Volume 23, Special Issue **Print ISSN: 1099-9264**
Online ISSN: 1939-4675

BROILER LIVESTOCK BUSINESS BASED ON PARTNERSHIP COOPERATION IN INDONESIA: THE ASSESSMENT OF OPPORTUNITIES AND BUSINESS DEVELOPMENTS

Amam, Jember University
Zaenal Fanani, Brawijaya University
Budi Hartono, Brawijaya University
Bambang Ali Nugroho, Brawijaya University

ABSTRACT

The principle of partnership cooperation in Indonesia is based on mutual need, mutual reinforcement, and mutual benefit to both parties who conduct business cooperation. The business cooperation includes the partnership between broiler livestock business between livestock companies and farmers. This study aims to map the potential of broiler breeders partnership systems that support livestock business development and find a model for developing broiler livestock business partnership systems in Indonesia. The study was conducted in January - August 2018 in Malang Regency, East Java Province. Respondents are broiler breeders with a partnership system. The number of respondents is 126 farmers. The results show that breeders and their access to resources have an effect on the development of livestock businesses by 56.4%. The conclusion of the study shows that the development of broiler livestock business partnership system in Indonesia is significantly influenced by financial resources, economic resources, social resources, and human resources.

Keywords: Partnership System, Broiler, Resources, Breeders.

INTRODUCTION

The need of chickenfor the fulfillment of animal protein has an impact on increasing public consumption of chicken, with an average growth of 17.64%, in 2017 the consumption of chicken reaches 0.744 kg/capita/year (Ministry of Agriculture of the Republic of Indonesia, 2017). Thus, the average price of broilers at the consumer level reaches Rp 33,334/kg (Directorate General of Animal Husbandry and Animal Health, 2017). Efficient price integration policies should be established so that the price gaps between consumer and producer levels are acceptable (Setianti et al., 2016). Therefore, the poultry industry experiences a population increase of 6.82% or as much as 1.69 billion tails in line with the partnership between livestock companies and farmers. Animal husbandry business partnership in Indonesia has been regulated in the Minister of Agriculture Regulation of the Republic of Indonesia Number 13/PERMENTAN / PK.240 / 5/2017 concerning Livestock Business Partnership and Republic of Indonesia Government Regulation Number 44 of 1997 concerning Partnerships.

The principle of partnership cooperation in Indonesia is mutual need, mutual reinforcement, and mutual benefit between the parties that carry out business cooperation, including broiler livestock business with partnerships between livestock companies and farmers.

The partnership partnership in reality does not always strengthen and mutually benefit each other. Many breeders have suffered losses because of the bargaining position of low farmers, which has an effect on the sustainability of broiler livestock business and the development of broiler livestock businesses. The low bargaining power of farmers is because most production factor inputs are obtained from livestock companies, whereas production factor inputs simultaneously have a significant effect on farmers' profits (Haloho et al., 2013), while character, capacity, and conditions do not significantly affect farmer credit returns (Prasetyo et al., 2012), although the return of 5% livestock business credit will still be declared profitable when the profitability of livestock business reaches 10.34% (Dolewikou et al., 2016).

Partnership collaboration has an impact on farmers' access to resources (Mukson et al., 2017) to support agribusiness subsystems which include preproduction, marketing, and supporting services (Prasetyo et al., 2012) because the broiler livestock business partnerships are said to be feasible technical, organizational, and financial factors (Arrienda et al., 2010). Mukson et al. (2012) stated that the role of technical, social, economic, institutional, and business environment factors needs to be considered in an effort to increase business productivity and farmer income. These technical factors according to Perilla et al. (2009), among others, make their own nurseries as an initial investment step and to reduce adipocyte proliferation (Sugiharto et al., 2010), whereas according to Sumekar et al. (2013) stated that technical factors for livestock population, feed management, and mastery of breeders' technology were not optimal.
Broiler livestock business with partnership cooperation enables farmers to be able to expand the chicken marketing management by optimizing the length of fattening time. Optimization of fattening time needs to be done to increase farmer's income (Setiawan et al., 2013). Therefore, government involvement is needed to encourage the growth of the poultry industry, exploit potential new areas, and update legislation to preserve the environment. Potential investors must be encouraged to overcome price volatility (Indarsih et al., 2010).

