Measuring the Level of Prevalence of Undernourishment (PoU): Analysis of SDGs Achievement in Indonesia

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ABSTRACT: Prevalence of Undernourishment (PoU) is an indicator that measures the achievement of Sustainable Development Goal's 2nd goal. Empirical evidence shows that in 2018-2022) Indonesia's PoU continued to increase. Therefore, this study aims to determine factors that influence the level of PoU in Indonesia through food expectations, producer price index, food security budget, community purchasing power, and social assistance in the food sector. The novelty of this study is trying to trace the relationship between those variables towards Indonesia's PoU. To achieve this goal, multiple regression analysis was used with secondary data. The results show that the producer price index, food security budget, and community purchasing power had a significant effect on Indonesia's PoU level. Meanwhile, food expectations and social assistance did not have a significant effect on Indonesia's PoU level. This study implies that the government needs to evaluate various food security programs to maximize the reduction of Indonesia's PoU.

Keywords: Village Funds, Education Funds, Health Funds, Poverty, Eastern Indonesia

ABSTRAK: Prevalence of Undernourishment (PoU) merupakan indikator yang mengukur pencapaian tujuan ke-2 Sustainable Development Goals (SDGs). Bukti empiris menunjukkan bahwa antara tahun 2018-2022 prevalensi gizi kurang (PoU) di Indonesia terus meningkat. Oleh karena itu, penelitian ini bertujuan untuk mengetahui faktor-faktor yang mempengaruhi tingkat Prevalence of Undernourishment (PoU) di Indonesia melalui ekspektasi pangan, indeks harga produsen, anggaran ketahanan pangan, daya beli masyarakat dan bantuan sosial di bidang pangan. Kebaruan dari penelitian ini adalah mencoba menelusur relasi dimensi kualitas pangan, kebijakan fiskal, kebijakan harga dan daya beli masyarakat terhadap PoU Indonesia. Untuk mencapai tujuan tersebut digunakan analisis regresi berganda dengan data sekunder. Hasil penelitian menunjukkan bahwa indeks harga produsen, anggaran ketahanan pangan dan daya beli masyarakat berpengaruh signifikan terhadap tingkat PoU Indonesia. Sedangkan ekspektasi pangan dan bansos bidang pangan tidak berpengaruh signifikan terhadap tingkat PoU Indonesia. Implikasi dari penelitian ini, pemerintah perlu mengevaluasi berbagai program ketahanan pangan guna memaksimalkan penurunan indikator PoU Indonesia.

Kata Kunci: Prevalensi Kurang Gizi, Tujuan Pembangunan Berkelanjutan, Ketahanan Pangan

INTRODUCTION

Indonesia is faced with the problem of the prevalence of undernourishment (PoU) which continues to increase from year to year. Even though Indonesia is an agricultural country, it is unable to guarantee the availability of food supplies and people's access to nutritious food products. In the last five years, the prevalence of undernourishment (PoU) has increased from 7.92 percent in 2018 to 10.21 percent in 2022 (Central Bureau of Statistics Indonesia, 2022). This confirms that the handling of malnutrition in Indonesia is getting worse. Since being set in September 2015, the Sustainable Development Goals (SDGs) have become a global development agenda implemented by all countries in the world, including Indonesia. Efforts to achieve the Sustainable Development Goals (SDGs) targets are a national priority which are integrated into the 2015-2019 and 2020-2024 National Medium Term Development Plans (RPJMN). The Sustainable Development Goals (SDGs) are an effort to realize social welfare which is poured into seventeen goals, namely no poverty; without hunger; healthy and prosperous life; quality education; gender equality; clean water and proper sanitation; clean and affordable energy; decent work and economic growth; industry, innovation and infrastructure; reduced gaps; sustainable cities and settlements; responsible consumption and production; handling climate change; ocean ecosystem; terrestrial ecosystems; peace, justice and strong institutions; and partnerships to achieve goals (Bappenas, 2020)

Eliminating hunger, achieving food security and good nutrition and promoting sustainable agriculture is the second goal of the Sustainable Development Goals (SDGs). One of the targets of this goal is that by 2030, it is hoped that there will be no more people who feel hungry worldwide and that all people can access safe, nutritious and sufficient food all year round. One of the indicators used to measure the achievement of these goals is through the prevalence rate of food consumption insufficiency (Prevalence of Undernourishment). The Central Bureau of Statistics (BPS) defines the prevalence of insufficient food consumption or the Prevalence of Undernourishment (PoU) as an estimate of the proportion of a certain population, where consumption is insufficient to meet the energy level required for a normal, active and healthy life.

