UDC 332

ANALYSIS OF THE KUB CHICKEN DEVELOPMENT PROGRAM WITHIN THE FRAMEWORK OF COMMUNITY EMPOWERMENT IN KUPANG REGENCY OF EAST NUSA TENGGARA PROVINCE, INDONESIA

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ABSTRACT

This research focuses on the KUB chicken development program within the framework of community empowerment in Kupang Regency. The study was conducted from June 2022 to December 2023 in Kupang Regency, involving 5 livestock groups and 2 villages with a total of 240 selected farmers through a census approach. Data collection utilized questionnaires, interviews, observations, and documentation, and data analysis employed SEM-PLS analysis using SmartPLS 3.0 software. The research findings indicate: 1) Program policies, human resource support, and market support significantly influence behavior change and participation, while livestock production facility support and cultural support do not; cultural support and market support significantly influence program sustainability, whereas program policies and livestock production facility support do not; 2) Behavior change and participation significantly affect program sustainability; 3) Market support significantly influences program sustainability, and program policies, human resource support, livestock production facility support, and cultural support do not significantly influence program sustainability through behavior change and participation.

KEY WORDS

Program, development, KUB chicken, empowerment, Kupang regency.

Livestock commodities are integral to the agricultural sector and require optimal development by harnessing their inherent potential. Priyanti et al. (2016) *in* Hidayah et al. (2019) state that the superior free range village chicken (KUB chicken) is a result of six generations of selective breeding. The selection criteria focused on increasing egg production while reducing brooding behavior. The average egg production reached 180 eggs/year, with the hope of producing large amounts of day-old chicks (DOC). Primary data by 2022 reveals that the price of ready-to-slaughter village chickens is Rp75,000/kg, and the price of village chicken eggs ranges from Rp3,000 to Rp5,000 per egg.

The KUB chicken development program through community empowerment is a government initiative, particularly by the Ministry of Agriculture through the Agency for Technology Assessment in Agriculture (BPTP) in East Nusa Tenggara (NTT), which has currently been renamed BPSIP-BSIP NTT. The purpose of implementing this activity is to disseminate KUB chickens to communities with agribusiness orientation, increase community income, reduce poverty, create job opportunities, and enhance the population of KUB chickens while changing the business behavior of groups/farmers. Activities carried out to support the program include: 1) handling KUB chickens in the KUB chicken farming installation at BPSIP-BSIP NTT, accompanied by an assessment of the use of locally-sourced feed, 2) KUB chicken development activities through community empowerment for specific farmer groups/ communities in the NTT Province.

Based on the initial data collected at BPSIP-BSIP NTT through interviews with the activity coordinator, it was explained that the development of the KUB chicken business through community empowerment is carried out in a participatory manner, involving internal teams (researchers, extension officers, and administration) as well as external teams (agriculture and livestock agencies and farmers organized into farmer groups/communities in

the Kupang Regency). The agribusiness development program for KUB chickens through community empowerment was implemented in 2019 in several locations in Kupang Regency. The mechanism for implementing agribusiness development activities for KUB chickens within the framework of community empowerment includes: 1) program recipient requirements, 2) determination of program recipient groups/communities, 3) distribution of operational support to target beneficiaries, 4) technical assistance for KUB chicken farming, tailored to field needs.

The KUB chicken business development program within the framework of community empowerment in Kupang Regency is expected to change the behavior and participation positively among groups/members of groups in running the KUB chicken business. Changes in behavior and participation are believed to influence the sustainability or success of KUB chicken development within the framework of community empowerment. Factors suspected to influence the behavior and participation of program recipient group members and the sustainability of the KUB chicken development program include 1) Program policies, 2) Human resource support, 3) Livestock production facility support, 4) Cultural support, and 5) Market support.

Based on the results of the initial data collection (pre-survey) at BPSIP-BSIP NTT and program participant interviews and field observations, information was obtained that only a small number of groups are still involved in KUB chicken business development activities, while the majority of groups no longer have KUB chicken development and empowerment activities. There is a lack of increase in the population of KUB chickens, and there is no change in the scale of KUB chicken farming activities. According to data from the Central Statistics Agency (BPS) of East Nusa Tenggara (NTT) Province (2022), the population of village chickens was 10,984,790 in the last three years (2019), increased to 12,172,971 in 2020, and then decreased to 10,294,543 in 2021. Despite the discontinuation of KUB chicken development activities, a study is needed to determine the factors causing the lack of progress in business development and to serve as an evaluation for formulating a strategy for KUB chicken development based on community empowerment, targeting program recipient groups or those outside the groups interested in developing KUB chicken businesses in the Kupang Regency.

Based on the data, it can be concluded that there are the following problems: 1) Fluctuations in the population of village chickens in NTT at the beginning of the program and a subsequent decline after one year; 2) Limited development of KUB chickens in Kupang Regency; 3) The majority of program recipient groups have no activities in maintaining KUB chickens; 4) The majority of groups have no follow-up activities in the empowerment of KUB chicken development; and 5) There is no change in the scale of KUB chicken farming by program recipient groups.

Based on the factual information above, the author is interested in conducting a study on the KUB chicken development program conducted by BPTP NTT/BPSIP-BSIP NTT, especially in Kupang Regency. The study is conducted because it is suspected that there is an influence of program support aspects on changes in the behavior and participation of program recipient group members and the sustainability of the KUB chicken development program. This study is carried out to serve as a basis for formulating recommendations for the development strategy of KUB chicken businesses in Kupang Regency with the title "Analysis of the KUB Chicken Development Program within the Framework of Community Empowerment in Kupang Regency.

METHODS OF RESEARCH

This research was conducted in groups and villages that received the KUB chicken development program within the framework of community empowerment in Kupang Regency from June to December 2023. The population for this study consisted of 240 farmers who were members of livestock farmer groups or villages that received the KUB chicken development program within the framework of community empowerment in Kupang Regency, and the entire population was surveyed as respondents in this research.