The development of broiler livestock business partnership systems in Indonesia is inseparable from the access of farmers to various resources. These resources include financial resources, technological resources, physical resources, economic resources, environmental resources, and social resources (Syukur et al., 2014). This study aims to map the potential of broiler breeders partnership systems that support livestock business development and find a model for developing broiler livestock business partnership systems in Indonesia.

RESEARCH METHODS

The study was conducted in Malang Regency, East Java Province, Indonesia from January to August 2018. Farmer data was obtained from 33 sub-districts in Malang Regency. Respondents were broiler breeders in partnership systems (total sampling). The number of respondents is 126 breeders. Data are obtained using questionnaires, interviews, and observations. The Likert scale 1 to 5 is utilized to fill the questionnaires.

Research Variables

This study consists of 8 main variables and 59 indicators. These variables are: financial resources (X1), technological resources (X2), physical resources (X3), economic resources (X4),

environmental resources (X5), social resources (X6), human resources (Z1), and development of broiler livestock business (Z1). The research variables and indicators of the research are explained in Table 1 below:

Table 1
INDICATORS AND RESEARCH VARIABLES

No.	Variables	Indicators	
1	Financial (X1)	Main income	$X_{1.1}$
		Income from broiler livestock business	$X_{1.2}$
		Side income from non-farm businesses	$X_{1.3}$
		Income from other livestock businesses	$X_{1.4}$
		Income for family needs	$X_{1.5}$
		Amount of savings	$X_{1.6}$
		Amount of debt	$X_{1.7}$
		Amount of debt repayment	$X_{1.8}$
		The number of broiler populations	$X_{1.9}$
2	Technological Resources (X2)	DOC selection technology	$X_{2.1}$
		Feeding technology	$X_{2.2}$
		Livestock health	$X_{2.3}$
		Caging management	$X_{2.4}$
		Marketing management	$X_{2.5}$
		Body weighttarget	$X_{2.6}$
		FCR knowledge	$X_{2.7}$
3	Physical Resources (X3)	Home ownership	$X_{3.1}$
		Cage ownership	$X_{3.2}$
		Ownership of vehicles	$X_{3.3}$
		Ownership of communication tools	$X_{3.4}$
		Ownership of information facilities	$X_{3.5}$
		Electricity usage	$X_{3.6}$
		Land ownership	$X_{3.7}$
		The use of Land	$X_{3.8}$
		Access to water source	$X_{3.9}$
		Access to feed sources	$X_{3.10}$
4	Economical Resources (X4)	Formal education of farmers	$X_{4.1}$
		Non-formal education of farmers	$X_{4.2}$
		Involvement of siblingson work	$X_{4.3}$
		Family health status	$X_{4.4}$
		Family nutritional status	$X_{4.5}$
		Residential comfort	$X_{4.6}$
		Transfer of technology to the surrounding community	$X_{4.7}$
		Vacation opportunity	$X_{4.8}$
		Credibility of farmers	$X_{4.9}$
5	Environmental Resources (X5)	Air pollution level	$X_{5.1}$
		Level of soil pollution	$X_{5.2}$
		Water pollution level	$X_{5.3}$
		Sound pollution level	$X_{5.4}$
		Utilization of livestock waste for fertilizer	$X_{5.5}$
		Utilization of agricultural waste for feed	$X_{5.6}$
6	Social Resources (X6)	The role of farmers in community	$X_{6.1}$
		Relationship with other farmers	$X_{6.2}$
		Relationship with village based civil servants	$X_{6.3}$
		Relationship with health workers	$X_{6.4}$

		Relationship with the livestock office	$X_{6.5}$
		Relationship with feeding companies	$X_{6.6}$
		Relationship with the DOC supplier company	$X_{6.7}$
		Relationship with extension workers	$X_{6.8}$
		Relationship with financial institutions	$X_{6.9}$
		Relationship with marketing agencies	$X_{6.10}$
7	Farming/Breeder Human Resources (Z1)	Intellectual quality of farmers	$Z_{1.1}$
		Level of health of farmers	$Z_{1.2}$
		Spiritual quality of farmers	$Z_{1.3}$
		Language abilities	$Z_{1.4}$
8	Business Development (Y1)	Growth of revenue	$Y_{1.1}$
		Increasing number of broiler populations	$Y_{1.2}$
		Growth in the number of workers	$Y_{1.3}$
		Additional number of cages	$Y_{1.4}$

