area can be used as a tourist destination.

The mangrove ecosystem is an area that connects coastal ecosystem and terrestrial ecosystem. It only grows in sheltered coastal areas without waves, storms, and erosion.

According to Alikodra (1999), mangrove forests have special characteristics: limited to particular locations, unique ecological role as opposed to the role of other ecosystems, high economic value of products, and renewable as a natural resource.

Reclaimed land for embankment as coastal belt is very beneficial to the sustainability of mangrove ecosystems. The management of mangrove forest conservation area in Bangkalan Regency is stipulated in 2009-2029 Spatial Plan of Bangkalan Regency. It is environmentally sound sustainable development with the aim of improving the social and economic condition of the community and providing the replanting for damaged mangrove forests. Mangrove forests are one of the most important parts of the entire regional development system (Alikodra, 1999).

Coastal residents can make high-value mangrove wood products and handicrafts (in the form of bags and shoes) from its leaves; thereby increasing their incomes. The reclaimed land in Bangkalan Regency is also intended for fish ponds and sea salt production. The reclamation activities for fish ponds in Bangkalan Regency are increasing every year, thus raising the income of surrounding communities. Export businesses by village-owned enterprises (BUMDES) are very helpful for coastal communities especially fishermen.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Reclaimed land for tourism in Bangkalan Regency by involving coastal communities including fishermen may improve people's welfare. Reclaimed land for business and tourism can invigorate economic activities in the surrounding communities. These activities include making handicrafts as souvenirs by fishermen's wives, restaurants, and home industries from mangrove conservation.

Reclaimed land use is permitted by law as long as it takes into account the supporting capacity, sustainable development, ecosystem linkage, biodiversity, and environmental conservation. In addition to tourism and settlements for residents and their business, either as fishermen or traders, reclaimed land in Bangkalan Regency is useful for the sustainability and preservation of aquatic ecosystems including mangrove.

Recommendations

The development potential in the coastal zone could be followed up with similar research for other regions with reclamation projects. The research should be conducted in cooperation with government offices related to policy makers of coastal reclamation. It should be done with an in-depth study of the impacts of coastal reclamation by involving competent authorities concerned and a comprehensive interdisciplinary research.

The use of reclaimed land will support an increase in tourist visits, both for domestic and foreign tourists. Port in reclaimed land is expected to create a cooperation and partnership between the government, domestic and foreign investors, and the community, thereby increasing local revenue and state income in the form of foreign exchange in export and tourism sectors.

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Credit risk management and profitability: empirical evidence on Ethiopian commercial banks

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Abstract

The aim of the study was to assess the impact of credit risk management on the profitability commercial banks in Ethiopia. Secondary data was gathered from National Bank of Ethiopia for ten year periods (2010-2019). The study adopted Correlation analysis and fixed effect Model. Return on Asset was used to measure profitability of commercial banks, bank specific factors(Capital adequacy, Loan and Advances to total deposit, Non- Performing Loans, Bank size and Liquidity and macroeconomic factors (Inflation and Gross Domestic Product) as indicators of credit risk management. The findings showed that Credit Risk Management in terms of bank specific and macroeconomic factors has significant impact on profitability of commercial banks in Ethiopia. Also the result displayed that profitability of commercial banks is not affected by the amount of non- performing loans during the study. The study recommended that banks' credit risk management should not give due devotion only to the internal factors but also to external factors exclusively (Gross Domestic Product and Inflation) in order to minimize their negative impact on profitability of commercial banks in Ethiopia.

Keywords: *Bank specific, Commercial banks, Credit risk management, Profitability*

JEL Classifications: G21, E44, L25

INTRODUCTION

Banking industries have achieved great fame in the Ethiopian economic growth. They play principal role in granting credit facilities for financing of agriculture, industrial and commercial activities. The probability of incurring losses resulting from non- payment of loans by debtors known as credit risk is mostly encountered in the financial institutions of Ethiopia. The increased competition associated with the process of capitalization, liberalization and globalization and the attempts of Ethiopian banks to increase their presence in other markets may have affected the efficiency and credit risk of the Ethiopian banking institutions (Shibiru & Mebratu, 2017).

According to Girma (2011), banking institution in Ethiopia has the largest assets in the loan portfolio and the primary source of credit risk in Ethiopian's banking industries and are most likely to make a loss. When the commercial banks have higher credit risk, the greater credit payments to be charged by the banks.

If the credit risk management is success, the profit level will be suitable. In difference, if the credit risk management is unfortunate, the profit level will be justly low. Because the less the bank's loss from credits, the more the banks gain (Hosna et al., 2009). As per the study of Kargi (2011) and Fredrick (2010), credit risk management is an important indicator of banks financial performance. They stated that the degree of the impact of credit risk management strongly depends on regulatory environment in which banks operate.

In a study of the Kenyan Banking Industry, Kithinji (2010) presented that there is an indirect relationship between credit risk management and profitability of banks. Other empirical studies made in Qatar bank by Achou & Tengue (2008) showed that better credit risk management result in better bank performance. They concluded that credit risk management has crucial importance for banks safeguard the asset of the bank and protect investor's interest. Also they further indicated that banks with strong credit risk management policies tend to incur lower loan default and high return.

Macroeconomic factors affect bank's performance. Adverse macroeconomic conditions upset banks by increasing the amount of credit risk. Gross domestic product rate, inflation and interest rate are the main economic factors that determine credit risk management of the banks (Athanasoglou et al., 2008). The researchers stated that gross domestic product, inflation and interest rate significantly impacts on profitability of banks.

Credit risk management is a structured method to manage risk through risk assessment and developing strategies by screening and monitoring, long-term customer relationship, credit rationing and collateral requirements (Tefera, 2011). Consistently, Shibiru & Mebratu (2017), credit risk management has significant impact on performance of Ethiopian private commercial banks. Bank specific factors: Capital adequacy, loan growth, Non-Performing Loans, bank size and liquidity had significantly affects banks. The researchers recommended that the bank's Credit Risk Management should assess risk and develop strategies to minimize credit risk incidence.

Relatively very scanty studies have empirically examined credit risk management and profitability/performance of commercial banks in Ethiopia and arrive at divergent results (Tefera, 2011, Girma, 2011, Shibiru & Mebratu, 2017). Variables considered by researchers to capture the impact of credit risk management on profitability were only specific factors and concerning with the literature, were not found sufficient in prior studies in the country. Besides, lack of thorough investigation of macroeconomic factors that determine credit risk management of commercial banks are also been observed in prior studies. So, in current investigation both bank specific and macroeconomics factors were considered to grasp the impact of credit risk management on profitability of commercial banks in Ethiopia (2010 to 2019) and to fill the lacuna existing in the local literature.

LITERATURE REVIEW

Funso et al., (2012) used Non-Performing Loans as a strong Credit Risk Management indicator. Efficient Credit Risk Management supports the fact that lower NPLR is correlated with lower credit risk and lower deposit rate. However, in long run, high deposit rate increases the deposit base in order to fund relatively high credit risk and consequently increases NPLR. Therefore, allocation of the available fund and its credit risk management heavily depend on how the credit risk is held and differentiated to decrease the NPL amount.

Kosmidou (2008) tried to identify the impact of CRM in terms of Gross Domestic Product on bank profitability. The result showed that Gross Domestic Product has positive and strong impact on bank profitability due to the default risk is lower in rise than in recession economy. Mekasha (2011), Kurawa & Garba (2014) found that credit risk management has positive and significant on profitability of banks. But Tefera (2011) argued that credit risk management has negative and significant impact on the profitability of the commercial banks. Other researchers like Epured & Lafuente (2012) found that credit risk management does not influenced on banks profitability. Ani et al., (2012) revealed positive and significant relationship between loan growth and profitability of banks. They suggested that the growth of loans measure income source and liquidity of bank. But the result was contracted by Kargi (2012) and Rufai(2013). They found that a higher loan ratio actually impacts profitability negatively.

Regarding the impact of non-performing loans on profitability of financial institutions; Kadubo & Musyoki (2011) in Kenya, Kargi (2012) and Rufai (2013) in Nigeria, Kaaya & Pastory (2013) in Tanzania and Shibiru & Mebratu (2017) in Ethiopia found that non-performing loan had negatively impact on profitability of banks. However, these studies not in line with the findings of Epure & Lafuernte (2013). They claimed that credit risk management (non- performing loans) has no impact on financial performance of financial institutions and recommended that banks should follow regulatory changes rather than focusing on credit risk management.

Fredrick (2010) valued the impact of credit risk management on financial performance of banks is robust. They concluded that accomplishment of banks depend on credit risk management effectiveness. Also, Kenneth & Charles (2013) on commercial banks in Nigeria using Return On Asset as a measure of financial performance, it was understood that credit risk management have significant impact on financial performance of banks in Nigeria.

Kithinji (2010) explored the impact of credit risk management in Kenyan banks between 2004 to 2008 found majority of commercial banks are not affected by credit risk management. Lastly, the study recommended that banks should consider on other variables rather than on non- performing loans. Belayneh (2011) specified that Gross Domestic Product is the only significant factors from macroeconomic indicators. He stated that Gross Domestic Product of the country makes commercial banks to be more profitable. A high growth rate may strengthen the debt servicing capacity of domestic borrowers, and therefore contribute to less credit risk. The study also examined a negative and strongly significant impact of credit risk on Ethiopian commercial banks.

The impact of credit risk management on performance of private commercial banks in Ethiopia was examined by Shibiru & Mebratu (2017) for period 2000 to 3013.

Fixed Effect model was adopted. Secondary data was gathered from audited financial statement of 6 selected private banks. The result suggested that Credit Risk Management (capital adequacy, Non-Performing Loans, Bank size and Liquidity) have significant impact on financial performance of private banks. Similarly, Fredrick (2010) used Secondary data collected from annual reports of the six selected banks. The study employed the random Effect Model. The results presented that Credit Risk Management have significant relationship with the profitability of commercial banks in Ghana.

METHODS

This section deals with the methods of data collection and the methodology employed in the research analysis.

Data

Secondary data was collected from National bank of Ethiopia, the country's central bank. Both Bank specific factors and Macroeconomic factors were gathered from National bank of Ethiopia for the ten (10) years of old commercial banks covering from the period of 2010 -2019 G.C.

Sampling technique and sample size

Ten commercial banks of Ethiopia that have audited annual reports for the year 2010 and onwards were selected due to their age. Hence, the ten purposively selected commercial banks (Awash Bank, Abyssinia Bank, Commercial Bank of Ethiopia, Cooperative Bank of Oromia, Dashen Bank, Lion International Bank, Nib International Bank, Oromia International Bank, United Bank and Wogagen Bank.

Data analysis

After data collection processes have been accomplished, fixed effect regression model were employed. STATA version 13 was used for analyzing the data.

Model specification test

This study is modeled according to the work of Shibiru & Mebratu (2017), which investigated the impact of credit risk management on the performance of 6 (six) private old commercial banks from the year of 2000 to 2013. On recent study, researcher modified the model on the right side by adding the macroeconomic factors (Gross Domestic Product and Inflation) as exploratory variables of credit risk management to assess credit risk management impact on profitability of ten (10) commercial banks in Ethiopia.

The model is specified as:

$$ROA_{it} = \beta_0 + \beta_1 CAR_{it} + \beta_2 LATD - \beta_3 NPLR_{it} + \beta_3 LR_{it} - \beta_5 LOTA_{it} - \beta_6 INF + \beta_7 GDP + \varepsilon_{it}$$

Table 1. Variables description and expected results

Variable	Explanation	Expected Sign
ROA	A ratio of Bank's Net Income After Tax Against its Total Asset	
CAR	A Ratio of Net Income After Tax to Total Capital of Bank	(+)
LATD	A Ratio of Loans and Advances to Total Deposits of Bank	(+)
NPLR	Aggregate Non-Performing Loans to Total Loans	(-)
LR	Cash at Safe and Cash at Bank to Total Asset of Bank	(+)
LOTA	Natural Log. of Total Asset of Bank (Bank Size)	(-)
INF	Average Inflation Rate	(-)
GDP	Percentage Growth Rate of GDP	(+)

RESULTS AND DISCUSSION

This part of the study portrays the inferential analysis that shows the empirical evidence on the impact of credit risk management on the profitability of selected commercial banks in Ethiopia.

Multi collinearity test

The multicollinearity problems of independent variables of commercial banks in Ethiopia (Capital adequacy, loans and advances to total deposits, Non- performing Loans, Liquidity, Bank size, Inflation and Gross Domestic Product) was made using VIF and Tolerance. If tolerance limit is greater than 0.10 and the VIF is below 10, multicollinearity problem doesn't exist.

Table 2. Collinearity statistics

Variable	Tolerance	VIF
CAR	1.34	0.748500
LATD	1.51	0.661843
NPL	1.09	0.919237
LR	1.69	0.590701
LOTA	1.20	0.830261
INF.	1.23	0.815378
GDP	1.20	0.834387

As shown on Table 2, since the tolerance limit is greater than 0.10 and the VIF is below 10, multicollinearity problem doesn't exist. Therefore, the model is free from multicollinearity problems.

Hypothesis test

Brooks (2008) explained that Wald- coefficient restriction test was used to test the multiple hypotheses. It shows that the coefficients of explanatory variables are different from zero. If the Wald test presents the P- value is less than 0.05, then explanatory variables have an impact on dependent variable.

Table 4. Wald- Coefficient test

Statistic	ROA Model
F- statistic (7, 92)	28.35
Probability	0.0000

As shown on table 4, the independent variables (CAR, LATD, NPL, LR, LOTA, INF. And GDP) have an impact on the dependent variable (ROA) of commercial banks in Ethiopia since p-value is less than 5 percent level of significance.

Hausman specification test

Running a Hausman Specification test at five (5) percent level allows the researcher to select between fixed effect and random effect models. The Hausman Test evaluates the Null hypothesis that the coefficient estimated by the random effect estimator is the same as the ones estimated by the constant fixed effect estimator. If the Hausman test is significant (P-Value ≤ 5 percent), then the fixed effects model will be used (Brooks, 2008). In this study, as indicated by the Hausman test (Table 5), fixed

effect model is to be preferred as the p-value = 0.0000 which is less than 5 percent . Thus fixed effect was used in analysis.