Or simply, Prevalence of Undernourishment is a condition when the number of calories consumed is below the minimum requirements (Mardison, 2020). This indicator is used to measure the target of eliminating hunger globally because it is considered capable of measuring the condition of food shortages in a large number of populations. As a country with a large population and a large area, food security is an important agenda in Indonesia's development. Food is the most important basic human need and its fulfillment is part of the human rights guaranteed in the 1945 Constitution of the Republic of Indonesia. Food is one of the basic components for creating quality human resources. The quality of food consumption contributes greatly since the baby is in the womb. If food consumption intake does not meet nutritional adequacy standards, it can have an impact on the formation and growth and development of one's intelligence and physique (Saliem, 2021). Therefore, the state is obliged to realize the availability, affordability, and fulfillment of sufficient, safe, quality, and nutritionally balanced food consumption, both at the national and regional to individual levels, evenly throughout the territory of the Unitary State of the Republic of Indonesia.

Basically, Indonesia has the advantage of being an agricultural country in being able to provide large amounts of food supply to encourage the creation of national food security. However, in reality this condition does not necessarily mean that all Indonesian people can access food easily. The prevalence of undernourishment (PoU) is an indicator that can describe changes in the availability of food and the ability of households to access food at different socio-economic levels as well as at the national and sub-national levels.

As a whole in the seven year period from 2013-2019 the Prevalence of Undernourishment (PoU) in Indonesia has continued to decline from year to year. However, in the last three years, from 2020-2022, the prevalence of undernourishment (PoU) has continued to increase from year to year. In 2020 the Prevalence of Undernourishment (PoU) in Indonesia has increased by 0.71 percent from the previous year. Thus, the prevalence of insufficient food consumption in Indonesia in 2020 will reach 8.34 percent. This increase will continue until 2022 and touch 10.21 percent or an increase of 1.72 percent from the previous year (Central Bureau of Statistics Indonesia, 2022). The increasing

prevalence rate of insufficient food consumption indicates an increase in the percentage of the population consuming food but not meeting the energy requirements needed to live a normal, active and healthy life. The prevalence of insufficient food consumption in Indonesia, which has continued to increase over the last three years, is a challenge for Indonesia, especially in realizing the second goal, namely no hunger on the Sustainable Development Goals (SDGs) agenda.

Table 1. Prevalence of Undernourishment (PoU) Indonesia Tahun 2011-2022

Year	Prevalence of Undernourishment (%)
2011	21,69
2012	24,82
2013	24,70
2014	22,37
2015	20,49
2016	17,92
2017	8,23
2018	7,92
2019	7,63
2020	8,34
2021	8,49
2022	10,21

Source: Central Bureau of Statistics Indonesia, (2022).

The increase in the prevalence rate of insufficient food consumption can be categorized as a problem of food security in Indonesia. Law Number 18 of 2012 concerning Food defines food security as a condition of fulfilling food for the state down to individuals which is reflected in the availability of sufficient food, both in quantity and quality, safe, diverse, nutritious, equitable and affordable to be able to live a healthy, active and productive in a sustainable manner. Based on data from the Global Food Security Index (GFCI), Indonesia's food security in 2021 is ranked 69th out of 113 countries. This position has decreased from 2020 which was ranked 65th. With this position on a Southeast Asian scale, Indonesia is still under Singapore, Thailand, Malaysia, the Philippines and Vietnam (Central Bureau of Statistics Indonesia, 2022).

The success of a nation is determined by the availability of quality human resources, namely having a strong physique, strong mentality, excellent health and intelligence. Efforts to achieve quality Indonesian human beings are closely related to food and nutrition factors. Fulfillment of food adequacy can be reflected in the level of attainment of food provided and consumed in relation to the amount of food and nutrition available, its quality and variety. The inability to meet food needs in the household, especially for pregnant women and children under five, will result in malnutrition which results in the birth of a young generation who are not qualified.