Data Analysis Method

Data are analyzed using the Structural Equation Model (SEM) with SmartPLS. SmartPLS is used because it is useful to strengthen weak theories and / or find a new theory (Wiyono, 2011). The specification of the relationship between latent variables and indicators in Partial Least Square (PLS) theory is called the measurement model or outer relation. Mathematically, determining the value of outer loading on the reflective indicator is as follows:

$$3 = \Lambda 3£ + s3$$

$$y = \Lambda y5 + sy$$

x and y are indicators for exogenous latent variables (ξ) and endogenous (η), while Λx and Λy are loading matrices that illustrate simple regression coefficients that connect latent variables to their indicators. Residuals are measured by ϵx and ϵy which can be interpreted as measurement errors.

PLS is designed for recursive models. Moreover, the relationship between latent variables applies that each dependent latent variable η can be specified as follows:

$$5j = \sum i\beta\ ji\ 5i + \ 5 \sum i\ \gamma\ jb\ £b + \ Çi$$

$g_{Jь}$ (in the form of a rotated matrix r) is a path coefficient that connects an endogenous latent variable (η) with an exogenous latent variable (ξ), whereas β_{ji} is a path coefficient that bridges an endogenous latent variable (η) with another endogenous latent variable (ξ), while the parameter ς is the inner residual variable.

Weigth Relations (WR) is the estimation of the case values of the latent variables, inner models, and outer models that provide specifications, so as to provide estimates of weight relation in the following logarithmic equation:

$$£b = \sum kb\ W\ kb\ X\ kb$$

$$5j = \sum k i\ W\ k i\ X\ k i$$

W_{kb} and W_{ki} are k weigth which are used to form estimation of latent variables η and ξ. The estimation of the latent variable is linear aggregation of indicators whose weight values are acquired from the PLS estimation procedure.

RESULT AND DISCUSSION

Potential of Broiler Livestock Business Resources

Resources are a potential value that is owned by institutions or individuals that can be accessed and a continuing processes in their lives. The potential of these resources is obtained from the access of broiler breeders to the partnership system of various resources. These resources include financial, technological, physical, economic, environmental and social resources (Syukur et al., 2014).

The access to these resources is obtained from the results of tests using SmartPLS (Figure 1). Resources that can be accessed are resources that have the value of outer loading> 0.500 and declared valid, while the value of outer loading <0.500 is regarded as invalid and must be removed from the model because it does not support latent variables. Access to broiler breeders in partnership with resources is explained in Table 2 below:

Table 2
ACCESS TO BROILER FARMERS IN THE PARTNERSHIPSYSTEM FOR RESOURCES

Latent Variables	Indicators	Outer Loading
Financial (X1)	Main income($X_{1.1}$)	0.597
	Income from broiler livestock business ($X_{1.2}$)	0.673
	Side income from non-farm businesses($X_{1.3}$)	0.798
	Income from other livestock businesses($X_{1.4}$)	0.669
	Amount of savings($X_{1.6}$)	0.68
	The number of broiler populations($X_{1.9}$)	0.798
Technological Resources(X_2)	Marketing management($X_{2.5}$)	1
Physical Resources (X_3)	Ownership of information facilities($X_{3.5}$)	0.761
	Electricity usage($X_{3.6}$)	0.917
Economical Resources (X_4)	Involvement of siblings on work($X_{4.3}$)	0.789
	Vacation opportunity($X_{4.8}$)	0.724
	Credibility of farmers($X_{4.9}$)	0.543
Environmental Resources (X_5)	Utilization of livestock waste for fertilizer($X_{5.5}$)	0.83
	Utilization of agricultural waste for feed($X_{5.6}$)	0.827
Social Resources(X_6)	The role of farmers in community($X_{6.1}$)	0.569
	Relations with village based civil servants($X_{6.3}$)	0.728
	Relationship with health workers($X_{6.4}$)	0.696
	Relationship with the livestock office($X_{6.5}$)	0.741
	Relationship with feeding companies($X_{6.6}$)	0.784
	Relationship with the DOC supplier company($X_{6.7}$)	0.63
Farming/Breeder Human Resources (Z_1)	Intellectual quality of farmers($Z_{1.1}$)	0.945
	Level of health of farmers($Z_{1.2}$)	0.587

