The effect of organizational learning on market orientation moderated by job satisfaction

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Abstract: The study was aimed to examine the effect of organizational learning on market orientation moderated by job satisfaction. Quantitative approach was used due to the design of this study. The causal relationship of variables was understood using Structural Equation Modeling-Partial Least Squares (SEM-PLS). Population of study was 52 dairy cattle milk cooperatives in East Java. Sampling method was simple random sampling, which, after subjecting this population to this method, resulted in a sample of 46 cooperatives. Data were obtained through questionnaire where the items were prepared and processed with SmartPLS. Two results were obtained: (1) higher organizational learning was related with higher market orientation, and (2) job satisfaction had a positive effect on market orientation because it was helpful to increase market orientation of dairy cattle milk cooperatives in East Java, Indonesia.

Subjects: Microeconomics; Entrepreneurship and Small Business Management; Marketing; Organizational Studies

Keywords: Organizational learning; market orientation; job satisfaction; dairy cattle milk cooperatives

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PUBLIC INTEREST STATEMENT
The challenge to achieve the target of Milk Self-Capacity by Year 2020 was threatened to be failed because dairy cattle milk cooperatives in Indonesia, especially those in East Java, did not yet optimize the marketing of their products. Fact on the field showed that cooperatives’ products had been defeated by import commodities, and as a consequence, most cooperatives were hesitant to increase their market orientation. Two factors determined market orientation, namely organizational learning at the cooperatives and job satisfaction among employees. Result indicated that organizational learning can improve market orientation but because job satisfaction of employees is still low, so market orientation is hardly to be increased.

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Additional information is available at the end of the article
1. Introduction

East Java is one of Indonesian provinces with significant role as one prospecting dairy cattle milk center (Priyanti & Soedjana, 2015, pp. 163–164). Statistic data for East Java also declare East Java as the biggest producer of dairy cattle milk in Indonesia (BPS, 2016b). Such report is consistent to the position of East Java as a province with the largest population of dairy cattle in Indonesia (BPS, 2016a).

The development of dairy cattle milk cooperatives in Indonesia, including those in East Java, is however not without challenge. One long-term target, respectively Milk Self-Capacity in Year 2010, is threatened to be failure (Industry Ministry of Indonesian Republic, 2017; Kontan, 2016). The cooperatives still face some constraints that possibly impede them from achieving the target. Although, the Indonesian market for dairy cattle milk has been growing, but it not only lacks of infrastructures for dairy cattle breeding but also the quality of human resource, precisely the breeders, still needs improvement (Nikkei, 2017). The domestic stock of dairy cattle milk still relies greatly on the import supply from other countries, such as Australia, New Zealand, and United States (The Jakarta Post, 2017). Moreover, the quality of Indonesian dairy cattle products is not competitive enough for international market (Guntoro et al., 2016, p. 107), and for that reason, Indonesian dairy cattle milk entrepreneurs only do their business in domestic market.

It was presumed that less competitive quality of dairy cattle milk is caused by poor human resource of breeders, especially related with how to manage dairy cattle breeding and how to process dairy cattle milk as commodity (Guntoro et al., 2016, p. 107). One reason for sure is that consulting and training are rarely provided, and if any, given less. If dairy cattle milk cooperatives provide a learning session for dairy cattle breeders who constitute cooperative membership and employees who work at the cooperative, then this participation would increase productivity of dairy cattle milk (Sembada et al., 2016, p. 793; Seblewengel, Kubota, Kanayama, & Kono, 2017, p. 6).

Higher productivity given by dairy cattle milk cooperatives shall bring a good impact on income. Milk products with good quality shall satisfy customers, which in turn, will increase market share of these products (Chamboko, Mwakiwa, & Mugabe, 2017, p. 156; Lin et al., 2017, pp. 1–2; Razak, Nirwanto, & Triamanto, 2016, p. 65). Higher income helps the cooperatives to compensate employees. Through what so called corporate social responsibility, the cooperatives bestow to the employees of rewards and privileges by which employees may feel more comforting to work at the cooperatives (Du, Bhattacharya, & Sen, 2015, p. 329; Salisu, Chinyio, & Suresh, 2015, p. 290). If employees sense greater comfort at work, they will develop job satisfaction and increase their work productivity (Agbozo et al., 2017, p. 17; Shmailan, 2016, p. 6).

