

## THE INFLUENCE OF FARMER ENTREPRENEURIAL COMPETENCE ON BROILER FARM PERFORMANCE IN BOGOR

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**Abstract:** The broiler is a highly demanded animal protein source for Indonesian people. Nowadays, primary and derived product demand for broiler chicken increases steadily. So it is necessary to increase broiler farm performance in order to meet the increased demand. One of the broiler farm centers which have fulfilled the rapid request of broiler chicken is located in Bogor, West Java. However, there was an important issue facing the broiler industry in Bogor, namely the decreased growth of broiler chicken population in Bogor. This indicates in the optimized business performance of broiler farm, impacting on business sustainability. Theoretically, business performance can be improved by stimulating farmer entrepreneurial competence. This study aimed to analyze factors affecting entrepreneurial competencies of farmers and determine the influence of farmer entrepreneurial competence on broiler farm performance in Bogor. This study used a convenience sampling method involving 120 contract farmers when running their business. Data were analyzed using descriptive method and multivariate analysis using structural equation modeling (SEM). The results showed that farmer entrepreneurial competencies were very dominant in broiler farm business performance. The entrepreneurial competence variable was mostly influenced by the managerial competence variable of farmers. The influential manifested variable to increase managerial competence was the farmer's ability in human resource management.

**Keywords:** broiler farm, business performance, entrepreneurial competencies

**Abstrak:** Ayam ras pedaging merupakan salah satu sumber protein hewani yang diminati oleh masyarakat Indonesia. Saat ini, baik produk primer maupun produk olahan yang berasal dari ayam ras pedaging memiliki permintaan yang terus meningkat di masyarakat, sehingga performa usaha ayam ras pedaging perlu terus diperbaiki untuk memenuhi permintaan yang terus meningkat. Salah satu sentra produksi ayam ras pedaging terletak di Bogor, Jawa Barat. Namun, terdapat beberapa permasalahan penting yang dihadapi oleh usaha ayam ras pedaging di wilayah sentra produksi, yaitu adanya menurunnya tingkat pertumbuhan populasi ayam ras pedaging. Hal ini mengindikasikan bahwa saat ini performa usaha ayam ras pedaging belum secara optimal dilakukan dan berdampak terhadap keberlanjutan dari usaha ayam ras pedaging tersebut. Secara teori, performa bisnis dapat ditingkatkan dengan melakukan stimulasi terhadap kompetensi kewirausahaan yang dimiliki oleh peternak, sehingga penelitian ini dilakukan dengan tujuan untuk menganalisis faktor-faktor yang mempengaruhi kompetensi kewirausahaan peternak ayam ras pedaging dan untuk mengetahui pengaruh kompetensi kewirausahaan peternak terhadap performa bisnis ayam ras pedaging di Bogor. Penentuan peternak yang menjadi responden pada penelitian ini dilakukan dengan metode convenience, meliputi 120 peternak yang menjalankan usaha peternakan menggunakan pola kemitraan. Data yang telah dikumpulkan kemudian dianalisis menggunakan metode deskriptif dan analisis multivariate melalui Structural Equation Modeling (SEM). Hasil penelitian menunjukkan bahwa performa bisnis ayam ras pedaging sangat dipengaruhi oleh kompetensi kewirausahaan yang dimiliki peternak. Adapun variabel kompetensi kewirausahaan yang sangat dipengaruhi oleh variabel kompetensi manajerial peternak. Variabel manifest yang sangat berpengaruh terhadap peningkatan kompetensi manajerial peternak adalah kemampuan peternak dalam mengelola sumberdaya manusia.

**Kata kunci:** ayam ras pedaging, performa bisnis, kompetensi kewirausahaan

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## INTRODUCTION

Broiler farming is one of potentially developed business in Indonesia. The broiler consumption level increases in Indonesia with an average of 11.76 percent per year due to many derivative products from broiler chicken (Kusnadi et al. 2013), besides having cheaper price than other meats (Nurfadillah and Rachmina, 2015). Indonesian production of broiler in farm increases each year, achieving 3.62 percent growth in 2014, then reaching 1,497,626,000 in 2015 (Directorate General of Livestock and Animal Health, 2015). Nowadays, the growth rate makes broiler chicken as the main contributor of meat production in Indonesia with 53.13 percent, while beef only gets 18.14 percent (Directorate General of Livestock and Animal Health, 2015).