Table 5. Hausman test: Fixed effect model Vs Random effect model

Hausman Test:	H0: REM > FEM		Ha: FEM > REM
Model	Prob.(F-statistic)	Chi-sq statistic (χ^2)	Preferred model
ROA	0.0000	90.92	Fixed Effect model

The result of the Fixed Effect analysis

This section depicts the fixed effect regression model analysis of the impact of credit risk management on profitability of Commercial Banks in Ethiopia.

Table 6.   ROA model: Fixed Effect regression result

Variable	Coef.	Std. Err.	t	P>|t|
CAR	1.199446	.0879236	13.64	0.000**
LATD	-.041944	.0041951	-10.00	0.000**
NPL	.0069658	.0056383	1.24	0.220
LOTA	-.0111432	.0040188	-2.77	0.007*
LR	-.2149658	.0564897	-3.81	0.000**
INFL	-.0030490	.0012505	-0.24	0.018*
GDP	-1.94e-06	1.01e-06	-1.93	0.050*
Cons.	.3028181	.0774229	3.91	0.000**
R^2 =77 %	F- statistic = 39.02		Prob.(F- statistic)= 0.0000

Fixed effect regression result shows that the positive and significant impact of capital adequacy on the profitability of commercial banks in Ethiopia. The coefficient of capital adequacy is 1.199446 and its p-value is 0.000. This showed that as capital adequacy increased by one unit, return on asset (ROA) of sampled of Ethiopian commercial banks was increased by 1.199446 units. This finding is consistent with the previous studies by Hakim & Naieme (2002), Li Yuqi (2007), Birhanu (2012) and Kenneth & Charles (2013), but inconsistent with the finding of Berger (2000).

Credit risk management has negative impact on profitability of commercial banks in Ethiopia in terms of loan and advances to total deposit at 1% level of significance. The coefficient value of LATD (i.e. -.041944) indicates a percentage rise/decline in LATD ratio of commercial banks result in high proportionate (i.e. 4.19%)   rise/decline in ROA of commercial banks in Ethiopia. The study debated that this exposed to higher credit defaults level of commercial banks in Ethiopia. The result is consistent with the findings of Vong & Chan (2000), Kolapo et al., (2012). But disagrees with the findings of Ahmed et al., (1998) and Iloska (2014).

The result revealed that NPL has positive and insignificant impact on profitability of commercial banks in Ethiopia. For a 1% increase or decrease in NPL, the banks increase or decrease their profit by 0.7 present. The result was in line by the prior findings of Kithinji (2010), Afriyie et al. (2013) and Epure & Lafuente (2013) but contradicted with the findings of Achou & Tenguh (2008), Hosna et al. (2009), Mekasha (2011),Tefera (2011), Kargi (2012) and Shibiru & Mebratu (2017). They concluded that NPL ratio has negative and significant impact on profitability of banks. But the study showed that profitability of commercial banks was not affected by non-

performing loans during the study and the study suggested that commercial banks of Ethiopia should focus on other factors and banking policy than focusing more on non-performing loans.

Bank size has negative and significant impact on profitability of banks (P-value= 0.007) at 5% significance level. This implies that as bank size increased by 1%, return on asset decreased by 1.11% due to the existence of managerial inefficiency to manage their assets during the study in commercial banks of Ethiopia. The result of this study is in line with the result of Birhanu (2012) in Ethiopia, Ani et al. (2012) in Nigeria and Epure & Lafuente (2013) in Spain. Nonetheless, the result of this study is contradicted with many previous studies of Alper & Anbar (2011),Agyei et al. (2012) and Kaaya & Pastory (2013).

The result revealed that credit risk management in terms of liquidity ratio has significant negative impact on profitability of banks at 1% level of significance. It indicates that as the level of liquidity ratio increased by 1 percent, and then ROA is decreased by 21.50 percent. The result proposed that commercial banks of Ethiopia have an inability to meet its financial obligations at a reasonable cost and more exposed to credit risk and liquidity risk. The result is consistent with the finding of Yuqi (2007) and unpredictable with the prior studies of Hakim and Naieme (2002), Kurawa & Garba (2011), Adorkwa (2011), Megeid (2013), Iloska (2014) and Shibiru & Mebratu (2017).

Inflation refers to the continued increase in the general prices of goods and services in an economy over time. The impact of inflation on profitability is ambiguous. It has negative impact on profitability in banks. It weakens borrowers' ability to service debt by reducing the real value of outstanding loans. According to the regression result, inflation is significantly negatively impact on profitability of commercial banks in Ethiopia (PV= 0.018). The researcher argued that this is probably due to the fact that inflation could affect the value for money, purchasing power of people and the real interest rate that banks charge and receive. The result of the study was similar with the finding of (Nkusu, 2011) but dissimilar with the finding Richard (2011).

Finally, Economic growth (GDP) had negative significant impact on profitability of commercial banks (p-value= 0.050) at 5% level of significance. Like with the empirical evidence, as GDP of the country increased the profitability of Ethiopian commercial banks decreased and vice versa. If GDP growth is high, the loan request increases and thus the commercial banks of Ethiopia exposed to default risks. The result is in line with the findings of Beck et al.(2013) but not in line with the finding of Birhanu (2012) found that GDP has positive and significant effect on profitability of commercial banks in Ethiopia. Also Fredrick (2010) found that there was no significant relationship between GDP and banks profitability.

CONCLUSION AND RECOMMENDATION

Conclusions

The study assessed the impact of credit risk management on profitability of commercial banks in Ethiopia. This study concluded that capital adequacy, loan growth, liquidity, bank size, Inflation and Growth Domestic Product used as a proxy for credit

risk management had strong impact on the profitability of commercial banks in Ethiopia.

Recommendations

The study suggested that commercial banks in Ethiopia should not only concentrated on enhancing their capacity in credit analysis and loan administration but also engrossed on macroeconomic factors that were significantly impact on the profitability of commercial banks in Ethiopia.

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The relationship between of international migration, income per capita and unemployment rate in Indonesia

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Abstract

International migration has become an interesting issue in recent decades as globalization has become increasingly widespread as a form of openness in the world economy. This economic openness also results in changes in life socially, economically and culturally more dynamically. One of the dynamics of socio-economic conditions is shown by the increasingly flexible and dynamic international migration that occurs in several countries. Some underlying factors include conditions of income and unemployment. This study aims to analyse the response of migration when there is dynamics in per capita income as a proxy for welfare and unemployment as a proxy for employment conditions. VAR analysis is a method to see these responses through the IRF. The results of the analysis showed a significant response from migration as a result of the shock that occurred in both variables and with OLS estimation, both of these variables have a significant impact on influencing Indonesia's international migration flow. These is a signal that the main factor causing international migration is dominant due to the dynamics of income and labour market conditions (unemployment) in Indonesia. Although in other cases, migration also has a positive impact on some parties such as increasing income per capita for migrants, reducing unemployment and increasing the country's foreign exchange, but this condition also needs proper supervision and management. This must also be considered from various other aspects such as demographic conditions related to the age structure of the population and availability of employment to create a balance in the labour market.

Keywords: *Income per capita, International migration, Unemployment*

JEL Classification: F22, F62, F63

INTRODUCTION

International migration has become an interesting socio-economic issue to discuss due to its complexity which takes role in various fields of study such as social, economy, and law. A country shall pay attention to the migration flow since this will greatly impact the socio-economic condition of the home country either in terms of

emigration or immigration. The increasing international migration is also considered as a development effort as explained in the World Migration Report (IOM-UN, 2018) held in Marrakesh, Morocco which was attended by 164 countries including Indonesia (Timorria, 2018). This condition indicates that international migration does not only impact the country's development, but also increases international cooperation. The migrant contributes to the development. This is reflected from the remittance which is proven to help increasing family welfare and the country's foreign exchange (Timorria, 2018). The migration flow could significantly decrease the unemployment or raise the income per capita either at the home country or destination country.

International migration could also happen due to the push and pull perspective which means the migration flow is caused by push and pull factors. The push factor is usually coming from the home country while the pull factor comes from the destination country (Zimmerman, 1996). The migration flow correlates to the dynamics of unemployment rate and income per capita. This has gained a special attention especially from the European countries (Ramirez et al., 2014).

The same issue in Indonesia needs to be discussed thoroughly since the migration flow is the result of intense global economy integration. Hence, the dynamics of unemployment and per capita income can be responded by the migration flow rate in Indonesia. In the past 25 years, the migration rate in Indonesia stated as deficit. This was shown in 1992 where the net migration number obtained from World Bank was -35.412 people and in 2017 it became -494.777. It indicates that emigration level is greater than the immigration. It means there are more people emigrate than those immigrate. This shall be highlighted since this phenomenon is caused by various factors. One of them is the economic factor which generally has a great influence.

Several empirical studies such as Mihi-Ramirez & Kumpikaite (2013); Ramirez, et al., (2014) and Vojtovich (2013) implied that economy integration becomes the main factor of the international migration. In the other hand, social factor could also be a trigger though it has smaller contribution than the economic factor. The variation of income and unemployment become the push and pull factors. Besides, based on the research of Monseny (2014), location-based policy integration conducted in the region of Southern Spain and Andalusia provided probability in terms of migration which was based on the territory limitations. Meanwhile, the empirical study of Latif (2015) highlighted the unemployment factor caused by permanent migration in Canada by using analysis and panel data. The analysis result showed that immigration will have a positive impact for the unemployment rate in the short-term. However, in the long-term, it will cause a negative but insignificant impact to the unemployment rate.

In this phenomenon, the Neo Classic approach was used to explain the rise of unemployment rate and the low income level at the home country which cause emigration (Martinoia, 2011) from the home country perspective. In the other hand, emigration has a positive impact on unemployment and welfare level which was reflected from the income per capita at the home country. Immigration will tend to happen at the countries with lower level of unemployment which attract the immigrant to work there (Heid & Larch, 2011). Later, those economic factors attract and trigger the migration flow (Cushing & Poot, 2004). Those things above also trigger the pressure and desire to migrate from their home country which has a low income rate to other countries with higher income rate (Cattaneo, 2008).

An effective factor to stimulate growth of international migration flow is the economic factor since the global economy integration will be the main factor in raising the dynamics (Ramirez et al., 2014). Emigration will tend to happen at the countries with low income and employment level while immigration will happen to the countries with higher level of income and employment that those attract the immigrant. This reflects human's effort to improve their life and their welfare through income.

However, international migration flow will also bring several impacts for both home country and destination country. The immigration effect on the unemployment in the destination country will depend on the probability and the available number of labor. In the other hand, immigrant will bring a positive impact to the destination country since they will increase the demand on goods and service consumed by the immigrant. Besides, it will also influence the production amount as the result of the immigrants' performance.

Meanwhile, for the home country, emigration brings positive impact by increasing remittance as the result of the emigrants' income which in the end it will raise the family welfare. Besides, emigration could decrease the unemployment rate at the home country. Thus, if the migration flow was handled well, it will bring positive impacts for both countries and improving international cooperation to achieve internal and external welfare. Based on the explanation above, this study will highlight the response among variables such as migration flow, unemployment rate and income per capita when facing dynamics each other, as well as observing the effect of socio-economic factors, which consist of unemployment rate and income per capita, on the migration flow in Indonesia.

METHODS

This study uses secondary data in the form of annual data (time series) obtained from World Bank. Based on the objective above, this study uses VAR (Vector Autoregressive) analysis method to see the responses among variables as well as observing the effect of unemployment rate variable and income per capita on migration flow. To see the response, this study uses IRF (Impulse Response Function) to see the response among periods. Meanwhile, the effect of unemployment rate and income per capita on the migration flow could be seen at the probability value on the Ordinary Least Square (OLS) estimation. In VAR estimation, there are several pre-estimation tests such as data stationarity test, co-integration test, optimum lag test, IRF test, and Variance Decomposition (VD) test. After that, VAR estimation will be applied.

Several testing stages above have their own objective based on each test function. First, the unit root test. This test is used to see the data stationarity. At the time series data and a stochastic process, the data is considered as stationary if the median and variant are constant along the time series and the co-variance value between two periods depends on lag. Then, the co-integration test is to see whether there is a long-term or short-term relationship within the model through Johansen test by comparing the statistics trace and critical value. The first co-integration concept was introduced by Engle and Granger (1987). Next, the optimum lag test is to determine the optimum lag through AIC (Akaike Information Criteria) test. Then, IRF test is to see the responses showed by each variable when there is a shock happens at the other variables.

This study adopted the model from Ramirez et al. (2014) and Latif (2015) that

the OLS estimation model is simulated as follows:

$$Net\_Migrasi_t = \alpha_1 + \beta_1 Unemployment\_rate_t + \beta_2 GDP/Cap_t + \varepsilon_t \ \text{.......................} \ (1)$$

Net_migrasi is the proxy of migration flow that reflects the data of immigration number subtracted by emigration with 'people' as the data unit. Unemployment rate is amount of unemployment with data unit '%' and GDP/Cap reflects income per capita with 'rupiah' as the unit. Meanwhile, αand β are coefficients and t is time series data and ε is error term.

Later, the model will be transformed into VAR estimation model as follows:

$$Net\_Migrasi_t = \alpha_1 + \beta_1 Unemployment\_rate_{t-1} + \beta_2 GDP/Cap_{t-1} + \varepsilon_t \ \text{......................}(2)$$

$$Unemployment\_Rate_t = \alpha_1 + \beta_1 Net - Migrasi_{t-1} + \beta_2 GDP/Cap_{t-1} + \varepsilon_t \ \text{....................}(3)$$

$$GDP/Cap_t = \alpha_1 + \beta_1 Net - Migrasi_{t-1} + \beta_2 Unemployment\_Rate_{t-1} + \varepsilon_t \ \text{....................}(4)$$

Those are the VAR model transformation that the model will be dynamic by adding lag with the lag 1 assumption before applying optimum lag test.

RESULTS AND DISCUSSION

This study used two data analysis methods to achieve 2 different objectives. First, VAR was used to see the variable response when other variables experienced a change conducted through IRF test. In the VAR test, there were several pre-estimation tests consisted of data stationarity test (unit root), co-integration test, and optimum lag test. Then, after that, IRF test was conducted to see the variable response. The result of data stationarity test on the variable of net migration, unemployment rate, and income per capita were shown below.

