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COMMUNITY EMPOWERMENT MODEL IN THE DEVELOPMENT OF ENVIRONMENTALLY CULTURED VILLAGES IN WEST JAVA

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Abstract

The environmental crisis occurs because of the low sense of care of mankind in protecting the surrounding nature. The lack of care can be assessed from the state of the large amount of waste, waste that comes from human life activities is not managed properly, resulting in pollution to the environment. The development of an environment-based village (ecovillage) is a community-based conservation program that involves communities located around watersheds and forest areas, whether protected forests, production forests or conservation forests, which aims to create patterns of human interaction with nature that are synergistic and in accordance with several principles and supporting aspects including ecology, economy, social and spiritual. The environment is a unity consisting of parts that support each other consisting of objects, forces, living things and human interaction behavior with nature, closely related to become a unity that affects the survival of creatures with each other in the universe. The formulation of the problem is how to build community awareness and increase community capacity in developing an environmentally cultured village. The research used descriptive research and qualitative methods. Data collection techniques used observation, interview and documentation methods. While data analysis uses data reduction methods, data presentation and conclusion drawing. The author uses Drake's theory of community-based tourism (CBT), which consists of the planning, implementation and utilization stages.

Keywords: Community Empowerment, Cultured Village, Community Based Tourism

INTRODUCTION

The environmental crisis occurs because of the low sense of care of mankind in protecting the surrounding nature. The lack of care can be assessed from the state of the large amount of waste, waste that comes from human activities is not managed properly, resulting in pollution to the environment.

The largest watershed in West Java is the Citarum watershed with a length of 269 km and an area of 7061.77 km2. Based on the designation of water and water standards in West Java (Decree of the Governor of West Java Province Number 39 Year 2000), the Citarum River is a source of water for irrigation/agriculture, fisheries, industrial raw water, drinking water raw water, flood control, and hydropower generation. However, the great benefits of the

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Citarum watershed are not well maintained. The upstream part of the Citarum watershed has experienced degradation of water resources conservation functions, including the area of critical land reaching 26,022.47 ha, resulting in surface runoff of 3,632.50 million m3 /year and sedimentation of 7,898.59 tons/ha (MOE, 2015). Damage in the upstream part of the Citarum watershed is caused by the low concern of the community and the government for the preservation of nature, the impact of land use change in the Upper Citarum watershed in terms of a decrease in forest area by 41.7% from 1994 to 2005 (Adrionita, 2011) and will continue to grow along with the poor management of the Citarum watershed.

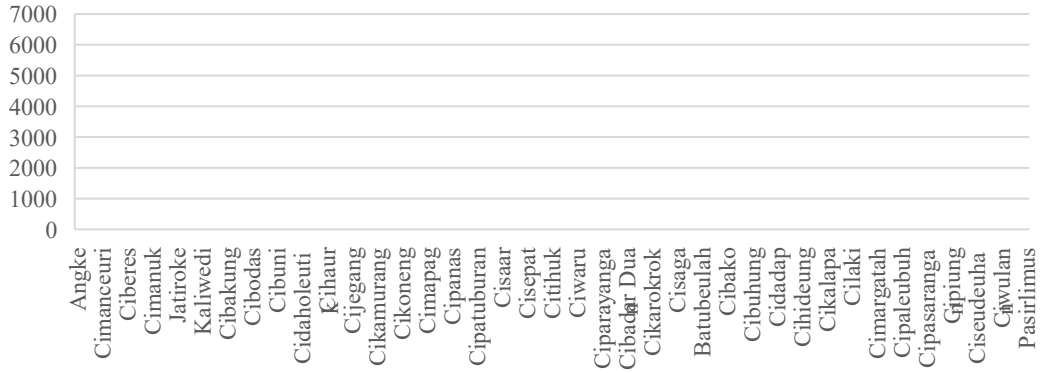

Figure 1. Watershed area in West Java (km^2)
Source: Open Data Jabar (2021)

The decline in watershed quality is one example that occurred in West Java, there are still many watersheds such as Ciliwung, Cisadane, Angke and others that need to be managed properly by all parties. This happens because population growth is increasing in the watershed area which causes an increase in critical land due to land use change and land clearing which triggers floods and droughts. West Java Province is ranked first as the province with the largest population in Indonesia. The number continues to increase every year. This phenomenon is a complex problem for the government because the increasing population growth is not accompanied by the expansion of the area. In 2014, the West Java Provincial Government launched an effort to overcome this problem through an innovative program, namely the Development of Environmentally Cultured Villages (Ecovillage), the implementation of which continues to this day. One of the efforts to solve environmental problems in the village is through the development of ecovillage.