Based on Central Bureau of Statistics (2012), broiler production concentrated in West Java is approximately 50.57% of the total broiler production in Indonesia with Bogor as broiler farm center in West Java. Nevertheless, the performance of broiler farms in Bogor is inoptimized. This condition is revealed from the declined growth rate of broiler production during 2013–2015. Bogor Fisheries and Animal Husbandry Unit (2015) stated that Bogor broiler production growth in 2014 only reached 6.85 percent, then decreased by 11.41 percent in 2015. This situation happened due to decreased interests among businessmen as high risk occurrence in broiler business. In addition, this phenomenon was also caused by the lack of farmer capabilities to maintain the broiler condition during the treatment period, causing the chickens became susceptible to diseases and high mortality rate.

Burhanuddin et al. (2013) mentioned that one factors affecting the growth of broiler business is the entrepreneurial level of farmers. This entrepreneurial level will influence the farmer capabilities to manage their broiler business. The farmer capabilities to behave, think, and act in business situation is one form of entrepreneurial competences influencing the business performance undertaken (Muatip et al. 2008; Dermol V, 2010). La Deist and Winterton (2005), Lans et al. (2008), Dermol V (2010) noted that the entrepreneur competences is an ability to manage uncertainty, learn from experiences, and improve the personal ability. These capabilities are certainly required when running high risk business, such as broiler farming. Not only the capabilities in managing technical maintenance in broiler breeding, but also capabilities in managing

broiler farms as a business entity (Subkhie et al. 2012; Fatmawati et al. 2013).

Broiler farmer has a role as manager in running his business, therefore must be able to design, conduct, and evaluate the business condition. The success in performing this role will certainly be based on the farmer characteristics, namely competences. Competences are defined as underlying characteristics of an individual influencing the way of thinking and acting, making a conclusion on tough situation that will determine the best and most effective results according to specified criteria (Spenser and Spencer, 1993). Competences are closely linked with behavior and individual performance (Dermol, 2010) and formed from a combination of knowledge, skills and attitudes (Lans et al. 2008; Inyang and Enuoh, 2009). Therefore, it is an obligation for farmer to have good competence as it plays an important role to enhance the business performance (Sanchez 2012).

Enhancing farmer competences can be improved based on knowledge and skills related to the business (Inyang and Enuoh 2009; Dermol V, 2010), as competences are related to entrepreneurial level emerged within the farmer (Muatip et al. 2008, Negara et al. 2013). Robbins and Coulter (2010) stated that the main skills that businessman needs are divided into three categories, namely 1) technical skills, abilities and knowledge needed to perform specific tasks; 2) interpersonal skills, the skills related to ability to cooperate with other people; and 3) conceptual skills, related to problem-solving, either from planning, organizing, leadership, or evaluation.

These definitions are referred to competence, which is the capability based on basic knowledge and skill standard. It is likely worthy mentioning that competences are applied to all life aspects, including job and managerial competence (Mitchelmore and Rowley 2010), then reviewed for further deliberative meaning of entrepreneurship and competences (Linton and Walsh 2013). Entrepreneurial competences are not fully given to individuals at birth, but are created through education, training, and experience process (Lans et al. 2008).

In livestock business, factors influencing these competencies can be divided into two major factors, namely technical and managerial competences. Muatip et al. (2008), Negara et al. (2013), and Muharastri et

al. (2015) were those who divide these two types of competences as the discussion aspect in their studies. Technical competences are explained based on the farmer capabilities related to livestock business management, such poultry breeding, as well as the ability to produce, maintain, clean the cage, and handle disease. Meanwhile, managerial competences can be identified based on the farmer capabilities to manage their livestock business, including business planning, human resource management, business finance, leadership (Gerli et al. 2011), and entrepreneurial attitudes, thereby supporting the farmer managerial competences of farmers. In addition, Wickham (2004) mentioned about entrepreneurial competences as possessing strategic capabilities, planning skills, marketing skills, financial capabilities, financial management skills, time management skills, leadership skills, motivating ability, delegating skills, and communication skills.

Therefore, in this study, the measurement of farmer entrepreneurial competences were presented based on two main aspects, i.e managerial and technical competences. Relationship explanation between technical and managerial competences as well as the effect occurred on the entrepreneurial competences and business performance are presented on Figure 1.

Therefore, it is important to conduct a study determining the influence of entrepreneurial competences on broiler farm performance with high risk characteristics. The result of this analysis can be used by policy creators to improve the performance of broiler farms, especially stimulating the entrepreneurial capabilities of broiler farmers in Bogor.

## METHODS

This study was conducted in Bogor, West Java, from February, 2015 to July, 2016. Population obtained in this study was broiler farmers partnerwho did partnership business. The number of samples in this research is 120 farmers spread in several production centers in Bogor, especially Pamijahan District, Parung District, Nanggung District, Dramaga District, Cigudeg District, and Ciampea District. Data were collected based on the convenient technique.

