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## Critical factors in local food development policies, farming, and coping mechanisms mothers with stunting children in Jember

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**Abstract.** Jember Regency has the potential of local food diversity that has not been optimally utilized in stunting recovery. Local institutions have also not fully contributed optimal roles in rural mothers with stunting children. The research aims to determine key policy factors for local food development, farming, and coping mechanisms in mothers with stunting children. Adequate policies, especially in utilizing cheap and easily obtain nutritious local food sources, are expected to facilitate effective stunting recovery efforts. This research method uses quantitative and qualitative approaches. Description of local food sources and their processing, demographics, and maternal behavior, is carried out through focus group discussion activities involving key stakeholders. Furthermore, modeling is carried out based on key factors or elements with interpretative structural modeling methods. The study's findings suggest that increasing maternal knowledge of local food and nutritional content and health aspects is a crucial policy factor. Systematically these key factors need to be supported by strengthening maternal health in decision-making in the household, handling maternal health detection, maternal skills to process food, and maternal skills to choose food according to family needs. Policy implementation requires formal and informal institutional support that exists in the countryside.

### 1. Introduction

Jember Regency in 2021 became the district with the highest stunting cases in East Java at 37.94% more above the national average [1]. This condition requires handling so that the problem of stunting can be minimized or eliminated. Efforts to overcome these conditions require good cooperation between the mother's family and stunting children, rural institutions, and the government.

Family efforts in the recovery of stunting in Jember are increasingly under pressure during the Covid19 pandemic. This condition is also coupled with the background of poverty from children with stunting families. Poverty causes an influence on the ability to provide food, including getting food choices that are worth taking from the aspects of nutrition and health. Minimal food causes families to share food, including children [2].

Knowledge of personal hygiene, education, and the role of local institutions contribute to the mother's internal empowerment [3]. The quality of health policies and services in village funds that are supposed to prevent stunting overlaps its utilization with Covid19 countermeasures. Posyandu is often constrained by "Kader" (social facilitator/worker in villages) capacity and access to homes [2]. It was assisting efforts that have been implemented through government programs to tend Supplemental Feeding



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Recovery from the Health Center. Efforts to utilize local food have not been optimal. At the same time, integrated agricultural management can provide adequate, sustainable, and local food used by residents [4].

Stunting children need recovery efforts by increasing the intake of macro and micronutrients and overall nutrients that are important in their body development. Food diversity is not optimal. Rice processed into rice is still seen as the primary food even though the price is relatively high [5]. Interrelationships between rural and institutional components related to dealing with stunting require an effort to determine the objectives of developing how policies regarding food access and processing, agricultural patterns, and coping mechanisms from mothers to stunting children. The proper goal provides direction so that the activity can be maximally and effectively towards the prepared achievements. Based on these considerations, the study aims to determine key factors in local food development policies, agriculture, and coping mechanisms in mothers with stunting children related to the goals set in program development. Structural goal setting will facilitate the implementation of strategies in activities.

## 2. Method

Maternal empowerment becomes vital by considering the overall dimensions that affect the role of the mother in stunting recovery. The design and determination of maternal empowerment goals need to be done by identifying and structuring the needs and factors of their empowerment. The research uses quantitative and qualitative approaches. The implementation of a study conducted in the highest stunting sub-districts included: Silo, Jelbuk, Wuluhan, and panti, Jember district. In unstructured interviews, descriptive quantitative methods and survey techniques are used to obtain maternal characteristics and behavior in stunting recovery. Maternal respondents were determined by purposive based on stunting children at each selected location. Based on literature studies and interviews, set elements and sub-elements of goals focused on empowering mothers with stunting children. Evaluation and measurement of comparisons between sub-elements of empowerment using are carried out with experts and key stakeholders using intellectual judgment in this interpretive Structural Modelling (ISM) [6] [7], covering related agencies, health experts, local institutions, village facilitators, and academics. Based on the assessment of experts set the critical factors of maternal empowerment goals with stunting children.