The Ecovillage Program is a community-based conservation program that involves communities located around watersheds and forest areas, whether protected forests, production forests or conservation forests, which aims to create a pattern of human interaction with nature that is synergistic and in accordance with several principles and supporting aspects including ecological, economic, social and spiritual. The environment is a unity consisting of parts that support each other consisting of objects, forces, living things and human interaction behavior with nature, closely related to become a unity that affects the survival of creatures with each other in the natural universe.

The role of the community in natural resource and environmental management programs in rural areas determines the realization of ecovillage (Kusharto et al. 2012). Environmental maintenance through the role of the community and the development of productive businesses

at the household scale can be done through the role of leadership and community participation (Kusharto et al. 2012). Therefore, this research is intended to create a model of community empowerment in the development of ecovillages in West Java.

METHOD

The data used in this study are primary data and secondary data. Primary data was obtained through distributing questionnaires to research respondents. The questionnaire is in the form of open and close ended questions distributed via Google Form. While secondary data comes from articles, journals, or related literature. The respondent sample was selected using purposive sampling method, namely West Java residents with the determination of the number of respondents referring to Walpole (1995), if the sample size is greater than or equal to 30 respondents, it can represent the population.

The validity and reliability of this research questionnaire were tested using SmartPLS 3.0 software to show validity and reliability. Descriptive analysis is used to describe the results of primary data. Sugiyono (2013) argues that descriptive analysis is intended to analyze data by describing the data collected. In this study, descriptive analysis aims to identify the characteristics of respondents and analyze the community empowerment model in the development of environmentally cultured villages in West Java.

RESULT

A. Respondent Characteristics

1) Age of Respondent

Respondent data according to age on the community empowerment model in the development of environmentally cultured villages can be seen in Figure 2, namely: age under 30 years as much as 16.7%, age 30-40 years as much as 19%, age 40-50 years as much as 50%, and age over 50 years as much as 14.3%. Respondent data according to gender on the community empowerment model in the development of environmentally cultured villages can be seen in Figure 3, namely: 66.7% male and 33.3% female.

Respondent data according to the level of education in the community empowerment model in the development of environmentally cultured villages are the three largest, can be seen in Figure 4, namely: SMA as much as 38.1%, D1 / D2 / D3 as much as 14.3% and D4 / S1 as much as 45.2%. Respondent data according to the type of work on the community empowerment model in the development of environmentally cultured villages are the three largest, can be seen in Figure 5, namely: Self-employed as much as 26.2%, private employees as much as 26.2% and civil servants as much as 9.5%. Respondent data according to domicile in the community empowerment model in the development of environmentally cultured villages can be seen in Figure 6, namely: the domicile of respondents in this study is dominated by 92.9% of Bogor district and the rest come from outside Bogor district.

The results of the analysis show that the characteristics of respondents on the community empowerment model in the development of environmentally cultured villages can be seen in Table 1.

Table 1. Recapitulation of Respondent Characteristics

No.	Respondent Characteristics	Percentage
1	Respondents' age is dominated by the age range of 40-50 years	50,0%
2	Gender is dominated by male respondents	66,7%
3	Respondents' education is dominated by respondents with a D4 / S1 graduate education	45,2%
4	Respondents' occupations are dominated by respondents who work as entrepreneurs and private employees	26,2%
5	The domicile of respondents is dominated by residents from Bogor Regency	92,9%

Source: Primary data processed (2023)

Analysis of Community Empowerment Models in the Development of Environmentally Cultured Villages

1) Respondents' Knowledge Level of Environmentally Cultured Villages

Based on the level of knowledge of respondents on environmentally cultured villages can be seen in Figure 7, namely: 88.1% of respondents knew about the environmental village program. This shows that the environmentally cultured village program is already quite well known among the community.

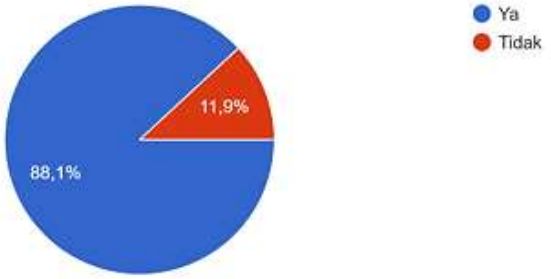

Figure 2. Respondents' level of knowledge of the Village Environmental Program

2) Level of Information Dissemination on the Environmental Cultured Village Program

Based on the level of effectiveness of the media for disseminating information on the environmental culture village program can be seen in Figure 8, namely: The most effective media used to disseminate information on this program is through socialization from the government because as many as 50% of respondents know this program from socialization from the government.