Business Development(Y_1)	Growth of revenue($Y_{1.1}$)	0.798
	Increasing number of broiler populations($Y_{1.2}$)	0.939
	Growth in the number of workers($Y_{1.3}$)	0.936
	Additional number of cages($Y_{1.4}$)	0.931
Note: Outer Loading values after removing invalid indicators (<0.500) Source: Processed data (2018)		

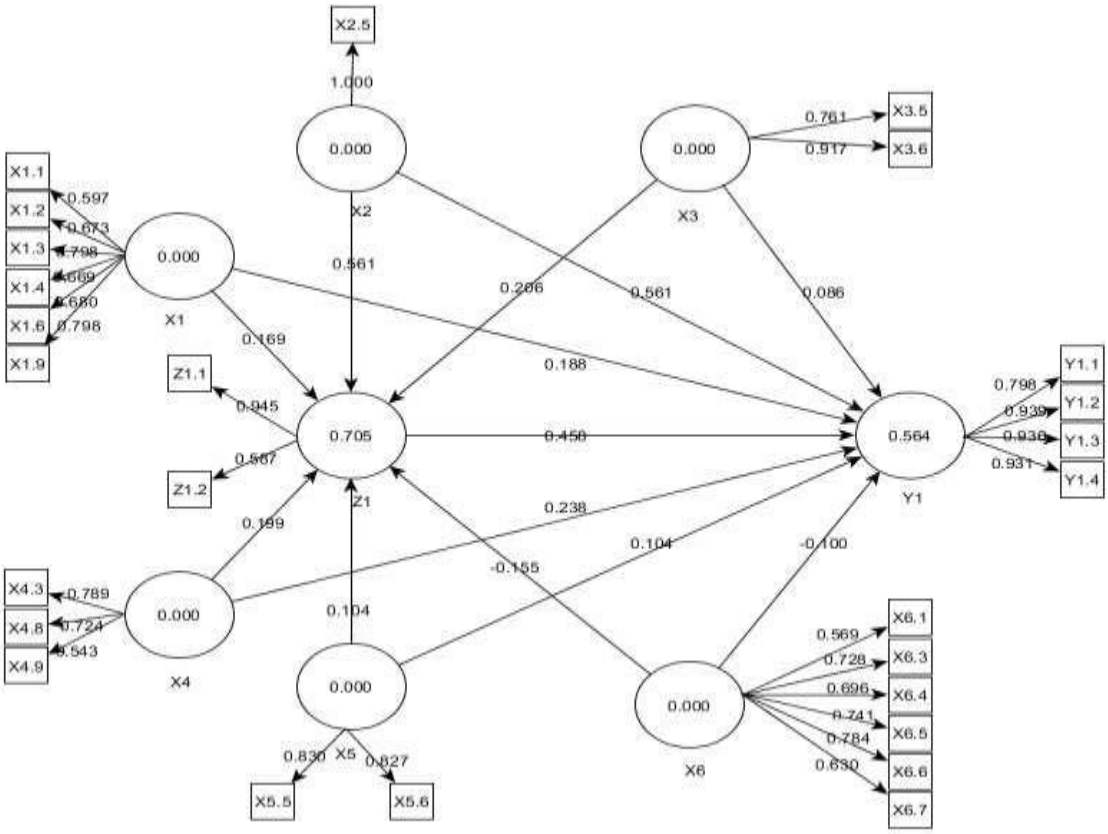

FIGURE 1
RESULTS OF PLS

Financial, technological, physical and economic resources have a significant positive effect on human resources. Therefore, access of broiler breeders to the partnership system of financial, technological, physical and economic resources directly affects the human resources of breeders. Broiler breedings under partnership system in Indonesia has a significant positive effect on livestock business development. This shows that the higher human resources of breeders, the chances of farmers in developing livestock businesses are also getting increased. Roessali et al. (2011) states that family carrying capacity can influence farmers' decisions to increase the scale of their business (Table 3).