Primary data were collected through interviews and questionnaires. Data were analyzed using multivariate analysis structural equation modeling (SEM) method. SEM analysis aimed to determine the influence of farmer entrepreneurial competences on the business performance of broiler farms in Bogor. The analysis stages were:

- 1) Development of theoretical models. In principle, testing relationships between variables should be based on existing theories to confirm this model.
- 2) Development using path diagram. This diagram is composed based on the theoretical concepts and acts as barrier in defining relationship patterns. This diagram is built to indicate the relationship between variables. This construct is made by looking for explanatory variables that can explain the construct.
- 3) Converting path diagram into structural equations. This conversion is necessary to show causality relationship.

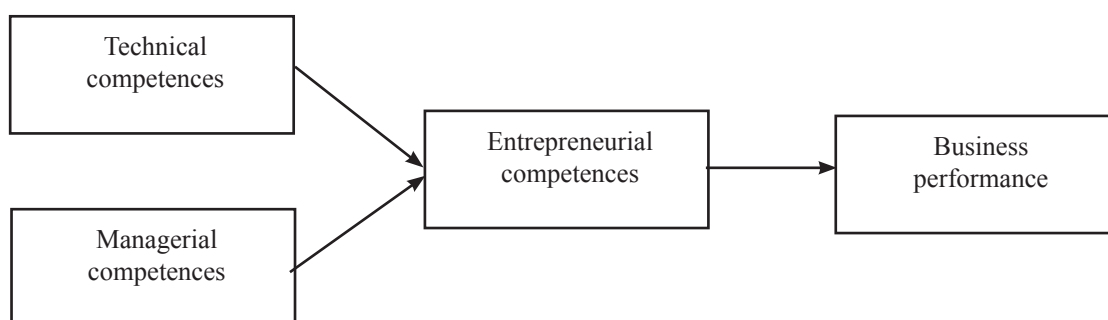


Figure 1. Entrepreneurial competences and business performance model (Wickham, 2004; Robbins and Coulter, 2010)

- 4) Estimation of matrix input and model. Data input data in this analysis were covariance matrix to perform model testing of existing theory equivalent to regression to explain the phenomenon studied.
- 5) Estimation of model coefficients. The inability of model structures to predict the unique outcome or the necessity of each coefficient to require a separate model can cause the estimation process to be irrational. Therefore, it is important to establish several coefficient values at fixed value (fix coefficient) and latent variables, having only one variable indicator with fixed value (generally one).
- 6) Evaluation for goodness of fit criteria used common compatibility index and value, namely: Positive degree of freedom (DF) signifies that model is identified. DF generally ranges between  $2.0 \leq DF$  value  $\leq 3.0$  as an indicator to measure the model suitability; Root mean square error of approximation (RMSEA) is an index to compensate chi-square in a large sample, indicating the suitability expected when the model is estimated. The requirement for the model to indicate model closed fit is  $RMSEA \leq 0.08$ ; Goodness of fit ( $GFI = R^2$  in regression) and Adjusted  $R^2$  (AGFI) is measured range between 0 (poor) to 1 (perfect),  $GFI$  and  $AGFI$  values  $\geq 0.90$  signifies good fit, while  $0.80 \leq GFI$  and  $AGFI < 0.90$  indicates marginal fit (fair); Comparative fit index (CFI) is index whose value is unaffected by sample size, therefore excellent to measure model acceptability with  $\geq 0.95$  expected value.
- 7) Interpretation and modifying models. Interpretation based on the underlying theory was performed after the model was accepted. When eligible criterion was unsuitable, the model modification was performed. Model modification can be performed by removing or adding any relationships within SEM model. Modification should only be performed whether there is a significant change within empirical data support.

In this study, SEM model was constructed using two variable types, i.e latent and manifested variables. Latent variables comprised two exogenous latent variables (technical and managerial competences) and two endogenous latent variables (entrepreneurial competences and business performance). The relationship among these latent variables was exogenous latent variable of technical (KTKS) and managerial competence (KMNJ) influenced the endogenous variable of entrepreneurial competence (KKWU).

Entrepreneurial competence variable affected the endogenous variable of business performance (KUSH), while endogenous variable of business performance was indirectly influenced by technical and managerial competence.