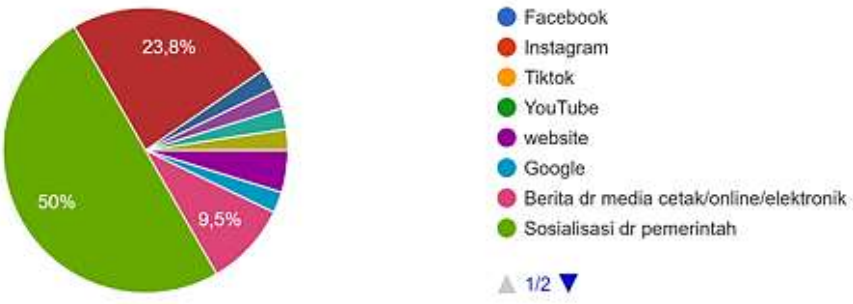

Figure 3. Level of Media Notification of the Eco-Culture Village Program

3) Level of Knowledge of the Objectives of the Eco-Cultural Village Program

Based on the level of respondents' knowledge of the objectives of the environmentally cultured village program, it can be seen in Figure 9, namely: 71.4% of respondents who know the objectives of the Environmental Cultured Village Program and the rest who do not know the objectives of this program.

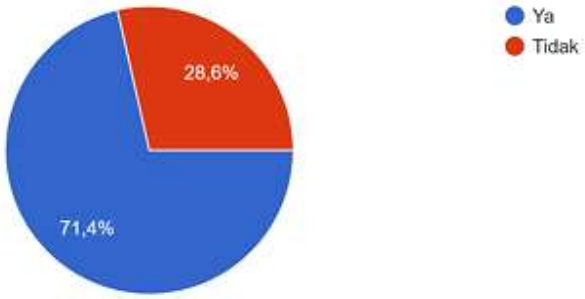

Figure 4. Level of Knowledge of Program Objectives of the Environmental Cultured Village Program

The recapitulation of the objectives of the environmental culture village program is as follows.

Table 2. Recapitulation of Respondents' Answers Regarding the Objectives of the Environmental Cultured Village Program

No	Program objectives of the environmentally-cultured village program
1	Form/build community awareness to live in harmony with nature and carry out environmentally friendly activities.
2	For villages or individuals to be aware of the importance of the environment and the preservation of their own and surrounding nature.
3	Engaging the community to create a Sustainable Eco-Culture Village
4	Development of village areas that take into account the individual achievements of families and the general public on a sustainable natural environment
5	Making a life that synergizes with the environment to protect nature

4) Level of knowledge of benefits/impacts of the Environmental Cultured Village Program

Based on the level of respondents' knowledge of the benefits/impacts of the Environmental Cultured Village Program can be seen in Figure 10, namely: 66.7% of respondents who know the benefits/impacts of the Environmental Cultured Village Program and the rest do not know the benefits/impacts of the Environmental Cultured Village Program.

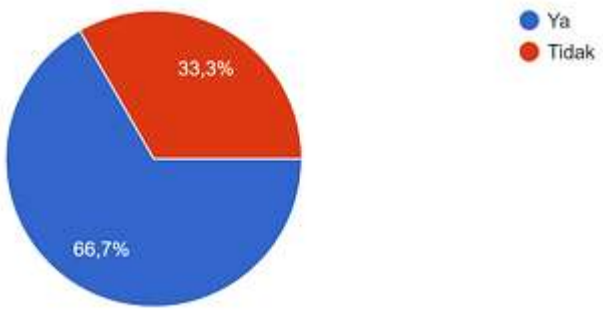

Figure 5. Level of Knowledge of Benefits/Impacts of the Eco-Cultural Village Program

The recapitulation of the benefits/impacts of the environmental culture village program is as follows.

Table 3 Recapitulation of Respondents' Answers Regarding the Benefits/Impacts of the Environmental Cultural Village Program

No	Program Benefits/Impacts of the Eco-Cultural Village Program
1	The community can explore the potential of its natural resources without damaging the environment, can manage both organic and non-organic waste.
2	Re-cultivating gotong royong in the community
3	Sustainable Living and a Beautiful Environment
4	Nature will be preserved in the governance of daily human life
5	Better environmental management so that the 4 aspects of ecovillage can be realized.

5) Level of Sustainability of the Eco-Cultural Village Program

Based on the survey of the level of sustainability in the environmentally cultured village program can be seen in Figure 11, namely: 52.4% of respondents answered that this program was running well and smoothly, 38.1% of respondents answered that this program did not know that it was running well and smoothly, and the remaining respondents answered that this program was not running well and smoothly.

