335



**A Comprehensive Rational Model for Management of Slum Settlements in Ciamis District: A Study of Public Policy Formulation**

## Andang Firman1, Thomas Bustomi2, Didi Turmudzi3

1,2,3Universitas Pasundan Bandung, Indonesia Email: andang.firman@gmail.com

**Abstract:** This research aims to find a comprehensive rational model in the formulation of policies for handling slum areas in The Ciamis Regency. The research focus is the factors that significantly influence and determine the ideal complete logical model. The analytical method used is an exploratory sequential mixed method with a qualitative phase carried out by exploring factors and a quantitative phase analyzing the relationship between factors and factor analysis. In addition, a SWOT analysis was carried out to determine the policy formulation model. Based on the SWOT analysis results in this study, it was found that in the formulation of policies for handling slum areas in Ciamis Regency, an Aggressive Maintenance Strategy was needed, namely aggressive and active development. The concept that the researchers found (novelty) in this study is that there is a need for determining thematic areas in the formulation of policies for handling slum areas in the Ciamis Regency. The concept is applied by collaborating between government policies, provincial governments, and the Ciamis Regency government, forming and activating Pokjas for handling slum areas, formulating policies with regional thematics that can accommodate supporting policies so that the guidelines are prepared based on the needs of the community that are adapted to the regional conditions of the slum area. In addition, policy formulation is supported by community involvement (working groups), improving the quality of human resources and technical capabilities of policymakers for each Technical OPD, and controlling policies that have been implemented.

***Keywords:*** *Policy, Comprehensive Rational Model, Slum Settlements.*

## INTRODUCTION

One of the impacts of population growth in an area is increased space for housing and regions with adequate settlements for humanity. However, along with the social and economic needs of the community, there is overcapacity in certain areas, giving rise to slum areas in that area (Gelbman, 2021). The limited availability of housing infrastructure and facilities, such as limited clean water and environmental sanitation facilities and decent housing, are the main characteristics of slum areas (Surya et al, 2020).

Considering the above conditions, it is necessary to have a policy directed at improving people's quality of life in slum areas that are carried out massively and sustainably (Soreg & Gonzales, 2021). The 100-0-100 movement has been launched by the Directorate General of Human Settlements (DJCK) of the Ministry of Public Works and Public Housing (PUPR RI) to provide 100% access to drinking water, 0% of slum areas, and 100% access to sanitation (Wolf et al, 2019). This movement is the mandate of Article 94 of Law no. 1 of 2011 concerning Housing and Settlement Areas. Even so, there are still some problems when carrying out this movement, namely the absence of accurate (baseline) data and information, the handling of slum areas has not been matched with regional capabilities (HR and financing, and the regional action plan has not been prepared as a blueprint for the handling of slums that are integrated with central and regional programs or programs between OPDs in Ciamis Regency (Hlaváček et al, 2019).

Ciamis Regency has a policy for handling slum areas in general, which has been stipulated in the Five-Year Development Plan (RPJMD) of Ciamis Regency, which is directed at providing clean water and environmental sanitation

facilities (Wolf et al, 2018). For example, the RPJMD of Ciamis Regency 2014-2019 targets access to clean water and ecological sanitation by 94%. However, the condition until 2015 only reached 80% (de Leon-Martinez et al, 2020). In addition, several housing development programs have been implemented through program synergies between the central government and local governments, such as the construction of Uninhabitable Houses (RUTILAHU), Self-Help Housing Stimulant Assistance (BSPS), and House Renovation, all of which are funded by the government, local governments, and CSR (Lo & Broto, 2019).

336

The implementation of the handling of slum areas in Ciamis Regency has not been optimal due to: planning for the handling of slum areas with a bottom-up approach through the Community Action Plan process has not been advocated in regional development planning documents; the planning process is still sectoral, pragmatic (Yustikasari et al, 2021). In addition, technically, the involvement of elements of the Regional Apparatus Work Unit (SKPD) is still limited in handling slum areas, either directly or indirectly. Furthermore, there are limited resources and institutions involved in the formulation of these policies, such as limited tenure of leadership, both political leaders and institutional leaders (e.g. the term of office of the regent is limited to 5 years, there is a mutation in the position, etc.); limited knowledge of policy formulation implementers; limitations in the process of gathering information; and other limitations (Rustam et al, 2019).

The explanation above shows how the general description of public policy formulations that are difficult to implement to answer the existing problems. Therefore, researchers want to research the factors that can determine an implementation policy by paying attention to the effective and efficient use of resources.

## LITERATURE REVIEW

**Public Policy Formulation**

Based on Siagian’s opinion, public administration is all activities that occur in a country and are carried out by all government agencies to achieve the goals of that country (Mulhayat et al, 2019). There has been a shift from public administration to public administration in its development, where the approach taken is no longer to the state but to the community (George & Pandey, 2017). This development in public administration arises from the management of a country to deal with the dynamics of society (Christensen & Laegreid, 2020).