The manifested variables used to reflect technical competence variable comprise DOC strain determination (DOC), feed and vaccine (PAV), safety and comfort, to the livestock (KKT), harvest time (UMP), and operational capabilities (OPE). Manifested variables to reflect managerial competences comprises human resource management (SDM), marketing (PEM), financial management (KEU), and also capabilities of negotiation and communication (KOM). Manifested variables measured the business performance variables, containing business scale growth (SKU), business ownership (MIL) and income level (PEN). Manifested variable of entrepreneurial competences were innovation (INO), risk-taking (RIS), and leadership (KPE). All manifested variables were measured using Likert scale of 1-5 (1= strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree). Entrepreneurial competencies model of broiler farmers in Bogor is shown on Figure 2.

Mathematically, the formulation of broiler farmer entrepreneurial competences in Bogor Regency can be defined into structural equation model, as well as exogenous and endogenous latent variables measurement model, as follows.

Structural equation model

$$KKWU = \gamma_1 KTKS + \gamma_2 KMNJ + \zeta_1$$

$$KUSH = \beta_1 KKWU + \zeta_2$$

Exogenous latent variables measurement model

$$DOC = \lambda_{DOC.1} \cdot \epsilon_1 + \delta_{DOC.1}$$

$$PAV = \lambda_{PAV.1} \cdot \epsilon_1 + \delta_{PAV.1}$$

$$KKT = \lambda_{KKT.1} \cdot \epsilon_1 + \delta_{KKT.1}$$

$$UMP = \lambda_{UMP.1} \cdot \epsilon_1 + \delta_{UMP.1}$$

$$OPE = \lambda_{OPE.1} \cdot \epsilon_2 + \delta_{OPE.1}$$

$$SDM = \lambda_{SDM.2} \cdot \epsilon_2 + \delta_{SDM.2}$$

$$PEM = \lambda_{PEM.2} \cdot \epsilon_2 + \delta_{PEM.2}$$

$$KEU = \lambda_{KEU.2} \cdot \epsilon_2 + \delta_{KEU.2}$$

$$KOM = \lambda_{KOM.2} \cdot \epsilon_2 + \delta_{KOM.2}$$

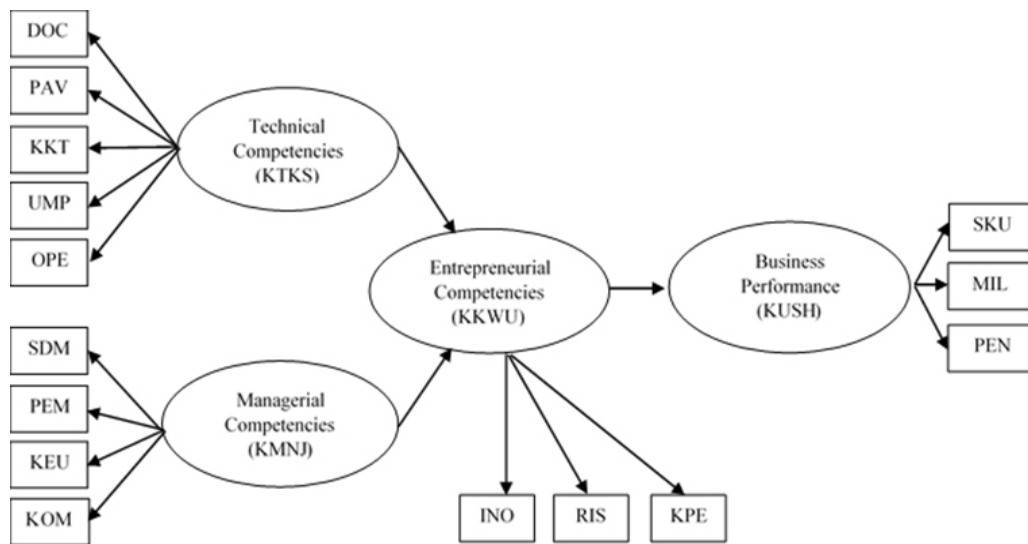


Figure 2. Entrepreneurial competences model of broiler farmers in Bogor

Endogenous latent variables measurement model

$$SKU = \lambda_{SKU.1} \cdot \eta_1 + \varepsilon_{SKU.1}$$

$$MIL = \lambda_{MIL.1} \cdot \eta_1 + \varepsilon_{MIL.1}$$

$$PEN = \lambda_{PEN.1} \cdot \eta_1 + \varepsilon_{PEN.1}$$

$$INO = \lambda_{INO.2} \cdot \eta_2 + \varepsilon_{INO.2}$$

$$RIS = \lambda_{RIS.2} \cdot \eta_2 + \varepsilon_{RIS.2}$$

$$KPE = \lambda_{KPE.2} \cdot \eta_2 + \varepsilon_{KPE.2}$$

## RESULTS

### Broiler Farming Business Overview in Bogor

Broiler farming business pattern in Bogor is mostly used partnership business pattern. This pattern becomes an alternative for farmers in running their livestock business because this pattern reducing high transaction costs due to market and government failures in providing livestock production input, and also assisting the product marketing aspects produced by farmers. The result of the study showed that there were three types of partnership pattern interested by broiler farmer in Bogor, i.e price agreement, partnership sharing, and partnership arrangement.