Table 1. Data stationarity test result (Unit root test)

Variable	Level	First Difference	Second Difference
Net_Migrasi	0,4661	0,0001*	0,0000
Unemployment	0,5216	0,0163*	0,0000
GDP/Cap	0,9824	0,0062*	0,0000

Source: Data, processed: 2019

Table 1 showed that the data on variables used in this study model were stationary at the first difference level. The result was confirmed by the probability value at the first difference level in each variable which was less than alpha 5%. On the Net_migrasi variable, the probability value was 0,0001. Meanwhile, in the unemployment and GDP/Cap as the proxy of income per capita had the probability value of 0.0163 and 0.0062. Next, to see if there was a co-integration and long-term relationship within the model used, a co-integration test was conducted through Johansen Test.

Table 2. Co-integration test result with Johansen Test

	Critical Value	Trace Statistic	Description
1%	35.45817	23.81486	Not Co-integrated
5%	29.79707	23.81486	Not Co-integrated
10%	27.06695	23.81486	Not Co-integrated

Source: Data, processed: 2019

From the co-integration test result above, we can conclude that this study model

did not have any long-term relationship with the variable used in the model. This was confirmed by comparing the critical value and statistics trace result from each alpha level. At alpha 1%, the statistics trace value was smaller than the critical value (23.81846 < 35.45817). At alpha 5%, the statistics trace result was smaller than the critical value (23.81486 < 29.79707). Alpha 10% also showed the similar result where statistics trace was smaller than the critical value (23.81486 < 27.06695). Thus, the result indicated that there was not any co-integration within the model. Then, the optimum lag result could be seen below.

Table 3. Optimum lag test

Lag	AIC
0	49.07349
1	42.54803*
2	42.77889

Source: Data, processed: 2019

The optimum lag in this study was at lag 1 with the AIC value of 42.54803. This result supported the result of co-integration test where it concluded that there was not any long-term relationship within the model. Logically, if we connected this result with the case in this study, it means the society directly responded the dynamics of unemployment and income per capita by quickly deciding whether or not they need to emigrate which later will cause migration flow is dominated with negative value. The net_migrasi which showed negative number also means that there is more emigration than immigration. Thus, more local people emigrate abroad than those migrant people come to Indonesia. This was the response to the increasing unemployment rate and low income per capita that they emigrate abroad to gain a better welfare.

Several pre-estimation tests above were conducted that we could obtain the result and decide if the model will continue through VAR estimation or VECM estimation. Based on the data stationarity test result which showed a stationary result at the first difference level and the co-integration test which showed that there was not any co-integration or long-term relationship within the model used, then, we can continue to VAR test. IRF was an important test in VAR where we could see the response of each variable when there was a change at the other variables.
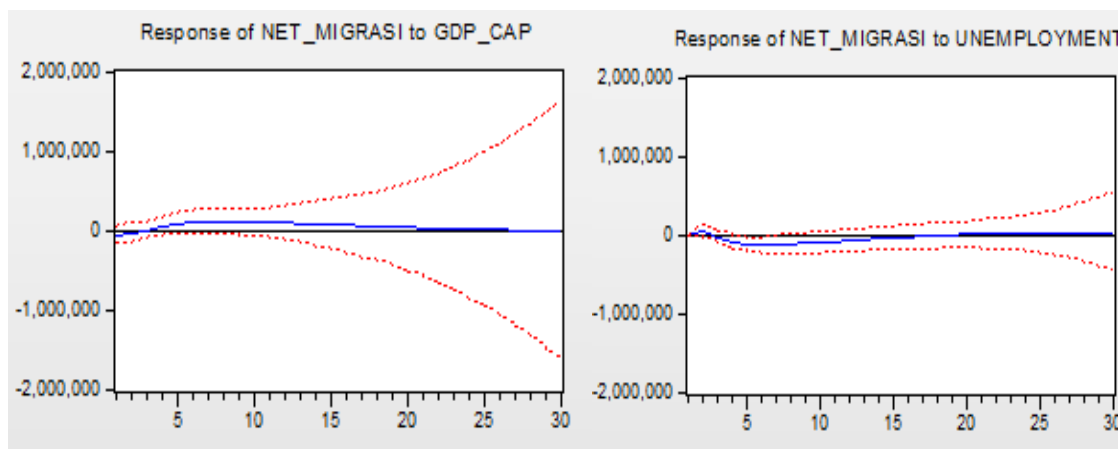

Figure 1. Impulse response function
Source: Data, processed: 2019

The response showed among variables when other variables experienced a shock can be seen on Figure 1. Net_migrasi showed a relatively high response when there was a shock on GDP per capita as the proxy of income and unemployment dynamics. The change of GDP per capita was greatly responded by net_migrasi in Indonesia as shown in Figure 1 that started from period 15 until 30, the response was considered as very high.

As a matter of fact, based on the data from World Bank, net migration in Indonesia showed negative number. It means there are so many Indonesian societies who conduct international emigration due to the higher income per capita, especially in the past 30 years. However, the great amount of emigration also provides a forward looking to the welfare improvement of the emigrant obtained from a higher income.

In the relation to the international financial condition, high emigration rate will impact the remittance sent for their family. This will positively impact the cash flow as well as increasing the foreign exchange of the country. In terms of number, Indonesian emigrants will tend to be higher since Indonesia is placed as fourth world's most populous country. Still, in terms of population ratio, the number of Indonesian emigrants may not be that large. In 2010 until 2015, Indonesian emigrants were noted at 1,15 million people (BPS, 2015). The number will be increasing years after along with the higher global economy integration which will also increase the emigration flow intensity. The emigration phenomenon does not happen only for seeking a job, but also some of them are studying abroad. Still, workers dominate the emigration for improving their welfare.

Besides, the unemployment dynamics also gave a relatively high response for the migration flow though it was not as high as the response for GDP per capita. This was showed by the relatively stable response of migration flow on the unemployment dynamics at the beginning of the period until period 20 and then the response was increasing until period 30. This means the migration flow, which was dominated by emigration, in the Indonesian international migration data was not that high due to the unemployment dynamics. Because the unemployment rate showed a relatively good trend which declined the unemployment rate into 5,01% on February 2019 (BPS, 2019). Basically, the migration flow was mostly caused by economic factors. Still, there were some caused by natural disaster which urges the people to migrate to the other countries. Besides, education became a reason for students to emigrate.

The result of OLS estimation to see the effect of dependent variable on the independent variable can be seen on the Table 4.

Table 4. OLS estimation result

Variable	Coefficient	Probability	Description
GDP/Cap	-175,0696	0,0003	Negative Significant
Unemployment	25276,61	0,0001	Positive Significant

Source: Data, processed: 2019

The OLS estimation result confirmed that the migration flow in Indonesia was significantly influenced by the dynamics of income per capita and unemployment rate. This was shown at Table 4 along with the probability value and coefficient found from the estimation result. Income per capita had a negative significant effect on the

migration flow with the coefficient value of 175.0696 and probability value of 0.0003 which was less than alpha 5%. This result means any decline of income per capita by 1 unit will increase the migration flow which is symbolized as more deficits on net migration number (minus) will increase migration by the amount of the coefficient value. More minus on the net migration data indicates more Indonesian people emigrate abroad with various reasons.

However, several reports confirmed that most of Indonesian emigrants were seeking for jobs to gain a better welfare and a higher income. In the other hand, when the income per capita increased by 1 unit, the migration flow decreased by the amount of the coefficient value. In this case, the migration flow decrease could be in the form of decreased deficit number on net migration. This will increase the income and decrease the emigration rate which later it will turn out attracting immigrant to work in Indonesia as the global economy liberalization expanding.

Meanwhile, the unemployment rate reflected from the unemployment rate data showed a positive significant effect on the data of migration flow in Indonesia. This was confirmed by the coefficient value of 25276.61 and the probability value of 00001 which was less than alpha 5%. This means an increase on unemployment rate by 1 unit will increase the migration flow by the amount of the coefficient value. Meanwhile, a decrease on unemployment rate by 1 unit will decrease migration flow by the amount of the coefficient value. In this phenomenon, it means the increasing unemployment rate in Indonesia will cause an increasing migration flow. Based on the current data, Indonesia faces a deficit which implies that we have more emigrants than immigrants. Several studies showed that the imbalance amount of job vacancy and labors causes unemployment. This became the push factor for the worker to emigrate in hope of having greater opportunity to work and gaining higher income to improve their life.

Several studies supported this result such as Ramirez et al. (2014) which showed that the correlation between unemployment and emigration are stronger from time to time. While in the relation of income, it stated that income was closely related to emigration which tends to increase when the income declines. This was reflected through the crisis phenomena which destroyed the economy that many workers decided to emigrate to the other region or even abroad. This was in line with the result stated unemployment has a positive impact on migration flow, especially emigration.

Government integrations in managing the migration flow were shown at, for example, policies and effort to legally protect the migrants. In Indonesia, the majority of emigrants migrate abroad so that various government efforts contribute to protecting emigrants through the establishment of the National Agency for the Placement and Protection of Indonesian Workers who are established in various regions with control centers in the National BPNP2TKI. This institution aims to facilitate and formulate policies in a coordinated and integrated manner for Indonesian workers who are abroad as well as monitoring and releasing policies (Sugandi and Heryadi, 2017).

In recent years Indonesia has become the country with the largest number of emigrants in the Asian region and the majority aims to find more decent jobs (Sugandi and Heryadi, 2017). This is also motivated by the population of Indonesia, the majority of which comprise a population of productive age greater than other ASEAN countries. Immigration and Emigration will tend to show its dominance when the economic

conditions are up and down. In an up condition or the economy is in good condition, it will tend to lead to greater immigration and vice versa, when the economy is in a down or sluggish condition it will tend to result in increased emigration with the aim of seeking better welfare.

Migration driven by economic factors in the long run will have an impact on the welfare of emigrant families. Remittances as cash inflows from remittances from emigrants to home countries can be used more productively so that they can have an impact on increasing productivity. In addition, when the remittance fund flow is used for investment in human resources such as education and health for his family, in the long run it can also contribute to improving the quality of human capital. In addition, the flow of outgoing migration is also an effort for Indonesian workers to escape the phenomenon of unemployment. As well as one of the government's efforts to distribute labor in countries that have collaborated with the government in terms of employment that is managed legally and officially through established institutions.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

In the phenomenon of migration flow in Indonesia in the short term is still very dominant influenced by economic drivers which are confirmed by the results of co-integration that indicate no co-integration or long-term relationship to migration flow, unemployment rate and per capita income. Meanwhile, the response through the IRF test that migration flow in Indonesia is shown by net migration data with a deficit value (dominated by emigration than immigration) is very vulnerable to dynamics in the unemployment rate and per capita income over the last 30 years.

The results of the OLS estimation also show the results that per capita income has a significant negative effect on net migration in Indonesia. These results confirm that this migration flow depends on conditions on the dynamics of per capita income. If income increases, it will reduce emigration and can actually increase immigration so that the net migration rate becomes positive or surplus. Meanwhile, if per capita income decreases it will result in increased emigration. Other results indicate that the unemployment rate will have a significant positive effect on the flow of migration that is deficit means that when the unemployment rate increases it will have an effect on increasing emigration resulting in a negative or deficit net migration.

Recommendations

Many policies have been carried out to respond to the phenomenon of international migration both through strengthening cooperative relations with destination countries in an effort to strengthen guarantees and protections for emigrants and immigrants. Other follow-up that might be done by the government is more on the results or output especially those produced by emigrants. The output can be in the form of foreign exchange reserves and remittances to be managed more productively especially as an effort to increase human resources which in the long run will have a positive impact on development while increasing the competitiveness of Indonesian workers. So that government integration can be through increased productivity and

proper allocation of foreign exchange reserves and remittances for more productive investments so that in the long run it can also improve the welfare of the community especially for the emigrants and families concerned.

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The Moslema entrepreneurship and product innovation: Its impact on market orientation and performance of small and medium enterprises

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Abstract

The development of entrepreneurship in a country is inseparable from the participation and role of women.Women's participation as an entrepreneur has increased quite sharply over the past decade and it turns out that the role is increasingly significant not only in developed countries but also in developing countries.This research aims to analyze the influence of Moslema entrepreneur and product innovation on market orientation and performance of SMEs.The research design uses a sample survey design with a quantitative approach. The population of this study is Islamic women entrepreneur who engaged as business owner called Moslema entrepreneur. Total sample amount of 86 people.The data analysis tool uses pathways analysis. The results showed that there is a significant influence between product innovation on performance and entrepreneurship on performance. Meanwhile this study stated that market orientation variables do not act as intervening variables. Thus, Moslema entrepreneurship needs to improve to increase performance. Moslema entrepreneurs must always innovate in marketing their products to consumers. Moreover, this research is expected to contribute empirically to strategic decision-making by SMEs.

Keywords: *Business performance, Innovation, Islamic entrepreneurship, Moslema entrepreneurship*

JEL Classification: M00, L26

INTRODUCTION

In crisis time, Small and Medium Enterprises (SMEs) have a better level of resilience compared to large businesses. SMEs play an important role in driving economic growth, both in number and the quality of entrepreneurship. Its existence needs to be supported in growing continously.The development of entrepreneurship in a country is not separated from the participation and role of women. Octavia et al. (2017) found that women's entrepreneur participation has increased quite sharply over the past decade and continues to increase significantly in both developed and developing countries.The existence of women entrepreneurs in SMEs is the economic

life reality of most people in Indonesia.The role of women micro-entrepreneurs in the Indonesian economy has gradually become increasingly as "goalkeeper" of the people's economy. Women's contribution to development is often considered disproportionate compared to men. In fact, in terms of economy, approximately 60 percent of 51.21 million Micro, Small and Medium Enterprises in Indonesia are managed or owned by women. In addition to absorbing about 91.8 million or 93 percent of the total workforce, women workers in the informal sector also account for 55 percent of Gross Domestic Product.Women as one of the human resources that every country has, should be used as one of the mediators of economic growth and development through entrepreneurship.The unique and distinctive character of women makes many of them run and organize entrepreneurship (Miftakhuljanah et al. 2016). Ludiya & Maulana (2020) stated that there is an influence of entrepreneurial characteristics and innovation on business performance in fashion SMEs in Cimahi City. This result is in accordance with Nurseto's research (2016) that there is a significant influence between entrepreneurial characteristics and innovation on business performance both simultaneously and partially

The ability to innovate is a factor that can influence the excellence of sustainable competition (Chamsuk, 2015). Innovation is defined as the company's tendency to enable and support new ideas, experiments, and creative processes that can be new products, new services, or technological processes (Islam et al. 2011). Innovation is a process of organizational change and market bids that are key to winning markets and consumers so as to increase sustainable competitive advantage (Chamsuk, 2015; Monika et al. 2016). In line with this research, Reguia (2014) and Chamsuk (2015) stated that innovation plays a role in realizing competitive excellence.