## 3. Result and discussion

### 3.1. Factors of empowerment goals

The development of policy cannot be separated from analyzing a condition and properly identifying the problems or constraints around the development. Policy development should consider the aspects of the main actors who will be affected and what is faced by the parties or stakeholders to develop certain conditions [8].

In efforts to develop alternative goals for the empowerment of mothers with stunting children, the purpose of the plans is evident in this activity. What main activities can be designed to arrange the actions that need and are highly considered?. Serious efforts to understand key goals and activities in local food development, including stunting, are prioritized.

Based on literature studies, discussions with the public through Focus Group Discussion and interviews with experts and researchers can be outlined several sub-elements that affect the development of maternal and community empowerment for stunting recovery. In the objective element of program development, thirteen (13) sub-elements have a relationship. Furthermore, based on the justification of experts, by obtaining geometric averages obtained sub-elements that have relatedness and that have relevance to the development of mother and community empowerment in stunting recovery. The sub-elements associated with the development of maternal and community empowerment are: Increase maternal knowledge of nutrition and health, Improve the mother's skills to choose food according to family needs, Improve the mother's skills to process food, Increase the active role of mothers in health empowerment activities, Increase maternal empowerment in decision-making in child care, Increase

marketing of creations or efforts of mothers, Develop businesses or entrepreneurship that improve the welfare of mothers and families, Improving maternal and family income and well-being, driving rural communities' economies, developing diversification of food products, increasing local food added value, improving detection management in mothers with stunting children, and strengthening institutional health performance in facilitating mother and child.

### 3.2. Driving Power and Level of Independence between Factors

Based on these interrelated factors are arranged to perform an analysis of selected sub-elements or factors. Table 1. Displays sub-elements that are interconnected and influence each other on the goals of empowerment development programs.

**Table 1.** Program Objective Selected Elements and Sub-Elements

Element Code	Sub-Elements
E1	Increase the mother's knowledge of nutrition and health.
E2	Improving the mother's skills to choose food according to the needs of the family.
E3	Improve the mother's skills to process food.
E4	Increase the active role of the mother in health empowerment activities.
E5	Increases the mother's help in decision-making in childcare.
E6	Increase the marketing of the creations or efforts of mothers.
E7	Develop a business or entrepreneurship that increases the well-being of mothers and families.
E8	Increase the income and well-being of mothers and families.
E9	Driving the economy of rural communities.
E10	Develop diversification of food products.
E11	Increase national food added value.
E12	Improve detection handling in mothers with stunting children.
E13	Strengthen institutional health performance in facilitating mother and child.

Based on the determination and assessment of experts to prepare contextual relationships by modeling objectives using structural self Interaction matrix (SSIM). Next, the process of converting SSIM to Reachability Matrix (RM). Based on the results of RM data analysis, it can be known that the sub-element code (E1) increases maternal knowledge of nutrition and health has the highest Driver Power value of 8. This shows that increasing maternal knowledge of nutrition and health is the most vital driving factor in stunting recovery efforts by developing coping mechanisms and local food resources during the pandemic in Jember Regency. Increasing maternal knowledge of nutrition and health needs to be prioritized because this element will significantly impact stunting recovery by developing coping mechanisms and local food resources during the pandemic in the Jember regency.

Sub-elements Of Driving the economy of rural communities (E9) and Developing food product diversification (E10) Increase national food added value (E11) has the lowest driver power value of 1. This shows that driving the economy of rural communities, developing diversification of food products, increasing national food added value is the weakest driving factor in stunting recovery efforts by developing coping mechanisms and local food resources during the pandemic in Jember Regency. So that if this element is considered in this case, it does not have a considerable impact in stunting recovery



efforts through the development of coping mechanisms and local food resources during the pandemic in Jember Regency.

In addition, when viewed from the dependency factor (dependence), it can be known that driving the economy of rural communities (E9), developing diversification of food products (E10) has the highest value (dependence) of 11, this shows that driving the economy of rural communities and developing diversification of food products is a factor that has a high level of dependency, so that in efforts to restore stunting through the development of mechanism coping and local food resources during the pandemic in Jember Regency. This element is highly dependent on other factors and is easily influenced by other factors.