Based on the resulted, the majority of broiler farmers in Bogor used price agreement pattern. In price agreement pattern, business was performed to resemble the plasma-core cooperation pattern between farmers and large-scale livestock companies. This result was consistent with the previous research that discussed most of price contract farming in broiler business using core-plasma

cooperation pattern (Suwarta et al. 2010, Fitrizia et al. 2012, Subkhie et al. 2012). Plasma farmers and core companies share responsibility for running broiler farm on every cycle. Plasma farmers are responsible for providing land, cages, and responsibilities during the production process, while core company is responsible for helping provide livestock production facilities (DOC, feed, and vaccine) and absorbing the farmer production. In price agreement pattern, the selling price of broiler produced is in accordance with the agreed contract. Plasma farmers and core companies sometimes have agreement without legal documents (Nurfadillah and Rachmina, 2014). However, when the market price crop turns out to be higher than the contact price, then core company will give bonuses to plasma farmers.

In price agreement pattern, core company provides assistance for plasma farmers. Assistance is given to ensure that the broiler harvest is in good condition. The results showed that the mentoring process performed effectively. This can be seen from the average mortality rate per season indicator on the price contract agreement with 6.44 percent or lower than profit sharing partnership (9.52 percent) and partnership business (6.82 percent), increasing the broiler production yield and farmer income. In addition, farmers with price contract agreement had lower average FCR value per season with 1.56. This FCR magnitude has been adjusted to desired market weight, indicating more efficiently feeding. In terms of business scale growth, 58.3 percent farmers showed business scale growth. High growth rate of this business influenced the high experienced farmers who have performed broiler business more than 10 years.

### Preliminary Model Analysis

SEM analysis measurement model is the first step for whole SEM analysis. It is performed to ensure the relationship level between latent and manifested variables. This relationship level can be seen based on the amount of loading factor value ( $\lambda$ ). The greater loading factor value, the greater relationship level resulted. Igbaria et al. (1997) mentioned that loading factor value with  $\leq 0.30$  can be eliminated to make better model. In addition, t-value on each variable checking is performed to determine whether the variables used were valid containing significant influences or not, as t-value smaller than 1.96 indicated insignificant loading factor value.

Based on the explanation, the analysis result of initial measurement model of broiler farmer entrepreneurial competences showed that there were still some variables obtained t-value less than 1.96 with less than 0.30 loading factor value, indicating that some of these variables did not meet the validity standard. Moreover, overall analysis of fit model showed that the model had no good suitability, while goodness of fit measurement also did not show good fit. Therefore, it is necessary to do model respecification by eliminating some invalid

variables with  $\leq 0.30$  loading factor value for better analysis results.

### Respecification Model Analysis

Respecification model was constructed by eliminating some of manifested variables in the initial model and causal relationship between technical (KTKS) and entrepreneurial competence (KKWU) variables. The respecification analysis result indicated that the entire variables were valid and met the criteria. Loading factor and t-value of manifested variables can be seen in Table 1.

### Overall Model Goodness of Fit Result Analysis

The first stage of overall goodness-of-fit test model is generally intended to evaluate the compatibility level or Goodness of fit (GOF) in the model. Based on the respecification model on Table 2, the respecification model was in good condition (fit) to the data sample with good compatibility level, while the structural compatibility model (Table 3) shows that the relationship between latent variables in this research was significant and positively related.

Table 1. Loading factor and t-value of manifested variables

Latent Variables	Manifested Variables	Loading Factor ( $\lambda$ )	t-value	Validity
Managerial Competences (KMNJ)	Human Resource Management (SDM)	0.87	10,72*	Valid
	Marketing (PEM)	0.47	5,16*	Valid
	Communication Capabilities (KOM)	0.60	6,82*	Valid
Entrepreneurial Competences (KKWU)	Leadership (KPE)	0.97	-	Valid
	Risk-Taking (RIS)	0.35	3,55*	Valid
Business Performance (KUSH)	Growth of Business Scale (SKU)	0.69	-	Valid
	Business Ownership (MIL)	0.48	4,17*	Valid
	Income level (PEN)	0.79	4,78*	Valid