The type of data used in this study is quantitative data to measure the influence of program factors (program policies, human resource support, livestock production facility support, cultural support, and market support) on behavior change, participation, and program sustainability. The data sources in this study include secondary data to collect program data from program organizers using documentation techniques and primary data sources to obtain data directly from program organizers and group members using interview techniques, observations, and questionnaires.

The instrument used in the research is a questionnaire containing questions and statements that will be responded to by the respondents (members of the group receiving the KUB chicken development program in the context of community empowerment). Each statement will be given a score using a Likert scale with scores of 5 (strongly agree), 4 (agree), 3 (neutral), 2 (disagree), and 1 (strongly disagree). Data analysis was carried out using the SEM-PLS (Structural Equation Modeling-Partial Least Square) analysis technique using SmartPLS 3.0 software to measure the outer model values by examining convergent validity, discriminant validity, Cronbach's Alpha, Composite Reliability, and Average Variant Extracted (AVE) to assess the validity and reliability of the model, and inner model values to see R square, F square, and Q square values.

RESULTS AND DISCUSSION

The results discussed in this research are the outcomes of testing the research instrument, namely the validity and reliability tests, which aim to ensure that the variables used in this study meet the requirements for further analysis by evaluating hypotheses to draw conclusions.

The outer model measurement, also known as the outer measurement model, explains how each indicator relates to its latent variable. This analysis is conducted to ensure that the measurements used are valid and reliable. The outer model measurement is performed by examining five criteria in data analysis techniques using SmartPLS: convergent validity, discriminant validity, Cronbach's Alpha, Composite Reliability, and Average Variant Extracted (AVE) to assess the validity and reliability of the model.

Convergent Validity is conducted to assess the validity of each indicator (measurer) and construct (measured) by looking at the factor loading values for each indicator on exogenous and endogenous latent variables. According to Ghozali (2014) cited in Riyanto and Widyaningsih (2022), an indicator is considered valid if its loading value is greater than >0.70. The loading factor values are presented in Figure 1.
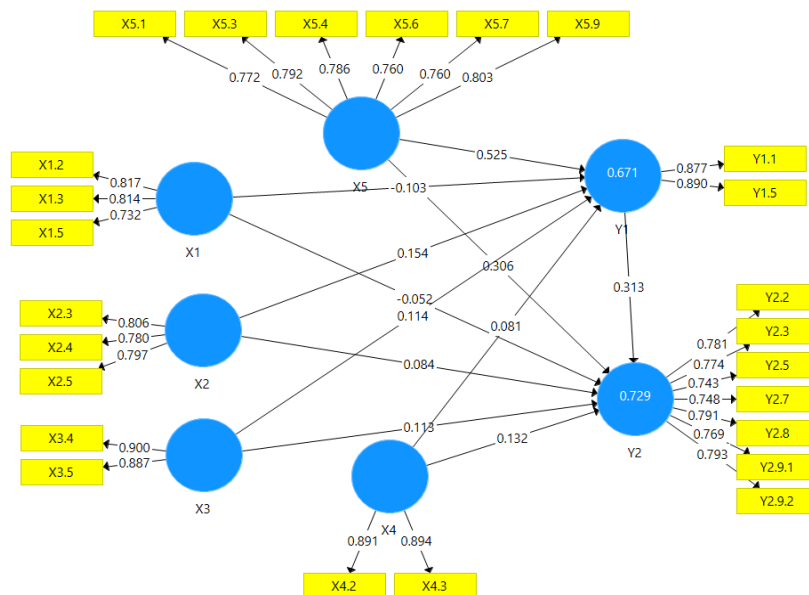

Figure 1 – Loading Factor

Figure 1 shows that the factor loading values for each indicator on each construct/variable are >0.70, indicating that each indicator in this study has good validity for measuring each construct/variable. A factor loading value >0.70 means that the research indicator variables used have a good correlation, indicating that each indicator is capable of explaining/interpreting the factors of program policies (X_1), human resource support (X_2), effect of livestock production facility support (X_3), cultural support (X_4), market support (X_5), behavior change and participation (Y_1), and program sustainability (Y_2).

Discriminant validity testing is the level of differentiation of an indicator in measuring the constructs of the instrument by comparing values with other constructs (cross-loading). Discriminant validity is assessed by comparing the cross-loading of indicators with their own construct and other constructs. If the correlation between an indicator and its own construct is higher than the correlation with other constructs, it indicates that the construct predicts its block size better than other blocks (Setiadi, 2022). The discriminant validity values are presented in Table 1.

Table 1 – Cross-loading discriminant validity values

Indicator	Variable						
	Program Policy (X1)	Human Resource Support (X2))	Effect of Livestock Production Facility Support (X3)	Cultural Support (X4)	Market Support (X5)	Behavior Change and Participation (Y1)	Program Sustainability (Y2)
$X_{1.2}$	0,817	-0,009	-0,009	-0,080	-0,116	-0,131	-0,160
$X_{1.3}$	0,814	-0,091	-0,070	-0,136	-0,082	-0,164	-0,151
$X_{1.5}$	0,732	-0,033	-0,016	-0,072	-0,049	-0,139	-0,075
$X_{2.3}$	-0,023	0,806	0,592	0,542	0,618	0,593	0,557
$X_{2.4}$	-0,045	0,780	0,603	0,567	0,611	0,477	0,548
$X_{2.5}$	-0,072	0,797	0,568	0,518	0,569	0,577	0,582
$X_{3.4}$	-0,047	0,673	0,900	0,614	0,671	0,624	0,639
$X_{3.5}$	-0,029	0,646	0,887	0,586	0,646	0,579	0,615
$X_{4.2}$	-0,128	0,593	0,595	0,891	0,644	0,576	0,606
$X_{4.3}$	-0,096	0,622	0,604	0,894	0,612	0,574	0,623
$X_{5.1}$	-0,063	0,611	0,561	0,508	0,772	0,641	0,630
$X_{5.3}$	-0,064	0,615	0,592	0,501	0,792	0,603	0,641
$X_{5.4}$	-0,091	0,593	0,590	0,580	0,786	0,629	0,650
$X_{5.6}$	-0,059	0,567	0,544	0,554	0,760	0,611	0,563
$X_{5.7}$	-0,058	0,535	0,518	0,516	0,760	0,571	0,562
$X_{5.9}$	-0,159	0,595	0,634	0,624	0,803	0,644	0,678
$Y_{1.1}$	-0,154	0,598	0,591	0,585	0,696	0,877	0,659
$Y_{1.5}$	-0,170	0,628	0,599	0,554	0,704	0,890	0,725
$Y_{2.2}$	-0,109	0,555	0,545	0,526	0,624	0,614	0,781
$Y_{2.3}$	-0,094	0,566	0,547	0,519	0,643	0,597	0,774
$Y_{2.5}$	-0,143	0,520	0,486	0,519	0,581	0,565	0,743
$Y_{2.7}$	-0,190	0,545	0,565	0,524	0,592	0,598	0,748
$Y_{2.8}$	-0,156	0,530	0,551	0,550	0,596	0,658	0,791
$Y_{2.9.1}$	-0,162	0,560	0,566	0,533	0,652	0,607	0,769
$Y_{2.9.2}$	-0,057	0,547	0,530	0,547	0,626	0,593	0,793

