

Impact of Inflation on the Income of Potato Farmers at Bauko, Mountain Province

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ABSTRACT

Inflation is one of the problem that Farmers are facing nowadays that is a very challenging situation in there behalf on how they can cope up with it's impact especially in their income. This Study was conducted in Bansa, Monamon Norte, Bauko, Mountain Province. This study aim to determine the impacts of inflation on the Income of Potato Farmers at Bauko, Mountain Province and how they could cope up with its impact. Findings from a survey of 61 farmers. The researcher used descriptive design thus the respondents were asked to answer the survey questionnaire. With this, the researcher found out that inflation reduce the income of Farmers that can pushed them to apply for a loan to sustain the needed expenses in potato farming and in the other hand, the respondents trying to save little amount of money from their income and reduce there household spending even though they cannot buy some supplies for their families in order for them to prepare for there upcoming expenses in the next planting season, Enhancing access to inflation information, Government-support like programs and campaigns to help Potato Farmers and proper knowledge about management of finances and expenses could substantially improve farmer's resilience and can motivate them to face this kind of challenges.

Keywords: Income, Farmers, Inflation, Savings, Loan

INTRODUCTION

According to Widdows (2024), the agriculture industry is experiencing challenges like climate change, water scarcity, and market volatility, and now inflation. Inflation is the rising cost of inputs like feed, fertilizers, fuel, labor and many others, because of this, can make it difficult for the farmers to generate profit.. It is also defined as the general increase in prices and fall in the purchasing value of money that has a significant impact on the agriculture industry. This rising cost of goods and services can lead the farmers to have a hard time to make profit and can also lead to food inflation, which can be harmful on the part of farmers and consumers (Brigantino, 2022).

Also, Britwum (2024) emphasize that according to the Australian Department of Agriculture, Fisheries and Forestries, inflation has skyrocketed to an alarming 4.9% year-on-year. Farmers are finding it increasingly difficult to cope with rising resource costs while their incomes remain stagnant. Inflation is the persistent rise and fall in the prices of goods and services that affects all sectors of the economy, but its impact on farmers is particularly pronounced. Farmers, who are the backbone of any nation, are currently grappling with the challenges posed by this economic phenomenon. (Farmdeck, 2024). Whether this is advantageous or harmful depends on the farmer owns or rents the land and renters are being the most affected.

Machuka (2023), stated that one major effect of inflation is it erodes the purchasing power of money. This makes it difficult for farmers to afford the necessities and makes it difficult for them to maintain an adequate standard of living and invest in their farms when the cost of living rises faster than their income. Many farmers are depending on loans to sustain their operations, as inflation erodes the value of money, it is hard for the farmer to repay these loans and potentially leading to a cycle of debt and financial stability.

Roberts (2022), also added that U.S. farmers, like those in Kentucky, continue to battle high costs for labor, fuel, seeds and fertilizers as inflation sets into the economy as experts say. Guilfoil said in the face of record inflation, he has no other option than to continue what he is doing. He added that inflation creates a lot of price unpredictability and the most damaging is that it increases the long-term interest rates that raises the farmer's cost of borrowing for growth or for reinvestment on the farm. Additionally, Chanco (2021) says that farmers are sadly in debt to traders who give money to them to sustain in buying seeds, fertilizers, and other important matters before the planting season starts. The same traders will buy at below market prices that they produce and they have no choice because they need to pay their debts and they have no other way of bringing their produce to market.

As stated by Evans (2023), cash flow is always a challenge on the part of the potato farmers who can always stand by more than a year until their crops are paid after harvesting. Tessa said that people are paying more for their bag of potatoes or their bag of carrots but it is not because they want more money. In their part, they are trying to understand where they can get profit because the costs have increased extremely.

Lopez and Perego (2024), cited that potato farmer, Higinio Gonzalez from Intibuca, he embodied many regional farmers who encountered due to the rapid increase of essential agriculture inputs. For him, the cost of the certified seeds climbed by roughly twenty eight percent (28%) and fertilizers by eighteen percent (18%) that undermine his productivity and sustainability. Despite the rising potato prices, food inflation provided his additional income insufficient to offset the increased cost of inputs and the personal food spending.