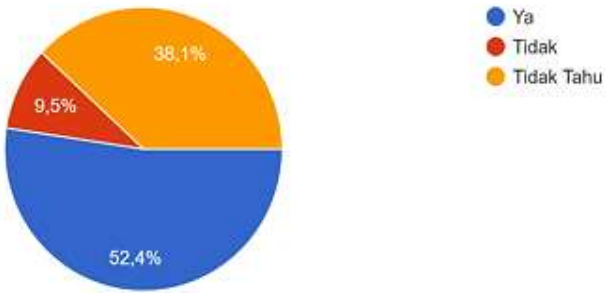

Figure 6. Level of Sustainability of the Eco-Cultural Village Program

6) Level of Deficiencies/Constraints in the Eco-Cultural Village Program

Based on the survey of the level of shortcomings / constraints of the environmentally cultured village program can be seen in Figure 12, namely: 54.8% of respondents said that the environmentally cultured village program has shortcomings / constraints, 16.7% of respondents said that the environmentally cultured village program has no shortcomings /

constraints, and 28.6% of respondents said that the environmentally cultured village program did not know it had shortcomings / constraints.

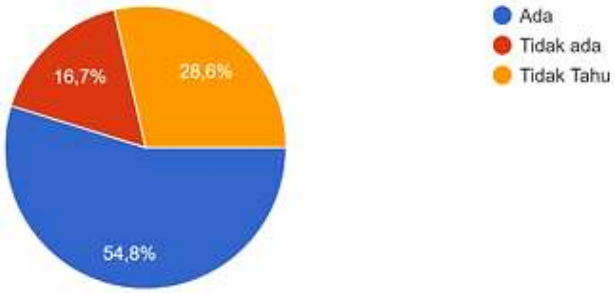

Figure 7. Level of Deficiencies/Constraints in the Eco-Cultural Village Program

The recapitulation of the shortcomings / constraints of the Environmental Cultured Village Program, namely as follows:

Table 4. Recapitulation of Respondents' Answers Regarding the shortcomings/obstacles of the Environmental Cultured Village Program

No	Shortcomings/obstacles of the Village Environmental Program
1	The program ended before the community was truly independent and could carry out activities according to the program objectives, so the program did not continue, besides that there was no monitoring and evaluation after the program was completed.
2	There is no synergy between the government and the community
3	Waste Sorting Education
4	Community awareness and support from all elements
5	The obstacle is the mentality of the community itself, which still has not accepted this program, so everything is still instant-based.

7) Level of excellence/uniqueness of the Environmental Cultured Village Program

Based on the survey of the level of excellence/uniqueness of the Environmental Cultured Village Program can be seen in Figure 13, namely: 78.6% of respondents answered that the Environmental Cultured Village Program has advantages/uniqueness and 21.4% of respondents answered that the Environmental Cultured Village Program does not know if it has advantages/uniqueness.

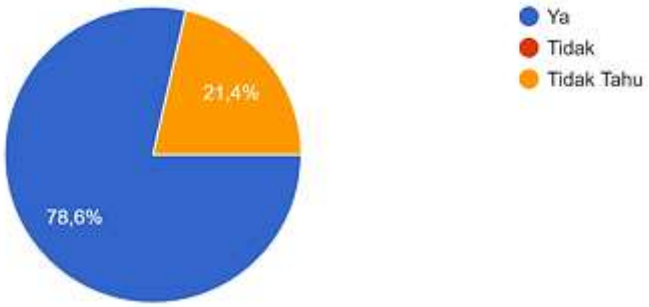

Figure 8. Level of excellence/uniqueness of the Environmental Village Program

The recapitulation of the advantages/uniqueness of the Environmental Cultured Village Program is as follows.

Table 5. Recapitulation of Answers on the Level of Excellence/Uniqueness of the Environmental Village Innovation Program

No	Excellence/Uniqueness of the Environmental Cultured Village Program
1	The program really starts with how the community can identify environmental problems in their environment and decide what will be done to overcome these problems, so that between one village and another village the approach will be different.
2	Waste downstreaming, where waste is destroyed directly in the village so that it does not depend on landfills and is managed with environmentally friendly technology.
3	The public can participate in the prevention of environmental damage
4	There are definitely many advantages that will be obtained as long as the community is aware of the importance of a clean environment.
5	Can be the basis for sustainable development while still paying attention to the environment

8) Suggestions for the Community Empowerment Model Innovation Program in the Development of Environmentally Cultured Villages

The suggestions for the Environmental Cultured Village Program program are as follows:

Table 6. Recapitulation of Suggestions for the Environmental Village Program

No	Suggestions for the Eco-cultural Village Program
1	Monitoring and evaluation should be carried out so that the activity program can be sustainable, in addition to community awareness, economic resilience should also be built and the program should not be implemented directly in one village because it is too large and has a large population, it is quite difficult to convince one village to have an environmental culture in a limited time (1 to 3 years).
2	The socialization is more down to earth, directly related to the lowest institutions invited for socialization and involve the existing environmental task force / companion
3	There should be a KRL (Eco-friendly Village) program
4	Cooperate with all village-owned enterprises in West Java to manage waste in an integrated manner to eliminate waste in the village
5	There needs to be motivation and evaluation of this program

9) Level of Presence in the Community of the Eco-Cultural Village Program

Based on the survey of the level of existence of the Environmental Cultured Village Program can be seen in Figure 14, namely: as many as 73.8% of respondents answered that the Environmental Cultured Village Program has not been perceived. Therefore, it is necessary to increase socialization in accordance with the suggestions of respondents so that the community knows about this environmental cultured village program and many people are involved.

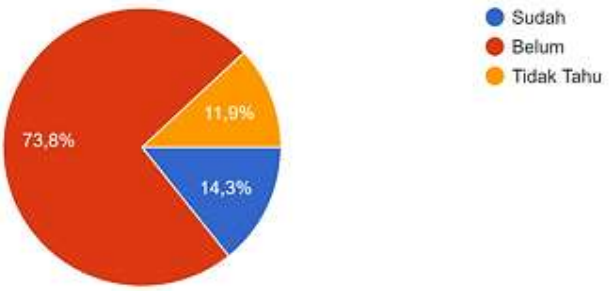

Figure 9. Level of Existence of the Environmental Village Program

10) Level of Support for Continuation of the Eco-Cultural Village Program

Based on the survey of the level of support for the sustainability of the Environmental Cultured Village Program can be seen in Figure 15, namely: 100% of respondents answered that the Environmental Cultured Village Program needs to be continued because it is able to move the community to care about environmental cleanliness as well as this program is able to preserve the environment through the realization of an environmentally friendly village.

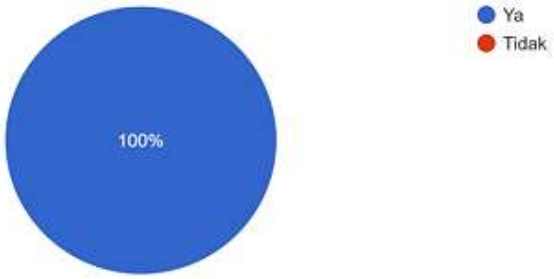

Figure 10. Level of Support for Continuation of the Eco-Cultural Village Program

B. SEM Analysis Results

1. Research Variables

In this study, several variables will be tested for their influence on the research of the Community Empowerment Model in the Development of Environmentally Cultured Villages in West Java. The following table presents the variables that will be tested, namely, as follows

Tabel 1. Variabel Penelitian

Variables	Variable Description
CM	*Change Management*
PM	Government
DK	Leadership Support
SR	*Realistic scope*
BM	*Adequate budget*
ED	Education
KP	Program Success

Source: Primary data processed (2023)

2. Outer Model

The purpose of the measurement model analysis is to determine the relationship of each indicator related to its latent variable. The PLS model used in this study is a reflective model, meaning that indicator measurements are influenced by the latent structure or represent variations from the indirect structure (Ghozali & Latan, 2015). The convergent validity test is carried out using SmartPLS 3.0 software which is evaluated based on the relationship between internal scores and construct scores. According to Ghozali & Latan (2015), an indicator is said to be valid if its loading factor value is more than 0.70. If the initial construct has not met the requirements, then the indicator is eliminated (dropping) one by one against the lowest loading factor value. After carrying out the indicator elimination stage, the research constructs are calculated again to obtain the final calculation model. Initial constructs and calculations can be seen in Figure 16.