The Indonesian government must be able to formulate a national food policy that can improve food security. The food policy includes the availability of food supplies and affordability of food prices by the public that are safe for consumption (Salasa, 2021). Basically, good food consumption is shown in terms of good food quantity and quality (Baliwati et al., 2015). In consuming food, the aspect that is considered is not only a matter of quantity but also aspects of food quality. An indicator for measuring the quality of people's food consumption can be assessed from the expected food pattern score (Agriculture of Indonesia, 2021). The higher the expected food pattern score, the more diverse and nutritionally balanced food consumption.

There are several previous studies related to the theme of this research. Availability of good food is when it can be accessed by all levels of society at affordable prices. A spike in food prices could exacerbate food security in the future. Expected food patterns significantly influences the prevalence of malnutrition in Pakistan (Afridi et al., 2021). Unlike this research, Solana (2022) confirm that one indicator that can be used to see price developments in society is through the producer price index.

The producer price index is considered as a predictor of the consumer price index because the producer price index measures price changes at an early stage in the production process. The producer price as the first price is the price leader of other price levels. When production costs increase, usually the increase is passed on to consumers, so that the price of consumer goods also increases. Meanwhile, an increase in the price of goods causes a significant increase in the prevalence of insufficient food consumption. The food policy carried out by the government to date is allocating a portion of state spending for national food security in the form of a food security budget and food subsidies. A study from the Indonesian Institute of Sciences (LIPI) shows that social protection programs from the government will support food security for vulnerable groups and low-income families (Hidayati et al., 2020). Allocating part of state spending for food security can be a form of investment in national food. Food investment plays an important role in breaking the vicious circle of poverty through improving work productivity and reducing health care costs as an effort to improve the quality of human resources. Therefore, fulfilling food for the health of citizens is an investment in improving the quality of human resources.

Based on the description of the problem, it is necessary to conduct a study that examines the problem of food security in Indonesia from the perspective of the prevalence of undernourishment (PoU) in Indonesia as a manifestation of the implementation of the Sustainable Development Goals (SDGs) agenda. Previously, Solana (2022) had conducted research on spatial analysis of the factors influencing the prevalence of insufficient food consumption in Indonesia in 2020. This research aims to determine the factors that influence the level of Prevalence of Undernourishment (PoU) in Indonesia through food expectations, producer price index, food security budget, people's purchasing power and social assistance in the food sector. It is hoped that it will be useful for the government in formulating better health economic policies. The novelty of this research is to try to trace the relationship between the dimensions of food quality, fiscal policy, price policy and people's purchasing power to the prevalence of undernourishment in Indonesia. Where research related to this field is not widely carried out in Indonesia, using these variables.

METHODS

This research is a type of quantitative research. A quantitative approach is used to examine the effect of expected food patterns, producer price index, food security budget, people's purchasing power and social assistance in the food sector on the level of Prevalence of Undernourishment (PoU) in Indonesia. This study uses secondary data with the type of time series data, namely from 2011-2022. The period of time series data included in the study is the last 12 years, because this data only started being produced in 2011, so the data running starts from 2011 to 2022. Data was collected using the literature study method. This research will examine from another perspective within a period of 12 years, namely the period before and during the implementation of the Sustainable Development Goals (SDGs) agenda in Indonesia. This study uses empirical indicators that the expected food pattern approach as a measure of food consumption quality, producer price index, food security budget, people's purchasing power and social assistance in the food sector which influence the Prevalence of Undernourishment (PoU) in Indonesia, where this data comes from the Indonesian Sustainable Development Goals Indicators issued by the government (Central Bureau of Statistics Indonesia, 2022). Through this method, the author collects and analyzes secondary data obtained from publications by government agencies, the Central Bureau of Statistics. The technique used to analyzes the data in this study is multiple linear regression analysis. Multiple linear regression analysis is a regression model that is used to see whether the independent variables affect the dependent variable. The statistical equations formed in this study are:

$$Y = \beta 0 + \beta 1 X1 + \beta 2 X2 + \beta 3 X3 + \beta 4 X4 + \beta 5 X5 \dots\dots\dots\dots\dots\dots\dots\dots. (1)$$

Equation (1) is not linear, so it is necessary to transform this equation into a semilog model (Ln) to produce a linear equation as follows.

$$Y = \beta 0 + Ln\beta 1 X1 + Ln\beta 2 X2 + Ln\beta 3 X3 + Ln\beta 4 X4 + Ln\beta 5 X5 \ldots\ldots\ldots (2)$$

As for the description of the equation used, among others as follows;

Y	= Prevalence of Undernourishment (PoU)
X1	= Expected Food Pattern
X2	= Producer Price Index
X3	= Food Security Budget
X4	= Public Purchasing Power
X5	= Social Assistance in the Food Sector
$\beta 1, \beta 2, \beta 3, \beta 4, \beta 5$	= Regression coefficient of variable X on Y, $\beta 0$ = Errors.