Furthermore, Ghiotto (2024), expressed that from planting to harvest, farmers are trapped in a system that restricts their autonomy and financial stability, a system in which they are forced to either scale up or exit the market. Scaling up pushes them into deeper debt as they must acquire more land and expensive equipment to stay competitive.

In the article of Beltran and Win (2023), in the Northern Tarlac Province, Arnold Unan, 54 years old, has also turned to money lenders to meet enough money to use. He used a collateral of land just to pay his costs to run a one hectare rice farm where his income is 10,000 pesos for each of his three harvest is not enough to supply his own family that pushed him to take side jobs like construction and carpentry. He also said that without taking loans, he cannot work and know if he can pay his money that he owes. Still, food inflation rises at 6.7 percent (%) and even a small shift can have a large effect in a country wherein households spend more than half of monthly income on food.

In addition from Battad et. al. (2005), in Region I and II, their income from farm production was very much affected just because of low yield caused by drought and more than half (54 %) of farmers in Region I borrowed money from their relatives, friends and neighbours to support and supply their family needs while waiting for the next cropping season, while in Region II 47.9 percent (%) of the farmers lessen their household and personal expenses.

One of the Potato Farmers in an interview at Bansa, Bauko, Mountain Province said that rising prices for seeds and fertilizers can really impact their decisions about how much land to dedicate to crops like potatoes. When production costs increase, they choose to plant less or switch to more profitable crops (J. Botiwey, personal communication, October 29, 2024). Inflation can lead to insufficient capital for purchasing necessary inputs for the next planting season, affecting the yields and financial stability on their side (E. Bayongasan personal communication, October 29, 2024).

According to Montevirgen (2024), inflation is defined as the general increase in prices or the money supply that can cause the purchasing power of a currency to decrease. There are four economic theories that aim to define and explain what inflation is.

First is the Quantity theory of Money which argues that inflation is determined by the supply of money but it is the amount of money in circulation that will directly cause a proportional increase in the price of goods and services over time.

Second is the Demand-pull theory of inflation that suggests that the cost of goods and services rises when the demand is more than the supply that is available. This model of supply and demand imbalance reflects the most common definitions of inflation which is much money chasing few goods.

Thirdly, the cost-push theory attributes inflation to the increase of production whether raw materials or wages that a mid a steady flow in demand. This theory an increase in these called input costs will probably decrease a manufacturer's bottom line and to compensate this, the manufacturers may decide to transfer those extra costs to the consumer by charging higher prices for the same unit of goods.

Lastly, the Structural theory of inflation that describes a type of inflation that often prevails in developing countries. It says that inflation is caused by structural weakness regarding the capacity of a certain country to produce goods or maintain a sufficient flow of supply. But poor infrastructure, old-fashioned technologies or inadequate supply chains can add to the general underproductivity, creating imbalances among supply and demand. Inflation that stems from structural issues may not be easily changed by monetary policy.

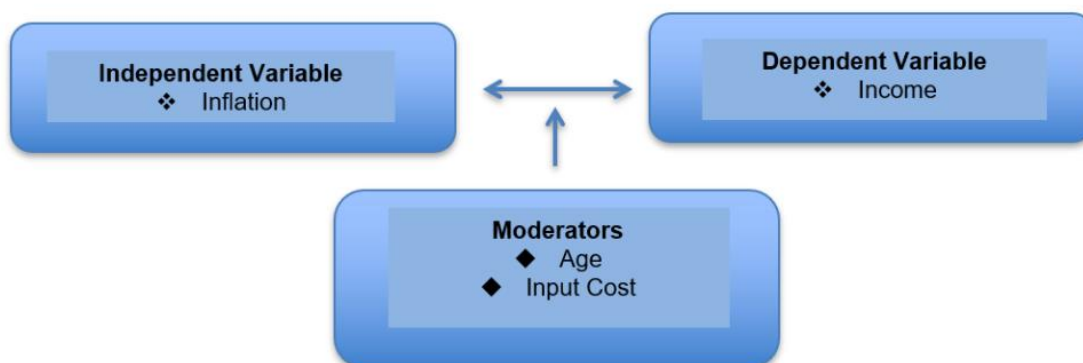
Also, according to Jahan, Papageorgioum & Saber, (2014), Keynesian Economics description on how economy works state that intervention is important to moderate the booms and boots in economic activity that is also known as business cycle.