Source: Primary data 2023 (processed).

Table 1 shows that each indicator has a cross-loading value greater when connected with its own construct compared to other constructs/variables, as indicated by the green color. It can be concluded that each indicator used in this study has good discriminant validity, meaning that each concept from each latent model is different from other variables, indicating that each variable in this study is considered valid.

Cronbach's Alpha, Composite Reliability, and AVE values are examined to test the reliability of the constructs used in this study. Cronbach's Alpha and Composite Reliability values greater than 0.70 indicate high reliability, and the expected AVE is greater than 0.50 (Pering, 2020).

Table 2 shows that all variables have Cronbach's Alpha and Composite Reliability values greater than 0.70 and AVE values greater than 0.50. This can be concluded that the variables of program policy, human resource support, Effect of Livestock Production Facility Support, cultural support, market support, behavior change and participation, and program sustainability have good reliability and are suitable for further testing.

Table 2 – Cronbach's alpha, composite reliability and (AVE) values

Variable	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Program policy (X_1)	0,701	0,831	0,622
Human resource support (X_2)	0,708	0,837	0,631
Effect of livestock production facility support (X_3)	0,747	0,888	0,798
Cultural support (X_4)	0,744	0,887	0,796
Market support (X_5)	0,870	0,902	0,606
Behavior change and participation (Y_1)	0,718	0,876	0,780
Program sustainability (Y_2)	0,886	0,911	0,595

Source: Primary data 2023 (processed).

The testing of the structural model (inner model) involves evaluating the R-square, F-square, and Q-square values.

This value can be used to assess a specific latent or independent variable's impact on a dependent or endogenous latent variable in terms of the substantial nature of the influence. The R-square test results indicate goodness if it has a value of 0.67 (Musyaffi et al., 2022). The R-square value ranges from 0 to 1; the higher the R-square value, the larger the amount of variance in the exogenous variable that can be explained by its endogenous variable. The interpretation criteria for R-square are 0.25 for low influence, 0.50 for moderate influence, and 0.75 for high influence (Hair et al., 2017). The R-square and adjusted R-square values are presented in Table 3.

Table 3 – R-square and adjusted R-square value

Variable	R-square	Adjusted R-square
Behavior change and participation (Y_1)	0,671	0,663
Program sustainability (Y_2)	0,729	0,722

Source: Primary data 2023 (processed).

The R-square values in Table 3 indicate that the variable of behavior change and participation (Y_1) can be explained by 67.1% due to the variation in the variables of program policy (X_1), human resource support (X_2), livestock production facility support (X_3), cultural support (X_4), market support (X_5), with the remaining 32.9% influenced by other factors unknown and not examined in this study.

As for the R-square value of the sustainability program variable (Y_2), it can be explained by 72.9% by the variable of program policy (X_1), human resource support (X_2), livestock production facility support (X_3), cultural support (X_4), market support (X_5), indicating that the variable of program policy (X_1), human resource support (X_2), livestock production facility support (X_3), cultural support (X_4), market support (X_5), and behavior change and participation (Y_1) together contribute to 72.9%, while the remaining 27.1% is influenced by other factors unknown and not examined in this study.

F-square values are conducted to determine the change in R-square on endogenous constructs, indicating the influence of exogenous constructs on related endogenous constructs. F-square values are categorized as small (0.02), medium (0.15), and large (0.35) (Musyaffi et al., 2022). The F-square values are presented in Table 4.

Table 4 – F-square values

Variable	F2	
	Behavior Change and Participation (Y1)	Sustainability Program (Y2)
Program policy (X_1)	0,032	0,010
Human resource support (X_2)	0,024	0,009
Infrastructure support (X_3)	0,014	0,017
Cultural support (X_4)	0,008	0,027
Market support (X_5)	0,272	0,088
Behavior change and participation (Y_1)		0,119

Source: Primary data 2023 (processed).

Table 4 shows that the Program policy construct (X_1) has a weak influence on the Behavior change and participation construct (Y_1) and a very weak influence on the Program Sustainability construct (Y_2). The human resource support construct (X_2) has a weak influence on the Behavior change and participation construct and a very weak influence on Program sustainability (Y_2). The infrastructure support construct (X_3) has a very weak influence on the Behavior change and participation construct (Y_1) and Program sustainability (Y_2). The Cultural support construct (X_4) has a very weak influence on the Behavior change and participation construct (Y_1) and a very weak influence on Program sustainability (Y_2). The market support construct (X_5) has a moderate influence on Behavior change and participation and a weak influence on Program sustainability (Y_2). The behavior change and participation construct (Y_1) has a weak influence on the Program sustainability construct (Y_2).

The Q-square value is used to assess the goodness of the model, where a higher Q-square value indicates that the structural model fits the data better (Sarstedt et al., 2011). If the Q2 value is > 0, it can be considered to have good predictive relevance. On the other hand, if Q2 < 0, it indicates poor predictive relevance (Hair et al., 2017). The predictive relevance values for Q2 are weak at 0.02, moderate at 0.15, and strong at 0.35 (Ghozali and Latan, 2020). The Q-square values are presented in Table 5.