RESULTS AND DISCUSSIONS

As for the multiple regression analysis used to determine the influence of the independent variables on the dependent variable, using a significance level of 5 percent ($\alpha = 0.05$). Through multiple analysis, it can be seen the effect of each independent variable, namely food expectations, producer price index, food security budget, people's purchasing power and social assistance in the food sector on the dependent variable, namely Prevalence of Undernourishment (PoU).

Table 2. Statistical Test Results T The Effect of Independent Variables on Dependent Variables

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2124,029	379,453		5,598	,001
Hope Food Pattern	-18,073	16,609	-,125	-1,088	,318
Producer Price Index	79,708	29,020	1,246	2,747	,033
Food Security Budget	1,934	,642	,381	3,011	,024
Public Purchasing Power	-127,819	28,820	-2,588	-4,435	,004
Social Assistance in the Food Sector	12,328	8,731	,315	1,412	,208

Based on Table 2 it can be seen that the producer price index variable obtains a significant value of 0.033 <0.05; food security budget of 0.024 <0.05 and people's purchasing power of 0.004 <0.05. Thus, the variable producer price index, food security budget and people's purchasing power have a significant effect on the Prevalence of Undernourishment (PoU). The producer price index has a positive influence on the Prevalence of Undernourishment (PoU) with a coefficient value of 79.708. That is, if the producer price index increases by 1 percent, it will increase the Prevalence of Undernourishment (PoU) by 79.708 percent. The food security budget has a positive influence on the Prevalence of Undernourishment (PoU) with a coefficient value of 1.934. That is, if the food security budget increases by 1 percent, it will increase the Prevalence of Undernourishment (PoU) by 1.934 percent.

Public purchasing power has a negative influence on the Prevalence of Undernourishment (PoU) with a coefficient value of -127.819. That is, if people's purchasing power increases by 1 percent, it will reduce the Prevalence of Undernourishment (PoU) by 127.819 percent. Meanwhile, the expected food pattern variable obtained a significance value of 0.318 > 0.05 and social assistance in the food sector 0.208 > 0.05. Thus, the variables of expected food patterns and social assistance in the food sector do not have a significant effect on the Prevalence of Undernourishment (PoU).

The Influence of Expected Food Patterns on the Prevalence of Undernourishment (PoU)

The results of this study indicate that the dietary pattern of expectations has a negative and insignificant effect on the Prevalence of Undernourishment (PoU). This means that changes to the

expected food pattern score cannot have an impact on the Prevalence of Undernourishment (PoU) level in Indonesia. The expected pattern of food consumption is not yet inclusive, unable to meet the nutritional and health needs of individuals or population groups in Indonesia. Though this indicator aims to reduce the problem of malnutrition and improve public health. Furthermore, it can be used as a barometer for the community to choose the type and amount of food that is healthy and balanced to meet the nutritional needs of the body. Qualified human resources are one of the determining factors in efforts to increase Indonesia's productivity and competitiveness. Improving the quality of human resources can be done by improving the health conditions and nutritional status of the community so they can live healthier and more productive lives. Good nutritional status can be obtained if the food consumed by the community is balanced both in terms of quantity and quality. Basically, the quality of people's food consumption in Indonesia is measured using the expected food pattern approach. The food pattern of hope is an arrangement of various foods based on the proportion of energy balance from various food groups which include grains, tubers, animal foods, oils and fats, oily fruits/seeds, nuts, sugar, vegetables and fruit and others to meet the nutritional needs of the community both in terms of quantity and quality.

These findings contradict the findings of Afridi et al., (2021) expected food patterns significantly influences the prevalence of malnutrition in Pakistan. According to the latest available data from the Food and Agriculture Organization (FAO), the PoU in Pakistan was 18.9% for the period 2016-2018. This means that almost one-fifth of the population is undernourished and is not consuming enough calories to meet their daily energy needs. The Food Insecurity Experience Scale (FIES) is a measure of the extent to which individuals and households experience food insecurity. It assesses the severity and frequency of food insecurity over the past 12 months, and measures the access to food, the quality of food, and the sufficiency of food. According to the latest available data from the United Nations Development Programme (UNDP), 50.4% of the population in Pakistan is experiencing moderate to severe food insecurity, based on the FIES. This means that more than half of the population is facing food insecurity, either occasionally or regularly. The reasons for food insecurity in Pakistan are complex and multifaceted. Poverty, lack of access to education, and limited job opportunities are among the key factors contributing to food insecurity. Other factors include natural disasters such as floods and droughts, political instability, and conflicts.