\*significance at 5 percent level

Table 2. Goodness of Fit model test result after respecification

Goodness-of-Fit	Cut-off-Value	Result	Conclusion
p-value	$\geq 0.05$	-	-
Root Mean Square Residual (RMR)	$\leq 0.05$ or $\leq 0.1$	0.063	Good (good fit)
Root Mean Square Error of Approximation (RMSEA)	$\leq 0.08$	0.056	Good (good fit)
Goodness of Fit Index (GFI)	$\geq 0.90$	0.95	Good (good fit)
Adjusted Goodness of Fit Index (AGFI)	$\geq 0.90$	0.90	Good (good fit)
Normed Fit Index (NFI)	$\geq 0.90$	0.93	Good (good fit)
Relative Fit Index (RFI)	$\geq 0.90$	0.89	Fair (marginal fit)
Comparative Fit Index (CFI)	$\geq 0.90$	0.97	Good (good fit)

Figure 3 indicates the latent variable of managerial competence (KMNJ) was reflected by manifested variable of human resources management ( $\lambda = 0.87$ ), marketing ( $\lambda = 0.47$ ), and communication capabilities ( $\lambda = 0.60$ ). The latent variable of entrepreneurial competences (KKWU) was reflected by manifested variable of leadership ( $\lambda = 0.97$ ) and risk taking ( $\lambda = 0.35$ ). The latent variable of business performance (KUSH) was reflected by manifested variable of business scale growth ( $\lambda = 0.69$ ), business ownership ( $\lambda = 0.48$ ), and income level ( $\lambda = 0.79$ ). Structural model t-value broiler farmer entrepreneurial competences in Figure 4.

**Factors Affecting Entrepreneurial Competencies of Broiler Farmers**

Based on the result of goodness-of-fit of the structural model, only managerial competence variable had significant and positive influence to the farmer entrepreneurial competences with 0.90 coefficient

influence value ( $\gamma$ ). Managerial competence factor was measured from human resource management (SDM), marketing (PEM), and communication capabilities (KOM). The existence of significantly positive influence indicates that improved farmer managerial competence will enhance farmer entrepreneurial competences.

The results showed that the most dominant variable affecting farmer managerial competence was human resource management with 0.87 loading factor ( $\lambda$ ). The ability of farmers in managing human resources (labors) is the key factor in the success in broiler farming. Ramadhan and Burhanuddin (2017) mentioned that labor is one of technical factors in broiler farm business that determines the business success. Rasyaf (1993) stated that the role of labor in the cage during nurturing and treatment period will optimize the performance of chicken production. The ability of labor management is determined by business plan run by farmers, therefore when the farmers can manage the labor properly, the managerial competence will improve.

Table 3. Goodness of fit structural mode result between latent variables

Variables	Path Coefficient		t-value	Conclusion
	Direct	Indirect		
KMNJ → KKWU	0,90	-	10,74	Significant and positive
KKWU → KUSH	0,42	-	3,27	Significant and positive
KMNJ → KUSH	-	0,37	3,16	Significant and positive