Table 5 – Q-square values

Variable	SSO	SSE	Q² (=1-SSE/SSO)
Program policy (X_1)	720,000	720,000	
Human resource support (X_2)	720,000	720,000	
Infrastructure support (X_3)	480,000	480,000	
Cultural support (X_4)	480,000	480,000	
Market Support (X_5)	1440,000	1440,000	
Behavior change and participation (Y_1)	480,000	237,305	0,506
Program sustainability (Y_2)	1680,000	966,246	0,425

Source: Primary data 2023 (processed)

Table 5 shows that the Behavior change and participation (Y_1) variable has a Q_2 value of 0.506 > 0, and since 0.506 > 0.35, it is concluded that the Program policy (X_1), Human resource support (X_2), Infrastructure support (X_3), Cultural support (X_4), and Market support (X_5) variables have strong predictive relevance to Behavior change and participation (Y_1). Hair et al. (2017) state that the Q-square value > 0 (zero) is 0.363, and Ghozali and Latan (2020) state that Q_2 predictive relevance values indicate 0.02 weak, 0.15 moderate, and 0.35 strong (Ghozali and Latan, 2020).

For the Program sustainability (Y_2) variable, it has a Q_2 value of 0.425 > 0, and since 0.425 > 0.35, it is concluded that the Program policy (X_1), Human resource support (X_2), Infrastructure support (X_3), Cultural support (X_4), and Market support (X_5) variables, as well as Behavior change and participation (Y_1), have strong predictive relevance to the Program sustainability (Y_2) variable. Hair et al. (2017) state that the Q-square value > 0 (zero) is 0.363, and Ghozali and Latan (2020) state that Q_2 predictive relevance values indicate 0.02 weak, 0.15 moderate, and 0.35 strong (Ghozali and Latan, 2020).

The research results on the KUB chicken development program in the framework of community empowerment in Kupang Regency can be seen based on the direct and indirect influence hypothesis testing results.

Hypothesis testing of direct effects includes the influence of the variables Program policy (X_1), Human resource support (X_2), Livestock production facility support (X_3), Cultural support (X_4), and Market support (X_5) on Behavioral change and participation (Y_1), as well as the effect of Behavioral change and participation (Y_1) on Program sustainability (Y_2). The results of hypothesis testing for direct effects are presented in Table 6.

The hypothesis testing for indirect effects includes the variables: Policy program (X_1), Human resource support (X_2), Livestock production facility support (X_3), Cultural support (X_4), and Market support (X_5) in influencing the Program sustainability (Y_2) through Changes in behavior and participation (Y_1). The results of the hypothesis testing for indirect effects are presented in Table 7.

Table 6 – Results of direct influence hypothesis testing

Path Coefficient	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Program policy -> Behavioral change and participation	-0,103	-0,099	0,050	2,055	0,040
Program policy -> Program sustainability	-0,052	-0,049	0,037	1,415	0,158
Human resource support -> Behavioral change and participation	0,154	0,158	0,077	1,988	0,047
Human resource support -> Program sustainability	0,084	0,083	0,073	1,153	0,250
Infrastructure support -> Behavioral change and participation	0,114	0,113	0,076	1,506	0,133
Infrastructure support -> Program sustainability	0,113	0,113	0,072	1,557	0,120
Cultural support -> Behavioral change and participation	0,081	0,082	0,059	1,368	0,172
Cultural support -> Program sustainability	0,132	0,133	0,055	2,415	0,016
Market support -> Behavioral change and participation	0,525	0,522	0,089	5,890	0,000
Market support -> Program sustainability	0,306	0,317	0,086	3,568	0,000
Behavioral change and participation -> Program sustainability	0,313	0,301	0,095	3,297	0,001

Source: Primary data 2023 (processed)

Table 7 – Results of hypothesis testing for indirect effects indirect effect

Indirect Influence	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P values
Policy program -> Changes in behavior and participation -> Program sustainability	-0,032	-0,031	0,021	1,525	0,128
Human resource support -> Changes in behavior and participation -> Program sustainability	0,048	0,047	0,028	1,703	0,089
Livestock production facility support -> Changes in behavior and participation -> Program sustainability	0,036	0,034	0,026	1,359	0,175
Cultural support -> Changes in behavior and participation -> Program sustainability	0,025	0,025	0,020	1,240	0,216
Market support -> Changes in behavior and participation -> Program sustainability	0,164	0,156	0,054	3,026	0,003

Source: Primary data 2023 (processed).

Effect of Policy Program Factor on Behavioral Change and Participation. The research results indicate that the policy program significantly influences behavioral change and participation, with a t-statistic value of 2.055 > 1.96 and a p-value of 0.040 < 0.050. The policy program in the development of KUB chicken businesses within the community empowerment framework in Kupang Regency includes 1) program recipient requirements, 2) determination of recipient group/community, 3) Operational distribution of support activities to target beneficiaries, 4) Technical assistance for KUB chicken business. Operational support provided by the program implementers includes KUB chicken DOC, drinking and feeding equipment.

Policy program components, such as government support in the form of operational support assistance, and human resources strengthening through socialization and technological guidance on KUB chicken, can serve as motivation for farmers to work together in groups and develop KUB chicken businesses. Additionally, farmer groups gain knowledge and skills related to KUB chicken business development, fostering a business-oriented mindset with the application of technological innovations in KUB chicken product production processes.

Effect of Policy Program Factor on Program Sustainability. The policy program has no significant effect on program sustainability, evidenced by a t-statistic value of 1.415 < 1.96 and a p-value of 0.158 > 0.05. The lack of significant influence of the policy program on program sustainability is demonstrated by the current physical conditions in the field, where there is no KUB chicken maintenance activity among all farmer groups. The research findings suggest that the KUB chicken development program within the framework of community empowerment in Kupang Regency has failed due to the lack of sustainability. This failure is attributed to the implementation of the policy program, the awareness of group/members receiving the program, and other inhibiting factors affecting the sustainability of the KUB chicken development program in the community empowerment framework in Kupang Regency. Fadillah et al. (2023) studied the sustainability of beef cattle farming

supported by government assistance in Padang Pariaman Regency, stating that low sustainability is caused by various factors such as limited access to information and technology, lack of capital for business, weak group management, low knowledge of members/farmers in business management, low quality and quantity of animal feed, low population growth of cattle, and cattle deaths.