The aggregate demand is influenced by many economic decisions whether public or private, wherein private sector decisions can sometimes lead to adverse macroeconomics results like reduction in consumer spending during recession. These market failures can sometimes call for active policies by the government like fiscal stimulus packages. So therefore, Keynesian Economics approves a mixed economy that is guided mainly by the private sector but others is operated by the Government.

Prices, especially wages, respond slowly to changes in supply and demand that results in periodic either shortages and surpluses, especially of labor.

Changes in aggregate demand, whether anticipated or unanticipated, have their greatest short-run impact output and employment not on the prices. Keynesians believe that because the prices are somewhat hard, the fluctuations in any componet of spending, consumption, investment or Government expenditures that cause output to change. When the Government spending increase, for example, and all other spending economics remain continuous and the output will rise. The Keynesian Model of Economic Activity also includes a multiplier effect such as the output changes by some multiple of increase or decrease in spending that caused the change so if the multiplier is greater or more than one, then a dollar increase in Government allocation that would result in an increase in output greater or more than a one dollar.

Statement of the Problem.



The study aims to determine the impact of inflation on the income of Potato Farmers at Bauko, Mountain Province.

This study seeks to answer the following questions:

- What is the level of impact of inflation on the income of potato farmers at Bauko, Mountain Province in the First Semester of 2024 (January to June)?
- What are the coping mechanisms of potato farmers with the said inflation in the First Semester of 2024 (January to June)?

The result of the study will be of great benefit to the following:

Farmers: Farmers can make better decisions on which investments to make in terms of agricultural technology. They can make better decisions on how to cope up with the impacts of inflation to help them in managing their income for their personal finances and day-to-day expenses.

Local Government: The Local Government Unit involves the situation of the farmers and creates programs and formulate policies that can better assist farmers and can subsidize their needs from the impacts of inflation. They will also benefit through the participation and support coming from farmers especially in projects conducted by the LGU's.

Community: Community members will be able to know and prepare for the next years on how to cope up and be aware of the impacts of inflation towards their life because inflation can be higher than today.

Future Researchers: The future researchers can use this research for future references and to compare the results from today and to the near future on how inflation impacts farmers.

Overall, this research will support the Farmers, Local Government Units, the Community and the future researchers.

METHODOLOGY

This research will use descriptive research, using questionnaires as a survey method to acquire data on the impact of inflation on the income of potato farmers at Bauko, Mountain Province. This research is quantitative.

The study will be conducted at Bauko, Mountain Province particularly at Sitio Bansa, Monamon Norte, and will be limited to selected potato farmers. The study focuses on the impact of inflation on the income of Potato Farmers. The study will involve the dissemination of survey questionnaires to the Farmers which would help the researcher to gather information. In determining the sample size, the Cronbach Alpha will be applied. The respondents are selected through convenience sampling. Questionnaires has a series of questions to receive responses from individuals who will be administered.

The researcher will use a survey questionnaire with close-ended questions to gather the data needed for the study. It is a self-made questionnaire that is formulated by the researcher which is crafted based on various readings of online sources. A questionnaire can be a research instrument that consists of a set of questions to collect information from a respondent (Bhat, 2024).

There are two parts of the questionnaire in this study. Part I is the level of impact of inflation on the income of potato farmers at Bauko, Mountain Province in the First Semester of 2024 (January to June). Part II is the coping mechanisms of potato farmers with the said inflation in the First Semester of 2024 (January to June). The researcher will use a survey questionnaire method for easy gathering of data. The questionnaire only gave only four scale questions, so central tendencies or neutralization of respondents is avoided.

The researchers understand the importance of ensuring the validity and reliability of the research instrument. The content validity of the interview guide will be subjected to examination by two (2) experts in the field. Then, it will be tested for reliability in twenty (20) children of Farmers.

Upon the approval of the research, the researcher will seek permission to conduct the study from the Barangay Captain/Barangay Kagawad. A letter to the respondents will be attached to the questionnaire ensuring the confidentiality of the respondent's response. Then after the approval, the researchers will float the questionnaire through house to house. With the data gathering, the researcher collected the data for checking and tallying. The information from the questionnaire will be kept confidential and for research purposes only.