According to the Central Bureau Statistics of Indonesia, the expected food pattern is one of the indicators that can be used to determine the success rate of food and nutrition development, especially in terms of food consumption diversification. The expected food pattern is a parameter to measure how diverse and balanced people's food consumption is by calculating the score of each value of the composition of the nine food groups. Based on data from the Food Security Agency of the Ministry of Agriculture, it shows that in the last two years, namely from 2021-2022, Indonesia's expected food pattern score has continued to increase to reach 92.9 in 2022 which has exceeded the 2022 RPJMN target of 92.8. That is, the quality obtained from diversifying the types of food consumed by Indonesian people is getting better. However, the results of this study indicate that dietary expectations have a negative and insignificant effect on the level of Prevalence of Undernourishment (PoU). It can be interpreted that even though the expected food pattern in Indonesia has increased continuously, it has not had a significant impact on reducing the Prevalence of Undernourishment (PoU) level. This can happen because the expected food pattern focuses on measuring the level of diversity in people's food consumption, while the Prevalence of Undernourishment (PoU) level measures the level of adequacy of energy needs obtained from food consumption. Based on the XI National Widyakarya for Food and Nutrition (WNPG) in 2018, the minimum energy requirement is 2100 kcal/day. Thus, even though the higher the level of diversity in the consumption of food groups, the results of this consumption are not sufficient to meet the energy needs of the community, the increase in the expected food pattern score cannot affect the level of Prevalence of Undernourishment (PoU) in Indonesia.

Effect of Producer Price Index on Prevalence of Undernourishment (PoU)

The results of this study indicate that the producer price index has a positive and significant effect on the Prevalence of Undernourishment (PoU). This means that changes in the producer price index can affect the level of Prevalence of Undernourishment (PoU) in Indonesia. Basically, the producer price index is an index that describes the level of price changes at the producer level. When there is an increase in the producer price index it indicates that the cost of production of a good or service is increasing. Changes in production costs that are increasing will cause the prices of goods circulating in the community to also increase so that inflation will occur. When inflation occurs, it will cause people's purchasing power to decrease so that the level of public consumption of goods or services decreases. This is in line to Marson et al., (2022) that producer price index has a positive and significant effect on the Prevalence of Undernourishment (PoU). The PPI measures the average change in prices received by domestic producers of goods and services over time. A rise in PPI indicates an increase in the cost of production, which may lead to an increase in the prices of goods and services. This increase in prices may affect the purchasing power of consumers, particularly those who are living in poverty and already struggling to meet their basic needs. The Prevalence of Undernourishment, on the other hand, is a measure of the proportion of the population that is unable to consume enough food to meet their daily energy requirements. This measure is often used as an indicator of food insecurity and malnutrition. Irving Fisher's theory of the PPI emphasized the importance of measuring price changes from the producer's perspective and considering factors such as production costs in understanding price changes. He recognized that the PPI has limitations but still considered it an important measure in understanding economic conditions (Assous & Carret, 2022; Guerard, 2022a; Lennard et al., 2021).

The results of this study indicate that the producer price index has a significant effect on the Prevalence of Undernourishment (PoU). Thus, it can be interpreted that the producer price index is one of the factors that causes the Prevalence of Undernourishment (PoU) figure in Indonesia. Based on data from the Central Bureau of Statistics, in the last three years, namely from 2020-2022, the producer price index and the Prevalence of Undernourishment (PoU) in Indonesia have continued to increase from year to year. The increase in the producer price index for three consecutive years occurred because several sub-sectors making up the producer price index also experienced an increase, especially in the agricultural sub-sector. The agricultural sub-sector basically has a very important role in life because it acts as a provider of food for the community. In 2020-2022 the price index in the agricultural sub-sector will continue to increase. In 2020 it was 146.61 increasing to 152.42 in 2021 until 2022 it was 161.96. An increase in the producer price index, especially in the agricultural sub-sector, caused prices to increase so that public consumption of agricultural products decreased. The decline in public consumption of agricultural products as a result of rising prices is what has caused the prevalence of undernourishment (PoU) in Indonesia to increase.