Then the understanding of the concept of public policy, according to Nurcholis, are various provisions that function to be able to guide behaviour as a result of decisions to be able to achieve specific goals carried out by an organization. This concept does not focus on what is proposed or intended but on what is done (Nurcholis, 2020).

The policy concept provides an overview of the elements involved in the policy itself, such as Problem-Oriented and Action-Oriented. It can be concluded that policy is a series of actions taking into account various rules and a collection of information or problems (Haynes et al, 2020). Researchers define rules as a series of rules that must be considered in formulating policies, such as goals to be achieved, culture/customs, applicable rules/laws, and others (Koven, 2021).

Meanwhile, policy formulation based on Nugroho's opinion is the core of public policy because the boundaries of the policy are formulated here (Iizuki & Hane, 2021). Based on this explanation, the researcher can conclude that policy formulation is an element that comes from policy management which has a particular process framework that is significantly determined by several factors, including the managerial ability of issues/problems, goal setting, value preferences, environmental influences, strategies used, and so forth. These factors will then determine the policy formulation model used (Tawse & Tabesh, 2021).

Nugroho provides several examples of the characteristics of the public policy formulation model based on the influence of several determining factors in the form of a). Institutional Models; b). Process Models; c). Model Groups; d). Elite Models; e). Rational Models; f). Incremental model; g). Game Theory Models; h). Public Choice Models; i). System Models; j). Mixed Scanning Models; k). Democracy Model; l). Strategic Models; m). Delibrative Model; and n). Garbage Can Model (Soewarno & Nugroho, 2021).

The process of managing public policy formulation consists of six steps, according to Patton-Sawicki. These steps are a). Identifying problems; b). selection of criteria to evaluate issues to carry out the selection of policy alternatives; c). identify various policy alternatives; d). conduct an evaluation by assessing all policy alternatives; e). the

alternative assessment produces the best option compared to others selected as a policy; f). implement the chosen alternative as a policy (Skačkauskienė & Katinienė, 2017).

337

## Elements of Slums Settlement

Settlement can be interpreted as a valuable area as a place to live or carry out activities that can support life for the community. This area can be rural or urban and is outside a protected area (Surya et al, 2020). In addition, settlements can be interpreted as an area intentionally arranged and built by humans to make people's lives easier and more independent and provide happiness and security to these humans (Han & Kim, 2019).

Based on the ekistic theory described by Doxiadis, there are five elements in a settlement in the form of natural, man, society, shell, and network. The residential environment can be shaped by these five ekistic elements (Farizkha et al, 2019). First, a society (society) as a form of a social group can emerge because of the nature that functions as a container for humans as individuals (man). Then (shell) can be created due to the need for these social groups for protection to run their lives safely. In the end, the network will be needed by the group as a result of the development of the shell so that it becomes so complex and extensive. The existence of this network then serves to support the environment in the settlement (Freeman, 2014).

Meanwhile, slum settlements are settlements or areas that are inappropriate for human habitation based on Law number: 1 of 2011 (Guzey, 2016). This inappropriateness is caused by the overcrowding of the settlement, the irregularity of the positions of the arranged buildings, and the declining quality of the facilities and infrastructure that function as a place to live (Dear & Wolch, 2014).

People who live in areas with slum settlements generally have various similarities when viewed through their socio-economic background (Sarker, 2021). The equation is the limited expertise that can be done, the low level of formal education achieved, and the inadequate ability to adapt to the modern environment (Oliva & Kotabe, 2019).

Some factors cause the emergence of slum settlements (Pramadi et al, 2020). These factors include the limited number and types of work so that there is a migration of people to places with lots of work, unequal educational facilities and infrastructure in one area with other areas, housing and settlement facilities that are difficult for the poor to reach, and access to workplaces or businesses that are difficult to achieve in urban areas (Iammarino et al, 2019).

## METHOD

The research will be conducted with a mixed approach using an exploratory sequential method. This hybrid approach is carried out to analyze two different data obtained separately in the form of data analysts from the qualitative phase to build arguments in the form of factors that will be used as measures in the quantitative phase; then an analysis of quantitative data will be carried out using parametric statistics through factor analysis and SWOT analysis (Martin et al, 2021). This is carried out to obtain assumptions on whether the database in the form of qualitative and quantitative will strengthen, weaken or contradict each other. Data sources were obtained through document studies, interviews, observations, and Focus Discussion Groups (FGD).

## RESULT AND DISCUSSION

**Profile of Slums in the Three Research Areas**

## Wanasigra Village, Sindangkasih District

Wanasigra Village is a village located in Sindangkasih District which has a slum area (Effendy et al, 2020). In general, the problems in Wanasigra Village are as follows:

* 1. The irregularity of residential buildings and the number of buildings that do not comply with technical requirements and are semi-permanent
	2. Construction of damaged environmental roads that have not been integrated with drainage channels
	3. Poorly integrated drainage channels
	4. Raw water piping network that is not well served
	5. Lack of domestic waste management in drainage channels
	6. Irregular waste sorting and transportation
	7. Communal bathroom with poor condition

338

* 1. Unavailable fire protection
	2. The trade sector and the processed food industry dominate most of the people's work.

