ANALYSIS OF MEASUREMENT INDICATORS OF MEMBERS’ COOPERATIVE LITERACY IN ISLAMIC SAVINGS-LOAN AND FINANCING COOPERATIVES

Amelia Pratiwi1, Fauziah Rahmah2

1-2Universitas Muhammadiyah Yogyakarta, Indonesia.

Email: 1’ameliapratiiw@fai.uny.ac.id, 2fauziah.rahmah.2015@fai.uny.ac.id

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Abstract

Purpose of the study: This study aims to investigate the measurement indicators used to measure the literacy rate for several Islamic cooperatives in D.I. Yogyakarta and to formulate an instrument to measure the cooperative literacy level of members and boards.

Methodology: The purposive sampling method was applied to choose 14 Islamic cooperatives as samples. Data were collected by distributing questionnaires to members and boards. The measurement of literacy utilises six indicators, namely institutional identity (JDL), duties and obligations of the financial institutions (TDK), organisational institutions (KL), the role of members (PA), Sharia deposit mechanism (MS), and Sharia financing mechanism (MP). The data was processed using the partial least square-structural equation modelling (PLS-SEM) analysis.

Main Findings: The results show that all indicators had significant influences on the level of cooperative literacy, which means that they can be used as instruments to measure the level of cooperative literacy. It is also revealed that although in general, the Islamic cooperative members and boards have a quite good understanding of cooperative literacy, but only in terms of attributes of financing mechanisms and sharia deposit.

Applications of this study: This study is useful for the development of Islamic cooperatives in D.I. Yogyakarta in particular and Indonesia in general, because of the high level of understanding of members about all aspects of cooperatives can increase their activities in the institution.

Novelty/Originality of this study: There are not many kinds of literature available on cooperative literacy. Some of them only focus on one institution. In contrast, this research involves several Islamic cooperatives to measure the level of cooperative literacy that could be applied in every cooperative in Indonesia.

Keywords: Islamic Cooperatives, Saving-loan and Financing Cooperatives, Cooperative Literacy, Cooperative Members, Purposive Sampling, Partial Least Square-structural Equation Modeling (PLS-SEM).

INTRODUCTION

Cooperatives in Indonesia have a common motto ‘from members, by members and for members.’ It denotes that the management is in the hands of its members because they are the owners itself. It is what distinguishes them from other business entities. Good management of a cooperative develops it substantially. Therefore, all members need to be trained in every aspect of cooperatives, which includes ordinary, prospective, and board members. Although the board runs the operational activities, however, both members and the board need to understand various aspects such as vision and mission, institutional identity, duties, rights, and responsibilities. The goal is to motivate them to work together in creating good governance in their cooperatives (Wilson, 2014).

The members and board must have a sustainable cooperative education on the workings of a cooperative. According to Kinyuira (2017), The International Cooperative Alliance (ICA) (2012) stated that a cooperative education for the community, members, and administrators is essential. It encourages the performance and development of every aspect of the organisation. Furthermore, education needs to become the focus of cooperatives if everyone wants to develop their institutions in a sustainable manner. It helps all members and administrators attain high literacy and understand the identity, principles, objectives, functions, benefits, roles, rights and obligations as members, types of products, as well as the organisational management (Bhuyan, 2007; Istiqamah & Rahajuni, 2012; Riansani, Indrawati, & Syabrus, 2016; Sukamdiyo, 1996; Wilson, 2014).

When members and board are well-educated, there is the required awareness needed to excel in running the organisation (Prakash, 2011; Wilson, 2014). Such education is necessary because a cooperative is an institution that is owned, developed and regulated by members to meet their needs and aspirations, under the cooperative principles, namely democracy, self-help, self-responsibility, equity, equality, as well as solidarity (Anania & Rweka za, 2016).

Constitution Number 25, 1992, stated that in providing the training to members, cooperatives are permitted to take a certain amount of their profit for the cost of implementing the training. Each institution should set an education fund of around 2% of the total profit available. The percentage should be decided at the Annual Member Meeting (Rapat Anggota Tahunan or RAT).
However, the availability of the education budget does not guarantee that cooperatives would bring sustainable cooperative education to its members. In fact, not all of them organise cooperative learning regularly. The absence of a national curriculum on this learning could lead to conflicting education curricula. It could make members not to have enough knowledge, and it might reduce their participation in these institutions (Catur & Setiawina, 2018; Sujianto, 2016; Trisuladana & Suparman, 2017; Wira & Gustati, 2016). It could also eventually hinder the performance of the cooperatives (Anggoro, 2017; Novianita & Hadi, 2017).

