



Domestic Poultry as a Mechanism to Fight Poverty in two Villages in Fayoum Governorate

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ABSTRACT

This Research aimed to identifying domestic poultry as a source of income and nutrition to the rural family in the study area, understanding the gender roles played by the sample members in domestic poultry, defining the source of information that the sample members refer to regarding domestic poultry, identifying the problems of domestic poultry and the sample members suggestions to improve the level of domestic poultry in the study area. The research was conducted in Fayoum governorate, the human field of the research are members of the household that owns domestic poultry from Zaweit ELkerdasah and Bani Saleh villages, Fayoum district, sample size was 200 respondents, the study is subjective, the data was collected in April, May 2023, Results were displayed using frequencies and percentages. The most important results the research found were, the returns from domestic poultry are used to improve the income and nutrition level of household members. The roles related to poultry care are mainly associated with women. Personal experience and neighbors are the most important source of information. The most important problem which the sample members suffer from is high prices of basic requirements for home poultry production; one of the most important suggestions of the respondents is the need for state support for poultry production requirements and activating the role of state institutions in the villages.

Keywords: Domestic poultry, poverty, rural family, gender, income, nutrition

Introduction

Over the past four decades, there has been a significant increase in both academic and public interest in poverty and inequality (Jenkins & Michaelwright, 2009:7), Global attention to poverty stems from the widening gap between the rich and the poor, In fact, 80% of the world's population uses only 6% of its wealth (United Nations Development Programme, 2015: 5) The declaration of 1996 as the International Year for the Eradication of Poverty supported the global campaign against the alarming reality of widespread poverty worldwide, particularly in developing countries (Al-Tab'e'i, 1999: 18), Figures show that 836 million people worldwide live in extreme poverty (Arab Planning Institute, League of Arab States, 2019:1), The COVID-19 pandemic has caused the biggest setback to efforts to reduce global poverty in decades, with the global poverty rate rising to 9.3% in 2020, up from 8.4% in 2019 (The World Bank, 2023: 45) Moreover, approximately 80% of the world's poor reside in rural areas and heavily depend on agriculture for their livelihoods, (The World Bank, 2017:18) Additionally, four out of five individuals living below the global poverty line inhabit rural regions. Over time, poverty has become increasingly concentrated in rural areas, with rural poverty rates being four times higher than urban rates (World Bank Group, 2020: 122,123), despite significant progress in promoting prosperity and reducing poverty over decades, the world continues to suffer from wide disparities. For instance, the probability of the poorest children enrolling in primary education is four times lower than that of children from wealthier households in developing countries. Among the estimated 780 million illiterate adults worldwide, nearly two-thirds are women. The poor face a higher risk of malnutrition and child mortality, as well as reduced access to essential health interventions (World Bank, 2016:2). The first Sustainable Development Goal is to end poverty in all its forms everywhere by 2030 (United Nations, 2018: 2), Poverty is not worthy of human civilized society and should be confined to history.

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Eradicating global poverty is a matter of will, yet we still do not give this issue the serious attention it deserves. Many people distance themselves from this issue by claiming that if the poor worked harder, they would not be poor. (Yunes, 2007: 236,237) Research into the characteristics of the poor is essential for a better understanding of the circumstances surrounding poverty. The picture reveals that the world's poor are mostly young rural people who have received inadequate education and work primarily in agriculture. They live in larger families with more children. Sixty-four percent work in agriculture, 44% are 14 years old or younger, and 39% have never attended formal education (World Bank, 2016:5,6) Poverty is primarily a rural phenomenon, with 70% of the Arab region's poor living in rural areas and relying heavily on agriculture for their livelihoods. They depend largely on small-scale family farming, which accounts for 80% of the total agricultural production in the Arab region (Arab Planning Institute, League of Arab States, 2019: 17). Egypt ranks 116 out of 189 countries in terms of human development and has been classified as a country with high human development since 2019. The overall poverty rate in Egypt is 29.7%, while the extreme poverty rate is 4.5% (Ministry of Planning and Economic Development, UNDP, 2021: 43, 49), 78% of the poor in Egypt are concentrated in rural areas, this percentage rises to 81% in the case of the poorest population,(Ministry of agriculture and land reclamation, 2009: 62),agriculture in Egypt is still the sector that lags behind other economic sectors in terms of the level of wages, it is also affected by climate fluctuations and terms of international trade(Mohey eldeen, 2014: 248).