t-value is significant whether > 1,96

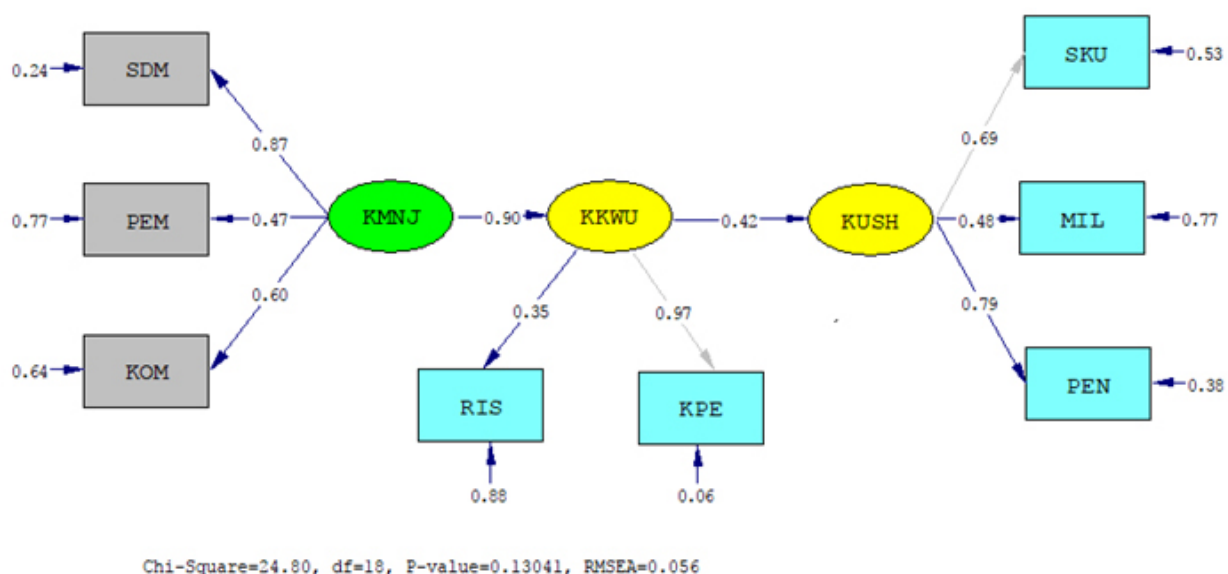


Figure 3. Standard structural model loading factor on broiler farmer entrepreneurial competence

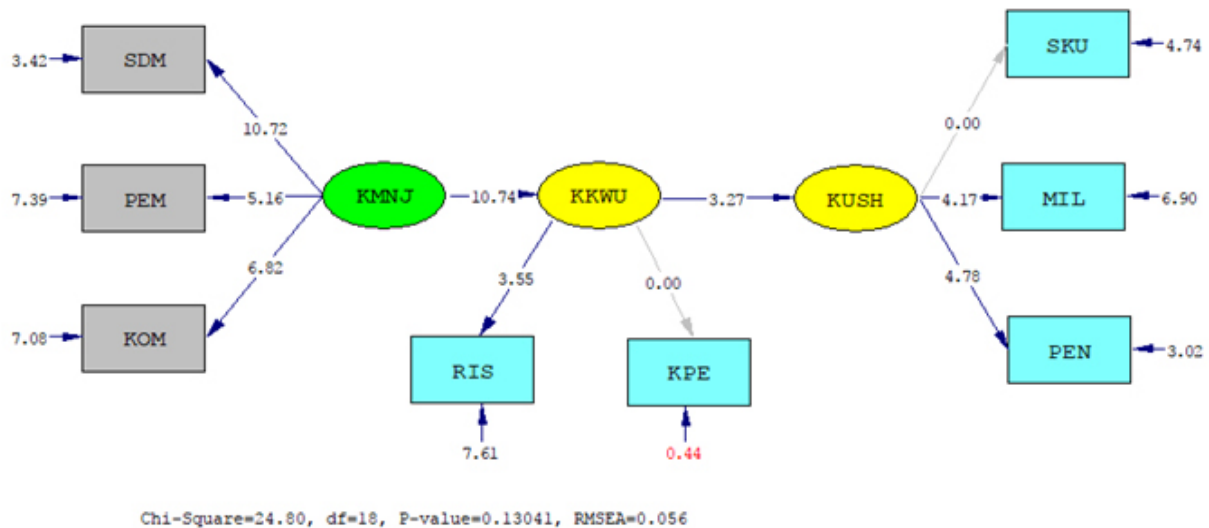


Figure 4. Structural model t-value broiler farmer entrepreneurial competences

Another variable affecting the farmer managerial competence is the communication capability. This capability enables farmers to improve bargaining position among other stakeholders, such as community, core companies, or government. Muatip et al. (2008) stated that this capability is capital for farmers to lead their business properly and interact with all parties in parallel position, making their farms have good images either on companies, communities, or government. According to the farmers, communication capability can be performed under several things: 1) Communicating with core companies and making an offer related to rights and responsibility agreements, including the negotiation of input prices and bonuses, besides determining the broiler harvest time; 2) Communicating with the community related to the negative impacts of broiler farming business nearby, such as the smell produced and number of flies due to chicken manure produced. Farmers establish good communication with the community to solve this problem by providing loss compensation for the community in the form of broiler products given to the influence people in community at harvest; and (3) Communicating with government regarding to the program guidance program provided and aspiration channel to the government.