Optimum productivity is achievable through job satisfaction, and this job satisfaction is created through empowering employees by giving them education and training (Chehrazi & Shafizadeh, 2016, p. 22; Chaudhry, Jariko, Mushtaque, Mahesar, & Ghani, 2017, p. 46). Given opportunity to learn at a convenient work organization, employees feel facilitated to increase their work capacity, and as a result, their work productivity will improve (Chehrazi & Shafizadeh, 2016, pp. 22–23; Kalmuk & Acar, 2015, pp. 464–465), which as a further consequence, increases market orientation of the organization (Lee & Lee, 2015, p. 50; Nikoomaram & Ma’atooﬁ, 2011, p. 639).

2. Research limit

The author finds difficulty to make appointment with respondents in research location for the interest of interview.

Other problem is that respondents have low communication capability, and it disturbs the process of data collection through interview.
The location of dairy cattle milk cooperatives is quite far away, and therefore, it disturbs the insistence of the author to refresh data directly on spot.

3. Hypothesis
Organizational learning allows business units, such as dairy cattle milk cooperatives, to understand their strengths and weaknesses from which strengths can be reinforced, while weaknesses are detected earlier and corrected (Comlek et al., 2012, p. 368; Yadav & Agarwal, 2016, p. 20). Business units with organizational learning are more advantageous than competitors (Saadat & Saadat, 2016, p. 222). The reason is that such business units are more able to improve performance and reduce production cost (Beyene, Shi, & Wu, 2016, p. 127; Wujiabudula & Zehir, 2016, p. 82).

Learning-oriented business units shall be easier to monitor behaviors of market and competitors (Fu, 2017, p. 6347). Business performance is only achieved when learning-oriented business units are willing to learn, understand, and fulfill what consumers need (Dicle & Kose, 2014, p. 960; Zainul, Astuti, Arifin, & Utami, 2015, p. 7). Market orientation of these business units can be improved by focusing on organizational learning. Based on this outline, the hypothesis is written as:

\[ H_{a1} \]: Organizational learning has a positive and significant effect on market orientation of dairy cattle milk cooperatives in East Java.

Apart from the effect of organizational learning, market orientation is also affected by other factors. One is internal factor because employees and managers always have their own interest on organization, and these interest influence market orientation of business units (Salyova & Petrovicova, 2017, p. 84). Inter-department factor is also influencing market orientation because inter-departmental conflict and poor communication across departments may disturb employee convenience at work, and the distorted employees are difficult to learn about the advance of the market (Kirca, Jayachandran, & Bearden, 2005; Salyova & Petrovicova, 2017, p. 84). Managerial factor, such as decision making in managerial structure, can affect the transformation of knowledge about market, which then influences market orientation (Jangl, 2015, p. 155; Salyova & Petrovicova, 2017, pp. 84–85). Inter-departmental turbulence and easily reshuffled managerial structure can reduce employees’ job satisfaction (Agarwal, 2015, p. 723), and this reduction impacts the relationship between organizational learning and market orientation. Concerning with this background, the hypothesis is then generated as:

\[ H_{a2} \]: Job satisfaction is moderating the effect of organizational learning on market orientation of dairy cattle milk cooperatives in East Java.

4. Method
This study was designed to use quantitative approach. The examination of causal relationship across variables was done with Structural Equation Modeling-Partial Least Squares (SEM-PLS). Two kinds of variable were involved, latent (construct) variable also known as unobserved variable, and indicator variable also known as observed variable of each latent variable. Latent variable is divided into exogenous latent variable and endogenous latent variable. In this study, the exogenous latent variable refers to Organizational Learning (OL), while the endogenous latent variable is represented by Market Orientation (MO). Meanwhile, Job Satisfaction (JS) is the moderating latent variable. The model of hypotheses is depicted in Figure 1.