Financial and economic resources undoubtedly and significantly impacts on the development of broiler farming in the partnership system. Thereby, more access of farmers to financial and economic resources influences the opportunity for farmers to develop livestock businesses. Riszqina et al. (2014) states that livestock business productivity is strongly influenced by business scale. Productivity and profitability of large-scale livestock businesses is higher than that of small-scale livestock businesses (Asmara et al., 2017).

TABLE 3
COEFFICIENT OF DETERMINATION, PATH COEFFICIENT, AND T-STATISTIC

Coefficient of determination	
Examining	Results
Farming human resources (HR)	0.705
Development of livestock business	0.564

Path coefficientand t-statistic

Endogenous Func.		Direct Effect				*Total Effect*	
		Farming HR (Z_1)		Business Development (Y_1)		Business Development (Y_1)	
Exogenous Func.		Coefficient	t-value	Coefficient	t-value	Coefficient	t-value
Financial Resources	X_1	0.169	2.629	0.188	2.421	0.266	3.777
Technological Resources	X_2	0.561	6.092	0.561	0.558	0.192	3.664
Physical Resources	X_3	0.266	2.368	0.086	0.821	0.181	1.54
Economical Resources	X_4	0.199	2.312	0.238	2.445	0.329	3.548
Environmental Resources	X_5	0.104	1.614	0.104	1.207	0.154	2.059
Social Resources	X_6	-0.155	1.004	-0.1	1.651	-0.171	1.715

Note:T-Tabel = 1.660
Sources: Processed Data (2018)

Development of Broiler Livestock Business Partnership System

Access to resources for farmers and the quality of Human Resources (HR) affect the development of broiler livestock business partnership systems in Malang Regency by 56.4%, while the remaining 43.6% is influenced by other factors not found in the model depicted in Figure 2. Ellitan (2003) states that the performance of HR and technology is influenced positively and/or negatively by accessibility to resources.