While increasing the mother's help in decision-making in childcare (E5) has a low dependence of 1. This indicates that increasing maternal empowerment in childcare decision-making is a factor with the lowest dependency value. So that in the efforts of stunting recovery through the development of coping mechanisms and local food resources during the pandemic in Jember Regency, this element is not dependent on other parts and is not easily influenced by other factors.

Furthermore, based on the MICMAC analysis, the Program Objective Selected Elements can be seen in figure 1.

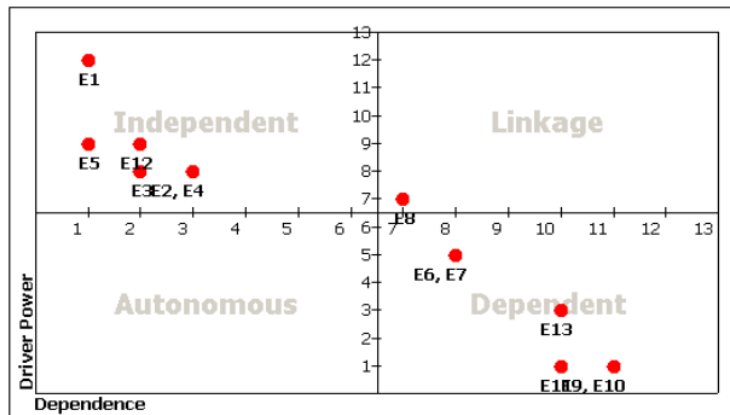


Figure 1. Sub-Element Sector Graph (MICMAC Analysis)

Based on MICMAC (Matrix of Impact Cross Multiplication Applied to Classification) analysis, it is known that none of the sub-elements are in quadrant I (autonomous quadrant). This condition indicates that none of the elements have weak driving power and dependence. All aspects of the analysis have a connection with each other.

In sector II (dependence) 5 elements include: E6, E7, E9, E10, and E11. This indicates that these elements are elements that have weak driving power and strong dependency. One element is among sector III linkage, namely E8 Increases the income and welfare of mothers and families. This variable has strong driving power and dependence, so it should be studied more carefully. In sector IV (Independence), elements include E1, E2, E3, E4, and E5. This indicates that the element has a strong driving power and weak dependence on other elements. So that these elements can become (key players) key elements in stunting recovery efforts through the development of coping mechanisms and local food resources during the pandemic in Jember Regency. Based on MICMAC analysis can be compiled structural model of program objectives as shown in figure 2.

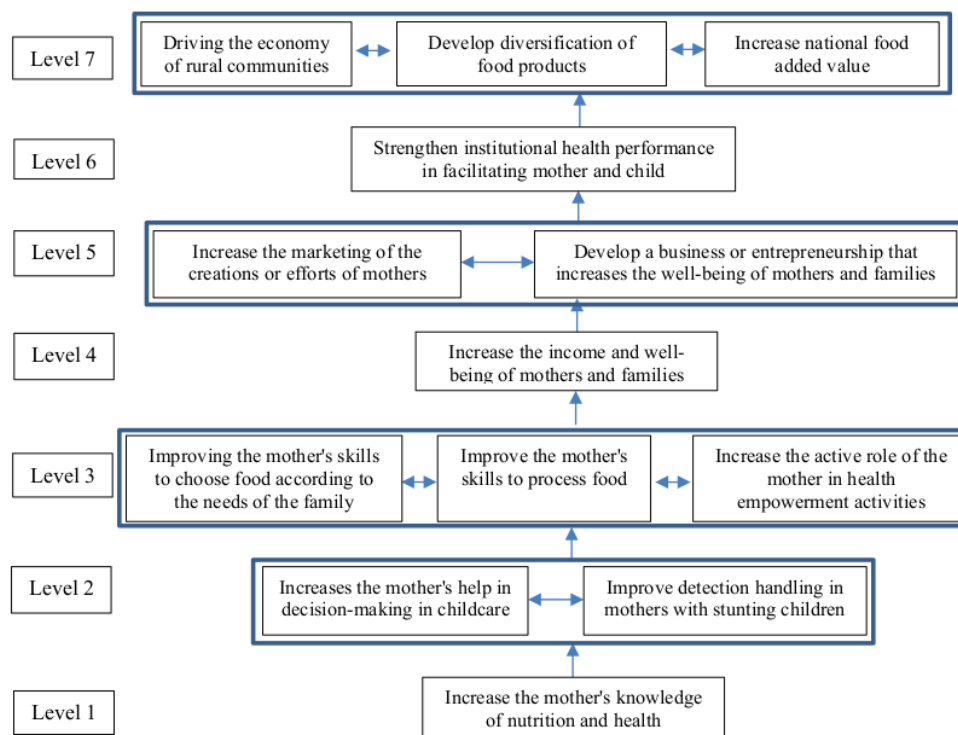
Based on Digraph's analysis in figure 2, there are seven levels of a hierarchy consisting of Sub-Elements Selected Program Goals in stunting recovery efforts. The levels obtained come from the