Effect of Food Security Budget on Prevalence of Undernourishment (PoU)
The results of this study indicate that the food security budget has a positive and significant effect on the Prevalence of Undernourishment (PoU). This means that changes to the food security budget can affect the level of Prevalence of Undernourishment (PoU) in Indonesia. This finding is in line with Keynesian theory. According to Keynesian economics, government expenditure can have a significant impact on reducing the Prevalence of Undernourishment (PoU) in a country. Keynes believed that government spending can boost the economy, creating jobs and increasing income for households, which in turn can increase their purchasing power and ability to buy food and other necessities. Keynes argued that during economic downturns, the government should increase its spending to stimulate demand and support employment. This increased spending can also be directed towards programs and policies that specifically address issues related to food insecurity and malnutrition, such as food subsidies, nutrition education programs, and investments in agricultural productivity (Rössner, 2023).

Providing food needs in the midst of conditions where Indonesia's population continues to increase every year is a task that is not easy for the government. In situations like this, Malthus' theory reveals that population growth follows a geometric progression, while the ability to produce food follows a geometric progression so that an imbalance will occur which will result in a greater population compared to food availability (Raharto, 2020). To Malthus, the only way to prevent this

outcome was for individuals and societies to practice self-restraint in terms of family size and consumption. He argued that if people did not voluntarily limit their population growth, nature would impose "checks" on the population, such as disease, famine, and war, to bring it back into balance with the available resources (Kreager, 2022). Thus, one of the steps taken by the government to overcome this problem is to allocate a budget for food security. This is in line with Kamenya et al., (2022) findings which found that government expenditure in the food sector had a significant impact on Prevalence of Undernourishment (PoU) in Africa. The food security budget is basically allocated to increase the productivity of food commodities to the provision of agricultural facilities and infrastructure such as the provision of seeds or fertilizers, irrigation to the stability of food prices.

However, the results of this study indicate that the use of the food security budget has a positive and significant effect on the Prevalence of Undernourishment (PoU) in Indonesia. Thus, it indicates that the use of the food security budget in Indonesia is still not optimal because it is unable to reduce the prevalence of undernourishment (PoU). Based on data from the Ministry of Finance of the Republic of Indonesia, Indonesia's food security budget in 2021 has increased from the previous year. When compared to the previous year, the 2021 food security budget increased by IDR 25.4 trillion. This number is not a small number and should be able to have a bigger impact on Indonesia's food security, especially in reducing the level of Prevalence of Undernourishment (PoU) in Indonesia. The Central Bureau of Statistics reports that in 2021 the Prevalence of Undernourishment (PoU) in Indonesia will continue to increase as happened in the previous year. In 2020 Indonesia's Prevalence of Undernourishment (PoU) was 8.34 percent, an increase of 0.71 percent from the previous year. In 2021, the Prevalence of Undernourishment (PoU) in Indonesia has again increased to touch 8.49 or an increase of 0.15 percent from the previous year.

Effect of Public Purchasing Power on the Prevalence of Undernourishment (PoU)

The results of this study indicate that people's purchasing power has a negative and significant effect on the Prevalence of Undernourishment (PoU). This means that changes in people's purchasing power can affect the level of Prevalence of Undernourishment (PoU) in Indonesia. Based on the results of this study indicate that people's purchasing power has a negative and significant influence on the level of Prevalence of Undernourishment (PoU). This means that one of the factors that can influence the rise and fall of the Prevalence of Undernourishment (PoU) level is people's purchasing power. Even though people's purchasing power has increased, it has not been able to reduce the level of Prevalence of Undernourishment (PoU). This can happen because when people's purchasing power increases, the condition that occurs in the field is that more and more goods or services cannot be consumed by the community, including those related to basic needs, namely food.