Then looking at the profile of slums in Wanasigra Village, it can be seen from the physical aspect in the form of 72% of buildings that do not have regularity; low density of buildings (79 units/ha); 36% of buildings do not have floors, walls and tops that comply with technical requirements; 40% of settlements do not have access to environmental roads with 68% of poor road network conditions; 67% of the drainage network is in poor condition; 71% of buildings do not have a clean water network and 57% of the community cannot meet the minimum water requirement of 60 litres; 35% of buildings do not have access to communal toilets, 32% of buildings do not have toilets connected to septic tanks; and 100% of sewers mixed with environmental drainage; 70% of domestic waste can only be transported to the landfill twice a week; 100% of settlements do not have infrastructure and facilities to protect themselves from fires.

Meanwhile, from a non-physical perspective, the profile of slums in Wanasigra Village is as follows: 68% of buildings do not have IMB, and 16% of building land does not have a letter recognized by the government; a population density of 26 people/ha with 71% of the population working in the trade or service sector; 45% of households still use

<450 Watts of electricity; 62% of households still use a Midwife or Mantri; 77% of households do not follow the nine-year compulsory education age.

## Cisadap Village, Ciamis District

Cisadap Village is located in Ciamis District with a population density and irregularity in regional infrastructure, so this village is considered a slum area. In general, the problems that exist in Cisadap Village are as follows:

* 1. Irregularity of residential buildings and a dense population that do not comply with technical requirements
	2. There are still environmental roads that do not meet the technical requirements
	3. Poorly integrated drainage channels
	4. In general, the raw water pipeline network is still not served because many still use wells.
	5. There is no treatment so that the sewage and drainage channels become one
	6. No facilities and infrastructure support waste management
	7. No fire protection
	8. There is a habit of throwing domestic and industrial waste into the pond.

Then from a physical point of view, the slum settlements in Cisadap Village are as follows: 99% of irregular buildings with high density (112 units/ha); 16% of buildings do not have floors, walls and roofs that comply with technical requirements; 21% of settlements do not have access to environmental roads with 21% of poor road network conditions; 95% of the drainage network is in poor condition; 61% of buildings do not have a clean water network; 8% of buildings do not have access to communal toilets, 26% of buildings do not have toilets connected to septic tanks; and 20% of sewers mixed with environmental drainage; 98% of domestic waste can only be transported to the landfill twice a week; 100% of settlements do not have infrastructure and facilities to protect themselves from fires.

Meanwhile, from a non-physical perspective, the profile of slum settlements in Cisadap Village is as follows: 100% of the buildings do not have IMB; population density reaching 14 people/ha with 92% of the population's work in trade or services; 78% of households still use <450 Watts of electricity; 83% of households still use a Midwife or Mantri; 51% of households do not follow the nine-year compulsory education age.

## Ciamis and Maleber Villages, Ciamis District

Ciamis and Maleber villages are part of the Ciamis sub-district as an urban area. Meanwhile, there are four slum areas: the Limusnunggal area, the Kedungpanjang area, the Janggala area, and the Barak area. In general, the problems that occur in this area are:

* 1. There are still irregular residential buildings with high density and not following technical requirements even though the average percentage is below 70%, the building density is low
	2. Environmental road conditions are in good condition, while those with poor quality are in the Limusnunggal area
	3. Drainage channels that are not well integrated (broken pipelines) and no flooding
	4. The settlements in the Limusnunggal area, Kedungpanjang area, Janggala area, and the Barak area are not well served by the raw water piping network.

339

* 1. Domestic sewage and drainage are combined into one, and there is no treatment.
	2. There are no supporting facilities and infrastructure for waste processing; and
	3. No fire protection is available.

Then viewed from the physical and non-physical aspects, the profiles of all Ciamis and Maleber villages are as

follows:

## Table 1. Physical Profile of Slum Settlement in Ciamis and Maleber Villages

|  |  |  |
| --- | --- | --- |
| **No** | **Criteria/Indicators** | **Parameter** |
| **Limusnunggal Area** | **Kedung Panjang Area** | **Janggala Area** | **Barak Area** |
| 1 | Disorganized building | 65% | 43% | 68% | 66% |
| 2 | Building Density | 15 unit/Ha | 24 unit/Ha | 37 unit/Ha | 27 unit/Ha |
| 3 | Floor Area < 7.2 m2 person | 27% | 26% | 68% | 7% |
| 4 | Non-compliant roofs, walls and floors | 27% | 26% | 68% | 23% |
| 5 | Residential areas that are not served by an adequate environmental network | 75% | 0% | 13% | 25% |
| 6 | Road network in settlements that have poor quality | 85% | 0% | 13% | 19% |
| 7 | Poor quality in drainage network condition | 54% | 33% | 6% | 54% |
| 8 | Buildings that are not served by clean water | 58% | 61% | 22% | 27% |
| 9 | Not meeting the minimum water requirement (60/litre/day) | 38% | 61% | 17% | 24% |
| 10 | Areas that are not protected by SPAL | 24% | 32% | 28% | 35% |
| 11 | Mixing domestic waste disposal with environmental drainage | 58% | 67% | 31% | 34% |
| 12 | Garbage is not transported in less than two weeks | 61% | 90% | 55% | 46,9% |
| 13 | Settlements that do not have fire protection facilities/infrastructure | 100% | 28% | 45% | 100% |

**Table 2. Non-Physical Profile of Slums in Ciamis and Maleber Villages**

|  |  |  |
| --- | --- | --- |
| **No** | **Criteria/Indicators** | **Parameter** |
| **Limusnunggal Area** | **Kedung Panjang Area** | **Janggala Area** | **Barak Area** |
| 1 | Buildings that do not have an IMB | 100% | 100% | 100% | 100% |
| 2 | Population density | 60 people/Ha | 96 people/Ha | 148 people/Ha | 108 people/Ha |
| 3 | Trade/service as the main occupation | 67% | 70% | 63% | 78% |
| 4 | The majority of families who use electricity of < 450 Watt | 70% | 69% | 62% | 59% |
| 5 | The majority of households still go to the Midwife/Mantri for health facilities | 84% | 89% | 79% | 88% |
| 6 | Families who do not follow the nine-year compulsory education age | 42% | 51% | 54% | 46% |

## Analysis of the Factors of a Comprehensive Rational Model in the Formulation of Public Policy for Handling Slum Areas in Ciamis Regency

340

1. **Define the Problem**

Problem identification is the first process in the stage of a comprehensive rational model of public policy formulation related to the indicators and objectives to be achieved (Janjevic et al, 2019). The formulation of policies to deal with areas in slums must pay attention to the conditions regarding the economy and social environment of the community and the availability of regional facilities and infrastructure. For example, Cisadap Village is the centre of the tofu/tempeh industry, so that most of the people work in this industry, both as owners and workers. This condition has the consequence that a lot of industrial waste is not managed adequately coupled with a lot of housing that does not meet health requirements, so the identification of the problem is the lack of access to sanitation, especially household and industrial waste disposal channels that pollute the environment in the area. This condition is an issue in the preparation of work plans for handling slum areas.

## Determine Evaluation Criteria

The selection of the problem criteria (determine evaluation criteria) is the second stage of public policy formulation for handling slum areas in the Ciamis Regency (Abdel-Basset et al, 2021). In determining evaluation criteria, it is carried out by considering resources (such as financial resources, materials, and other infrastructure), environmental conditions, economic and social conditions of the community in slum areas have a positive contribution in choosing the criteria for problems in slum areas. However, based on the data obtained by the researchers through the results of observations and documentation studies, it is found that the proposals received by the political/aspirational process and the musrenbang have not explicitly been directed to the handling of slum areas that the Regional Government has determined. This shows that so far, there is still limited advocacy for slum areas starting from the village/ward, sub-district, and OPD levels.

## Identify Alternative Policies

The third stage is formulating policies for handling slum areas through a comprehensive rational model approach to identifying policy alternatives (Mu, 2018). The personal characteristics of the policymakers determine the implementation of this process Identification of alternative policies for handling slum areas in the Ciamis Regency is also based on environmental conditions in slum areas, such as conformity with the Spatial Planning (RTR), population, land tenure status, strategic location values, social, economic and cultural conditions. However, in the order of policy formulation implementation, the opinions of community leaders and policymakers in each OPD involved are very much determined.

## Evaluate Alternative Policies

Evaluating alternatives to alternative policies for handling Slum Settlement Areas (Iban, 2020) in Ciamis Regency considers time constraints, limited institutional resources, limited funding/financing resources, technical limitations, in the form of constraints in technical ability to formulate public policies themselves. Meanwhile, to realize program synergy, it must be guided by regional development planning documents. In addition, the budget management system is limited by the existence of a fiscal year and the working period of each Regional Head. Therefore, in evaluating alternative policies for handling slum areas, it is necessary to consider the time of budget allocation and the working period of the regional head. Furthermore, special attention must be paid to the term of regional authorities because it is related to the promises of elected regional leaders during the campaign period. Elected regional heads will prioritize their campaign promises, especially in areas where their voice is strong.

## Select Prefered Policy

At the initial stage of the assessment process, alternative policies for handling slum areas are based on the needs plans that have been prepared (Jones, 2017) in the RP2KPKP which are then advocated by each village/kelurahan and sub-district both in the musrenbang process and which are directly shown to the supporting OPD in this case DPKPLH or to the other OPD tailored to their duties and functions. But in reality, the activity plans that have been prepared in the

RP2KPKP are used as input for the Ministry of PUPR RI through the Directorate General of Creativity to carry out activities in slum areas.