The study is implemented at dairy cattle milk cooperatives in East Java. Sampling method is simple random sampling. After applying this method to population of 52 dairy cattle milk cooperatives in East Java, a sample of 46 cooperatives is obtained. Sample size is determined using Taro Yamane’s Equation (Yamane, 1967, p. 1986), written as following:
Questionnaire is used as an instrument to collect the data. Items in this instrument are made and processed using SmartPLS Version 3.27. Data analysis and hypothesis testing are conducted with Structural Equation Modeling-Partial Least Squares (SEM-PLS), which is also used to examine relationship between exogenous and endogenous latent variables. A comprehensive model of study is then developed consisting of three latent variables and each indicator of each latent variable. This model is displayed in Figure 2.

5. Result
Before testing the hypotheses, goodness-of-fit of study model is first tested by conducting goodness-of-fit test on outer model and inner model. Goodness-of-fit test is done to ensure the fulfillment of goodness-of-fit criteria for outer model (Hair, Hult, Ringle, & Sarstedt, 2014, p. 107) and inner model (Hair et al., 2014, p. 186). This test is implemented by using SmartPLS 3.2.7 and the result is explained in the following section.

5.1. Goodness-of-fit test for outer model
Goodness-of-fit test for outer model involves three measures, namely convergent validity, discriminant validity, and reliability. Convergent validity of outer model is tested by taking an examination on Factor Loading Rate and AVE (Average Variance Extracted) Rate in Tables 1–3.

Tables 1–3 shows that factor loading for all indicators is more than 0.7, and therefore, all indicators are considered as valid on term of convergent validity.

AVE rates of all latent variables are more than 0.5, which then it can be stated that all latent variables are valid on term of convergent validity. Based on criteria of factor loading and AVE, thus, outer model can be said as fulfilling convergent validity.
Discriminant validity of outer model is counted by applying discriminant validity test on cross-loading rate of the cross-loading process across factor loading rates of each indicator in latent variable.

As shown by Tables 1-3 given, cross-loading process across factor loading rates of each indicator in latent variables has produced greater cross-loading rates than those resulted from cross-loading across factor loading rates of latent variables.

5.2. Reliability test for outer model
Outer model reliability is tested by taking an examination on composite reliability rate of each latent variable. Result of analysis on outer model reliability is indicated in Table 4.

The Table 4 demonstrates that composite reliability rate of all latent variables is higher than 0.7 from which all latent variables are then considered as reliable.

Pursuant to all results of analysis on goodness-of-fit for outer model on terms of convergent validity, discriminant validity, and reliability, thus, an inference can be made that all criteria of validity and reliability are fulfilled. Thereby, outer model is perceived as fit.

5.3. Goodness-of-fit test for inner model
Goodness-of-fit test for inner model involves an evaluation on $R^2$-value. Test procedure is conducted with SmartPLS, and the result is shown in Table 5.

As displayed by Table 5, the variance ($R^2$) of MO is 0.987, meaning that OL and also JS moderation can explain MO variance for 98.7%, while the remaining 0.3% is explained by other variable beyond the model. The condition for $R^2$ has been fulfilled, and therefore, inner model is declared to be fit and can also be used for hypothesis testing.

5.4. Hypothesis test
Hypothesis is tested by processing values obtained from bootstrapping formulation, and this processing is done with SmartPLS 3.2.7. Alternative Hypothesis (Ha) will be accepted if $t_{\text{count}} \geq 1.96$ (Hair et al., 2014, p. 186). The summary of t-statistic ($t_{\text{count}}$) values from direct effect test is presented in Table 6.

| Indicator | Factor loading of latent variables | Convergent validity |
|-----------|-----------------------------------|---------------------|
|           | OL      | MO      | JS      | Moderating effect |                     |
| OL1       | 0.979   | Valid   |         |                   |                     |
| OL2       | 0.975   | Valid   |         |                   |                     |
| OL3       | 0.979   | Valid   |         |                   |                     |
| MO1       |         | 0.977   | Valid   |                   |                     |
| MO2       |         | 0.989   | Valid   |                   |                     |
| MO3       |         | 0.986   | Valid   |                   |                     |
| JS1       |         |         | 0.984   | Valid             |                     |
| JS2       |         |         | 0.981   | Valid             |                     |
| JS3       |         |         | 0.964   | Valid             |                     |
| JS4       |         |         | 0.982   | Valid             |                     |
| OL*JS     |         |         | 1.213   | Valid             |                     |