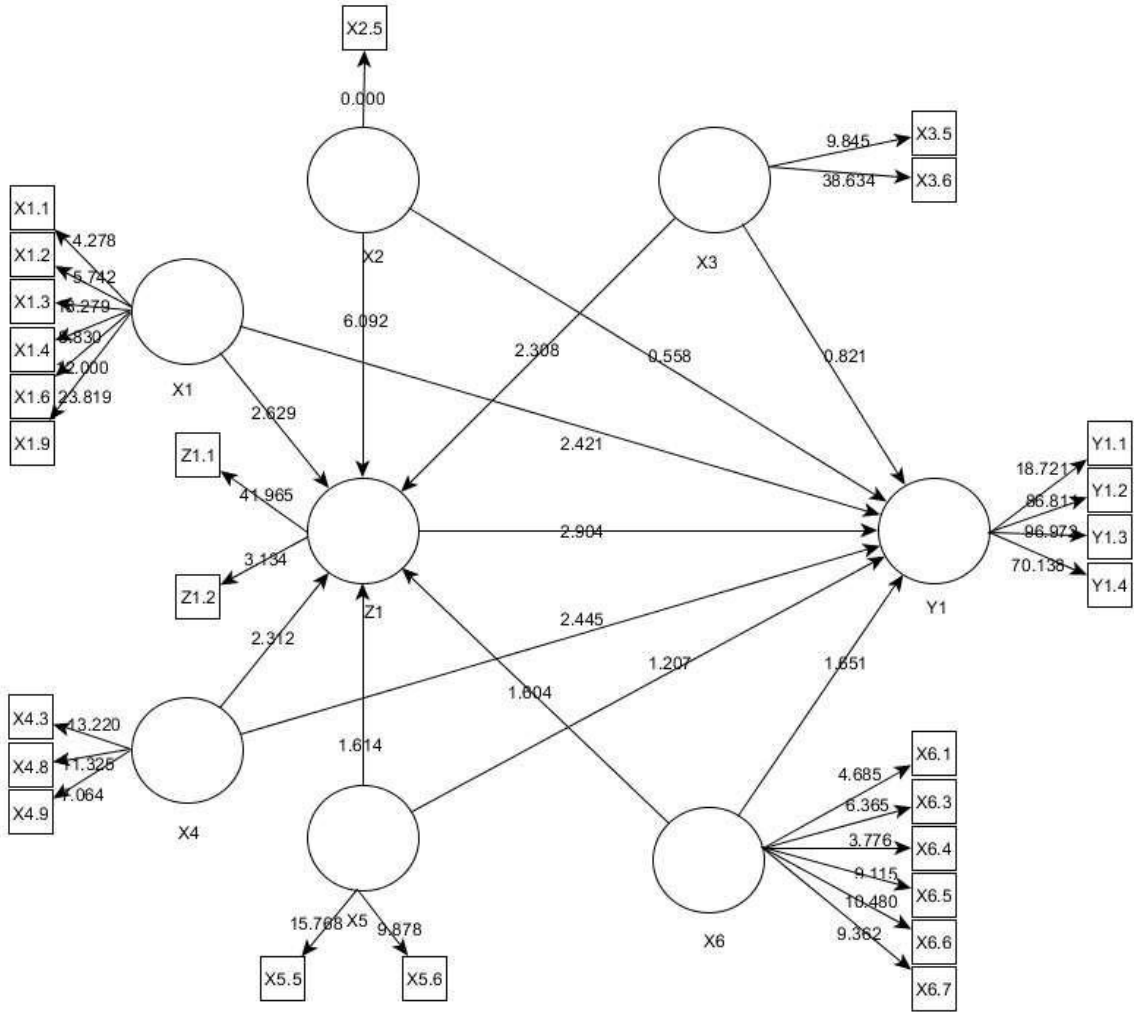

FIGURE 2
RESULTS OF BOOTSRAP PLS

The total effect of financial resources to breeders and business development has a significant positive effect of 26.6%. This factor is supported by financial resources that have a significant positive influence on breeders' human resources and the development of broiler livestock business partnership systems in Indonesia. Sutawi (2013) states that the value of interest on bank loans shows that broiler farms, both open and closed pensions, are very flexible if funded by bank loan. This means that farmers' access to resources can influence the motivation of farmers to continue to develop their livestock business. This motivation has a significant effect on business productivity (Riszqina et al., 2014), but small-scale livestock business must also be protected and considered for the broiler livestock business (Benalywa et al., 2018).

The total effect of technology resources to breeders and business development has a significant positive effect of 19.2%. This is supported by technological resources that have a significant positive influence on breeders' HR, but not significantly assessed on business development. This means that without quality human resources, technological resources cannot guarantee the development of broiler livestock business partnership systems in Indonesia. Technology and HR performance are influenced positively and / or negatively by the availability

of resources (Ellitan, 2003). This shows that farmers' access to resources can strengthen or weaken the influence of technology on HR performance. Yudiarini (2014) explains that facilities and infrastructure can guarantee the efficiency of livestock business, while at the location of research facilities and infrastructure production is the responsibility of the company.

The total effect of economic resources to breeders and business development has a significant positive effect of 32.9%. This is supported by economic resources that have a significant positive influence on livestock breeders and the development of broiler livestock business partnership systems in Indonesia. It shows that if farmers are getting richer, higher education, and have more motivations then it impacts on the farmers' decision to increase the business scale because of the support from labor with family ties (Roessali et al., 2011).

The total effect of environmental resources to breeders and business development has a significant positive effect of 15.4%. This is supported by environmental resources that have a significant positive effect on breeders' HR, but not significant on business development. This means that without quality human resources, environmental resources cannot guarantee the development of broiler livestock business partnership systems in Indonesia. Amam and Soetriono (2019) stated that livestock business development must be supported by various production facilities (resources), one of which is access to animal feed. Utilization of agricultural waste for feed and utilization of livestock manure for organic fertilizer fortified with chemical fertilizers has been shown to increase crop productivity by 39-48% (Bamualim et al., 2015), besides that farmers can also make cost efficiency on production for animal feed (Pakage et al., 2015).