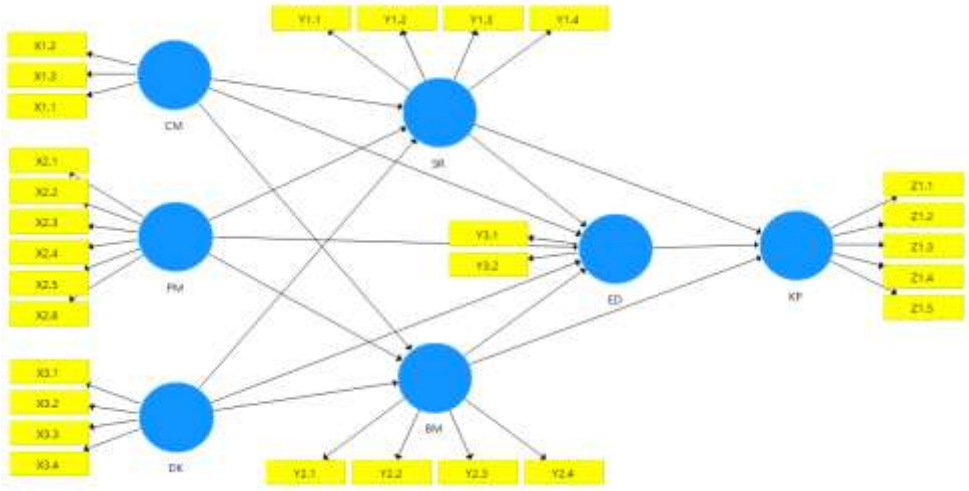

Figure 11. Model and Initial Loading Factor Calculation

The calculation of the loading factor meets the requirements because the value is more than 0.70 which can be seen in Figure 12 so there is no elimination in this model.

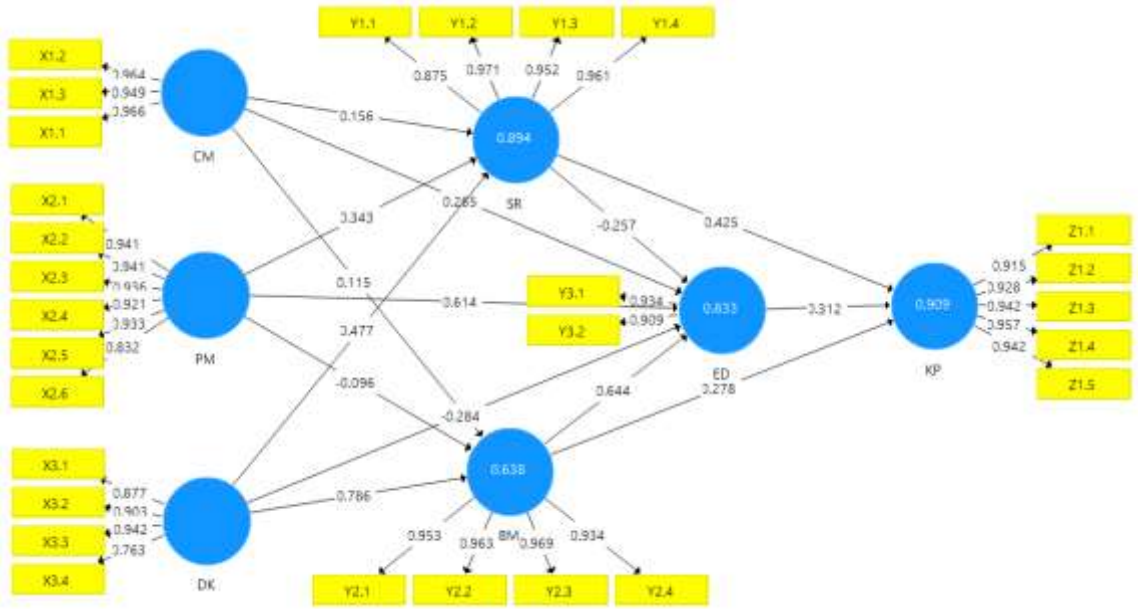

Figure 12. Model and Final Loading Factor Calculation

Based on Figure 12, it is known that the dimensions that reflect the latent variable of change management are awareness building activities (X1.1), changes in business processes (X1.2) and changes in work culture (X1.3). Dimension X1.1 has the largest loading factor value so that it has the most influence on the latent variable of program success, which is 0.966. This shows that awareness building on the success of the program created by the company has better performance.

The dimensions that reflect the latent variable project management are setting up work mechanisms (X2.1), meeting program needs (X2.2), communication between stakeholders (X2.3), managing human resources and their competencies (X2.4), directing programs by leaders (X2.5) and cooperation between cross-sectors (X2.6). X2.1 and X2.2 have the largest loading factor value so that they have the most influence on the latent variable of program success, both of which are 0.941.

The dimensions that reflect the latent variable of leadership support are reflected by four dimensions, namely leaders supporting the program (X3.1), leaders involved in the program (X3.2), leaders evaluating the program regularly (X3.3), and leaders providing incentives and motivation (X3.4). Dimension X3.3 has the largest loading factor value on program success so that it has the most influence on the latent variable of human resource risk, which is 0.942. This shows that leaders evaluate the program regularly will increase employee loyalty because employees feel their rights are fulfilled by the company.