In addition, the assessment of alternative policies is based on the needs in the slum area based on the problems and needs of the community and the environment. Therefore, to synthesize the issues and needs of the slum community, it is necessary to have a thematic policy that is adapted to the social, economic and environmental conditions of the slum area. This is intended for the development that will be carried out and getting support from the community. It is also adjusted to the potential and existing resources.

## Implement the Prefered Policy

The implementation of the selected alternative policies for handling Slum Settlement Areas in the Ciamis Regency is based on the objectives that have been set as mentioned above. In implementing it, the policymakers are guided by the results of the regional development planning deliberation, which is held annually to prepare a regional development work plan (Dale et al, 2020). In addition, various alternative policy information is conveyed from the village level to the district level, hierarchical to the national level.

## Variable Independence Test

1. **Kaiser-Meyer Olkin Test (KMO) and Bartlett Test of Sphericity**

This test is carried out to determine the value of the adequacy of the sample. The KMO test value of less than

0.5 indicates that the factor analysis technique cannot be continued. Other variables cannot explain the correlation between variables and the factor analysis becomes inaccurate (Bang et al, 2019).

## Table 3. Classification of KMO Values

|  |  |
| --- | --- |
| **KMO size** | **Value** |
| ≥0.90 | Very well |
| ≥0,80 – 0,90 | Well |
| ≥0,70 – 0,80 | Moderate |
| ≥0,60 – 0,70 | Enough |
| ≥0,50 – 0,60 | Not enough |
| ≤0,50 | Rejected |

The Barlett Test of Sphericity was used to test the null hypothesis regarding the absence of correlation between variables in the population. The population of the correlation matrix is the identity matrix. Then the Spherecity Test will be carried out because of the chi-square transformation of the determinants of the correlation matrix. The null hypothesis will usually be rejected because of the large value for statistical tests to correlate the variables in the population. The Barlett Test of Sphericity will use the following formula:



*Barlett Test* = - ln

*R*  *n* 1 

2 *p*  5 

# 

Explanation:

lRl = Determinant Value

n = Amount of data

p = Number of Variabless

#  6 

341

The results of the calculation of the KMO value from the factors that influence the policy of handling slum settlements in Ciamis Regency are carried out in each aspect and carried out two times analysis because it follows other test requirements. The following is a table of KMO output and Bartlett's Test policies for handling slum areas in Ciamis Regency:

## Table 4. KMO and Bartlett's Test scores

342

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **KMO and Barlett’s Test** | **Aspect 1** | **Aspect 2** | **Aspect 3** | **Aspect 4** | **Aspect 5** | **Aspect 6** |
| KMO Measure of Sampling Adequacy | .680 | .674 | .681 | .812 | .791 | .670 |
| Bartlett’s Test of Sphericity | Approx. Chi- Square | 103.897 | 196.199 | 198.117 | 171.332 | 108.812 | 105.245 |
| Df | 36 | 78 | 66 | 45 | 36 |  |
| Sig. | .000 | .000 | .000 | .000 | .000 | .000 |

It can be seen from Table 4 that the value of Keiser-Meyer Olkin (KMO) is between .670 to .812, which means that the KMO value is > 0.50 or is sufficient and moderate. This means that the variables used can be continued in the following factor analysis process. Meanwhile, from the Bartlett Test of Sphericity value results, it has a significant value of 0.000. It can then be concluded that this value can meet the requirements for factor analysis because its significance has a value requirement below 0.05 (5%).

## Measure of Sampling Adequacy (MSA) Test dan Communalities

Factor analysis will provide the results of the transformation of 13 variables divided into each aspect which is expected to be considered for its influence on slum settlement policies in Ciamis Regency. Each factor is a linear combination of the original variables and can be formulated in a model:

**a, Fi = Wi1Xi + Wi2Xi + Wi3X3 +…+ Wik**

In this case the value of Fi = score of the i-th factor (i = 1,2,3...,13) and k = number of variables = 13 Furthermore, the Measure of Sampling Adequacy (MSA) test will be carried out to determine various variables

appropriate for factor analysis in the correlation matrix, which can be seen in the Anti-image Matrices table (Sophian et al, 2021). In making the assessment, the number marked 'a' will form a diagonal line. If the MSA value of the figure is <0.5, then the factor is not appropriate to be continued into the analysis. Meanwhile, if the MSA value found is > 0.5, then the factor analysis is relevant to data analysis in the form of a correlation matrix. The calculation of the MSA number will give the result of the MSA value in the form of 0 to 1 if:

1. MSA = 1, meaning that other variables can predict this variable without any errors
2. MSA > 0.5, meaning that this variable can still be further predicted and analyzed
3. MSA < 0.5, meaning that this variable is excluded by other variables or cannot be analyzed and predicted further

## Factor Extraction

Through the Principal Component Analysis (PCA) technique, the data will then be extracted in factor analysis to determine the minimum number of factors by calculating the maximum variance in the data. PCA in the form of a diagonal correlation matrix will be considered, with each element as much as 1 (Schreiber, 2021).