Innovation capabilities and positioning products are variables that have a significant effect on competitive excellence (Octavia et al. 2020). These findings are in line with previous research, where increased innovation and enterprise are important conditions for the strength of competitive positions especially for small companies (Bubel, 2015; Monika et al. 2016; Chiu & Chen, 2016). In the model found, innovation capabilities are not only related to innovation in the field of marketing, but also the ability of companies to innovate from organizational components such as strong commitment to company leadership and management. Both of these factors are still weaknesses for most SMEs. It can be one of the inhibitory factors in realizing competitive advantage while the potential of SMEs is very huge and the number is growing as well. This research aims to analyze the influence of Moslema inovativeness, product innovation and market orientation on the performance of SMEs.

METHODS

Design and sample research

The type of research used in this study is explanatory research with quantitative approaches. The research that explains causal relationships and tests the relationship between multiple variables through hypothetical testing or explanatory research. The population in this study was 600 Moslema entrepreneurs in Jambi City. The research sample was taken by using the purposive sampling technique. This technique is done by taking a sample from the population-based on certain criteria. The number of research

samples was 86 people.

Research instrument test

As a research instrument, the questionnaire was used to collect primary data. Validity and reliability tests were carried out on the questionnaire to determine whether the questionnaire used was valid and reliable. The validity is content describes the suitability of data that being measured. Reliability testing uses consistency interval reliability techniques. A test is carried out by trying out the instrument only once and data obtained is analyzed. From the two tests, it was found that all indicators used were valid and reliable.

Data analysis

Analysis of data was running out by pathways analysis in order to assess causality relationships between variables or causal models that have been set before based on theory. The analysis of the pathway itself does not determine causal relationships and nor can't be used as a subtitution for researchers to look at causality relationships between variables.

Causality relationships between variables have been formed with models based on theoretical foundations. In order to obtain the path coefficient value of each Independent variable, first calculated the correlation between variables using the Pearson Product Moment correlation. After the correlation coefficient between variables is calculated, the coefficient of the path is subsequently calculated. The manual steps performed in the path analysis are as follows:

1. Create a correlation matrix between Independent and dependent variables
2. Calculate the Inverse correlation matrix for independent variables (R_1-1)
3. Calculate the P_{yxi} Path Coefficient $(i = 1.2)$,
4. Calculates $R_2 (X_1X_2)$ which is the coefficient that states the total determination of X_1X_2 against Y
5. Count P_{ye}
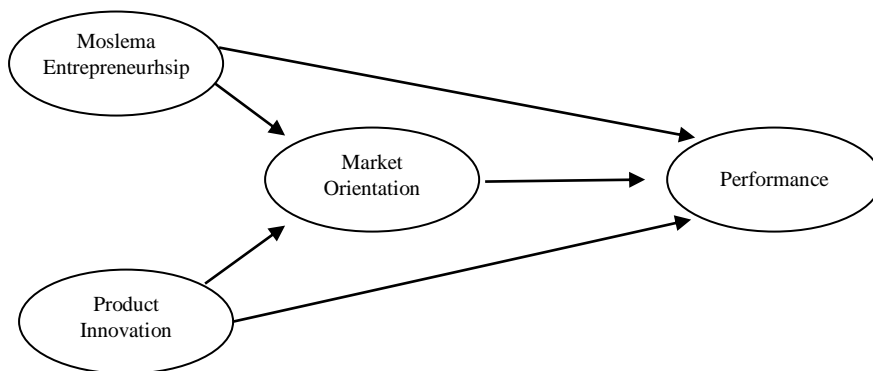
**Figure 1.** Research model

RESULTS AND DISCUSSION

Entrepreneurship is a concept that encompasses a way of thinking and acting within the organization. Entrepreneurship is a process for developing and realizing the vision and mission of business life by implementing innovative ideas and getting opportunities to run things. Moslema entrepreneurs have a unique characteristics that

possible to be innovative for reaching market orientation and business performance.

Hypothetical testing was conducted by Path analysis that is an extension of multiple linear analysis to estimate causality relationships between variables (causal models) that have been set before based on theory. The analysis of the pathways themselves does not determine causal relationships and nor can it be used as a subtitution for researchers to look at causality relationships between variables. Causality relationships between variables have been formed with models based on theoretical foundations.

The results of testing between variables or hypotheses in this study were obtained from the results of running bootstrapping from the research model. If all coefficients in the confirmatory factor analysis model were statistically significant at $P<0.05$, it will show the positive and significance relationship between those variables. Based on calculations, the t-stat value is above the p value of 0,05 thus indicating the significant influence of each hypothesis.

Table 1. Results of analysis

No	Path	Standard of deviation	t statistic	P value
1.	Product Innovation – Performance	0,125	0,402	0,688
2.	Product Innovation – Market Orientation	0,089	6,678	0,000
3.	Moslema Entreperenurship – Performance	0,094	3,554	0,000
4.	Moslema Entrepreneurship – Market Orientation	0,079	1,595	0,111
5.	Market Orientation – Performance	0,135	0,341	0,733

Source: Data processed, 2020.

The results found that product innovation had no significant effect on performance (Table 1). Product innovation reflected by product quality, product variants and product style and design has no significant effect on the performance of SMEs reflected by sales growth, capital growth, labor growth, market growth, profit growth. Improvements by product quality, product variants and style and product design are incapable of sales growth, capital growth, labor growth, market growth, and profit growth.

The results of this study do not support the research that has been conducted by Utaminingsih (2016). The influence of innovation on marketing performance is evidenced by this research obtained by the value of sig. smaller than $\alpha = 0.05$. To be suceed in the era of data and IT development, companies must innovate and interact with the market (Wang & Ke, 2016; Chen, 2016; Tepic et al., 2017). This results is not in line with previously research that organizations with innovation capabilities can respond to environmental changes more quickly compared to non-innovative organizations that have high performance (Farsi et al., 2013; Asaad and Omer, 2016; Al-Refaie and Al-Taher, 2017). Besides, the goal of positioning a product is also to create a different image to introduce the product in the minds of consumers (Octavia et al., 2020).

From Table 1, product innovation has a positive and significance influence on market orientation of SMEs. Product innovation reflected by product quality, product variants and product style and design has a significant effect on market orientation reflected by customer orientation, competitor orientation, interfunctional coordination. The more attention to the positive loading factor value and significant value the higher

product innovation will increase the orientation of the Market. On the other hand, the lower the product innovation will decrease the market orientation.This study supported by the previous researchers such as Chamsuk et al. (2015) and Reguia (2014).

This study obtained results that a value of significantly is smaller than α = 0.05. Moslema entrepreneurship has an effect and significant performance of SMEs in Jambi Province (Table 1). Increasing self-reliance, capital, emotional and education is able to increase sales growth, capital growth, labor growth, market growth dan profit growth. By paying attention to the positive loading factor and significant value, it can be concluded that the higher the Moslema entrepreneurship will improve performance the lower the Moslema entrepreneurship will decrease performance.

The results support research conducted by Ludiya & Maulana (2020) which found that there is a positive influence of entrepreneurial characteristic variables on business performance. This means that the characteristics of entrepreneurship have a significant uni-directional positive influence, so the characteristics of entrepreneurship can explain the variables of business performance. The ups and downs of business performance can be determined through the level of entrepreneurial characteristics that business owners have. The better the characteristics of entrepreneurship then the performance of the business will increase. Moreover, entrepreneurship simultaneously has a significant effect on the success of performance. This means SMEs need to pay attention to independence, capital, emotional and education in order to improve performance. Some of the things that play a role in women's entrepreneurial success include stand-alone skills, risk-taking attitudes, competitiveness, innovation orientation and strategic plans (Agarwal et al. 2018 and Hodgkinson, 2001).

On the other hand, the test result of his study showed that moslema entrepreneurship has no significant effect on market orientation (Table 1). Contrary to prediction, although in line with the existing literature, there is no evidence to show relationship between moslema entrepreneurship and market orientation in SMEs. It is necessary for further research and take different variables that might interect each other. Moslema entrepreneurship reflected by self-reliance,capital, emotional and education has no significant effect on the market orientation reflected by customer orientation, competitor orientation, interfunctional coordination.This means that increase of self-reliance, capital, emotional and education is not able to improve customer orientation, competitor orientation, inter-functional coordination. This result is quite difference from previous research from Molovanovic & Wittine (2014) that stated entrepreneurship imply active seeking and exploration of market opportunities in order to achieve above the average results.

Furthermore, market orientation had no significant effect on performance of SMEs .This means that increasing of customer orientation, competitor orientation, inter-functional coordination are not able to increase sales growth, capital growth, labor growth, market growth, profit growth.The results supported by the research that has been conducted by Ramadaniati & Lestari (2020). Market orientation has no significant influence on the company's performance in the rattan industry. Meanwhile, the results of this study do not support the research that has been conducted by Utaminingsih (2016) that observed the influence of market orientation on marketing performance.

CONCLUSION AND RECOMMENDATION

Conclusion

In the related literatures, entrepreneurship can be captured by the proper to act and to behave toward competition, to pursue market opportunities, to innovate and bear to take risk. This researh explore the influence among moslema entrepreneurdhip, innovation product, market orientation and performance of SMEs. As assumed by the hypothesis, in fact moslema entrepreneurship has no significant influence on market orientation, but it has an impact on business performance.

The more Moslema businesses have an entrepreneurial spirit, the more business performance will increase. On the other hand product innovation has a significant influence on market orientation, but didn't have an impact on business performance. Thus innovation must be continuously carried out. Consumers will see that products have a difference each other so as to increase consumers' buying interest. Furthermore, market orientation does not have an influence on business performance. For moslema entrepreneur, product marketing has not really adopted the strategy as measured in the market orientation instrument. However, by innovating products and having an entrepreneurial spirit, business performance can be achieved.

Recommendation

Considering for Moslema entrepreneurs to improve product innovation by improving product quality, product variant style and product design. With certain strategies, it is expected to further increase the market orientation continuously and strengthen the entrepreneurial spirit so as to increase business performance such as sales growth rate, capital growth, labor growth, market growth and profit growth.

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The influence of company's external and internal factors to financial performance and company competitiveness on consumer good companies industry

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Abstract
The purpose of this study is to predict the influence model of external and internal factors of a company, starting a company's financial performance on the competitiveness of companies in the Consumer Goods Industry Sector on the Indonesia Stock Exchange. The sample of this research is 35 companies in the Consumer Goods Industry Sector on the Indonesia Stock Exchange during the period of 2016 to 2018. This research is used SEM (Structural Equation Modeling) based on component or variance based analysis known as Partial Least Square (PLS). The results of this study concluded that external factors affect the company's financial performance and company competitiveness. Internal factors also affect the company's financial performance and competitiveness but the influence of both external factors and internal factors respectively are not able to mediate the financial performance of the company's competitiveness

Keywords: *Company competitiveness, External factor, Financial performance, Internal factor*

JEL Classification: G11, G23

INTRODUCTION

Indonesia's Global Competitiveness Index in 2018 is in the 45th rank out of 140 countries. This ranking was released by the World Economic Forum (WEF) in 2018. The WEF states that the competitiveness index is compiled annually to determine the global competitiveness landscape, in line with the fourth industrial revolution or industry 4.0.

Competitiveness according to WEF benchmarks was identified to 5 (five) dominant factors. On the macro side there are 3 (three) factors, namely: (a) the macro economic conditions are not conducive; (b) the poor quality of public institutions in carrying out their functions as facilitators and service centers; and (c) weak technology development policies in facilitating the need for increased productivity. Meanwhile, at the micro or business level, 2 (two) prominent factors are: (a) low business efficiency at the level of company operations; and (b) the weak business competition climate.

The term comparative advantage was originally put forward by David Ricardo in 1817 when discussing trade between two countries. According to Ricardo the theory of absolute superiority becomes the theory of comparative advantage. This theory explains that trade occurs when there are differences in comparative advantage. Comparative advantage will be achieved if a country is able to produce goods and services more at a lower cost than other countries.

Another competitiveness theory is superior competitiveness according to Porter (1980), Porter's theory of competitiveness departs from his belief that classical economics that explains comparative advantage is inadequate or even incorrect. According to Porter, a country gains a competitive advantage if the company (which is in the country) is competitive. A country's competitiveness is determined by the ability of industries to innovate and improve their capabilities. Hamel & Prahalad (1995) suggests that companhamies build competitive strategies around the core of shared competencies and be able to have good company performance in the preparation of competitiveness strategies.

Companies that do not have competitive advantage will surely be abandoned by the market. Because not having competitiveness means the company has no advantage, and not superior means it is difficult for the company to stay in the market for the long term. Competitiveness is related to how effective an organization is in the competitive market, compared to other organizations that offer the same or similar products or services. Companies that are able to produce quality products or services and good performance are companies that have the power to be able to compete.

One area that is very potential to develop is the Consumer Goods Industry sector. Consumption goods consisting of daily needs and other complementary goods become very potential to be developed. The Consumer Goods Industry Sector is one of the Industrial sectors in the Indonesia Stock Exchange (IDX) that continues to grow and develop.

The Consumer Goods Industry on the Indonesia Stock Exchange consists of 5 sub-sectors, namely the Food and Beverage Sub-Sector, the Cigarette Sub-Sector, the Pharmaceutical Sub-Sector, the Cosmetics and Household Goods Sub-Sector, and the Household Equipment Sub-Sector.Based on the increasing consumption needs, it is predicted that this industrial sector will continue to increase until the following years. It also demands that companies in the consumer goods sector must have good and competitive company performance in order to survive in increasingly fierce business competition.