The dimensions that reflect the realistic scope latent variable are scope implemented accordingly (Y1.1), setting program targets (Y1.2), adequate human resources (Y1.3), SOPs are implemented (Y1.4). Dimension Y1.2 has the largest loading factor value so that it has the most influence on the latent variable of program success, which is 0.971. This shows that the target of a program will provide a clear direction for the company.

The dimensions that reflect the latent variable adequate budget are budget according to scope (Y2.2), budget for quality services (Y2.3), and budget to achieve targets (Y2.4). Dimension Y2.3 has the largest loading factor value so that it has the most influence on the latent variable of program success, which is 0.969. This shows that the budget for quality services determines the success of the program.

The dimensions that reflect the latent variable of education are program implementation guidance (Y3.1) and program socialization (Y3.2). Dimension Y3.1 has the largest loading factor value so that it is declared the most influential on the latent variable of program success, which is 0.934. This shows that program socialization is able to improve the competence of participants through the training/materials provided so that the program will be successful.

The dimensions that reflect the program success variable are programs according to budget (Z1.1), programs according to targets (Z1.2), programs according to scope (Z1.3), programs to improve service quality (Z1.4) and programs to improve performance effectiveness (Z1.5). Dimension Z1.4 has the largest loading factor value so that it has the most influence on the latent variable of program success, which is 0.957. This shows that a good program that runs smoothly will improve the quality of service at the company.

Evaluation of reliability can be done by paying attention to the Cronbach's alpha value greater than 0.70. The following Cronbach's alpha and composite reliability values can be presented in Table 8.

Tabel 2. Nilai Cronbach's Alpha

Variables	Cronbach's Alpha
BM	0,968
CM	0,957
DK	0,894
ED	0,824
KP	0,965
PM	0,962
SR	0,956

Source: Primary data processed (2023)

Based on Table 8, the Cronbach's alpha value of each variable is above 0.60. In this case, Cronbach's alpha greater than 0.60 indicates that each indicator has accurate, precise and consistent reliability.

3. Structural Model Evaluation Analysis (Inner Model)

After testing the outer model to determine the validity and reliability of a construct, then testing the structural model (inner model) is carried out by looking at the value obtained through the bootstrapping process. According to Ghozali & Latan (2015), the use of the R-square value aims to test the structural model. This measurement is used to determine the predictive power of the structural model. Inner model evaluation is assessed by looking at the effect of exogenous latent variables on endogenous latent variables using the path coefficient value and significance level. The following bootstrapping analysis results can be seen in Figure 18.

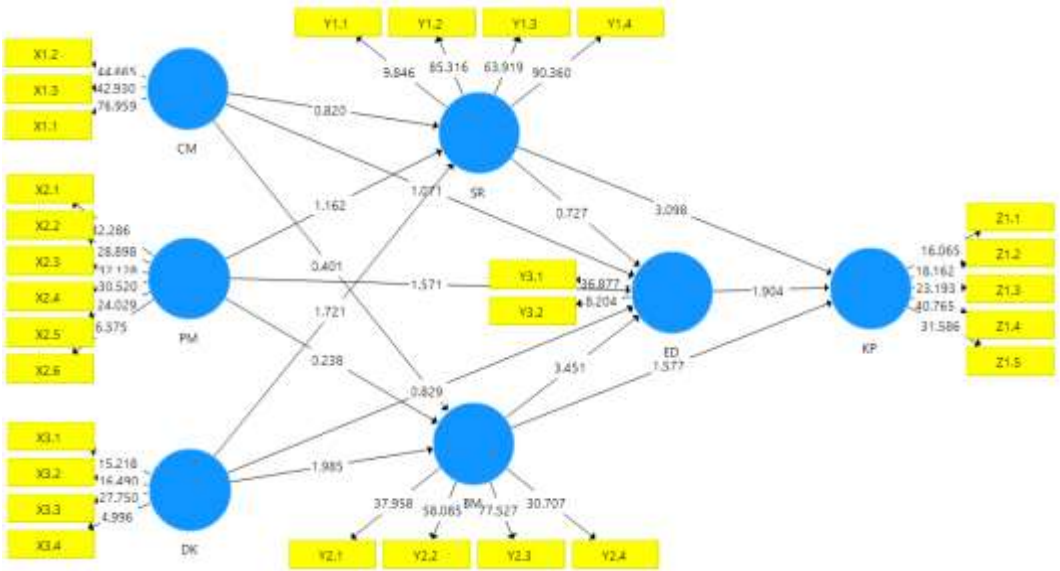

Figure 13. Bootstrapping Analysis Results

The inner model is measured by bootstrapping, which is done by evaluating the significance of the t statistic to determine the effect between variables. Hypothesis testing is done by comparing the calculated t value with the t table through the path coefficient. The test parameter is t-count> t-table (0.05). To see the nature of the relationship between latent

variables (positive and negative), see the p value. The effect and significance level of exogenous latent variables on endogenous latent variables can be seen in Table 9.