ranking of each element. This level indicates the priority structure of the strategy. The network formed informs the interrelationships between sub-element and their level of influence.

At the first level, one element increases the mother's knowledge of nutrition and health (E1). It is a crucial element that affects aspects of the above class. This indicates that the element must be prioritized first because the element is a priority element of improvement at the level afterward. In this case, increasing maternal knowledge of nutrition and health is an element that must be prioritized in stunting recovery efforts by developing coping mechanisms and local food resources during the pandemic in Jember Regency.

A second level, there are two elements: Increasing maternal empowerment in decision-making in childcare (E5), Improving detection handling in mothers with stunting children (E12). This shows that if the element at level 1 increases maternal knowledge of nutrition and health has been going well, then the aspects at this level will run well in stunting recovery efforts through the development of coping mechanisms and local food resources during the pandemic in Jember Regency.

At the Third level, there are three elements, among others: Improving the Mother's Skills to choose food according to family needs (E2), Improving the mother's skills to process food (E3), and Increasing the active role of mothers in health empowerment activities (E4). The mother's understanding of food sources also requires facilitation to be changed, not just rice. Some corn commodities are essential [9] but often not utilized.



**Figure 2.** Digraph Program Development Objectives

Further, At the fourth level, there is one element of the program's goal of increasing the income and well-being of mothers and families (E8). In the fifth level, there are two elements: expanding the marketing of the creation or efforts of mothers (E6) and developing businesses or entrepreneurship that increase the welfare of mothers and families (E7). Structurally Sixth level, there is one element that strengthens the institutional performance of health in facilitating mother and child (E13). At the seventh level, there are three elements, namely Driving the economy of rural communities (E9), developing diversification of food products (E10), and increasing national food added value (E11).

Thus, increasing the mother's knowledge of nutrition and health is a crucial factor influencing other factors or elements in developing maternal empowerment programs with stunting children. Knowledge-related reinforcement requires counseling based on the proper scope of facts [10] and is based on the issue of maternal understanding. The following key factor is increasing maternal empowerment in decision-making in childcare and improving detection handling in mothers with stunting children. The three elements are crucial in the development of programs that boil down to the mother's empowerment in terms of individual behavior, parenting and family support skills, and facilitation of space for mothers to synergize to participate in the decision-making process in terms of childcare and family food development and management.

#### 4. Conclusion

This study can conclude three things; namely, increasing maternal knowledge of nutrition and health is a crucial factor that should be the primary goal in maternal empowerment. Furthermore, increased knowledge must be supported by increasing maternal empowerment in decision-making in childcare and improving the handling of detection in mothers with stunting children. Motherhood represents the ability of individuals with knowledge, attitudes, and skills towards the management of nutrition and health, as well as their ability to make decisions in domestic and public spaces.

#### 5. Acknowledgments

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