The purpose of this research is to determine the indicators for measuring the level of cooperative literacy of members in Islamic cooperatives in D.I. Yogyakarta, and to determine how well they understand every aspect of the organisation. There are not many kinds of literature available on this subject. Some of them only focus on one institution, whereas this research involves several Islamic cooperatives to measure the level of cooperative literacy that could be applied in every cooperative.

LITERATURE REVIEW

Islamic Saving–Loan and Financing Cooperatives (Koperasi Simpan Pinjamdan Pembiayaan Syariah, or KSPPS)

The Minister of Cooperatives and Small and the Medium Enterprises Republic of Indonesia with Regulation Number 16/Per/M.KUKM/IX/2015, concerning the implementation of savings and loan business activities and Islamic finance, defines KSPPS as "cooperatives whose business activities include deposits, loans, and financing under the sharia principles, which includes managing zakah, infaq/shadaqah, and waqf." This definition stated that the purpose of establishing KSPPS is to improve the welfare of the society and members in general, without violating sharia principles.

Members could obtain their daily needs while advancing the national economy by prioritising the collective interests of other members. KSPPS is not run exclusively for profit. KSPPS need to develop the potential and ability of their members and the society to encourage productivity that could improve their welfare. These activities could be in the form of funding facilities for members that want to run a business, providing direction for managing the business (Nugroho, 2015), training the community to utilise their income effectively, and fostering healthy business habits (Baswir, 2013). Such education is done basically to improve the level of cooperative literacy, according to the cooperative principles stated in Law No. 25 of 1992.

Cooperative Literacy

According to the Cambridge English Dictionary, the definition of literacy is "the knowledge of a particular subject or a particular type of knowledge." As stated by Setiadi (2008), knowledge is a collection of information stored in a memory as the output of the prior learning. This information becomes the basis of thinking of a person or group of people in carrying out an activity. Therefore, cooperative literacy can be defined as a collection of information, knowledge, and understanding of various institutional aspects, membership, finance, and activities of a cooperative.

Several studies on cooperative literacy show that the better the understanding level of members, the higher their level of participation in developing the organisation (Anania & Rwekaza, 2016; Bhuyan, 2007; Mendes & Passador, 2014; Sujianto, 2016; Trisuladana & Suparman, 2017; Utami, Asriati, & Syahrudin, 2015). Furthermore, a study conducted by Anania & Rwekaza (2016) revealed that lack of knowledge of members could result in low commitment, poor loyalty, and irresponsibility to their institutions.

Good cooperative literacy could motivate members and boards to participate actively in their institutions. It also has a significant impact on the performance and growth of the organisation (Briggeman et al., 2016; Chareonwongskak, 2017). An investigation carried out by Novianita & Hadi (2017), who examined knowledge of cooperatives and its influence on the patronage dividend (Sisa Hasil Usaha or SHU) of a village cooperative (Koperasi Unit Desa or KUD), showed that cooperative literacy rate had a positive and significant influence on the profit of members' business.

A study conducted by Kinyuira (2017) regarding the relationship of cooperative education to the performance of cooperatives, denoted that this education strongly influences the improvement of the institutions. It improves institutional goals, membership turnover, financial turnover, and other aspects. Furthermore, Kinyuira (2017) stated that cooperative education needs to become a long-term investment for institutions that want to develop.

Another study conducted by Catur & Setiawina (2018) on the influence of cooperative knowledge on managerial capacity, service, interest, and participation of members proved that this knowledge has a positive influence on the contribution of members. In this study, cooperative knowledge is measured using the indicators of knowledge of the objectives, the functions and roles, the rights and obligations of members, principles, and the instruments of the institutions. However, this education may not significantly improve the welfare of members after the variable participation of members is included in the model.