The total effect from social resources to breeder HR and business development has a significant negative effect of -17.1%. This is supported by social resources that have a negative influence but are not significant to breeders' HR, but have a significant effect on business development. Although breeders' human resources are not qualified enough, but they have a lot of access to social resources, they are able to guarantee the development of broiler livestock business partnership systems in Indonesia. Priyono and Priyanto (2018) describe that the development of livestock business is hampered if there is no support of social resources in the form of farmer relationships with financial institutions. This approach is executed due to difficulties in accessing financial resources. Besides, the farmer must establish a partnership with another party. Fauzi et al. (2016) mentions that human capital or HR influences financial performance and competitive strategies.

Correlation Analysis

The results of the correlation analysis or latent variable correlation of the partnership model development of broiler livestock systems are described in Table 4 below:

TABLE 4
LATENT VARIABLE CORRELATION

	Y_1	X_4	X_1	X_5	Z_1	X_2	X_6	X_3
Y_1	1.000							
X_4	0.573	1.000						
X_1	0.543	0.430	1.000					
X_5	0.393	0.367	0.305	1.000				
Z_1	0.684	0.584	0.508	0.384	1.000			
X_2	0.462	0.479	0.286	0.263	0.747	1.000		
X_6	0.435	0.606	0.512	0.407	0.483	0.435	1.000	

X_3	0.517	0.465	0.665	0.308	0.558	0.386	0.681	1.000
Note: Results are calculated from PLS outputs after indicator testing Sumber: Processed Data (2018)								

Based on the results of the correlation analysis in Table 4, it shows that the highest positive correlation is between technology resources and breeders, namely with a coefficient of 0.747. That is, technology resources contribute significantly to breeders' human resources. Technology and HR performance are influenced positively and / or negatively by the availability of resources (Ellitan, 2003). This shows that farmers' access to resources can strengthen or weaken the influence of technology on HR performance.

CONCLUSION

The research findings show that breeders 'human resources and farmers' access to resources influence the development of livestock businesses by 56.4%. The development of broiler livestock business partnership systems in Indonesia is significantly influenced by financial resources, economic resources, social resources, and human resources.

ACKNOWLEGMENT

The authors gratefully acknowledge the contribution and support from PT Charoen Pokphand Indonesia Tbk, Yayasan Toyota Astra, Livestock Office of Malang Regency, Office of Research and Development of Jember University, and Animal Husbandry Faculty of Brawijaya University.

REFERENCES

Amam., & Soetriono. (2019). *Institutional Performance Evaluation of Dairy Farmers Based on Aspects of Business Risk and Business Development. JITRO, 5*(3), 8-13.

Arrienda, F.Q., Cruz, C.V., Perilla, M.V., & Setiawan, B.M. (2010). Feasibility Study of Establishing an Artificial Insemination (AI) Center for Carabaos in San Ildefonso, Bulacan, Philippines. *JITAA, 35* (2), 134-141.

Asmara, A., Purnamadewi, Y.L., & Lubis, D. (2017). The relationship analysis between service performances of milk producer cooperative with the dairy farm performance of members. *Media Peternakan, 40*(2), 143-150.

Bamualim, A.M., Madarisa, F., Pendra, Y., Mawardi, E., & dan Asmak. (2015). Indonesian Animal Husbandry Journal. *17*(2), 83-93.

Benalywa, Z.A., Ismail, M.M., Shamsudin, M.N., Yusop, Z. (2018). An assestment of the impact of governmnet policies on broiler production in peninsular, Malaysia. *IJPS, 17*(10), 459-466.

Dolewikou, R.L., Sumekar, W., & Setiadi, A. (2013). The profitability analysis of dairy cattle business on the group diary farmers in west ungaran district Semarang Regency. *JITAA, 41*(4), 216-223.

Ellitan, L. (2003). The Role of Resources in Increasing the Effect of Technology on Productivity. *Journal of Management & Entrepreneurship, 5*(2), 155-170.

Fauzi, A., Suharjo, B., & dan Syamsun, M. (2016). The Effect of Financial Resources, Intangible Assets, and Competitive Advantage that Implies the Performance of Micro, Small and Medium Enterprises in Lombok, NTB. *Manajemen IKM, 11*(2), 151-158.