In measuring the impact of inflation on the income of potato Farmers at Bauko, Mountain Province in the First Semester of 2024 (January to June), the researcher will gather the data, compile, sort, organize and tabulate. They are subject to statistical treatment to answer the questions proposed in the study. The statistical tools employed are the frequency, mean and ranking.

For Part I of the questionnaires is the Level of Impact of Inflation on the Income of Potato Farmers at Bauko, Mountain Province in the First Semester of 2024 (January to June). The statistical tool to be used will be Frequency, Mean and Ranking. The following scales will be used for the said part.

Value	Range of Values	Qualitative Interpretation
4	3.26-4.00	Strongly Agree (SA)
3	2.51-3.25	Agree (A)
2	1.76-2.50	Disagree (D)
1	1.00-1.75	Strongly Disagree (SD)

For Part II of the questionnaire, which is the coping mechanisms of potato farmers with the said inflation in the First Semester of 2024 (January to June), the statistical tool to be used is Frequency, Mean and Ranking by using the scale below:

Value	Range of Values	Qualitative Interpretation
4	3.26-4.00	Strongly Agree (SA)
3	2.51-3.25	Agree (A)
2	1.76-2.50	Disagree (D)
1	1.00-1.75	Strongly Disagree (SD)

In the study the researchers are bound to adhere to their responsibilities, an ethical standard to ensure that the participants are treated with utmost respect and acceptance. The Researcher thoroughly explains in the questionnaires the purpose of the study to the research subject in order to assure their anonymity, confidentiality, rights and at the same time obtaining their trust and consent to the study. Furthermore, the participants have the right to withdraw any time and decide not to participate. The research also will facilitate the respondents in what to do or what to be done and ensure that the result gathered will be treated as confidential. Overall, the study is purely for the academic purpose and the information gained from the participants was treated with strict respect. Therefore, the study is indeed legal and clearly bestowed respect to the social work of research.

RESULTS AND DISCUSSION

Impact of Inflation on the Income of Potato Farmers

Inflation causes an increase in the cost of living and prices of basic products from food to clothing have become more costly. With the reduced value of money can make it harder to make ends meet. Debts may increase that make you struggle in paying them (Villafuerte, 2024).

Table 1. Level of Impact of Inflation

Statement	Mean Rating	Descriptive Equivalent
1. Inflation pushed me to get a loan because of not enough capital.	3.11	Agree
2. The portion of my income left for my savings has decreased.	3.08	Agree
3. Inflation reduced my overall income.	3.05	Agree
4. Inflation has made it difficult to invest in new farm equipment.	3.16	Agree
5. I cannot buy enough supplies for my family.	2.90	Agree
Over-all Mean	3.06	Agree

Table 1 shows that potato farmers mostly agrees that inflation has made it difficult to invest in new farm equipment. According to Trading Economics (2024), machinery and transport equipment (% of value added in manufacturing) in the Philippines reported at 22.36 percent (%) in the year 2022 and according to the World Bank collection of development indicators compiled from officially recognized sources. Philippines Machinery and transport (% of value added in manufacturing), the actual values, historical data, forecasts and projections were sourced from the World bank in the month of November in the year 2024. If the inflation is projected from 2022 to 2024, a machine from October 2021 would have increased by 83.2% or the price almost doubled within just 3 years. While, the annual inflation rate in the Philippines rose to 2.3 percent (%) in the month of October 2024. Projecting within the three years from October 2021 to October 2024, prices, in general, only increased by 16.9% which does not conform with the possible provision of new equipment.

Overall, 68.67% or about 7 out of 10 respondents agreed that inflation as a significant impact to their income as a potato farmer. While they most agree that inflation has made it difficult to invest in new farm equipment, they also agree that: inflation pushed them to get a loan because of not enough capital, according to the Bangko Sentral ng Pilipinas (2024), agriculture loans and services share in increased to 18.1 percent (%) in 2022 from 17.6 percent (%) and according to the 2022 Countryside Bank Survey (CBS) report that released by the Bangko Sentral ng Pilipinas (BSP). The increase was observed in rural and cooperative banks (RCB's) and it reflects an expansion in loan products that relates to various agricultural needs like seeds, fertilizer, working capital and farm equipment, sustainable projects, digitalization of farming activities and agri-tourism activities. Also, according to Catudan and Martin (2023), likewise the farmers fall back on to credit in being able to finance the capital needs of their crops. The usual lenders were input dealers or traders who were ready to give inputs or cash to them with an agreement that the latter would sell their product and/or pay their borrowed money at harvest time.