The next competence affecting farmer entrepreneurial competence is farmer marketing capability. This capability has significantly positive effect on entrepreneurial competences with 0.60 loading factor ( $\lambda$ ), indicating that improved farmer marketing capability will increase entrepreneurial competence of farmers. There were three patterns of business

partnership performed by broiler farmers in Bogor, namely plasma core partnership, profit sharing, and maklon partnership (Nurfadillah and Rachmina, 2015). In terms of marketing, only profit-sharing partnership pattern gives farmers the freedom to sell their harvest independently with core company assistance. The other two patterns were bound tightly with core companies. Therefore, one way to measure farmer marketing capability was by determining the farmer understanding level about the cooperation agreement with core companies. The fact showed that farmers did not fully understand the cooperation agreement. One indication matter was that farmers were uninvolved during the agreement preparation with the companies, causing the farmers to renegotiate the broiler price. However, core companies were fair enough in making cooperation with farmers. When the market price of broiler is below the agreement price, then farmers will get the price based on the initial agreement. Moreover, when the broiler market price is above the agreement price, then farmers will still get the price based on the agreement price plus incentive or bonus from the core companies.

### Factors Affecting Business Performance of Broiler Farms

Based on the structural model result analysis shown in Table 2, variables that directly affected the business performance was the entrepreneurial competence variable, while managerial competence variable did not directly affect the business performance. The entrepreneurial competence variable has directly



positive influence with 0.42 the influence coefficient. This signifies that the improvement of farmer entrepreneurial competences can enhance business performance of broiler farms.

Improving the farmer capabilities in managing broiler farm business and farmer courage in risk-taking can increase the farm business performance. The farmer leadership in cage is crucial as good management practice on broiler farming business, resulting well farming activities and harvested broiler quality. This is in accordance with previous studies conducted by Muatip et al. (2008), Sanchez (2012), and Pamela et al. (2016) who stated that entrepreneurial competences owned by farmers affect the business performance.

Entrepreneurial competences of the farmers can be reflected through their leadership attitudes in running the farms and risk taking courage. The farmer leadership demonstrates the farmer capability to set others in motion, manage resources, and determine strategic actions in order to achieve business goals. Leadership is needed to perform various farming for achieving the desired goals, one of which is to generate profits through productivity optimization in the cage. Muatip et al. (2008) mentioned that leadership is considered to improve business productivity and competitiveness in the livestock business. Through good leadership, especially in organizing activities in the cage, farmers are capable of minimizing the future risks. Farmers will become better at preventing the risks that may interfere with broiler farming activities. The capability to calculate these risks should be existed in farmers to achieve their business goals.

Meanwhile, the farmer managerial competence variable had indirect effect on business performance with 0.37 influence coefficient. Thus, the improvement of managerial competence can indirectly enhance the business performance of broiler farm. Gerli et al. (2011) stated that managerial skills possessed by entrepreneur may influence the effectiveness of entrepreneurial activities and improve business performance. Similar thing stated by Negara et al. (2013), indicating that entrepreneur competences are needed to improve the business performance.

## Managerial Implications

Based on the study results, several number of recommendations can be given to improve the broiler farm performance, especially stimulating the entrepreneurial capabilities of broiler farmers in Bogor. The government or companies can stimulate the entrepreneurial capabilities by improving the entrepreneurial competences of broiler farmers. Managerial competence variable of farmers is influenced by various indicators, such as the capabilities in managing human resources, communication, and marketing.

Therefore, in order to improve the broiler farm performance, there should be a policy providing training or informal education to improve the farmer capability in managerial competence held by government or companies. This training aims to improve skill, knowledge, and capabilities of farmers, particularly in managing human resources they employ, communication, and marketing. These capabilities are expected to improve the efficiency and effectiveness of broiler farm activities, therefore improving the broiler farm business performance.

## CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

There are numbers of conclusion from this study to answer the influence of entrepreneurial competence on broiler farm performance in Bogor. The results showed that the broiler farm performance is only influenced by the farmer entrepreneurial competences with 0.42 influence coefficient. The entrepreneurial competencies variable is only influenced by the farmer managerial competences with 0.90 influence coefficient. This indicates that the broiler farm performance can be improved by applying entrepreneurial competences, especially improving the farmer managerial capabilities.

Managerial competence variable of farmer is influenced by various indicators, namely human resource management, communication, and marketing capabilities. The most dominant indicator affecting managerial competence of farmers is human resource management. Therefore, in order to improve the performance of broiler business, the policy providing

training or informal education should be existed to improve the farmer capabilities in human resource management, therefore being better in managing human resource they employ. Good human resource management is expected to improve the efficiency and effectiveness of broiler farm activities, increasing the business performance of broiler farming.

### Recommendations

From this study as well, we found three types of partnership pattern that interested by broiler farmer in Bogor, i.e price agreement, partnership sharing arrangement, and partnership arrangement. Most of broiler farmers in Bogor used price agreement pattern to resemble the pattern of core-plasma cooperation between farmers and large-scale livestock companies. Therefore, companies has the responsibility to provide training for farmers who become partners to improve the performance of broiler farms in Bogor.

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