Each factor can explain differences with different totals. The first factor can explain higher than the second factor. The second factor can explain higher than the third factor and so on. Through consideration of the eigenvalues in each factor, the number of factors can be determined. The sum of the total variances that each factor can explain is an eigenvalue with a cumulative variance percentage of at least 60%.

In this factor analysis, the result of factor extraction used is the fourth extraction process because the results already meet the requirements for KMO values, Bartlett's Test, MSA, communality and have cumulative diversity > 60%. Theoretically, the variables analyzed in this study have been grouped into various factors, but to carry out the subsequent interpretation and analysis will be based on statistical analysis results through PCA techniques. Through this technique, to choose a core factor that can represent a group of variables, it is the one that has an eigenvalue of at least 1.00 (one). The results of the third stage of the diversity of factors based on the process analysis results are extraction,

which selects the factors with the minimum eigenvalues. Meanwhile, the set eigenvalue is more than 1, thus causing a value less than 1 to fall. Therefore, the eigenvalues > 1 in the table above is indicated by factors with high total diversity.

In addition, the determination of the number of factors formed will also be based on the results of the variety of factors that are more than 60%. This is because the value of 60% is considered to represent the dominant relationship.

343

## Interpretation of Factors Influencing Policies for Handling Slum Areas in Ciamis District

Based on the results of the extraction and rotation of factors in Ciamis Regency, it was found that factors that could influence slum areas in Ciamis Regency were as follows:

1. Define the problem produce six variables that affect the handling policy in the form of past conditions; limited time in office so that there are differences in perception; limited human resources in problem identification; the limitations of the Institution regarding the rotation and transfer of officials; limited funding related to APBD; and limited technical capacity of planning
2. Determine evaluation criteria produce six variables that influence the handling policy in the form of environmental intervention; value preferences; limited time; limited human resources; institutional limitations; and limited technical ability
3. Identify alternative policies produce five variables that influence the handling policy in the form of the personal characteristics of the policymaker; limited time, budget, and position; limited human resources; institutional limitations; and limited technical ability.
4. Evaluative alternative policies produce eight variables that influence the handling policy in the form of environmental intervention; old habits; personal traits or sectoral ego; past circumstances or experiences; limited time budget and leadership positions; limited human resources; institutional limitations; limited technical ability.
5. Select preferred policy produce seven variables that influence the handling policy in the form of intervention of external pressures; social-environmental intervention; the personal characteristics of the elected policymakers; limited time budget and position; limited human resources; institutional limitations; and limited technical ability.
6. Implement the preferred policy produce four variables that influence the handling policy in the form of social environment intervention; the objectives to be achieved are determined through the implementation of policies; thematic development goals to be achieved; and limited human resources in education experience and specific positions.

## SWOT Analysis Public Policy Formulation for Handling Slum Areas in Ciamis District

SWOT analysis will interpret problems and potentials related to the handling of slum areas in the Ciamis Regency based on the previous analysis. Based on the SWOT analysis results above, it can be seen that the handling of slum areas in Ciamis Regency is an Aggressive Maintenance Strategy, where object managers carry out aggressive and active development. Concepts that can be applied to the Comprehensive Rational Model for Handling Slums in Ciamis Regency in the Perspective of the Study of Public Policy Formulation include:

1. Integration of central government policies with local governments in handling slum areas in Ciamis Regency, such as integrating existing slum management policies with (RP3KP and RP2KPKP) with the central government's slum management policies, so that the handling of slums can take advantage of the APBN budget;
2. Forming and activating a working group for handling slum areas consisting of technical institutions (OPD) in the policy-making process, starting from problem identification to selecting policies that are appropriate to the problems of slum areas in Ciamis Regency;
3. Develop thematic policies that can accommodate supporting policies in handling slum areas so that existing policies are not partial;
4. Policies that are formulated based on the needs of the community and without the influence of political interests;
5. Involvement of the community (working group) in the policy-making process from problem identification to policy selection;
6. Improving the quality of human resources and technical capabilities of each policymaker of each Technical OPD in the preparation and selection of policies for handling slum areas;
7. Controlling policies that can already be implemented and involving community groups with thematic planning that can support the community's economy.

344

## CONCLUSION

The research results above show that the results for the formulation of policies for handling slum areas in Kab. Ciamis empirically has not been fully accommodated in district government policies. However, based on empirical data, research results can be revealed that from an academic perspective, a comprehensive rational model in the formulation of policies for handling slum areas is determined by: define the problem, determining evaluation criteria, identifying alternative policies, alternative evaluative policies, selecting preferred policy, and implement the preferred policy.