The Influence of Human Resource Support on Changes in Behavior and Participation. Human resource support significantly influences changes in behavior and participation, as indicated by a t-statistic value of 1.988 > 1.96 and a p-value of 0.047 < 0.050. In this study, human resource support includes formal education, informal education, and entrepreneurial experience, all of which significantly affect changes in knowledge, attitudes, skills, and the active role of group members in the development of KUB chicken farming.

Human resource support's significant influence on changes in behavior and participation is attributed to the higher education levels of farmers or livestock keepers. Higher education levels result in better acquisition and adoption of information on KUB chicken farming development, supporting the success of the venture. This aligns with Supriyanto et al. (2019) research, stating that farmers with higher education are more likely to adopt technology faster due to their creativity and quick grasp of herbal medicine innovations.

Informant education data reveals that 53% of farmers/livestock keepers attended formal education 1-2 times, followed by 38% who never attended, 9% attended 3-4 times, and 1% attended more than 5 times. Informal education data indicates that the majority of program recipients attended informal education 1-2 times. This additional specific information induces changes in behavior and participation among farmers or livestock keepers. Consistent with Supriyanto et al. (2019), monthly extension intensity of 3-4 times per month is predicted to accelerate the adoption process, as more frequent extension activities help farmers better understand the conveyed information or innovation.

The average experience in KUB chicken farming among program recipients is 1-2 years, whereas traditional local chicken farming experience is 11 years. This experience can have both positive and negative effects on changes in behavior and participation. Positively, some individuals, despite having experience, are willing to accept new technological innovations. Conversely, some individuals, with increasing experience, may hold strong opinions rooted in generational traditions. This aligns with Supriyanto et al. (2019), stating that farmers/livestock keepers may resist using technological innovations due to long-standing ancestral habits, forming a unique concept or approach to farming.

The majority of farmers/livestock keepers fall within the 20–50 age group, constituting 74% of the sample. This indicates a predominance of productive age individuals. This aligns with Otuluwa (2015) cited in Makmur et al. (2023), highlighting that age significantly influences the physical ability of farmers in managing cattle farming and other agricultural activities, with the productive age ranging from 15 to 60 years old.

The Influence of Human Resource Support on Program Sustainability. Human resource support has an insignificant effect on program sustainability, as evidenced by a t-statistic value of 1.153 < 1.96 and a p-value of 0.250 > 0.05. This research aligns with the physical conditions in the field, where the KUB chicken farming development program within the community empowerment framework, as described in the program policy variable, has currently ceased. The expected human resource support from farmers/livestock keepers could have potentially sustained the program's existence. This is presumed to be due to the lack of intensive assistance from the program organizers. According to interviews, assistance from the program organizers occurred only three times after program realization, involving socialization activities, monitoring and evaluation, and on-demand assistance in the field.

Widodo et al. (2023) emphasize that active mentoring by community service teams is crucial to providing guidance, training, and technical support to livestock groups and their members in effectively implementing programs. Periodic monitoring ensures that activities are carried out according to plan and identifies potential improvements. Comprehensive evaluation assesses the program's impact on livestock groups, the community, and the surrounding environment, as well as evaluates the effectiveness of the employed strategies.

The mindset of the group/members of farmer/livestock keeper groups is identified as one of the causes of the program discontinuation. This mindset is oriented toward the material assistance provided by the government, neglecting the utilization of government assistance that should be oriented toward agribusiness. Tawainella's (2023) study on the effectiveness of sustainable forage garden programs finds that a hindering factor is a mindset focused solely on personal, family, and close relative interests rather than common interests. Another inhibiting factor is the economic condition in which group members solely rely on assistance from the Food Security Agency to keep the program running.

Managerial capability refers to the ability of each member of the livestock group to manage their farming businesses, including planning, organizing, leadership, and control. Organizational management within the KUB chicken farming groups in Kupang Regency is found to be lacking. This deficiency is associated with inadequate group organization and weak coordination among group members. The limited managerial capabilities of farmers within this group organization are attributed to the lack of understanding among leaders and members in running the group organization. Consequently, they fail to maximize the livestock group as a means to address challenges, rendering the group members incapable of fulfilling their roles and functions. Fadillah et al. (2023) research, examining the sustainability level of government-assisted beef cattle businesses, suggests that low sustainability levels result from various challenges faced by farmers. These challenges include limited access to information and technology, the farmers' financial constraints, and the weak management of the group.

The Influence of Livestock Production Facility Support (X_3) on Behavioral Change and Participation (Y_1). Livestock production facility support has an insignificant effect on behavioral change and participation with a t-statistic value of 1.506 < 1.96 and a p-value of 0.133 > 0.05. This corresponds to the field findings, indicating that even though farmers receive support in the form of livestock production facilities as an initial aid to develop KUB chickens, they do not utilize it. Tawainella's (2023) study on the effectiveness of the sustainable forage garden program (P2L) in enhancing food security found that inhibiting factors for this program include a mindset focused solely on personal, family, and close relative interests rather than common interests. Another inhibiting factor is the economic condition where group members solely rely on assistance from the Food Security Agency to keep the program running.

The Influence of Livestock Production Facility Support on the Sustainability of KUB Chicken Development Program. Livestock production facility support has an insignificant effect on the sustainability of the program, with a t-statistic value of 1.557 < 1.96 and a p-value of 0.120 > 0.05. This aligns with the observed conditions in the field, indicating that despite the provision of livestock production facility support such as land availability, water, transportation access, cages, and initial government assistance in the form of day-old chicks, feed, drinking and feeding places, the KUB chicken development program is no longer running. In light of this, there is a need for improved integrated production management to support the sustainability of livestock programs that prioritize community welfare, such as the KUB chicken development program within the framework of community empowerment in Kupang Regency.