Competitiveness in the context of financial management has several indicators. According to Saedi, Sofian, Rasid, Saeid, (2012), the company's competitiveness can be seen from the company's growth as measured by asset growth. On research of Zhaohua, Yaobin, Kwok & Jinlong (2010), and the research of Liang, Zhang, & Cui (2015) which suggests to measure competitiveness can be based on sales growth. According to Morgan & Hunt (2004), the company's competitiveness can be seen from the company's market share and the company's market performance.

Research on the effect of company performance on competitiveness in several countries has been carried out. Among them Hsiao, Lin, Xiang-Ying, His-Peng, & Hueiju (2010), examine that the company's performance can have an influence on the company's competitiveness. Teeratansirikool, Siengthai, Badir, & Charoenngam (2013) stated that

the company's financial performance has an influence on the competitiveness of the company itself in the market.

On the other hand, several studies on the influence of external factors and company internal factors in several countries on competitiveness have also been carried out. Khan, Khan, Rukh & Imdadullah (2012) found that the company's external factors such as interest rates and inflation did not significantly influence the company's competitiveness as reflected by the return of the KSE 100 index shares, while the external factors in the form of the exchange rate had a significant effect on the competitiveness of the company as reflected by the return of the KSE 100 index shares. Research Prempeh (2016) examines external factors in the form of macro variables that are reflected by inflation and interest rates do not affect the competitiveness of companies which is reflected by stock price volatility.

Instead, He, Shen, Li, Xu, Zhao, & Long (2017) suggesting that the company's internal and external factors can influence and impact on the company's financial performance activities. The company's external factors according to research. He et al. (2018) namely Government Pressure (GP) in the form of government regulations, Social Pressure (SP) in the form of environmental protection and responsibility around companies operating, Economic Pressure (EP) such as exports, domestic currency exchange rates, foreign exchange, inflation and interest rates .

Sheikh, Wang, & Khan (2013) conduct research on internal factors projected by the number of directors and employees on the company's financial performance projected by Return on Assets (ROA), Return on Equity (ROE), Tobins Q, and Return on Investment (ROI). This research concluded that there is an influence of the company's internal factors on the company's financial performance.

Research of Rivera, Munoz & Moneva (2017) examine that a company's internal factors can affect the performance of the company. The company's external factors are social responsibility, shareholders, inflation, and interest rates. Financial performance are Return on Equity (ROE), Return on Sales (ROS), and Tobins'Q.

Based on previous exposure about the phenomenon and research gap, this study aims to predict the influence of company's external and internal factors to financial performance and company competitiveness on consumer good companies industry.

METHODS

The number of samples in this study were 35 companies. The sample was determined using the purposive sampling method of judgment sampling type. The sample selection criteria are based on the considerations: 1) The research period in this study is from 2016 to 2018, which is listed on the Indonesia Stock Exchange; 2) Companies in the consumer goods industry sub-sector that have complete financial statements during the study period.

To predict the influence of company's external and internal factors to financial performance and company competitiveness, the Structural Equation Modeling (SEM) based on component or variance which is well known as Partial Least Square (PLS), is used. The preliminary research model is shown in Figure 1.
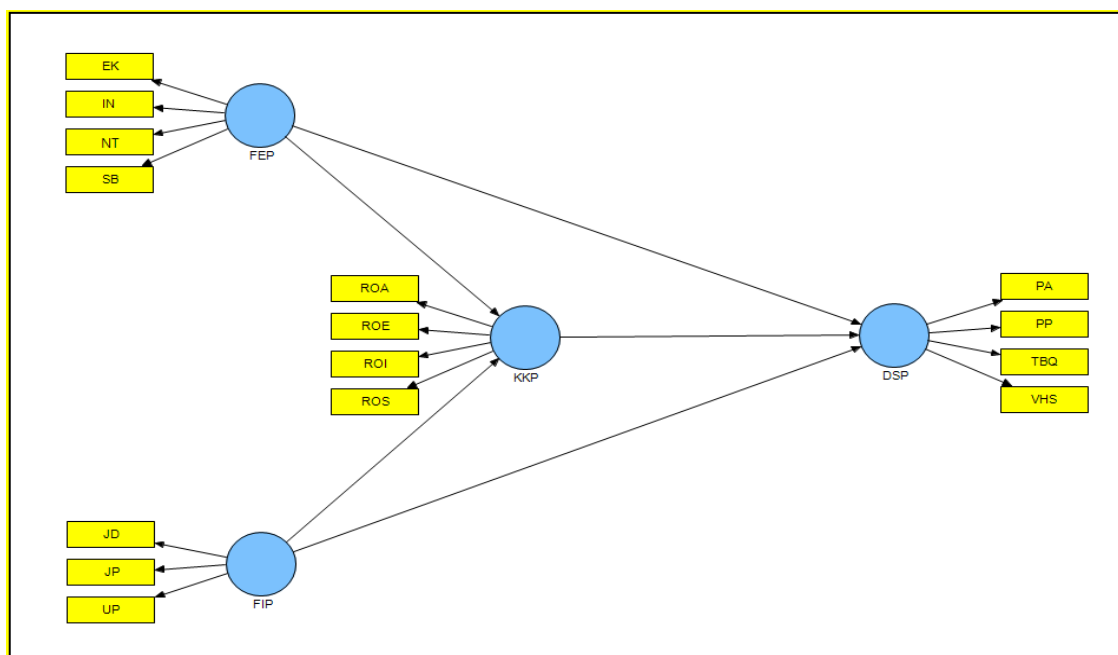
Figure 1. Preliminary research model

The measurement and assessment of variables and indicators in the study are given as Tabel 1.

Table 1. Operational variables

Variable	Indicator	Formula
Corporate Competitiveness (DSP)	Stock Price Volatility	Standard deviation of the company's stock price
	Asset growth	$\dfrac{Total\ Aktiva\ Th\ i - Total\ Aktiva\ Th\ i - 1}{Total\ Aktiva\ Tahun\ i - 1}\ x100\%$
	Sales Growth	$\dfrac{Total\ Sales\ Th\ i - Total\ Sales\ Th\ i - 1}{Total\ Sales\ Th\ i - 1}\ x100\%$
	Tobins -Q	$TQ = \dfrac{Total\ Market\ Value + Total\ Book\ Value}{Total\ Book\ Value\ of\ Asset}$
Financial Performance Company (KKP)	*Return on Equity*	$ROE = \dfrac{Net\ Income_t}{Equity_t}$
	Return on Sales	$ROS = \dfrac{profit\ before\ tax\ and\ interest}{Sales}$
	ROI	$ROI = \dfrac{Total\ Sales - Investation}{Investation\ x\ 100\%}$
	ROA	$ROA = \dfrac{Net\ Income}{Total\ Aset}$
External Company Factors (FEP)	Export	Number of company exports in one period.
	Exchange rate	The ratio of the value of the rupiah to the dollar.
	Inflation	Changes in the average price of goods and services
	Interest rate	The value of interest rates that are visited in each time period
Internal Company Factors (FIP)	Number of Directors	JM = total of direction in companya
	Number of Employees	JE = total of employees in company
	Company Size	UP = total assets

RESULTS AND DISCUSSION

Before conducting the analysis, an evaluation of the model was carried out first, wich was related to the loading factor (outer loading). According to Ghozali (2008) convergent validity of the measurement model with reflective indicators can be seen from the correlation between item scores / indicators and their construct scores. This correlation is known as the loading factor (outer loading). Indicators are considered reliable if they have a positive correlation value above 0.70. However, at the scale development research stage, loading 0.5 to 0.6 is still acceptable.

Based on the guidance, it appears that in some variables there are indicators that have a loading factor value <0.5, ie the FEP variable is an IN (inflation), NT (exchange rate) and SB (interest rate), the KKP variable is the ROI (Return On Investment), the DSP variable is the PA (Asset Growth) and, TBQ (Tobin's Q). These six indicators are then exclude from the model.

After removing the indicators, a modified SEM-PLS model is constructed as shown in Figure 2.
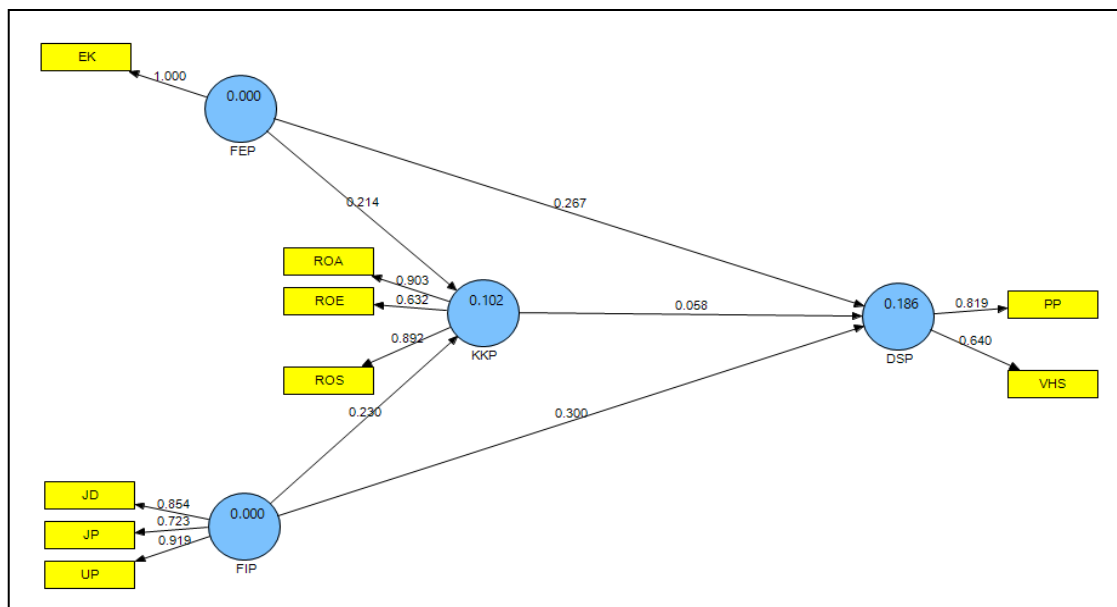
Figure 2. A modified model

Convergent validity from testing the indicator (measurement model) can not only be seen from the value of the loading factor but can also be seen from the results of the calculation of the modified model in the form of Average Variance Extracted and Composite Reliability. The Table 2 is Average Variance Extracted and Composite Reliability.

Table 2. AVE and composite reliability

Variable	Average Variance Extracted (AVE)	Composite Reliability	Information
DSP	0.540310	0.698394	Qualified
FEP	1.000000	1.000000	Qualified
FIP	0.698433	0.873126	Qualified
KKP	0.669817	0.855988	Qualified

Based on the loading factor value, Average Variance Extracted and Composite Reliability, the indicators of each variable are reliable and valid reflecting their respective

variables.

Testing the structural model's goodness of fit against the inner model using predictive-relevance (Q2) values. Magnitude Q2 has a range value of $0 < Q2 < 1$. The closer to 1 means the better the model (Solimun, 2011). The result of predictive-relevance value calculation is 0.268593 or 26.86% shows that the diversity of data that can be explained by the model is 26.86%. These results indicate that the value of Q Square> 0 gives the meaning that this research model has predictive-relevance and can be used for hypothesis testing.

The influence between variables is shown through coefficient and significance of t statistic as shown in Table 3.

Table 3. The modified model hypothesis testing

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	Standard Error (STERR)	T Statistics (|O / STERR|)
FEP -> DSP	0.279344	0.303015	0.068768	0.068768	4.062092
FEP -> KKP	0.213992	0.216328	0.073924	0.073924	2.894768
FIP -> DSP	0.313500	0.344286	0.067474	0.067474	4.646216
FIP -> KKP	0.229515	0.250282	0.074386	0.074386	3,085480
KKP -> DSP	0.058137	0.081564	0.095215	0.095215	0.610588

Furthermore, the mediation test was carried out using the sobel test. Briefly the results of the recapitulation are as Table 4.

Table 4. Recapitulation of the company's financial performance mediation test

	t-count	t-table	Criteria
FEP->DSP	1.036	1.64	Not qualified
FIP->DSP	1.330	1.64	Not qualified

T table with alpha 0.5, the t-table value is 1.64. Based on the Table 4, it can be concluded that the influence of external factors and internal factors on company competitiveness cannot be mediated by the company's financial performance.

Corporate external factors that are reflected by exports (EK) have a significant direct effect on the competitiveness of companies that is reflected by Sales Growth (PP) and Stock Price Volatility (VHS). This means that external factors that are reflected by exports will be able to increase the competitiveness of companies both in terms of sales growth and the company's stock price. This means that when an increase in exports of companies in the consumer goods industry sector will also be able to increase sales growth and stock prices of companies in the consumer goods industry sector on the IDX.

The findings of this study support the research of Juma (2014) who found a positive relationship between company external factors and the competitiveness of real estate companies. But it does not support the research of Khan, et., Al., (2012) and Prempeh (2016) who found that the company's external factors reflected by the interest rate and inflation did not significantly influence the return of KSE 100 index shares as a proxy for company competitiveness.

The company's external factors that are reflected by exports (EK) have a significant effect on the company's financial performance reflected by ROA, ROE and ROS. The three ratios are the company's profitability ratio. Thus increasing exports will increase company profitability.

The findings of this study support the research of He et al (2017) and Obeng-Krampah (2018) who found that the interest rate and inflation as a proxy for external

factors of the company have a significant influence on the company's financial performance. Whereas the Egbunike & Okerekeoti (2018) studies were not supported due to different significance results. The difference in the results of this study with previous research lies in the difference in the proxy or indicator of the company's external factor variables. In this study the external factor indicator is export. Means that in the sample company research period, the effect of export volume greatly affects the company's financial performance.

In this study the company's external factors significantly influence the competitiveness of the company, but after mediating through financial performance, the company's external factors do not significantly influence the competitiveness variable, this can happen because it is caused by the direct role of external factors that are so large on competitiveness, while in this study the possibility of financial performance represented by indicators of ROA, ROE and ROS does not play a maximum role in the competitiveness of companies in the object in this study. Or in other words, an increase in exports only affects competitiveness but an increase in exports cannot be mediated by profitability to increase competitiveness.