Based on the results of the SWOT analysis in this study, it was found that in the formulation of policies for handling slum areas in Ciamis Regency, an Aggressive Maintenance Strategy was needed by integrating central government policies with local governments; Forming and activating Pokja for taking slum areas; Develop thematic policies that can accommodate supporting policies; Policies developed based on community needs, community involvement (working groups); Improving the quality of human resources and technical capabilities of each policymaker of each Technical OPD; Controlling policies that can already be implemented and involve community groups. Based on the research and discussion results, the researcher found a new concept related to the formulation of policies for handling slum areas in the Ciamis Regency. The idea that the researchers found (novelty) in this study is the need for a thematic determination stage in the formulation of policies for handling slum areas in the Ciamis Regency.

## REFERENCES

Abdel-Basset, M., Gamal, A., Chakrabortty, R. K., & Ryan, M. (2021). A new hybrid multi-criteria decision-making approach for location selection of sustainable offshore wind energy stations: A case study. *Journal of Cleaner Production*, *280*, 124462.

Bang, J. Y., Kirtane, S., Krall, K., Navaneethan, U., Hasan, M., Hawes, R., & Varadarajulu, S. (2019). In memoriam: Fine‐needle aspiration, birth: Fine‐needle biopsy: The changing trend in endoscopic ultrasound‐guided tissue acquisition. *Digestive Endoscopy*, *31*(2), 197-202.

Christensen, T., & Lægreid, P. (2020). Balancing governance capacity and legitimacy: how the Norwegian government

handled the COVID‐19 crisis as a high performer. *Public Administration Review*, *80*(5), 774-779.

Dale, A., Vella, K., Ryan, S., Broderick, K., Hill, R., Potts, R., & Brewer, T. (2020). Governing community-based natural resource management in Australia: International Implications. *Land*, *9*(7), 234.

de León-Martínez, L. D., Palacios-Ramírez, A., Rodriguez-Aguilar, M., & Flores-Ramírez, R. (2020). Critical review of social, environmental and health risk factors in the Mexican indigenous population and their capacity to respond to the COVID-19. *Science of The Total Environment*, *733*, 139357.

Dear, M. J., & Wolch, J. R. (2014). *Landscapes of despair*. Princeton University Press.

Effendy, L., Pradiana, W., & Rahmawati, R. (2020). The Model of Rural Youth Empowerment through Red Chili Farming in Sindangkasih Sub-district of Ciamis, Indonesia. *The International Journal of Science & Technology*, *8*(6).

Farizkha, I. A., Koesoemawati, R. D., Suprobo, R. A., Listyawati, R. N., & Hayati, N. N. (2019, October). Urban settlement growth factors through ekistics element approach (Case study: Jember City). In *IOP Conference Series: Earth and Environmental Science* (Vol. 340, No. 1, p. 012024). IOP Publishing.

Freeman, W. J. (2014). *Societies of brains: A study in the neuroscience of love and hate*. Psychology Press.

Gelbman, A. (2021). Seaside hotel location and environmental impact: land use dilemmas. *Journal of Tourism and Cultural Change*, 1-21.

George, B., & Pandey, S. K. (2017). We know the Yin—But where is the Yang? Toward a balanced approach on common source bias in public administration scholarship. *Review of public personnel administration*, *37*(2), 245-270.

Güzey, Ö. (2016). The last round in restructuring the city: Urban regeneration becomes a state policy of disaster prevention in Turkey. *Cities*, *50*, 40-53.

Haynes, A., Garvey, K., Davidson, S., & Milat, A. (2020). What can policymakers get out of systems thinking? Policy partners' experiences of a systems-focused research collaboration in preventive health. *International journal of health policy and management*, *9*(2), 65.

Hlaváček, P., Kopáček, M., & Horáčková, L. (2019). Impact of Suburbanization on Sustainable Development of Settlements in Suburban Spaces: Smart and New Solutions. *Sustainability*, *11*(24), 7182.

345

Iammarino, S., Rodríguez-Pose, A., & Storper, M. (2019). Regional inequality in Europe: evidence, theory and policy implications. *Journal of economic geography*, *19*(2), 273-298.

Iban, M. C. (2020). Lessons from approaches to informal housing and non-compliant development in Turkey: An in-depth policy analysis with a historical framework. *Land Use Policy*, *99*, 105104.

Iizuka, M., & Hane, G. (2021). Towards attaining the SDGs: cases of disruptive and inclusive innovations. *Innovation and Development*, 1-22.

Janjevic, M., Knoppen, D., & Winkenbach, M. (2019). Integrated decision-making framework for urban freight logistics policy-making. *Transportation Research Part D: Transport and Environment*, *72*, 333-357.

Jones, P. (2017). Formalizing the informal: Understanding the position of informal settlements and slums in sustainable urbanization policies and strategies in Bandung, Indonesia. *Sustainability*, *9*(8), 1436.