Rusdiana and Soeharsono (2020) wrote that regular production management includes cage improvements, parent stock breeding (brooder cages, mating cages, grow-out cages) along with cage equipment (electrical and clean water installations). Production management in superior local chicken businesses is carried out in an integrated manner through the optimization of human resources and capital. Technological production innovations, supported by an effective management system for small-scale poultry farming at the economic scale, are crucial. Superior local chicken businesses are expected to achieve technical indicators, productivity, and efficiency. Regular monthly monitoring is then conducted, including records of growth, production, reproduction, mortality, and the quantity and types of feed given according to the age of the livestock.

The Influence of Cultural Factors on Program Sustainability. Cultural support significantly influences the sustainability of the program, with a t-statistic value of 2.415 >

1.96 and a p-value of 0.016 < 0.05. Cultural support has a significant impact on the sustainability of the KUB chicken development program because KUB chicken resembles local free-range chickens used in cultural activities that are mystical and religious in nature. KUB chicken is an example of a sacrificial animal commonly used in traditional ceremonies and Hindu religious rituals in the Bali Province. The chickens used come in various colors, adapting to the type of ritual performed (Yamayanti, 2020, as cited in Putri et al., 2022).

The cultural support mentioned above becomes an issue that needs attention, highlighting the importance of incorporating a production process concept that can fulfill the cultural activity needs as a target market in KUB chicken development. An example of a production process concept is the production of KUB chickens or similar breeds with specific feather colors, leg colors, or certain chicken types. This aligns with the research by Putri et al. (2022), indicating that the cultural events in the Bali Province specifically require the specifications of a local chicken known as "brumbun." Brumbun chicken has colors such as biing, selem, and white, with beak and leg colors in white, yellow, or black (Ardika et al., 2015, as cited in Putri et al., 2022).

The Influence of Market Support on Behavioral Changes and Participation. Market support has a highly significant influence on the behavioral changes and participation of the group/members receiving the KUB chicken development program in the empowerment of the community in Kupang Regency. This is indicated by a t-statistic value of 5.890 > 1.96 and a p-value of 0.000 < 0.05. This significant influence is attributed to marketing being a crucial factor affecting the motivation of the group/members to develop the KUB chicken business. This aligns with Irwansyah et al. (2019) cited in Hartati et al. (2021), stating that external factors influencing perception include the availability of capital and market prospects. The market has a significant relationship with farmers' motivation toward Livestock Business Insurance (AUTS), related to the basic needs of farmers, with a correlation coefficient value of 0.601 (Mahmud, 2021).

The findings of this research correspond to the field reality, where there is a skeptical attitude among KUB chicken farmers about expanding their poultry in large numbers due to the uncertain market. Market uncertainty results in delayed chicken harvesting, leading to increased maintenance costs, time, and effort. To address this, there is a need for a marketing strategy concept to ensure a guaranteed market for KUB chicken, encouraging the group/members of farmers to have an enthusiastic attitude toward developing a market-oriented KUB chicken business. Mahmud (2021) states that a guaranteed price for farmers and a high assured selling price for livestock significantly affect the availability of farmers' consumption. Darojat and Sunandar (2019) in a study on the KUB chicken development strategy in a work program in Garut Regency, West Java Province, write that providing market and price guarantees will ignite enthusiasm among farmers to develop their businesses.

The Influence of Market Support on Program Sustainability. Market support has a highly significant influence on the sustainability of the KUB chicken development program in the context of community empowerment in Kupang Regency, with a t-statistic value of 3.568 > 1.96 and a p-value of 0.00 < 0.05. Marketing becomes a crucial factor in determining the sustainability or existence of the KUB chicken business because the market is the process of the movement of the developed KUB chicken business, involving buying and selling processes that are expected to provide fair benefits or advantages to both sellers and buyers. Priyanti and Chasanah (2022) write that theoretically, agribusiness is formed as an institution based on market ideology.

The market is one of the factors causing the KUB chicken development program not to continue due to a lack of management overseeing the production and marketing processes. The intended production and marketing management involves collaboration between the group/members and the program implementer, which in this case is the government. They need to understand the target market, market strength, product specifications that consumers desire, so that the produced chickens meet consumer expectations and do not exceed market demand. Poor market management may lead certain entities, such as traders, to take advantage by offering low purchase prices, which results in unfair profits for

farmers. This aligns with Darojat and Sunandar (2019) that the potential for competition among market players (cartels) in the egg and KUB chicken meat market in the program location is possible if the community/RTM is not well-managed.

The marketing issues mentioned above are crucial foundations for the development of KUB chicken businesses, either individually or as part of government programs. If there are similar programs to the KUB chicken development program, the initiating party needs to be involved from planning, production processes, to marketing. The study by Darojat and Sunandar (2019) on the KUB chicken development strategy in the Work program in Garut Regency states that the government's focus after distribution is on marketing. The government, as the initiator of the program, can utilize existing village institutions such as Village-Owned Enterprises (BUMDes), cooperatives, agricultural economic institutions (KEP), or others to facilitate the marketing of RTM's production.

The Influence of Behavior Change and Participation on Program Sustainability. Behavior change and participation have a significant influence on program sustainability, with a t-statistic value of 3.297 > 1.96 and a p-value of 0.001 < 0.05. This indicates that changes in knowledge, skills, and involvement of the group/members affect the sustainability of the KUB chicken business development program. The study by Mulyani and Firmansyah (2023) on the analysis of farmer behavior and the effectiveness of the People's Prosperity Poverty Reduction Program (BEKERJA) states that the basic foundation of community behavior, including farmer attitudes, underlies farming activities in a region. Behavior encompasses all observable and unobservable human activities, according to Notoatmodjo (2003) cited in Mulyani and Firmansyah (2023). Referring to participation from Nasdian (2003) in Widodo et al. (2023), participation is viewed as community involvement in decision-making, decision implementation (implementation), and evaluation.