Source: Result of PLS Algorithm with SmartPLS.
Table 2. Result of analysis on AVE for outer model

| Latent variable | AVE  | Convergent validity |
|-----------------|------|---------------------|
| OL              | 0.956| Valid               |
| JS              | 0.989| Valid               |
| Moderating Effect | 1.000| Valid               |
| MO              | 0.989| Valid               |

Source: Result of PLS Algorithm with SmartPLS.

Table 3. Result of analysis on cross-loading for outer model

| Indicator | OL       | MO       | JS       | Moderating effect | Highest cross-loading | Discriminant validity |
|-----------|----------|----------|----------|-------------------|-----------------------|-----------------------|
| OL1       | 0.979    | 0.958    | 0.966    | −0.040            | OL1 → OL              | Valid                 |
| OL2       | 0.975    | 0.968    | 0.948    | −0.326            | OL2 → OL              | Valid                 |
| OL3       | 0.979    | 0.966    | 0.976    | −0.044            | OL3 → OL              | Valid                 |
| MO1       | 0.975    | 0.977    | 0.969    | −0.174            | MO1 → MO              | Valid                 |
| MO2       | 0.971    | 0.989    | 0.973    | −0.224            | MO2 → MO              | Valid                 |
| MO3       | 0.965    | 0.986    | 0.971    | −0.147            | MO3 → MO              | Valid                 |
| JS1       | 0.973    | 0.975    | 0.984    | −0.041            | JS1 → JS              | Valid                 |
| JS2       | 0.972    | 0.980    | 0.981    | −0.162            | JS2 → JS              | Valid                 |
| JS3       | 0.927    | 0.924    | 0.964    | 0.075             | JS3 → JS              | Valid                 |
| JS4       | 0.979    | 0.980    | 0.982    | −0.205            | JS4 → JS              | Valid                 |
| OL*JS     | −0.140   | −0.185   | −0.087   | 1.000             | OL*JS → Moderating Effect | Valid                 |

Source: Result of PLS Algorithm with SmartPLS.

Table 4. Result of analysis on composite reliability for outer model

| Latent variable | Composite reliability | Reliability |
|-----------------|-----------------------|-------------|
| OL              | 0.985                 | Reliable    |
| JS              | 0.989                 | Reliable    |
| Moderating Effect | 1.000             | Reliable    |
| MO              | 0.989                 | Reliable    |

Source: Result of PLS Algorithm with SmartPLS.

Table 5. Result of analysis on $R^2$-value for inner model

| Endogenous latent variable | $R^2$  | Decision               |
|----------------------------|--------|------------------------|
| MO                         | 0.987  | Inner model is good    |

Source: Result of bootstrapping with SmartPLS.

Result of hypothesis test on direct effect in Table 6 indicates that organizational learning (OL) has a direct and significant effect on market orientation (MO). It aligns with Barron & Kenny’s Norm (Hair et al., 2014, p. 222) which states that the tests on mediation or moderation effects are possible only if the direct effect is significant. The direct effect is found to be significant, and therefore, the hypothesis test on moderation effect of JS in the effect of OL on OM can be
conducted. In the case of indirect effect, the hypothesis is tested in a similar way to direct effect test, where the values from bootstrapping formulation are processed by using SmartPLS 3.2.7. The difference is that indirect effect test is conducted by operating indirect effect menu in SmartPLS 3.2.7. The summary of t-statistic ($t_{\text{count}}$) values from indirect effect test is reported in Table 7.

The summary of factor loading, path coefficient, and t-statistic ($t_{\text{count}}$) of hypothesis model is illustrated in Figure 3.