Koven, S. G. (2021). *Entrepreneurship and Economic Development: The People and Their Environment*. Rowman & Littlefield.

Lo, K., & Broto, V. C. (2019). Co-benefits, contradictions, and multi-level governance of low-carbon experimentation: Leveraging solar energy for sustainable development in China. *Global Environmental Change*, *59*, 101993.

Martin, E. W., Harmon, T. S., Hopkins, J. B., Chakravarthy, S., Incicco, J. J., Schuck, P., ... & Mittag, T. (2021). A multi-step nucleation process determines the kinetics of prion-like domain phase separation. *Nature communications*, *12*(1), 1-12.

Mu, R. (2018). Bounded rationality in the developmental trajectory of environmental target policy in China, 1972– 2016. *Sustainability*, *10*(1), 199.

Nurcholis, L. (2020). How to improve internationalization strategy based on market characteristics, culture understanding, and knowledge management: the mediating effect of management behavior. *Journal of the Knowledge Economy*, 1-24.

Oliva, F. L., & Kotabe, M. (2019). Barriers, practices, methods and knowledge management tools in startups. *Journal of knowledge management*.

Pramadi, Y., Hananto, P. M., Fathy, R., Rachmawan, D., & Rabbani, H. (2020). Community Participation, Sustainable Development and Slum Settlements in Jakarta.

PrawiraW, R., Maulida, H., & Achmad, W. (2021). Narrating the Implementation of Social Welfare Community Program. *Review of International Geographical Education Online*, *11*(5), 228-235.

Rustam, Z., Yaurita, F., & Segovia-Vergas, M. J. (2019). Application of fuzzy kernel robust clustering for evaluating the internationalization success of companies. In *Business Innovation and Development in Emerging Economies* (pp. 568-597). CRC Press.

Sarker, M. S. H. (2021). Assessing levels of migrant-friendliness in the context of vulnerability to climate variability, change and environmental hazard: A comparison of two different-sized cities. *International Journal of Disaster Risk Reduction*, 102525.

Schreiber, J. B. (2021). Issues and recommendations for exploratory factor analysis and principal component analysis. *Research in Social and Administrative Pharmacy*, *17*(5), 1004-1011.

Skačkauskienė, I., & Katinienė, A. (2017). Possibilities to evaluate employee knowledge as a component of knowledge synergy at organization. *Journal of Management*, (1), 30.

Soewarno, N., & Nugroho, D. A. (2021). Influence of CEO Characteristics to Firm Performance with CSR as A Mediation Variable. *Review of International Geographical Education Online*, *11*(4), 216-233.

Sophian, A., ABINAWANTO, A., NISA, U. C., & FADHILLAH, F. (2021). Morphometric analysis of Gorontalo (Indonesia) native chickens from six different regions. *Biodiversitas Journal of Biological Diversity*, *22*(4).

Soreg, K., & Bermudez-Gonzalez, G. (2021). Measuring the Socioeconomic Development of Selected Balkan Countries and Hungary: A Comparative Analysis for Sustainable Growth. *Sustainability*, *13*(2), 736.

Surya, B., Saleh, H., Suriani, S., Sakti, H. H., Hadijah, H., & Idris, M. (2020). Environmental pollution control and sustainability management of slum settlements in Makassar City, South Sulawesi, Indonesia. *Land*, *9*(9), 279.

Surya, B., Syafri, S., Sahban, H., & Sakti, H. H. (2020). Natural resource conservation based on community economic empowerment: Perspectives on watershed management and slum settlements in Makassar City, South Sulawesi, Indonesia. *Land*, *9*(4), 104.

346

Tawse, A., & Tabesh, P. (2021). Strategy implementation: A review and an introductory framework. *European Management Journal*, *39*(1), 22-33.

Wolf, J., Hunter, P. R., Freeman, M. C., Cumming, O., Clasen, T., Bartram, J., ... & Prüss‐Ustün, A. (2018). Impact of drinking water, sanitation and handwashing with soap on childhood diarrhoeal disease: updated meta‐analysis and meta‐ regression. *Tropical medicine & international health*, *23*(5), 508-525.

Wolf, J., Johnston, R., Hunter, P. R., Gordon, B., Medlicott, K., & Prüss-Ustün, A. (2019). A Faecal Contamination Index for interpreting heterogeneous diarrhoea impacts of water, sanitation and hygiene interventions and overall, regional and country estimates of community sanitation coverage with a focus on low-and middle-income countries. *International journal of hygiene and environmental health*, *222*(2), 270-282.

Yustikasari, Y., Gemiharto, I., & Ayuningtyas, F. (2021, July). The Development of Communication Model for the Empowerment of Highly Poor Villages in Pangandaran Regency, West Java, Indonesia. In *IOP Conference Series: Earth and Environmental Science* (Vol. 819, No. 1, p. 012038). IOP Publishing.