Observing the KUB chicken business development program in the context of community empowerment in Kupang Regency, which has discontinued, it can be concluded that this might be due to the lack of knowledge and skills among the group/members of farmers in developing the KUB chicken agribusiness, as well as suboptimal attitudes in utilizing the government-provided program. This aligns with Widodo et al. (2023), stating that behavior has an impact on the effectiveness of government assistance programs in the field of animal husbandry in achieving goals and success. Improving public knowledge about animal husbandry and fostering a change in behavior in animal husbandry can assist the government in achieving welfare improvement goals.

This information emphasizes the importance of planning livestock development programs, such as KUB chicken development, to achieve their intended objectives of community welfare. Production management in superior local chicken farming is carried out in an integrated manner through the optimization of human and capital resources. Technological innovation in production, supported by an effective small-scale livestock industry management system, contributes to technical indicators, productivity, and efficiency. Regular monitoring is then conducted, containing records of growth, production, reproduction, mortality, and the quantity and type of feed given according to the age of the livestock (Rusdiana and Soeharsono, 2020).

The Influence of Program Policies on Program Sustainability through Behavior Change and Participation. The support of program policies does not significantly influence program sustainability through behavior change and participation, as indicated by a t-statistic value of 1.525 < 1.96 and a p-value of 0.128 > 0.05. This implies that the variable behavior change and participation of the group/farmers receiving the KUB chicken business development program in the context of community empowerment in Kupang Regency as a mediating variable has not been able to mediate the variables of program policies and program sustainability in this study.

Behavior change and group/farmer participation do not serve as a mediator for program policies in influencing program sustainability due to several factors. The beneficiaries of this program are not well-targeted, farmers' attitudes relying solely on government assistance, and program organizers focusing on administrative solutions rather than a more comprehensive approach. This is in line with the findings of Darojat and

Sunandar (2019) regarding the development strategy of KUB chicken programs in the "Bekerja" program in Garut Regency. They emphasize that after distribution, the government's focus should shift to marketing. Initiators of the program, such as the government, can leverage existing village institutions such as Village-Owned Enterprises (BUMDes), cooperatives, agricultural economic institutions (KEP), or others to facilitate the marketing of RTM's (KUB chicken program beneficiaries) production.

The Influence of Human Resource Support on the Sustainability of the KUB Chicken Development Program through Behavior Change and Participation. Human resource support does not significantly influence program sustainability through behavior change and participation, as indicated by a t-statistic value of $1.703 < 1.96$ and a p-value of $0.089 > 0.05$. This suggests that behavior change and participation, as mediating variables, have not been able to effectively mediate between human resource support and the sustainability of the KUB chicken development program in the context of community empowerment in Kupang Regency.

The research findings align with the observed facts in the field, indicating that the behavior of the farmer groups/farmers in Kupang Regency is characterized by members with education levels ranging from high school to bachelor's degrees, and they have received technical guidance on KUB chickens. Consequently, the farmer groups/farmers possess knowledge and skills related to the development of KUB chicken businesses. However, despite this, the variable of behavior change and participation, which includes knowledge, skills, and group involvement, has not been successful in ensuring the continuation of the program. Referring to the study by Amam and Soetriono (2020), it is suggested that the higher the human resource capacity of farmers, the lower the efforts in developing their businesses.

The Influence of Infrastructure Support on Program Sustainability through Behavior Change and Participation. Infrastructure support in livestock production does not significantly influence program sustainability through behavior change and participation, with a t-statistic value of $1.359 < 1.96$ and a p-value of $0.175 > 0.05$. This suggests that behavior change and participation, as mediating variables, have not effectively mediated between infrastructure support and the sustainability of the KUB chicken development program in the context of community empowerment in Kupang Regency.

Even though behavior change and participation have not served as effective mediators in this study, it is crucial to reevaluate the planning of KUB chicken development programs. The aim is to ensure that behavior changes, such as improvements in knowledge, attitudes, skills, and the active role of farmer groups/farmers, align well with similar programs, contributing to the program's success in promoting community well-being.

Based on the research findings and explanations above, it is evident that farmer groups/farmers need support for behavior change and participation. This support is essential to optimally manage livestock production infrastructure, thereby supporting the sustainability of a program. The desired behavior change and participation involve fostering an entrepreneurial mindset or agribusiness behavior among farmer group members. This includes a willingness to seek information and leverage available production facilities to support KUB chicken farming. Quoting from Priyono and Burhanuddin's study (2020), transforming household farmers' behavior into entrepreneurial behavior can be achieved by considering both internal and external factors. Strengthening internal factors involves developing motivation, innovation, and risk-taking abilities, which are essential characteristics of entrepreneurial farmers. External factors, including training, the availability of production facilities, and government policy support, also play a crucial role.

The Influence of Market Support on Program Sustainability through Behavior Change and Participation. Market support significantly influences program sustainability through behavior change and participation, with a t-statistic value of $3.026 > 1.96$ and a p-value of $0.003 < 0.005$. This indicates that behavior change and participation, as mediating variables, effectively mediate between market support and the sustainability of the KUB chicken development program in the context of community empowerment in Kupang Regency. The

behavior of farmer group members becomes a determining factor in assessing the market prospects for KUB chickens, providing an opportunity for sustainable agribusiness.

To ensure the sustainability of the KUB chicken development program, it is crucial for farmer groups/farmers to exhibit entrepreneurial behavior and agribusiness mindset. This involves interpreting market opportunities, understanding marketing strategies, and fostering an internal drive to initiate and manage sustainable poultry farming businesses, particularly focused on KUB chickens. The study by Darojat and Sunandar (2019) emphasizes the importance of providing market guarantees and pricing to stimulate farmer enthusiasm in developing their businesses. Referring to the research by Priyono and Burhanuddin (2020), dominant entrepreneurial characteristics such as motivation, innovation, and risk-taking should be considered in promoting entrepreneurial behavior. External factors like counseling or training support, the availability of production facilities, and government policy support also contribute significantly to fostering entrepreneurial behavior.