The Measurement of Cooperative Literacy

This study utilises constitution Number 25 the Year 1992, the Minister of Cooperatives and Small and Medium Enterprises Regulation No. 16/Per/M.KUKM/IX/2015, and some previous studies on the topic. Prior literature available
is reviewed to determine the cooperative literacy level due to the unavailability of a standard curriculum in establishing the standardisation of cooperative education materials. These aspects are as follows:

1. Knowledge and understanding of cooperative identities, which involves understanding the meaning of the organisation itself and understanding the principles and values of the institution. These identities are used as a measure of cooperative literacy. A major objective of cooperative education is building the awareness of members on their importance and principles (Sudarsono, 2004 in Ernita, Firmansyah, & Rozi, 2014; Kinyuira, 2017; Riansani et al., 2016; Utami et al., 2015).

2. Knowledge and understanding of the duties and obligations of cooperatives. One of the objectives of establishing cooperatives is to improve the welfare of members (Baswir, 2013; Gimenes et al., 2016). Therefore, the cooperatives have duties and obligations that need to be undertaken by their boards and members. The obligations include a) conducting activities to empower members; b) performance of cooperative education; c) building of networks with other institutions; d) involving members in every event; e) helping members who have problems in their business; f) providing financial services and other services (the constitution Number 25 of 1992). Members, who are the driving agents, need to know the duties and obligations of their institutions and play an active role in running them.

3. Knowledge and understanding of cooperative organisations as an institution, which comes through the mechanism of boards selection and dismissal, the function of supervision, the Annual Member Meetings (RAT), and active membership to provide criticism and suggestions for cooperatives (Anania & Rwakaza, 2018; Sukamdiyo, 1996).

4. Knowledge and understanding of roles as members. The sustainability of a cooperative relies on the level of members’ activeness or participation (Birchall & Simmons, 2014; Huang et al., 2015). Therefore, understanding the role of a member is very important. This knowledge should be conveyed during training to educate members about the roles they carry out. Members should play an active role based on their rights and obligations that have been determined in the constitution. Catur & Setiawina (2018) opined that the level of members’ understanding of their rights and responsibilities is one of the attributes necessary to measure knowledge.

5. Understanding of the major activities of KSPPS. This kind of cooperatives mainly engages in saving and lending money, financing members’ activities, as well as managing the zakah and waqf funds based on sharia principles. All of their operational activities must not contain any element of usury, gharar, and all transactions need to be based on the principle of justice. Therefore, every members and board also need to understand the principles of savings and lending or financing based on sharia, and the types of contracts that underlie such activities. Even though there is an involvement of the Sharia Supervisory Board (Dewan Pengawas Syariah or DPS) in the KSPPS management structure.

**Figure 1:** Research Thinking Framework

**METHODOLOGY**

This study employed a quantitative exploratory approach to formulating an instrument for measuring the cooperative literacy of members and boards. Data were collected by distributing questionnaires and conducting in-depth interviews with 176 regular members and board members of 14 Islamic cooperatives in D.I. Yogyakarta. From the surveys, 136 questionnaires can be analysed further.

The purposive sampling method was used to select samples and respondents. There are some criteria used in selecting samples, namely: 1) the institution is an Islamic Saving–Loan and Financing Cooperative (KSPPS), and 2) it carries out operational activities in D.I. Yogyakarta. While the criteria for the respondents are that they are active members for at least two years. Therefore, for the last couple of years, the person was actively saving and financing, or active on the board as a member, a supervisor or manager.
Definition of Indicators

Cooperative literacy is defined as the knowledge and understanding of various aspects of the organisation, as stated in the constitution Number 25 of 1992. As an endogenous latent variable, this literacy has several measurement attributes or exogenous latent variables. These variables include an understanding of identities, duties, and obligations of members, organisational goals, the role of members, and cooperative activities, especially those related to sharia-based savings and financing. The determination of indicators for each measurement attribute is based on the constitution Number 25 of 1992, as in Table 1 below.

### Table 1: The Measurement of Cooperative Literacy Constructs

| Name of the Construct                                      | Indicators                                           |
|------------------------------------------------------------|------------------------------------------------------|
| Knowledge and understanding of cooperative identities (JDL)| Vision and mission; Principles; Values               |
| Knowledge and understanding of the duties and obligations of cooperatives (TDK) | Economic function; Social function                   |
| Knowledge and understanding of cooperative organisations as an institution (KL) | Boards election; The role of boards; Annual member meeting (RAT); Management |
| Knowledge and understanding of roles as members (PA)       | The rights, duties, and obligations of members       |
| Knowledge and understanding of deposits mechanism (MS)     | The variety of deposit products; Deposit contracts; Concept of Wadia and profit-loss sharing |
| Knowledge and understanding of financing mechanism (MP)    | The variety of financing products; Financing contracts; Concepts of margin and profit-loss sharing; Default sanctions |

The study uses the scale ranges with the formula below to measure the level of cooperative literacy of members. It is counted by subtracting the highest score with the lowest, and then the result is divided by the alternative number of answers in the questionnaires.