Haloho, R.D., Santoso, S.I., Marzuki, S., Roessali, W., & Setiadi, A. (2013). Profit function analysis of diary cattle farming in getasan and west ungaran districts, semarang regency. *JITAA, 38*(2), 116-122.

Indarsih, B., Tamsil, M. H., & Nugroho, M.P. (2010). A study of contract broiler production in Lombok, NTB: An opportunity of introducing syari'ah partnership. *Media Peternakan, 33*(2), 124-130.

Mukson, M., Isbandi Santosa, S.I., & Sudjadmogo Setiadi, A. (2012). Analysis of various factors in order to enhance productivity and income of diary cattle farmers in central java, indonesia. *JITAA, 37*(3), 220-208.

Mukson, M., Setiawan, H., Handayani, M., & Setiadi, A. (2017). Analysis of the local resource-based dairy cattle development in central java. *JITAA, 42*(1), 48-56.

Pakage, S., Hartono, B., Fanani, Z., & Nugroho, B.A. (2015). Analysis of technical, allocative and economic efficiency of broiler production using closed house system in malang district of east java, Indonesia. *LRRD, 27*(9), 1-8.

Perilla, M.V., Escala, J.M., & Setiadi, A. (2009). A case study of luntian multi-purpose cooperative in barangay lalaig, tiaong, quezon, philippines: A vertical integration approach. *JITAA, 34*(3), 216-223.

Priyono dan Priyanto. (2018). Local Cattle Fattening Partnership Based on Local Resources in the Sub-optimal Land Area of East Nusa Tenggara. *Wartazoa, 28*(2), 61-68.

Prasetyo, E., Sunarso Santosa, P.B., Rianto, E., Ekowati, T., Yuwana, D.M., Mulyatno, B. (2012). The influence of 5-factors on rate of credit return in beef cattle farming in central java. *JITAA, 37*(7), 213-219.

Prasetyo, E., Sunarso Santosa, P.B., Rianto. (2012). The influence of agribusiness subsystem on beef cattle fattening farms profit in central java. *JITAA, 37*(2), 121-126.

Riszqina., Isbandi., Rianto, E., & Santoso, S.I. (2014). The analysis of factors affecting the performance in benefits of karapan (racing) cattle business in madura island, east java. *JITAA, 39*(1), 65-72.

Roessali, W., Masyhuri, S., Nurtini Darwanto, D.H. (2011). Factors influencing farmers decision to increase beef cattle business scale in central java province. *JITAA, 36*(1), 27-35.

Setianti, C., Ekowati, T., & Setiadi, A. (2016). Market integration of milk in dairy business area of pamijahan district and cisarua district, bogor regency, Indonesia. *JITAA, 42*(1), 42-47.

Setiawan, B.M., Isbandi Santosa, P.B., & Rianto, E. (2013). Optimum of lenght of raising time and the relation with business income of Simmental-Ongole grade cross grade beef cattle fattening farm in wonosobo regency, Central Java. *JITAA, 38*(2), 109-115.

Sugiharto Henckel, P., & Lauridsen, C. (2010). Compensatory growth and fat parameters on broiler fasted in early life. *JITAA, 35*(4), 239-244.

Sumekar, W., Isbandi Atmomarsono, U., & Susilowati, I. (2013). Business performance of duck farmers in brebes regency, Central Java. *JITAA, 38*(3), 171-175.

Sutawi. (2013). Profitability and Profitability of Open and Closed Cage Broiler Partnerships. Gamma Journal, *8*(2), 108-116.

Syukur, S.H., Fanani, Z., Nugroho, B.A., & Antara, M. (2014). Empowerment of livestock farmer through graduate program to build to village on dynamics of beef cattle farmers groups level of gaduhan model. *Journal of Natural Science Research*, 4(2), 107-112.

Wiyono, G. (2011). Designing Business Research with SPSS 17.0 & SmartPLS 2.0 Analysis Tools. STIM YKPN Yogyakarta Publisher and Printing Unit. Indonesia.

Yudiarini, N. (2014). Change of Traditional Subsistence Agriculture to Modern Agriculture. *Dwijen AGRO*, *2*(1), 1-8.