6. Discussion
Hypothesis testing delivers few results. Each will be explained as following.

**Table 6. Summary of $t_{\text{count}}$ values from direct effect test**

| No | Direct effect     | Hypothesis | Path Coeff. | $t_{\text{count}}$ | Decision       | Remark                  |
|----|-------------------|------------|-------------|---------------------|-----------------|-------------------------|
| 1. | OL on MO (OL $\rightarrow$ MO) | $H_0$: $\gamma_{11} = 0$ | $H_a$: $\gamma_{11} \neq 0$ | 0.324              | 2.803           | $H_0$ is rejected; $H_a$ is accepted. | Has a positive and significant effect |

Source: Result of analysis with SmartPLS at significance level of 5%.

**Table 7. Summary of $t_{\text{count}}$ values from indirect effect test**

| No | Indirect effect  | Hypothesis | Path Coeff. | $t_{\text{count}}$ | Decision | Remark                  |
|----|------------------|------------|-------------|---------------------|----------|-------------------------|
| 1. | OL on MO moderated by JS (OL*JS $\rightarrow$ MO) | $H_0$: $\gamma_{12} = 0$ | $H_a$: $\gamma_{12} \neq 0$ | -0.067       | 3.076           | $H_0$ is rejected; $H_a$ is accepted | Has a negative but significant effect |

Source: Result of analysis with SmartPLS at significance level of 5%.

Figure 3. Summary of hypothesis model calculation
(Source: Result of analysis with SmartPLS at significance level of 5%)
6.1. The effect of organizational learning on market orientation
Organizational learning done at dairy cattle milk cooperatives in East Java has a positive and significant effect on market orientation. It is also said that organizational learning can increase market orientation of dairy cattle milk cooperatives in East Java.

In fact, dairy cattle milk cooperatives in East Java indeed do this organizational learning but it is only in managerial aspect, meaning that only manager and secretary do such learning. However, organizational learning remains less optimum, and as a result, milk products from the cooperatives are not competitive for international market. Market orientation of these cooperatives concern only with local market, and is not emphasized for export to abroad (Prifti & Alimehmeti, 2017, p. 3). The use of resource and capacity in proper way will improve competitive advantages of the organization, and one of such advantages is market orientation. Certain organization, including business units or cooperatives, always needs relevant knowledge to exploit the advantages (Prifti & Alimehmeti, 2017, p. 3). Knowledge and information about customers can be improved by providing a training session to employees where they will do organizational learning in it. In this matter, organizational learning must be very important because it is a factor that keeps employees surviving at work (Emamgholizadeh & Javanmard, 2016, p. 72) despite the change of the age.

Business units with market orientation are those with the ability to develop a connection between customer demand, competition, and business output (Kim-Soon, Mostafa, Mohammed, & Ahmad, 2015, p. 80; Prifti & Alimehmeti, 2017, p. 4). Market-oriented business units are able to see the opportunity in the market and also to bring product innovation into it (Prifti & Alimehmeti, 2017, p. 5). However, business units cannot escape from dealing with the challenges, including meeting customer demand for the products they produce. The challenge of meeting customer demand can only be solved through organizational learning.

Business units may improve organizational learning by giving employees a training session that emphasizes on how to increase customer satisfaction and also on how to explore new ideas of marketing (Kamya, 2012, p. 231). Market orientation can be developed by abandoning routines and status quo (Kamya, 2012, p. 233), but business units still must not refrain from being responsive to customer satisfaction. Indeed, market-oriented business units are required to be responsive to customer demand, competitor behavior, and product development (Emamgholizadeh & Javanmard, 2016, p. 73; Kharabsheh, Ensour, & Bogolybov, 2017, p. 116; Prifti & Alimehmeti, 2017, p. 7).

Previous research works indicate that organizational learning can increase market orientation level of the organization (Emamgholizadeh & Javanmard, 2016, p. 78; Kim-Soon et al., 2015, p. 86). Business units in which their employees can capture information about customer demand, or in other words, they have better knowledge about customer, would be those with higher market orientation (Kharabsheh et al., 2017, pp. 122–123). Therefore, business units must put greater focuses on improving employee knowledge by building employees’ commitment to organizational learning (Kharabsheh et al., 2017, p. 123).