Outer Model Testing

The measurement of the model in the PLS-SEM analysis is carried out using the outer model and inner model. The outer model is a measurement model used to assess the validity and reliability of the indicator (Mustakini & Abdilah, 2014). The outer model examination is conducted to test the validity of the construct and the reliability of each item, indicator, or construct. The validity test of the construct includes the test of convergence and discriminant validity. An indicator or item is considered valid if it meets the criteria of convergent validity test with loading score > 0.7, p-value < 0.05 and AVE value > 0.5. Any indicator that does not fit the above criteria is eliminated from the analysis. The discriminant validity test is fulfilled by comparing the AVE square root value for each construct with the correlation coefficient between constructs. The AVE square root value needs to be more significant than the correlation coefficient between constructs before the research model can be considered fit.

Inner Model Testing

The value of $R^2$ for the inner model is analysed through the goodness of fit test. The inner model test checks the value of $R^2$ for the dependent variable and the coefficient value on the path for the independent variable. The significance test uses the T-statistics for each path (Mustakini & Abdilah, 2014:80). The larger the value of $R^2$, the better. Larger values of $R^2$ show greater variance of changes in the dependent variable, which can be explained by the independent variables in the inner model. The criterion used in analysing the value of path coefficient or T-statistics of the inner model is the value of T-statistics $\geq 1.96$ with $\alpha = 0.05$ for a two-tailed test.

RESULTS/FINDINGS

Evaluation of The Outer Model

An indicator is said to meet the convergent validity test if it satisfies the following three criteria, viz. (1) outer loading score $> 0.70$; (2) p-value $< 0.05$; (3) AVE $> 0.5$. The result of the convergent validity test for each construct shows that not all indicators have an outer loading score greater than 0.7. In general, an indicator will be excluded from the analysis if it has an outer loading value of 0.4–0.7. The exclusion of such an indicator will increase the composite reliability value (Hair et al., 2017:113). However, if the AVE value is higher than 0.5, then we can retain the indicator in the model (Mustakini & Abdilah, 2014:80).

A discriminant validity test is carried out to ensure that a construct differs from other constructs. Each construct is analysed to explain a certain phenomenon. The discriminant validity of a construct is established if the AVE square root value displayed in parentheses is larger than the correlation between latent variables, both vertically and horizontally (Hair et al., 2017; Sholihin & Ratmono, 2013).
The result shows that the discriminant validity for all constructs is established. It is indicated by the AVE square roots values in the diagonal column, which is larger than 0.7. These values are also higher than the correlation values between other constructs. Therefore, it can be concluded that the indicator of each construct is different from the indicators of other constructs.

Each construct is analysed based on its score of composite reliability and Cronbach's alpha, which need to be higher than 0.7 to satisfy the reliability criteria. Nonetheless, the Cronbach alpha of 0.60-0.70 is still acceptable as long as the research is an exploratory study (Sholihin & Ratmono, 2013). The result shows that all constructs meet the criteria of construct reliability because none of the latent variables has a Cronbach alpha score of less than 0.60.

**Evaluation of the Inner Model**

The inner model is evaluated to test the model fit, the structural models, and the significance level between each construct. The model fit is tested by analysing the values of the average path coefficient (APC), average R-squared (ARS), and the average inflation factor (AVIF). A model is said to meet the goodness of fit criteria if the APC and ARS p-value is lesser than 0.05 and AVIF is lesser than 5.00. The result of the analysis proofs that the model in this study has met the criteria of goodness of fit, because the p-value of each APC and ARS is lesser than 0.001, while the score of AVIF is 1.830.

**Hypothesis Testing**

The result of hypothesis testing denotes that the JDL, TDK, KL, PA, MS, and MP constructs have positive path coefficients with p-values < 0.001. Therefore, it can be concluded that the six contracts can be used as indicators to measure the level of cooperative literacy. It is also known that the R² value of the Litkop is 0.99, which means that 99% of the variance of members’ cooperative literacy is explainable by contracting JDL, TDK, KL, PA, MS, and MP. The rest of 1% can be explicated by other factors beyond the scope of this research.