The portion of their income left for savings has decreased, inflation reduced their overall income, and (due to inflation) they cannot buy enough supplies for their families.

According to the study of Pesimo (2024), the focus group discussion revealed that farmers can cope with their income during typhoons. In other severe weather conditions, the farmers have no alternative means to increase their income such as loans, financial assistance or crop assistance. Additionally, according to Battad et. al. (2005), income from farm production was the most affected in Regions I and II because of low yield because of drought and more than half (54%) of the farmers in Region I borrowed money from their relatives, friends and to their neighbours just to support and sustain family needs. For the next cropping season while waiting, 47.9 percent of the farmers in Region II reduced their household and personal expenses.

Table 2. Coping mechanisms of potato farmers with the said inflation in the First Semester of 2024

Statement	Mean Rating	Descriptive Equivalent
1. I save a little amount of my income.	3.10	Agree
2. I seek additional income sources outside of farming to manage the impact of inflation.	3.05	Agree
3. I rely on government assistance to deal with the effects of inflation.	2.85	Agree
4. I must reduce my household spending.	3.00	Agree
5. I undergo counseling for advice to get some tips.	2.79	Agree
Over-all Mean	2.96	Agree

Table 2 shows that the respondents mostly agree to save a little amount of their income to cope up or catch up with the inflation. On the contrary, relying on Government assistance and undergoing counselling for (financial) advice is not popular and disagreed by a significant portion of the respondents.

Pagkatotohanan (2023) stated that however, the majority of savings accounts from major banks in the country grow funds at an inadequate rate of 0.10% to 0.25% per year. With these, the respondents agreed that there should be additional income sources outside of farming to manage the impact of inflation alongside with reducing the household spending, as stated by Catudan and Martin (2013), the very most immediate impact of poor performance was how to sustain the budget for basic needs as food before the farm will be recovered. And while most farming households normally had softened food sources like vegetables, and chicken from the backyards, these were not sufficient and they were sold to have cash for other needs of the household. Farmers would not even consume at home their off-season vegetables produce as much as they need to because they wanted to maximize their sales. Another aspect that needed to be adjusted was their expenses for education for their children and in times of shortage to their income and cash, their children's allowances were reduced to minimum. Although, reducing household spending is logically impossible since it also depends on the overall inflation of consumer goods

CONCLUSION AND RECOMMENDATION

Inflation is an economic phenomenon that is currently affecting not only the farmers but as a whole, its effects on farmers are real and can be challenging to eliminate. Inflation has been a powerful impact on the income of the Potato Farmers at Bansa, Monamon Norte, Bauko, Mountain Province which probably decrease their savings because of high prices of equipment used in farming and they are pushed to apply in loans such as Agricultural Loans in cooperatives to sustain there expenses so that they can sustain and meet the needed materials in farming. Aside from this, Potato Farmers from the locality try to save a little portion of their income in order to save for emergencies where they can get expenses for future purposes. Even if it hard to cope up with inflation, they agree that they need to decrease their spending so that they can reduce costs.

Some coping mechanism practiced by the Potato Farmers should be address and an indication and concerns for everybody to focus on in order for this impact will be lessen and eliminated in the part of the Farmers that the locality will gain benefit and for the success of everyone not only in Bauko but entire Philippines relying in farming.

The Researcher recommended that the Barangay Should provide seminars and other programs and campaigns that can inform farmers through coordination to the Local Government Units that would help them on ways to access affordable credit and financial services. In the part of the Potato Farmers reduce input costs, investigate cheaper alternatives for fertilizers, pesticides, and irrigation methods (e.g. compost) to manage inflationary pressures on operational costs and the use of organic fertilizers by adopting organic or local alternatives to reduce costs.

Inflation is very critical situation for farmers but engaging in an effective financial planning and risk management that includes setting up emergency funds and managing debts appropriately to avoid falling into a debt trap. Also, the researcher suggest to diversify not only focus on one area to be able that when one activity has low returns, their are other activities has higher returns.

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