6.2. The moderation effect of job satisfaction in the effect of organizational learning on market orientation
Result of research also demonstrates that job satisfaction acts as the moderator in the effect of organizational learning on market orientation. However, it is also said that job satisfaction may trigger negative impact on market orientation of dairy cattle milk cooperatives in East Java despite their great concern to organizational learning. There is a circle when low job satisfaction causes low market orientation which then gives lower income to dairy cattle milk cooperatives in East Java. As a consequence, they fail to maximize the compensation that must be given to employees, which finally causes low job satisfaction among them.
Recent phenomenon at dairy cattle milk cooperatives in East Java is that they suffer from a structural problem, namely job overlapping, especially on managerial jobs. Role and job conflicts have obstructed job accomplishment, and this obstruction reduces work convenience (Verburgh, 2017, p. 5). Fact on the field indicates that decision making that supposes to be handled by manager of dairy cattle milk unit tends to be determined by the chair or the owner of dairy cattle milk cooperative. As a result, managerial domain has been surpassed. Such unstructured decision making could happen due to low organizational learning. It is consistent with Pantouvakis and Bouranta (2013, p. 51) who asserted that decision making is one important aspect in organizational learning.

Strategies that can be used by business units to increase job satisfaction of employees are not only by giving incentive stimulus, but also by attending factors related with organizational learning, such as dialog, respect, and training program, focusing on developing individual professionalism (Monsiváis, Guzmán, Alcázar, & Usagre, 2017, p. 4). To ensure job satisfaction among employees, business units must facilitate them to do organizational learning. As noted by Monsiváis et al. (2017, p. 4), job satisfaction can be increased by creating good integration between convenient workplace and trust given to staffs when they attempt to do organizational learning.

Organizational learning improves employees’ work capacity. Indeed, employees may sense an empowerment when they have a convenient place to work, and immediate outcome from this empowerment is greater job satisfaction. Empowerment also increases employees’ behavioral quality (Alshurideh, Alhadid, & Barween, 2015, p. 143). Job quality of the employees can be increased through empowerment and it is done by facilitating them to initiate organizational learning, such as giving them convenient workplace. Employees with high work competence will give better work outcomes (Trivellas, Kakkos, Blanas, & Santouridis, 2015, p. 474). Under circumstances that employee empowerment through organizational learning shall be suboptimal, then employee performance can be improved through other dimensions such as by giving motivation and making good communication to develop a sense of comfort at work (Alshurideh et al., 2015, p. 143; Gooshki, Jazvarghi, Kermani, & Esfandari, 2016, p. 97). It can be said then that business units can improve their market orientation by increasing organizational learning level and making certain that employees sense the expected job satisfaction.

7. Conclusion

By taking into account the research problems, research objectives, analysis results, and discussions, the following conclusions are made: (1) organizational learning done at dairy cattle milk cooperatives in East Java can significantly increase market orientation, (2) job satisfaction can reduce the effect of organizational learning on market orientation of dairy cattle milk cooperatives in East Java. Some suggestions are given to dairy cattle milk cooperatives if they want to improve their market orientation:

(1) Organizational learning can be improved by:
   (a) Providing training to employees based on job description;
   (b) making a coordination with relevant managerial ranks to avoid job overlapping;
   (c) showing responsive and innovative actions to customer demand; and
   (d) using result of learning to achieve the best outcome.

(2) Job satisfaction can be increased by giving employees with their entitled rights, paying their salary at fair value, providing them with incentives based on performance, and increasing workplace convenience.

Based on the conclusions, the recommendations for future research are as follows:

(1) Next study model shall include other variables because this addition is helpful to obtain complete description about relationship between variables of organizational learning, job satisfaction, and market orientation.
(2) Result of current study must be generalized into another kind of business, or at many other business groups such as trade and service enterprises, private companies, and other business institutions. This generalization will deliver various reviews because the object of study involves different business units with different characteristics.

(3) Next study shall examine the result of current study at wider scale by using bigger population and more extensive coverage because it allows further study to obtain more complete and more comprehensive conclusion.

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