Table 9. Path-Coefficient Results

	P Values
BM -> ED	**0,001**
BM -> KP	0,115
CM -> BM	0,689
CM -> ED	0,285
CM -> SR	0,413
DK -> BM	**0,048**
DK -> ED	0,407
DK -> SR	0,086
ED -> KP	0,058
PM -> BM	0,812
PM -> ED	0,117
PM -> SR	0,246

Source: Primary data processed (2023)

Hypothesis:

H_0 : No significant effect < 0,05

H_A : There is a significant effect > 0,05

In table 9, the following conclusions can be made:

- The first hypothesis is that the adequate budget variable has a significant effect on education. Evidenced by the calculated p value of 0.001. This shows that the calculated T value is greater than the T table value. Thus it can be concluded that HA is accepted in this research hypothesis. The positive coefficient value means that the higher the adequate budget, the higher the education.
- The second hypothesis is that the adequate budget variable does not have a significant effect on program success. Evidenced by the calculated p value of 0.115. This shows that the calculated T value is smaller than the T table value. Thus it can be concluded that H0 is accepted in this research hypothesis.
- The third hypothesis in this study is that the Change Management variable has no significant effect on adequate budget. Evidenced by the calculated p value of 0.689. This shows that the calculated T value is smaller than the T table value. Thus it can be concluded that H0 is accepted in this research hypothesis.
- The fourth hypothesis in this study is that the change management variable has no significant effect on education. Evidenced by the calculated p value of 0.285. This shows that the calculated T value is smaller than the T table value. Thus it can be concluded that H0 is accepted in this research hypothesis.
- The fifth hypothesis in this study is that the change management variable has no significant effect on realistic Scope. Evidenced by the calculated p value of 0.413. This shows that

the calculated T value is smaller than the T table value. Thus it can be concluded that H0 is accepted in this research hypothesis.

- The sixth hypothesis in this study is that the Leadership Support variable has a significant effect on adequate Budget. Evidenced by the calculated p value of 0.048. This shows that the calculated T value is greater than the T table value. Thus it can be concluded that HA is accepted in this research hypothesis. The positive coefficient value means that the higher the Leadership Support, the positive effect on adequate Budget. In line with Izzaty (2011), that leadership style (in this case leadership support) has a positive and significant effect on the implementation of a program budget.
- The seventh hypothesis in this study is that the leadership support variable has no significant effect on education. Evidenced by the calculated p value of 0.407. This shows that the calculated T value is smaller than the T table value. Thus it can be concluded that H0 is accepted in this research hypothesis.
- The eighth hypothesis in this study is that the leadership support variable has no significant effect on realistic scope. Evidenced by the calculated p value of 0.086. This shows that the calculated T value is smaller than the T table value. Thus it can be concluded that H0 is accepted in this research hypothesis.
- The ninth hypothesis in this study is that the education variable has no significant effect on program success. Evidenced by the calculated p value of 0.058. This shows that the calculated T value is smaller than the T table value. Thus it can be concluded that H0 is accepted in this research hypothesis. The negative coefficient value means that the higher the leadership support, the no effect on adequate budget.
- The tenth hypothesis that the Project Management variable has no significant effect on an adequate budget. Evidenced by the calculated p value of 0.0812. This shows that the calculated T value is smaller than the T table value. Thus it can be concluded that H0 is accepted in this research hypothesis.
- The eleventh hypothesis of the Project Management variable has no significant effect on education. Evidenced by the calculated p value of 0.117. This shows that the calculated T value is smaller than the T table value. Thus it can be concluded that H0 is accepted in this research hypothesis.
- The twelfth hypothesis of the Project Management variable has no significant effect on realistic scope. Evidenced by the calculated p value of 0.246. This shows that the calculated T value is smaller than the T table value. Thus it can be concluded that H0 is accepted in this research hypothesis.

CONCLUSION

Based on the results of the SEM analysis, the variables that have a significant effect are the leadership support variable to the adequate budget, and the adequate budget variable to education. The education variable on program success almost has a significant effect. Therefore, it implies that the leadership support variable will affect the program success variable. Leadership support variables need to be strengthened so that the program gets better. The dimensions of leadership support include leaders supporting program implementation, leaders being involved in the lifecycle of the program, leaders routinely evaluating program success and leaders providing intensives to motivate program success..

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