**DISCUSSION / ANALYSIS**

**The Analysis of Cooperative Literacy Level**

From the survey, it is known that most of 136 respondents consisted of members and boards, are male. About 39% of the respondents are in the age range of 36-45 years, and 39% of total respondents are undergraduate. About 51% of the respondents are dominated by cooperative members.

Overall, the result of the cooperative literacy measurement in KSPPS reveals that members and boards have a good level of literacy. As many as 76% of respondents have a good understanding of their institutions. However, if the data is analysed separately between the boards and members, it is found out that the board members (with 5% of poor cooperative literacy) have a better understanding than regular members (with 23% of poor cooperative literacy).

Based on interviews with respondents who were board members, it was discovered that several KSPPS held training on management with the managers and the board. However, such training was rarely given to the members. Therefore, it is not surprising that the board have a higher literacy than the members.

As many as 43% of respondents said that their organisation did not or rarely conducted education or training for the members. This statement is in accordance with an interview with Sultoni Nurifai, the Chair of the Cooperative Department, The Cooperative and SMEs Office of D.I. Yogyakarta, which was conducted at his office on October 1, 2018. He said that many institutions had not provided routine training for members. These institutions are yet to carry out their functions as providers of education and training for their members. The results of interviews with some Islamic cooperative boards reveal that cooperative education is given structurally to only the boards or managers. In contrast, education for members is given only when a new member wants to borrow money. It is a reason why members' understanding is relatively lower than that of boards. Furthermore, the analysis for each construct is as set out in Table 2 below.

**Table 2: The Results of Constructs Analysis of Members' Cooperative Literacy**

| Name of the Construct | Interpretation |
|-----------------------|----------------|
| Knowledge and understanding of cooperative identities (JDL) | The level of JDL for members and boards is quite good. However, there are still some board members who are yet to comprehend the identity of the institutions they manage. Although the number of such persons is relatively small, it should not be happening as the boards are responsible for “monitoring the performance of management, forming long-term strategic plans, evaluating proposals presented by the management, and understanding the financial and strategic actions undertaken by the cooperatives” (Bond, 2009). Furthermore, the path coefficient analysis shows that the JDL construct is the least influential construct to Litkop, compared to the MS and MP, which measures the respondent’s understanding of savings and financing mechanisms. Even though the major... |
| Name of the Construct | Interpretation |
|-----------------------|----------------|
| Knowledge and understanding of the duties and obligations of cooperatives (TDK) | The purpose of cooperative education is the understanding of the institutions and the participation of members. The comprehension of these matters is important for the creation of awareness for members to participate actively in a cooperative (Sukamdiyo, 1996; Wilson, 2014). Analysis of the questionnaire shows that the knowledge level of the boards regarding the duties and obligations of the cooperative is quite adequate. Around 85% of board members fall into the 'very understand' and 'quite understand' categories. While the rest of them have a relatively low understanding of the kind of tasks that need to be carried out. From the members' side, 32% of respondents have a poor understanding of the duties and obligations of these organisations. Further analysis of the surveys revealed that around 41.7% of respondents did not know that one of the roles of a cooperative was the provision of education and training to its members, both in the form of entrepreneurship and training. Respondents tend to understand the duties and obligations of the institutions only in terms of their ability to provide consumptive and productive financing. |
| Knowledge and understanding of cooperative organisations as an institution (KL) | From the survey results, it is found out that about 90% of board members have a good knowledge of management and organisation. Meanwhile, only 57% of regular members understand the same aspect. Some respondents (41.8%) said they did not know that they have the rights to nominate board members, and about 37.7% of respondents did not know that they could be chosen as a member of the board. Furthermore, about 30.1% of respondents knew that the cooperatives had regular meetings. However, they did not understand that they had to attend them. The lack of understanding of constructs might lead to low motivation of members to attend meetings and participate actively in the development of the institutions. |
| Knowledge and understanding of roles as members (PA) | The analysis of members' knowledge of their roles in cooperatives appears that about 30% of members did not understand and were not aware of their roles in cooperatives. Whereas the boards show a high level of understanding, as 91% of them stated that they understood their roles adequately in their institutions. In general, the respondents' answers in the questionnaires on this construct are quite shocking, where 31.5% of respondents stated that it is alright if they do not make compulsory deposits. As many as 26% of respondents did not understand the meaning of voluntary savings. About 28.7% of them stated that they did not know that if they made voluntary savings, they could make the cooperatives gain more capital from that action. In terms of the involvement of members in the management of cooperatives, as many as 61.6% of respondents said that they strongly believed in the management. Therefore, they felt they did not need to intervene in managing the institutions. Interviews with some respondents indicated that as long as cooperatives were still distributing patronage dividends, members consider them to be working fine, and they did not need to oversee boards' performance. Moreover, about 46.5% of respondents stated that their managers or boards were not transparent with members, especially if they were having problems. It is not surprising when 69.1% of other respondents thought that members did not need to help the boards in looking for a solution if they had a problem. From these findings, it clears that many members of Islamic cooperatives in D.I. Yogyakarta does not comprehend their roles. They have not realised that they are the owners of the institution. The members have not been fully aware that they have rights and obligations to participate and work together with the board. |
| Knowledge and understanding of deposits mechanism (MS) | There are 38% of members do not understand the mechanisms of Islamic law-based savings. This percentage is very different from the board, where only 13% of respondents stated that they did not understand such mechanisms. In general, the results of the questionnaire indicate that 93% of respondents claimed to have understood the savings mechanisms of Wadiah contract. As much as 67.8% of respondents understood the mechanisms of Mudharaba based deposits, while 95.9% of respondents stated that they understood the concept of profit sharing. Furthermore, as many as 50% of respondents who save their money in their cooperatives claimed that their purpose of saving was not solely because of the profit. The answers from respondents indicate that board members dominate the number of respondents who... |
**CONCLUSION**