Internal company factors that are reflected by the number of directors (JD), Number of Employees (JP) and company size (UK) have a significant influence on the competitiveness of the company reflected by Growth Growth (PP) and Stock Price Volatility (VHS). This means an increase in the number of directors (JD), the Number of Employees (JP) and the size of the company (UK) is able to increase the Sales Growth (PP) and Stock Price Volatility (VHS).

The findings of this study support the research of Aloui & Jarboui (2017) investigating the causal relationship between stock return volatility, independent directors, and control variables in the simultaneous equation panel data model of 89 Korean companies during the 2006-2012 period. Empirical results show that the proportion of outside directors destabilizes stock price volatility. This result is statistically significant and strong in a wide range of model specifications. Preliminary test results are consistent with signaling theory (Spence, 1974), which is more important when an investor operates in a particular investment environment, such as in Korea after the 1997 Asian Financial Crisis. Furthermore, the results of the study show that independent directors stabilize stock returns.

Research by Békés, Horváth & Sápi (2016) states that competitiveness refers to the fact that a company outperforms 'competitors' in terms of size (workers, output, income) and profitability thanks to everything that affects the perceived quality of the company's products and cost effectiveness in supply them. The company's competitiveness boils down to its own ability to produce more added value than given the amount of input, that is, from the total productivity factor (TFP) as measured by the number of employees, directors as well as increasing the scale or size of the company.

Internal company factors that are reflected by the number of directors (JD), Number of Employees (JP) and company size (UK) have a significant influence on the company's financial performance reflected by ROA, ROE and ROS. This means that an increase in the number of directors (JD), Number of Employees (JP) and company size (UK) can increase company profitability.

The findings of this study are in line with the results of research by Bonn, Yoshikawa & Phan (2004) who found that the size (number) and age of the board of directors were negatively associated with Japanese company performance. Likewise, the research by Wang, Senorate, Rafic (2015) concluded that there is an influence of the

company's internal factors on the company's financial performance. But it does not support Wu's research (2009) which found no significant relationship between the proportion of independent directors on the board and company performance.

Internal factors significantly influence the competitiveness of companies, but if through mediation of financial performance in this study indicate that internal factors have no effect on the competitiveness of companies. This shows that investors look at the company's internal conditions and do not see the company's financial performance conditions.

The results of this study conclude that the financial performance of companies proxied by ROA, ROE and ROS does not significantly influence the company's competitiveness reflected by Sales Growth and Stock Price Volatility. This means that investors do not see the company's competitiveness as a result of the company's financial performance.

The findings of this study do not support the research of Zanotti, Reyes & Fernandez (2018) which shows that competitiveness is significantly related to corporate financial performance, but not with operational performance and also Anwaar (2016) research shows that profit margins net, return on assets has a significant positive effect on stock returns while earnings per share has a significant negative impact on stock returns. Meanwhile, the results of Teeratansirikool et al (2013) research stated that the company's financial performance had an influence on the competitiveness of the company itself in the market.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The external factors of the company have a direct and significant influence on the competitiveness of the company and the company's financial performance. However, the company's external factors do not have a significant influence on the company's competitiveness by mediating the company's financial performance. The company's internal factors have a significant direct effect on the company's competitiveness and financial performance. However, the company's internal factors do not have a significant effect on the company's competitiveness by mediating the company's financial performance.

The company's financial performance does not have a significant direct effect on the company's competitiveness. Thus, it can be concluded that external and internal factors have a positive and significant influence on competitiveness and financial performance, however, the company's financial performance is unable to mediate the influence of external and internal factors on the company's competitiveness.

Recommendations

Referring to the results of the study which concluded that the company's external factors and the company's financial performance had a significant influence on the company's competitiveness, for issuers in the consumer goods industry group to consider giving more attention to their export activities and asset utilization and increased sales. By providing increased export activity and asset utilization and increasing sales, it will increase the company's competitiveness.

For further researchers, it can examine the export capacity and export destinations of companies in the Consumer Goods Industry Sector and can examine the ideal board size of companies as a contribution to agency theory.

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A spatial analysis of monetary and non-monetary poverty in Cameroon between 2001 and 2014

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Abstract

The objective of this study is to analyze the spatial distribution of monetary and non-monetary poverty in Cameroon. The identification of poor households by the monetary dimension is done using the thresholds defined by national institute of statistics. While in the non-monetary, dimension we use multiple correspondence analysis to construct composite indicators of well-being. After calculating the composite indicators, we use the formula developed by Ki et al. (2005) to calculate the poverty line. The data used in this study is from the second, third and fourth Cameroon household surveys. The results show that the incidence of monetary poverty declined from 40.2% in 2001 to 39.9% in 2007 to reach 37.5% in 2014. Non-monetary poverty stagnated between 2001 and 2007, with the incidence going from 60.65% to 61%. In 2014, the incidence declined to 53.84%. The proportion of individuals affected by both monetary and non-monetary poverty increased from 34.34% in 2001 to 35.59% in 2007, and stood at 33.49% in 2014. The rural areas are the most affected by monetary and non-monetary poverty. The region of the country most affected by monetary and non-monetary poverty is the Far North. Taking into account these results, poverty reduction policies in Cameroon should give priority to rural areas. Thus specific measures should be taken to improve access to basic infrastructures in rural areas. The Cameroonian government can also reduce taxes on construction materials.

Keywords: Cameroon, Composite indicator, Monetary poverty, Non-monetary poverty

JEL Classification: I31, I32

INTRODUCTION

Since the end of the 1980s, the search for solutions to the problem of poverty has become more and more active in developing countries in general and in Sub-Saharan African countries in particular. Sub-Saharan Africa is the region most affected by poverty. In fact, according to the World Bank report (2015), the incidence of poverty in Sub-Saharan Africa decreased from 57% to 41% between 1990 and 2015. In South Asia during the same period the incidence increased from 52% to 17%. Although the incidence of

poverty in Sub-Saharan Africa fell from 49% in 1981 to 41% in 2015, the number of poor continues to increase, from 229 million in 1981 to 278 million in 1990 and 413 million in 2015. For the United Nations Development Program (UNDP, 2001), Sub-Saharan Africa lags behind other regions not only because monetary and human poverty remains considerable in this region, but also because the adult literacy rate is still very low (60%) and life expectancy at birth is stands at only 48.8 years. The fight against poverty thus occupies an important place on the agenda of the presidents of African countries. Since developing countries are called upon to adopt economic policies which enable the achievement of a certain level of growth which benefits everyone.

Today, this fight against poverty is more and more perceived as a main condition for development for at least three reasons: (i) poverty is associated with malnutrition, infant mortality, under-education, difficulties in access to health care and low productivity. These have as effect, the perpetuation of poverty (Klopper, 2007). (ii) Poverty forces people to abuse natural resources for short-run survival without any concern for protecting the environment. Which is incompatible with sustainable development (Asadi et al. 2008) and (iii) poverty is associated with conflicts and dysfunctioning in resource allocation systems, which leads to corruption in many countries (Omotola, 2008).

Before the mid 80s, Cameroon witnessed economic prosperity with impressive rates of economic growth. In fact, from 1965 to 1985, Cameroon experienced sustained growth driven by the continued development of agricultural production and exports and by the exploitation of oil resources from the second half of the 1970s. Cameroon thus recorded average real growth rates of about 7% for over a decade (Government of Cameroon, 2003). Following the fall in the prices of rent generating agricultural products and the deterioration of the terms of trade, the macroeconomic indicators gradually worsened beginning in the 1985/1986 financial year. In order to better the economic situation and promote the wellbeing of the populations, Cameroon adopted structural adjustment programs (SAPs) in September 1988. However, the measures applied under the SAPs resulted in a worsening aggravation of poverty and an increase in inequality. In view of correcting these poor results, Cameroon adopted an economic and social program based on a participative approach (Government of Cameroon, 2003). These joint efforts led to the admission of Cameroon to the decision point by the IMF and World Bank within the framework of the Highly Indebted Poor Countries Initiative (HIPC). It is in this wise that Cameroon in April 2003 drafted a Poverty Reduction Strategy Document (PRSD) which had as ultimate objective to improve in a durable and efficient manner the living conditions of the populations by combating the main causes of poverty.

The implementation of the PRSD in line with the Millennium Development Goals (MDGs) led to the admission of the country in April 2006 to the completion point of the HIPC initiative. A close examination of these strategies and policies implemented by Cameroon shows that poverty did not fall considerably. In fact, according to harmonized data of the first, second, third, and fourth Cameroonian Household Surveys, monetary poverty stood at 53 % in 1996, 40,2% in 2001, 39,9% in 2007 and 37.5% in 2014 (INS, 2015). These results are unsatisfactory for Cameroon which seeks to become an emerging country by 2035. In order to address the many obstacles which slow down the reduction of poverty, the government prepared the Growth and Employment Strategy Document (GESD) for a long-term vision (2035) for the economy. In the GESD, Cameroon has taken on the challenge of accelerating growth, creating formal jobs and reducing poverty.

Regarding poverty, Cameroon seeks to reduce the monetary poverty rate from 39.9 % in 2007 to 28.7% in 2020. Despite all the efforts made by Cameroon, monetary poverty has not decreased considerably. Poverty therefore remains a crucial problem in Cameroon. Diagne et al., (2005) state that when a policy maker wants to take action to fight against poverty, he is faced with two practical questions which are: who is poor and in why is he poor? To these two questions are added other questions which are: Where do the poor live? What do they do ? To answer these questions, several approaches have been developed.

The monetary approach measures poverty from the level of well-being achieved by an individual or a household using his consumption or indirectly his income. In Cameroon, several authors have used this approach to measure poverty (see, Dubois and Amin 2000 ; Fambon et al. 2001 ; INS 2002, 2007, 2015). The monetary approach is criticized because it reduces the dimensions of poverty. In fact, the level of income available to an individual or a household is not explicit enough to account for the equally fundamental dimension in well-being such as health, access to basic infrastructure and education. Authors such as Lollivier and Verger (1999) have indicated that it is unreasonable to reduce the totality of resources to only the availability of money, neglecting both the consumption of free public goods and the services of owned capital. This criticism led to the development of the non-monetary approach to poverty.

The non-monetary approach is multidimensional in the sense that the sole focus on income is abandoned in favor of a broader vision of well-being which takes into account a multitude of components (Bertin, 2006). The non-monetary approach is also known by the term "poverty in conditions of existence" and is subdivided into two approaches: the capabilities approach, which has as main proponent economist Armatyar Sen, and the basic needs approach. The basic needs approach analyzes well-being in terms of achievements or results. Unlike the utilitarian approach where the only accomplishment is utility, the scope of the achievements is multidimensional in the basic needs approach. Well-being is considered to be a set of elements deemed essential for leading a decent life. These elements are defined according to the characteristics of each society. They include: adequate food, good health, basic education, adequate housing, sanitation and good clothing. The approach based on capabilities holds that poverty can't be reduced to the question of the satisfaction of basic needs (being) and, utility (well-being), but also to the skills and human capabilities. According to this approach, capabilities are defined as being a functional combination of being and know-how that each person can reach

Given that poverty is recognized internationally as a multidimensional phenomenon, several authors have conducted their studies on the multidimensional approach to poverty (see, Ningaye and Ndjanyou 2006 ; Foko et al., 2007; Njong 2008 ; Feubi et al. 2011). Among these studies, very few have analyzed the spatial distribution of poverty in Cameroon between 2001 and 2014.

The main objective of this study is thus to analyze the spatial distribution of monetary and non-monetary poverty in Cameroon between 2001 and 2014. More specifically, we seek to: (i) to identify the profile of the poor households according to monetary dimension in 2001, 2007 and 2014; (ii) to identify the profile of the poor households according to the non-monetary dimension in 2001, 2007 and 2014.

Such a study is essential to better understand the phenomenon of poverty and better articulate policies intended to relieve the living conditions of most vulnerable Cameroonians.

LITERATURE REVIEW

In Cameroon, the analysis of poverty has been the subject of many studies. These studies focused for a long time on the monetary approach. We can distinguish the studies of the World Bank (2001; 2005a), Dubois and Amin (2000), Fambon et al. (2001) and INS (2002a, 2007, 2015). The main findings of these studies are that: income inequalities are higher in rural areas than in urban areas; and that poverty is mainly a rural phenomenon but is unequally distributed in the different regions.

However, it is increasingly accepted that poverty is not reduced to insufficien income alone. It also integrates non economic considerations (access to infrastructures and social services, the quality of housing, the possession of durable goods). Many authors therefore carried out studies on the multidimensional approach to poverty.

Ningaye et al., (2005) analyzed the impact of cultural aspects in the description of poverty in Cameroon, Ndongo et al., (2006) analyzed the effects of religion and social capital on poverty reduction. The studies by these authors show that certain cultural traits and norms can perpetuate or attenuate the transmission of poverty in the society, and that religious variables positively impact household poverty in the city of Yaoundé.

Ningaye and Ndjanyou (2006) focus their study on the approach of inertia in which after having built the composite indicator of well-being (ICBE) for each household, they obtain an incidence of multidimensional-poverty of 64%. Foko et al (2007) identify a profile of non-monetary poverty and compare it to that of monetary poverty in Cameroon. They find that the poverty of living conditions translates into the exclusion of households from the use of certain basic amenities due to their non availability or their poor accessibility. Njong (2008) in his Ph.D. thesis applies the theory of Fuzzy Sets to identify the sources of multidimensional- poverty and its variations in space and time in Cameroonian households between 1996 and 2001. He arrives at the conclusion that the incidence of multidimensional- poverty increased from 42.08 to 50.39 %. Ningaye et al., (2011) in their study use a structural equations model (SEM) to study five dimensions of poverty (living conditions, education, infrastructures, health and monetary) and calculate the scores of each individual on each dimension. They conclude that one can be poor on certain dimensions and be less poor in others.