When people's purchasing power increases, it does not always mean that the level of food adequacy will increase significantly. There are several factors that can affect the relationship between people's purchasing power and food adequacy: 1). High food prices, even if people's purchasing power increases, high food prices can become a barrier for people to buy enough food to meet their nutritional needs, 2). Limited access, some groups in society, such as those living in remote or poor areas, may face limited access to markets or places to buy healthy and affordable food, 3). Unbalanced consumption patterns, even though purchasing power increases, unbalanced consumption patterns or lack of knowledge about nutrition can prevent people from choosing healthy and nutritious food types, 4). Limited food production, even though there is an increase in people's purchasing power, the availability of food in the market can be limited due to factors such as a bad growing season, natural disasters, or limited production. Therefore, to increase food adequacy in Indonesia, a comprehensive and holistic approach is needed, which includes policies that support increased production and access to food, nutrition education and healthy consumption patterns, as well as social and economic support for vulnerable groups in society. This findings contradict to Fisher theory. Irving Fisher's theory suggests that there is a direct relationship between purchasing power and the prevalence of undernourishment. According to Fisher, when the purchasing power of consumers increases, the demand for food also increases, leading to a higher level of food production. This, in turn, will result in

an increase in the availability and affordability of food, which will reduce the prevalence of undernourishment (Curott & Snow, 2023).

The Effect of Social Assistance in the Food Sector on the Prevalence of Undernourishment (PoU)

The results of this study indicate that social assistance in the food sector has a positive and insignificant effect on the Prevalence of Undernourishment (PoU). This means that changes to social assistance in the food sector can impact on the Prevalence of Undernourishment (PoU) level in Indonesia, but the relationship is not strong. This findings in line on SMERU (2021) found that the implementation of the basic food program was still not effective due to several reasons, one of which was that there were still beneficiaries who were not on target. As a result, there are still many people who should receive assistance but do not become recipients of assistance. This problem triggers an increase in the number of people whose food consumption is still insufficient to meet energy needs to be able to live, grow and develop in a healthy manner. Thus, social assistance in the food sector distributed by the central government to the community cannot be a factor that can reduce the level of Prevalence of Undernourishment (PoU) in Indonesia.

Social assistance in the food sector is one type of subsidy given to the government for groups of people who are poor or vulnerable to social risks. Social assistance in the field of food distributed by the government to the community has undergone several transformations. Previously, social assistance programs in the food sector were channeled in the form of Special Market Operation Programs (OPK), Rice for the Poor (Raskin), Rice for prosperous families (rastra), Non-Cash Food Assistance (BPNT) with a change in the distribution mechanism of aid which was no longer in the form of rice, but it becomes an aid fund that is channeled directly to the accounts of Beneficiary Families (KPM) to assistance with staple food cards. Since 2020, social assistance programs in the food sector have been channeled in the form of staple food cards as part of the government's effort to reduce the burden on household expenses, especially in meeting the need for nutritious food. This findings in line on Stiglitz theory. Stiglitz argues that social welfare programs, such as cash transfers, healthcare, and education, can help to reduce poverty and promote social mobility. He also emphasizes the importance of investing in public goods, such as infrastructure and education, which can create opportunities for individuals and lead to long-term economic growth (Nelson & Shelton, 2023).

In 2022, social assistance in the food sector will be distributed in the form of a staple food card program for Beneficiary Families (KPM) in the amount of RP. 200,000/month which previously was only Rp. 150,000/month. This assistance can be used to purchase food items such as rice, eggs, meat, chicken, fish, vegetables or fruit. When viewed in terms of the nominal assistance received by the community, it is Rp. 200,000/month is still far from enough to meet the energy consumption needs of each individual in the beneficiary family. This is exacerbated by the fact that there are still various problems in the distribution of social assistance programs in the food sector in the community.

CONCLUSION

The results showed that the producer price index had a significant negative effect on the Prevalence of Undernourishment (PoU), the food security budget had a significant positive effect on the Prevalence of Undernourishment (PoU) and people's purchasing power had a significant negative effect on the Prevalence of Undernourishment (PoU) in Indonesia. Meanwhile, the pattern of food expectations has no significant negative effect and social assistance in the food sector has no significant positive effect on the level of Prevalence of Undernourishment (PoU) in Indonesia. Implication of this research, the government as the policy holder needs to maintain the stability of food prices and ensure the availability of nutritious food supplies for all people, especially for vulnerable groups of people. In the short term, the Government can increase the provision of social assistance in the food sector and carry out strict supervision of the implementation of the distribution of food assistance in Indonesia. However, in the long term, the continuous provision of large amounts of social assistance in the food sector can burden the state budget, so other efforts are needed to maintain food availability for the community, such as encouraging the implementation of agricultural intensification programs and food diversification

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