This work was conducted to find out indicators for measuring the level of cooperative literacy. In addition, this study also established the level of literacy of members and administrators of Sharia cooperatives, involving around 14 KSPPS in five regions in D.I. Yogyakarta. Data were collected using questionnaires and in-depth interviews with some members and managers, and then it was analysed further with PLS-SEM.

The results show that the constructs of understanding the cooperative identity (JDL), duties and obligations (TDK), management (KL), the role of members (PA), the mechanism of Sharia-based savings (MS) and financing (MP) have a significant influence on cooperative literacy. It indicates that the level of such literacy can be measured using the six constructs. Whereas the in-depth analysis of the questionnaire reveals that the respondents' cooperative literacy generally is quite good because 76% of the respondents have good cooperative knowledge.

However, in a separate analysis between the boards and members, it is obvious that board members dominate respondents who have a high literacy level. Although cooperative boards generally have a high literacy rate, there are still a small number of them who have not quite understood the duties, obligations, and functions of persons responsible for the operational activities of their institutions. There is a stark difference between the board members and the regular members, as a lot of regular members do not understand their duties, obligations, roles and rights as cooperative owners. As a result, many members still think that cooperatives are like banking institutions. It makes many of them not motivated to actively participate in managing their institution and bring up suggestions to the board. The understanding of members on Islamic-based financial products is also relatively low. Therefore, it is not surprising that they still consider that profit-sharing in these institutions is the same as bank interest.

This condition shows that Islamic cooperatives in D.I. Yogyakarta generally are more focused on the application of economic functions, and do not carry out many of their social functions by providing training and education to their members. More board members are trained, and very few regular members are trained. Also, the pieces of training are not carried out continuously. As a result, many members do not understand the various aspects of Islamic cooperatives.

Therefore, it is recommended that the Indonesian Government, through the Department of Cooperatives and SMEs, can develop a training curriculum for standardised members and administrators, to be used by all cooperatives in Indonesia. The government can also collaborate with universities to disseminate cooperative education to the public in general and members of these institutions in particular.

**LIMITATION AND STUDY FORWARD**

The limitation of this study is that it only focuses on the level of members' cooperative literacy, using constructs built based on constitution Number 25 of 1992. This study can be developed by adding other constructs. In addition, cooperative performance can be involved in subsequent studies, to observe how the cooperative literacy of members influences the level of cooperatives performance.

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**AUTHORS CONTRIBUTION**

Amelia Pratiwi wrote and designed the organisation of this paper. Fauziah Rahma and Amelia Pratiwi performed data collecting, conducted a statistical analysis, and interpreted the results of the analysis. Thus, all authors have a significant contribution to this study.
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