Several studies on poverty in Cameroon reveal significant efforts in diagnosing the phenomenon. However, in spite of progress in the field, the answer to the question of knowing who is poor remains diversified. The groups identified as poor can vary from one indicator to another and an effective strategy to fight against poverty depends on a good targeting of the populations concerned. A bad targeting could have as consequence a diversion of the resources of the strategy towards the less disfavored populations. The analysis of the spatial distribution of monetary and non-monetary poverty enables us to know the evolution of the living conditions of the most deprived individuals.

To our knowledge, very few studies have looked at the analysis of the spatial distribution of non-monetary poverty in Cameroon between 2001 and 2014. Feubi et al (2011) have shown the dynamics of poverty in Cameroon between 2001 and 2007, their results show that at the national level non-monetary poverty between 2001 and 2007 witnessed an increase for the most disadvantaged households initially in 2001, households classified as wealthy in 2001 experienced a strong entry into non-monetary poverty in 2007. The middle-class households have witnessed a marked improvement in their situation.

RESEARCH METHODOLOGY

In this section, we present the data used, the method of analysis and the variables of interest.

Presentation of data

In this study we use secondary data from the second, third and fourth Cameroon household surveys (ECAM 2, ECAM 3, ECAM4) conducted by the National Institute of Statistics of Cameroon. The ECAM 2 survey was undertaken from September to December 2001. This household survey was carried out to remedy mistakes made in the first household survey and ameliorate information concerning the poverty profiles. The ECAM 3 survey is carried out between September and December 2007. Its principal goals are, on the one hand, to put together a profile of poverty and the various indicators of household living conditions that were established in 2001. The ECAM 4 is designed to enable the Government and its development partners to assess progress in improving people's living conditions. The ECAM 4 survey is carried out between September and December 2014. The sampling plan for the three surveys identifies twelve survey areas which are the two major metropolises of Douala and Yaoundé, Adamawa, Center, East, Far Nord, Littoral, Nord, Nord West, West, South, and South West regions. In each region, a distinction is made between urban, semi-urban and rural stratum. The statistical unit is the ordinary household. The database of ECAM 2 contains data on 10992 households, that of ECAM 3 on 11391 households and that of ECAM 4 on 10303 households.

Method of analysis

In this section, we present the method of identifying the poor according to the monetary and non-monetary approaches.

Monetary dimension

To identify poor households according to the monetary dimension, we use the poverty thresholds defined by the National Institute of Statistics of Cameroon which is 232547 FCFA per adult equivalent per annum in 2001, 269443 FCFA in 2007 and 339715 FCFA in 2014 (NIS, 2015) to classify the households according to their level of expenditure. We select the years 2001, 2007 and 2014 because these are the recent years in which the National Institute of Statistics carried out the Cameroon household surveys.

Non-Monetary dimension

It is mainly derived from the study by Townsend (1979). In fact, the basic idea is that income is certainly an explanatory factor of poverty but that it is not the only factor. This author thus suggests to also measure poverty using an index of deprivation based on the observation of a certain number of consumption activities and participation in social life. We also take into account household wealth indicators. Lollivier and Verger (1997) define the wealth as the accumulated assets allowing a person or a household to have future resources

The idea of wealth is related to the concept of capital. We can identify four main classes in the wealth of an individual or a household: physical capital, financial capital, human capital and social capital. These fundamental elements explain the intrinsic capacity of individuals and households to reach a certain level of income, hence, welfare and face the shocks that affect their living conditions.

The construction of the composite indicator is based on the approach of inertia and consists in defining a composite indicator of welfare for each individual of a given population.

To construct the composite welfare indicator, we use MCA (multiple correspondence analysis). This choice is justified by the fact that the figures used in the coding of ordinal variables are only codes and do not have metric properties. The variables of non-monetary poverty analysed using MCA in order to identify the indicators describing a real poverty situation and thus adapted for the construction of a composite welfare index. The rationale of the choice of the variables is the property of Ordinal Consistency on the First Axis (COPA). According to this property, the methods of the indicators describing a situation of poverty must have increasing scores on the first factorial axis which is the axis of poverty (Asselin, 2009).

After identifying the variables to be use, we used the following formula to calculate the composite indicator of well-being for non-monetary poverty.

$$C_i = \frac{\sum_{k=1}^{K} \sum_{h_k=1}^{H_k} W_{h_k}^{k} J_{h_k}^{k}}{K} \quad \text{.. (1)}$$

Where K is the number of categorical indicators, H_k is the number of categories of the indicator K, $W_{h_k}^{k}$ is the weighting coefficient (normalized score on the first factorial axis, $\frac{score}{\sqrt{V_1}}$) of the category h_k , V_1 is the eigenvalue of the first factor, $J_{h_k}^{k}$ is the binary variable taking the value 1 when the individual i has the category h_k and 0 if not (Asselin, 2009).

The weighting coefficients obtained by the MCA correspond to the scores standardized on the first factorial axis.

After calculating the composite poverty index for each individual, we use the ascending hierarchical classification to subdivide the population into two homogeneous classes (poor class and non-poor class). Then poverty lines are determined from the following formula:

$$z = \max IC^p * m^p + minIC^{np} * m^{np} \quad \text{..(2)}$$

 (Ki et al., 2005), where z is the poverty threshold , max IC^p is the maximum value of the composite index in the poor class, min IC^{np} is the minimum value of the composite index in the non poor class, m^p the weight of the poor class and m^{np} the weight of the non-poor class.

Description of variables
Monetary indicator
The variable used in the monetary dimension is the total household expenditure. In fact, the income of a household does not always represent its consumption. It is generally largely underestimated, and constitutes a poor approximation of well-being (Fambon, 2004).
Non-monetary indicators
In our study, the preselected variables for the non-monetary dimension are listed in the Table 1.

Table 1. Presentation of the preselected variables for the construction of the composite indicator of well-being

Dimension	Attributes
Accessibility to basic infrastructures	Distance between the nearest public primary school and the house, distance between the nearest private primary school and the house, distance between the nearest foodstuffs market and the house, distance between the nearest tarred road and the house, distance between the nearest public access point of drinking water supply drinking and the house, distance between the nearest refuse dump can and the house.
Situation of the house	Type of access road to the residence of the household, nature of the relief where the residence of the household is built.
Habitat	Status of occupation of the residence of the household, type of housing, nature of the floor, nature of the roof, nature of the walls
Energy	Means of lighting, main source of energy used in the kitchen.
Sanitation	Mode of evacuation of the household refuse, mode of disposal of used water, type of toilet.
Drinking water	Type of drinking water supply.
Possession of durable goods	Possession of a television, possession of a landline telephone, possession of a mobile telephone, possession of a vehicle
Land assets	Possession of at least an exploited piece of land, possession of at least an unexploited piece of land, possession of at least a house.
Social capital	Membership of an association.
Human capital	Know how to read or write a simple sentence in French, the highest diploma of the head of household, attending a school, health status of the household head, the sector of consultation in the event of disease, the person having been consulted in the event of disease, the sector of consultation, reason for the choice of the sector of consultation., the duration of the last consultation.
Economic and financial assets	Possession of assets, title deeds or bonds, possession of savings by a member of the household.

Source : the authors using the data and of questionnaires of ECAM 2, ECAM 3 and ECAM 4

After preselecting these variables, they are subjected to MCA to retain the variables to be used for the construction of the composite indicators. Variables are selected according to the COPA criterion.

RESULTS ANS DISCUSSION

Before presenting the spatial distribution of poverty, we give the dimensional scores of the variables used for the non-monetary approach.

Table 2. Dimensional scores of composite welfare indicator

Variables	Terms	Dimension on the first axis.		
		2001	2007	2014
QUALITY OF HOUSING AND ACCESSIBILITY TO BASIC INFRASTRUCTURES				
Housing type	- villa / Consession / Sarret	1.791	0.250	1.069
	- apartment/house with several dwellings	0.423	0.022	0.139
	- detached house	- 0.330	-0.007	- 0.185
Method of drinking water supply	- tap / drilling	0.511	0.511	0.381
	- river / backwater / well / other	- 0.777	- 0.815	- 0.825
Garbage disposal	- truck / garbage collection	1.099	1.112	0.883
	- buried / recycled / other	- 0.289	- 0.314	- 0.500
Light source	- AES	0.661	0.641	0.531
	- fuel	- 0.905	-1.011	- 1.194
Source of energy for cooking	- gas	1.313	1.174	0.841
	- purchased wood	0.258	0.348	0.199
	- collected wood	- 0.851	- 0.869	- 0.866
Type of toilet	- modern latrine	0.601	0.795	0.425
	- pit latrine	- 0.696	- 0.583	- 1.015
Main wall material	- concrete / concrete block / baked bricks / cut stone	0.806	0.740	0.639
	- board /mats/thatch/sheet/ other	- 0.494	- 0.582	- 0.650
Main floor material	- cement / sheet metal / tile	0.207	0.219	0.221
	- mats / thatch / leaf / other	- 1.369	- 1.433	- 1.576
Main ground material	- cement / tiles	0.600	0.600	0.551
	- wood / earth / other	- 0.942	- 0.993	- 1.123
Distance from nearest public primary school to accommodation	- less than 1 Km	0.202	0.081	0.023
	- 1Km and more	- 0.137	- 0.062	- 0.67
Distance from nearest private primary school to accommodation	- less than 1 Km	0.563	0.631	0.600
	- 1Km and more	- 0.193	- 0.399	- 0.479
Distance from nearest food market to housing	- less than 1 Km	0.349	0.381	0.288
	- 1Km and more	- 0.216	- 0.194	- 0.279
Distance between the nearest tarmac road and the accommodation	- less than 1 Km	0.695	0.589	0.549
	- 1Km and more	- 0.609	- 0.603	- 0.828
Distance from nearest garbage bin to housing	- less than 1 Km	0.858	0.837	0.444
	- 1Km and more	- 0.351	- 0.440	- 0.715
ACCESSIBILITY OF DURABLE GOODS				
Mobile phone	- yes	1.574	0.657	0.104
	- no	- 0.167	- 0.817	- 0.561
Radio station	- yes	0.382	0.263	0.112
	- no	- 0.627	- 0.314	- 0.083
TV	- yes	1.122	0.885	0.316
	- no	- 0.380	- 0.578	- 0.404
Phone	- yes	1.899	0.057	0.672
	- no	- 0.063	-0.008	- 0.023
Vehicle	- yes	1.630	1.368	0.524
	- no	-0.093	-0.057	- 0.042
HUMAN CAPITAL				
Person consulted in case of illness	- health personnel	0.100	0.013	0.391
	- traditional healer / rescuer	- 0.570	- 0.018	- 0.293
Reason for choosing the consultation sector	- service quality	0.221	0.011	0.504
	- acceptable cost	- 0.120	- 0.011	0.151
Duration of last consultation	- less than a year	0.140	0.008	0.306
	- one year and more	- 0.246	- 0.019	- 0.306
Highest degree	- BTS/License/Maîtrise/Master/Doctorate	1.525	1.266	1.008
	- CEPE / BEPC / Probatory/ BAC	0.403	0.362	0.310
	- without diploma	- 0.627	- 0.463	- 0.552
WEALTH				
Ownership of at least one dwelling by household members	- yes	0.406	0.357	0.516
	- no	- 0.083	- 0.058	- 0.066
Membership of a household member in an association	- yes	0.238	0.262	0.237
	- no	- 0.328	- 0.245	- 0.212
Possession of savings by one of the members of the household	- yes	0.485	0.466	0.470
	- no	- 0.317	- 0.210	- 0.204
Ownership of stocks / securities / bonds	- yes	1.329	0.937	0.682
	- no	- 0.030	- 0.016	- 0.023
First eigenvalues		0.244	0.240	0.216

Source : Authors

Monetary poverty

Calculations for the monetary indicator show that 40.2% of the individuals were poor in 2001, 39.9% in 2007 and 37.5% in 2014. Although the incidence decreased from 2001 to 2014, the number of poor people increased, in 2001 the number of poor people was 6217059, from 2007 to 2014 the number of poor went from 713,0901 to 8,088,876. This increase can be explained by the high population growth estimated at 2, 6% per year (NIS, 2015).

According to the spatial dimension, Table 3 show that during the period from 2001 to 2014, monetary poverty increased in rural areas, the incidence of poverty rising from 55.1% in 2001 to 55% in 2007 to reach 61. 2% in 2014. This trend shows that monetary poverty is a rural phenomenon. In the semi-urban area, the incidence of poverty has been almost stable, it increased from 30.8% in 2001 to 32.3% in 2007 to settle at 29.2% in 2014. However, the incidence of poverty in urban areas has dropped considerably, from 17.9% in 2001 to 12.2% in 2007, and 8.9% in 2014. These disparities can be explained by the fact that there are unequal opportunities for access to income in areas of residence. The people of the rural area are mostly farmers, pastoralists, and small traders. Their activities do not generate as much income as those in the urban area. An analysis of the results obtained in the regions show that the two major cities Douala and Yaoundé recorded low poverty rates from 2001 to 2014. The regions with the highest poverty rates are the Far North, the North, the North-west and Adamawa. From 2001 to 2014, among these four regions, the Far North region has the highest poverty rate, 56.3% in 2001, 65.9% in 2007 and 74.3 % in 2014. In 2001, the regions with a poverty rate above the threshold are the Center, East and West. In 2007 the regions with a poverty rate above the threshold are the Center and East. In 2014, the Center, East, Littoral, West, South and South-West regions have a poverty rate below the threshold.

In terms of gender, from 2001 to 2014 female-headed households have a lower incidence of poverty than male-headed households. This situation, which is contrary to theory, can be explained by the small size of the households headed by women, by agricultural activities and small trade which they are used to doing.

With regard to the educational level, the table below shows that from 2001 to 2014 monetary poverty increased among people without education. In 2001, 2007 and 2014 the incidence of poverty was 56.6%, 64% and 66.3% respectively. However, for individuals who stopped their studies in higher education, the incidence of poverty is very low and stands at, 6.2%, 4.2% and 3.3% respectively. We notice that from 2001 to 2014 the incidence of poverty decreases when the level of education increases. It therefore appears that the higher the level of education is, the more the individual is able to seize opportunities to have a higher income.