CONCLUSION

The conclusions drawn from the research results on the Analysis of the KUB Chicken Development Program within the Framework of Community Empowerment in Kupang Regency are as follows:

- Program policies, human resource support, market support significantly influence behavioral changes and participation, while livestock production facility support and cultural support do not significantly influence them;
- Cultural support, market support, behavioral changes, and participation significantly influence sustainability, while program policies and livestock production facility support do not significantly influence it;
- Market support significantly influences sustainability through behavioral changes and participation, while program policies, human resource support, livestock production facility support, and cultural support do not significantly influence it.

REFERENCES

1. Amam, A. and S. Soetriono. 2020. Peranan sumberdaya terhadap SDM peternak and pengembangan usaha ternak sapi perah di Kawasan Peternakan Sapi Perah Nasional (KPSPN). Jurnal Peternakan Indonesia (Indonesian J. of Animal Science), 22(1):1-10.
2. Prawiranegara, L.D. and B. Sunandar. 2019. Strategi pengembangan ayam KUB pada program bekerja di Kabupaten Garut Provinsi Jawa Barat.
3. Fadillah, T., I.W. Syarfi and A. Agustar. 2023. Keberlanjutan usaha peternakan sapi potong program bantuan pemerintah di Kabupaten Padang Pariaman. Jurnal Niara, 16(1):188-197.
4. Ghozali, I. and H. Latan. 2020. Partial Least Squares: Konsep, Teknik, and Aplikasi Menggunakan Program SmartPLS 3.0 (2nd ed.). Badan Penerbit UNDIP.
5. Hair, J.F., G.T.M. Hult, C. Ringle and M. Sarstedt. 2017. A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM) 2nd Edition. Sage Publications.
6. Hartati, P., D. Cahyaningsih and N. Prabewi. 2021. Hubungan karakteristik peternak dengan persepsi terhadap pemberian maggot BSF (Hermetia illucens) segar untuk meningkatkan performa ayam kampung di Desa Sumberejo Kecamatan Ngablak. Jurnal Penelitian Peternakan Terpadu, 3(4):1-12.
7. Hidayah, R., I. Ambarsari and S. Subiharta. 2019. Kajian sifat nutrisi, fisik and sensori daging ayam KUB di Jawa Tengah. Jurnal Peternakan Indonesia (Indonesian Journal of Animal Science), 21(2):93-101.
8. Mahmud, M. 2021. Motivasi peternak dalam mengikuti Program Asuransi Usaha Ternak Sapi (AUTS). Tarjih: Agribusiness Development Journal, 1(01):18-25.
9. Makmur, M., F. Fitrawansyah and S. Sofyan. 2023. Peran penyuluh pertanian dalam meningkatkan kesejahteraan and taraf hidup peternak sapi potong di Kelurahan Pasir Putih Kecamatan Sinjai Borong. AgriMu, 3(2).

10. Mulyani, A.P. and A. Firmansyah. 2023. Analisis perilaku peternak and efektivitas Program Bedah Kemiskinan Rakyat Sejahtera (BEKERJA) (Kasus di Desa Pringkasap, Kecamatan Pabuaran, Kabupaten Subang). Jurnal Resolusi Konflik, CSR and Pemberdayaan (CARE), 8(1):40-47.
11. Musyaffi, A.M., H. Khairunnisa and D.K. Respati. 2022. Konsep Dasar Structural Equation Model-Partial Least Square (SEM-PLS) Menggunakan SmartPLS. Pascal Books.
12. Pering, I.M.A.A. 2020. Kajian analisis jalur dengan Structural Equation Modeling (SEM) Smart-PLS 3.0. Jurnal Ilmiah Satyagraha, 3(2):28-48.
13. Priyanti, A. and N. Chasanah. 2022. Fasilitasi pembiayaan mendukung hilirisasi inovasi bibit unggul ternak. Wartazoa, 32(3):119-132.
14. Priyono, P. and B. Burhanuddin. 2020. Penumbuhkembangan perilaku kewirausahaan dalam sistem agribisnis ayam lokal. Journal of Integrated Agribusiness, 2(1):62-76.
15. Putri, B.R.T., J. Hellyward, N.W. Siti, I.N. Ardika, A. Rastosari, I,M. Londra, and N.M.P. Setyani. 2022. Analisis keputusan pembelian ayam KUB dalam memenuhi kebutuhan upacara adat and agama di Provinsi Bali. Jurnal Peternakan Indonesia (Indonesian Journal of Animal Science), 24(1):119-125.
16. Riyanto, D., and N. Widyaningsih. 2022. Public transportation user movement analysis of passenger satisfaction with SEM PLS method at the Tangerang Selatan City Bus Terminal.
17. Rusdiana, S., and S. Soeharsono. 2020. Model indsutri ekonomi and kelembagaan pada usaha ayam lokal terintegrasi di peternak. Jurnal Ekonomi Pertanian and Agribisnis, 4(3):537-553.
18. Setiadi, H. 2022. Analisis faktor-faktor yang mempengaruhi penerimaan and penggunaan aplikasi mobile banking pada bank Buku 4 di Indonesia dengan menggunakan model unified theory of acceptance and use of technology 2 Fair Value: Jurnal Ilmiah Akuntansi and Keuangan, 5(1):410-417.
19. Supriyanto, S., A.C. Budy and Z. Arifin. 2019. Korelasi karakteristik peternak terhadap tingkat adopsi penggunaan jamu herbal pada budidaya itik magelang pedaging di Kecamatan Bandongan. Jurnal Pengembangan Penyuluhan Pertanian, 16(29):4-13.
20. Tawainella, S.A. 2023. Efektivitas Program Pekarangan Pakan Lestari (P2L) dalam meningkatkan ketahanan pangan di Kecamatan Kota Masohi Kabupaten Maluku Tengah Provisi Maluku (Doctoral dissertation, IPDN).
21. Widodo, N., B. Habriantono, W. Subchan, A.M. Siddiq and H.T. Handayani. 2023. Intensifikasi usaha pembibitan ayam Kampung Unggul Balitbangtan (KUB) melalui penguatan kelembagaan kelompok usaha bersama. J-ABDI: Jurnal Pengabdian kepada Masyarakat, 3(1):161-170.