With regards to age, the incidence of poverty is lower in households where the head is less than 30 years old (31.4% in 2001, 28.1% in 2007 and 27.1 in 2014), it increases steadily with age. For example, for households with a head age of 50 years or more, the incidence is 47.2% in 2001, 46.9% in 2007 and 44.3% in 2014. In fact, households with a retired head face many difficulties. These include the large household size and the lack of resources. This result is contrary to that of Delhausse (2002), who finds that the least aged (under 25) are the most exposed to monetary poverty.

Theoretically, the incidence of poverty increases steadily with the size of households. Table 3 shows that there is a positive relationship between household size

and monetary poverty. In fact, the increase in the size of the household leads to a decrease in per capita income and therefore an increase in the proportion of the poor.

Similarly, according to marital status, households with polygamous married heads have the highest incidence of poverty of 49.7% in 2001, 59.1% in 2007 and 59.8% in 2014. This can be justified by the large size of the household headed by polygamists. In these households, heads of households find it very difficult to provide for the needs of the household, especially when the head of household has a limited income. This result corroborates with that of Ouarme et al. (2009).

Table 3. Monetary poverty map as percentage

Characteristics of individuals	Incidence			Characteristics of individuals	Incidence		
	2001	2007	2001		2001	2007	2014
National	40.2	39.9	37.5	**Age range**			
Sex				Under 30 years	31.4	28.1	27.1
Male	40.9	41.6	38.9	30-39 years	33.3	34.8	32.1
Female	36.8	33.3	32.8	40-49 years	40.5	42.5	38.0
Residence stratum				50 years and more	47.2	46.9	44.3
Urban stratum	17.9	12.2	8.9	**Size of the household**			
Semi-urban stratum	30.8	32.3	29.2	1 and 2 persons	10.3	10.8	9.6
Rural stratum	55.1	55.0	61.2	3 and 4 persons	26.2	25.4	22.7
Regions				5 and 6 persons	37.8	39.5	35.3
Douala	10.9	5.5	4.2	More than 6 persons	51.0	54.6	51.8
Yaoundé	13.3	5.9	5.4	**Marital status**			
Adamawa	48.4	53.0	47.1	Single	21.3	14.1	17.4
Center	48.2	41.2	30.3	Monogamous	39.4	39.6	38.0
East	44.0	50.4	30.0	Polygamous	49.7	59.1	59.8
Far Nord	56.3	65.9	74.3	Widower widow	40.9	40.7	35.5
Littoral	35.5	31.1	19.5	Divorced / separated	34.7	32.6	33.0
Nord	50.1	63.7	67.9	Free union	30.2	23.7	14.4
Nord West	52.5	51.0	55.3	**Activity area**			
West	40.3	28.9	21.7	Primary sector	56.5	64.0	61.8
South	31.5	29.3	34.1	Industry	21.3	24.8	26.0
South West	33.8	27.5	18.2	Trade	25.7	19.9	16.4
Educational level				Services	22.8	15.8	13.7
Without level	56.6	64.0	66.3	**Institutional sector of the head of household**			
Primary	45.5	42.3	40.9	Public administration	11.7	10.3	11.9
Secondary	22.0	19.4	19.3	Public company	33.5	9.0	14.7
Tertiary	6.2	4.2	3.3	Formal private enterprise	14.1	9.9	9
Informality situation of the employment sector				Non-agricultural informal enterprise	31.7	23.0	21.6
Formal	15.4	9.8	11.2	Informal agricultural enterprise	56.9	59.6	62.8
Informal	50.0	46.9	43.4				

Source : Calculations made by the authors using data from ECAM 2, ECAM 3 and ECAM 4.

According to business sector, monetary poverty affects people working in the primary sector more. The proportion of the poor in this sector is 56.5% in 2001, 64% in 2007 and 61.8% in 2014. The results also show that households whose head works in the informal sector are the most affected by poverty. The incidence of poverty in this sector is 50% in 2001, 46.9% in 2007 and 43.4 in 2014. Concerning households whose head works in the formal sector, the proportions are 15.4%, 9.8% and 11.2% respectively. With regard to the institutional sector of the head of the household, the results show that monetary poverty affects households more when, the head works in informal agricultural

enterprises. The proportion of the poor for these households is 56.9% in 2001, 59.6% in 2007 and 62.8% in 2014.

Non-monetary dimension

The process of identifying the poor through the non-monetary approach using MCA requires performing a preliminary MCA on the preselected variables. This MCA includes several variables (see Table 1). After this phase, the variables which did not meet the COPA criterion are grouped into variables of less than four classes and, at the end of this phase, the variables which don't reflect the COPA criterion are simply removed. We finally retain 27 variables for the MCA. After this stage, we use the typology according to the dynamic cloud algorithm to classify households into two classes (poor and non-poor). To calculate the poverty threshold, we use the formula of Ki et al. (2005) which gives us a thresholds :

$Z = 5437/10992*(-0,45) + 5555/10992*(0,40) = - 0,0204$ in 2001 ;

$Z = 5183/11391*(-0,41) + 6208 /11391*(0,33) = - 0,0067$ in 2007 ;

$Z = 3817/10303*(-0,53) + 6486 /10303*(0,31) = - 0,0012$ in 2014.

It is based on these thresholds that we classify the households in 2001, 2007 and 2014. The results are shown in Table 4. From this table, we note that non-monetary poverty increased from 60.65% in 2001 to 61% in 2007 to reach 53.84% in 2014 at the national level. According to the spatial dimension, Figure 2 below shows that during the period from 2001 to 2014, non-monetary poverty is very high in rural areas, the incidence of poverty increased from 92.54% in 2001 to 93.16% in 2007 to reach 90.45% in 2014. This evolution shows that non-monetary poverty also affects people in rural areas more and, this result corroborates that of Feubi et al (2011).

This is explained by the fact that in rural areas accessibility to basic social infrastructure is very low, the quality of housing is precarious, and access to drinking water and electricity is very low. The proportion of households that do not use electricity as a source of lighting is still very high: 75.14% in 2001, 71.60% in 2007 and 72.5% in 2014. The majority of households drink water from wells, rivers and springs (74.40% in 2001, 73.29% in 2007 and 59.4% in 2014). In the semi-urban areas the incidence of poverty has been almost stable, increasing from 43.16% in 2001 to 45.95% in 2007 to reach 45.83% in 2014. However, in urban areas, the incidence of poverty is low going from 12.47% in 2001 to 12.87% in 2007 to settle at 8.72% in 2014.

An analysis of the results obtained in the regions show that the two major cities of Douala and Yaoundé recorded low poverty rates from 2001 to 2014. The regions with the highest poverty rates are the Far North, the North and the East between 2001 and 2014, among the three regions, the Far North region has the highest poverty rate 91.6% in 2001, 90.18% in 2007 and 89.49% in 2014. In 2001 and 2014, the regions with a poverty rate above the threshold are Adamawa, Center, North-West, West and South. In 2007, the regions with a poverty rate above the threshold are Adamawa, Center, North-West, West, South and South-West regions.

Regarding gender, households headed by men are the most affected by non-monetary poverty than those headed by in 2001, 2007 and 2014.

With regard to household size, we note that non-monetary poverty hit households made up of one and two persons much more in 2001. In 2007, households made up of 5 and 6 persons were the most affected. In 2014, households made up of more than 6

persons were the most affected. Relative to the sector of activity of the household head, from 2001 to 2014, non-monetary poverty affects much more the individuals who work in the primary sector with a rate of 90.81% in 2001, 90.66% in 2007 and 87.71 % in 2014. According to the marital status of the head of household, non-monetary poverty affects households whose heads are polygamous more in 2001 (71.90%), in 2007 (81.14%) and in 2014 (77, 58%). As in the case of monetary poverty, non-monetary poverty reduces with an increase in the level of education of the head of household. The incidence is 88.58% in 2001, 89.96% in 2007 and 84.16 % in 2014. With regard to the age of the head of household, the table shows that people aged 50 and above are the most affected by this form of poverty, i.e 69.17% in 2001, 68.99% in 2007 and 60.24% in 2014. This result corroborates that of Ouarme et al. (2009).

Non-monetary poverty affects people who work in the informal sector more, with an incidence of 78.3% in 2001, 71.15% in 2007 and 63.26% in 2014. Those who work in informal agricultural enterprises are the most affected with a rate of 92.78% in 2001, 91.35% in 2007 and 89.29% in 2014.

Table 4. Multidimensional poverty map as percentage

Characteristics of individuals	Incidence			Characteristics of individuals	Incidence		
	2001	2007	2014		2001	2007	2014
National	60.65	61.00	53.84	Age range			
Sex				Under 30 years	61.10	59.76	45.86
Male	61.39	61.79	55.62	30-39 years	52.08	55.63	49.02
Female	57.37	57.99	48.08	40-49 years	56.03	56.70	53.19
Residence Stratum				50 years and more	69.17	68.99	60.24
Urban stratum	12.47	12.84	8.72	Size of the household			
Semi-urban stratum	43.16	45.95	45.83	1 et 2 persons	62.83	57.74	39.32
Rural stratum	92.54	93.16	90.45	3 et 4 persons	61.56	59.95	48.85
Regions				5 et 6 persons	62.59	62.03	52.98
Douala	6.08	1.66	2.10	More than 6 persons	59.09	61.66	59.90
Yaoundé	2.27	1.67	5.85	Marital status			
Adamawa	78.34	72.55	66.12	Single	39.60	37.39	29.20
Center	80.19	68.60	65.27	Monogamous	58.33	58.92	54.23
East	82.86	79.07	77.17	Polygamous	71.90	81.14	77.58
Far Nord	91.60	90.18	89.49	Widower widow	66.73	66.63	57.17
Littoral	44.50	35.23	43.20	Divorced / separated	60.54	62.31	54.49
Nord	81.76	85.31	84.63	Free union	47.01	41.57	25.07
Nord West	71.49	76.49	61.76	Activity area			
West	66.62	65.16	58.31	Primary sector	90.81	90.66	87.71
South	63.95	64.26	59.73	Industry	30.96	69.67	36.42
South West	43.01	70.18	41.75	Trade	35.42	28.68	30.72
Level of education				services	26.35	23.77	22.41
Without level	88.58	89.96	84.16	Institutional sector of the head of household			
Primary	66.44	68.08	61.70	Public administration	15.20	20.86	24.79
secondary	33.64	34.02	33.47	Public compagny	23.97	19.01	19.48
Tertiary	4.72	7.13	5.88	Private formal compagny	22.58	17.81	9.68
Informality situation in the employment sector				Non-informal agricultural enterprise	40.08	33.39	33.96
Formal	20.07	19.53	18.31	Informal agricultural enterprise	92.78	91.35	89.29
Informal	78.30	71.15	63.26				

Source : Calculations made by the authors using data from ECAM 2, ECAM 3 and ECAM 4.

Evolution of double poverty at the national level and in residential areas.

The Table 5 shows that the proportion of poor individuals according to the monetary and non-monetary dimensions increased between 2001 and 2007, the incidence rose from 34.34% in 2001 to 35.59% in 2007. In 2014 the incidence decreased to 33.49%. The distinction according to the stratum of residence allows us to note that in urban areas the proportion of poor individuals according to the monetary dimension and the non-monetary dimension decreased from 2001 to 2014 while in rural areas, the incidence increased during the same period. These results show that the rural area is the most affected by double poverty.

Table 5. Evolution of double poverty at national level and in areas of residence

Characteristics of individuals	Incidence		
	2001	2007	2014
National	34.34 %	35.59%	33.49%
Residence stratum			
Urban stratum	6.42 %	5.18 %	2.61 %
Semi-urban stratum	20.36 %	23.45 %	21.29 %
Rural stratum	53.36 %	56.38 %	59.62 %

Source : Calculations made by the authors using data from ECAM 2, ECAM 3 and ECAM 4.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

This study seeks to perform the spatial analysis of monetary and non-monetary poverty in Cameroon between 2001 and 2014. To identify poor households according to the monetary dimension, we use the poverty thresholds defined by the National Institute of Statistics of Cameroon in 2015 which is 232547 FCFA per adult equivalent per annum in 2001, 269443 FCFA in 2007 and 339715 FCFA in 2014. With regard to the non-monetary approach, a multiple correspondence analysis (MCA) is performed on the variables selected for the construction of the composite indicator. After the construction of the composite indicators, we use the formula of Ki et al (2005) to calculate the poverty thresholds. Regarding the magnitude of poverty in Cameroon, this study has highlighted the importance of its spatial dimension, but also the importance of the socioeconomic characteristics of individuals.

The main results are as follows: In 2001, 40.2% of individuals lack the means to meet immediate needs, between 2007 and 2014, the incidence of monetary poverty decreased from 39.9% to 37.5%. Non-monetary poverty stagnated between 2001 and 2007, the incidence rising from 60.65% to 61%. In 2014, the incidence dropped to 53.84%. In 2001, 34.34% of people were affected by monetary poverty and non-monetary poverty, between 2007 and 2014, the incidence fell from 35.59% to 33.49%. Monetary and non-monetary poverty hits people in rural areas much more. The region most affected by monetary and non-monetary poverty is the Far North region.

The analysis of monetary and non-monetary poverty shows that poverty is not only due to a lack of monetary resources but that it is above all due to a lack of capacities and opportunities to develop themselves. This situation mainly affects vulnerable groups, especially large households, individuals who have never been to school, the elderly,

people who work in the primary sector, people living in rural areas, people who work in informal agricultural enterprises, and polygamous individuals.

Recommendations

Given that the incidence of poverty is higher in rural areas, poverty reduction in Cameroon requires a priority of national policies towards rural areas, because the results have shown that non-monetary poverty affects more than 9/10 of rural individuals, i.e 92.54% in 2001, 93.16% in 2007 and 90.45% in 2014. The incidence of poverty is very high in these areas due to the inaccessibility of road infrastructure, inaccessibility to basic needs (health, education, drinking water, electricity) and restricted access to markets to sell their products. Infrastructures generally amplify and create economic activities. The state can strengthen policies to combat poverty among the elderly by reviewing the policies put in place for their retirement conditions. The state can also improve the living conditions of individuals working in the primary sector. Governments can also reduce taxes on building materials because the high price of these materials condemns the poor to live in precarious housing. The state should also reduce the amount of taxes on income-generating activities for small traders, small artisans and small farmers.

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Author Guidelines

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