Furthermore, the poultry industry is one of the most important agricultural industries in Egypt. It also provides a large quantity of products that, along with household poultry production, contribute to achieving complete self-sufficiency in these products. The poultry industry is characterized by a rapid turnover of capital, high returns, and does not require large tracts of land, with lower capital requirements compared to other production projects for obtaining animal protein. The poultry industry in Egypt can be divided into two main systems: the specialized (commercial) production system, and the rural (household) production system (Salem, 2003:12), which is the focus of this research. As it contributes about 27% of poultry production, 29% of egg production, and is also the main source of production for ducks, geese, pigeons, turkeys, and rabbits (Ministry of Agriculture and Land Reclamation, 2009: 15). Despite this, the rural production system relies on local feed sources to provide a significant portion of its feed requirements. In addition, rural women bear the full burden of this production system in terms of operation, production management, marketing its products, and even financing its needs. Also, this system has not received any significant government support, compared to what has been provided to the commercial production system. This production system is based primarily on raising flocks of varying sizes ranging from 20 to 200 units in a single breeding cycle (Salem, 2003: 2, 14). This production sector has a significant marketing and pricing advantage, (Ministry of Agriculture and Land Reclamation, 2009: 15) appealing to a wide range of consumers. Studies show that approximately 30- 40% of rural sector production is marketed, while 60-70% is consumed by households. Therefore, this sector contributes to food security for rural populations and provides additional income for rural families, helping to address poverty, which stands at 29.7% in Egypt (Ministry of Planning and Economic Development, UNDP, 2021: 49) Moreover, the poverty rate in Fayoum Governorate is 36%, exceeding the national average (Ministry of Local Development, 2016: 37). Family farms are the backbone of agriculture in low and middle-income countries, but many are small and poor. Approximately 75% of farms in low and middle-income countries have less than one hectare of land. (Food and Agriculture Organization of the United Nations, 2015: 8, 9). In Egypt, 78.05% of agricultural landholders own less than five faddens (Central Agency for Public Mobilization and Statistics, 2022: 32), and smallholdings of less than one faddens alone account for 43.5% of all holdings (Ministry of Agriculture and Land Reclamation, 2009: 5)Therefore, the goals of sustainable agricultural development strategies (Ministry of Agriculture and Land Reclamation, 2009: 47) aim to continuously improve poultry flocks in rural areas and provide alternatives to using available feed resources, enabling rural women to manage these flocks, making them a source of additional income for rural families and achieving a reasonable level of food security for these families.

Based on the previous presentation of the research problem, the research objectives are as follows:

The general objective of the research is to identify the role of domestic poultry in reducing poverty among rural families in the study area. This objective has been expressed in a set of specific objectives as follows:

1. To identify the importance of domestic poultry as a source of income for rural families in the study area.
2. To identify the importance of domestic poultry farming as a source of nutrition for rural families in the study area.
3. To understand the gender roles played by the sample members in domestic poultry in the study area.
4. Defining the sources of information that the sample members refer to regarding domestic poultry in the study area.
5. To identify the problems faced by the sample members while raising domestic poultry in the study area.
6. To identify the suggestions of the sample members to reduce the problems they face with domestic poultry in the study area.

The applied importance of research

Given that poverty is one of the most significant problems afflicting rural Egypt, understanding the role of domestic poultry in reducing poverty and improving the nutritional status of rural families, as well as comprehending the diverse roles of rural family members in poultry-related activities, can aid in understanding, modifying, or supporting the policies adopted in this regard. Furthermore, the research presents an alternative perspective on domestic poultry that differs from the extent to which rural residents implement technical recommendations. Additionally, identifying the challenges faced by domestic poultry breeders and their proposed solutions contributes positively to understanding the situation realistically and developing appropriate plans to address these challenges, especially since domestic poultry makes a significant contribution to the poultry production sector without receiving substantial government support, despite enjoying a high marketing advantage.

Theoretical Framework

The theoretical framework adopted in this research includes theories that have interpreted the issue of poverty. These theories include functional and critical theory. Furthermore, the theoretical framework includes some concepts related to the research topic, in addition to previous studies on the research subject.

Functional theory

The structural-functionalist perspective holds that society is a system of specific, organized actions. This system consists of a set of interrelated variables at the structural level and interdependent variables at the functional level. Society, according to this view, has a transcendent nature that surpasses all its components, including the will of individuals living within it. Individuals are thus compelled to conform to social norms and regulations, as any deviation threatens the fundamental structure of society, the preservation and maintenance of which is an end in itself. Consequently, this theory argues that poverty is a deviant phenomenon that emerges when the social structure fails to fulfill its functions. It is, therefore, a state of functional disorder within the social structure. Functionalists consider poverty to be the individual's responsibility, with the state having no role in it. The individual, according to this perspective, is the one who should strive to improve their circumstances and develop themselves to avoid falling into the trap of poverty. The theory has justified the wide gap between the rich and the poor under capitalist systems by arguing that social justice mechanisms, such as guaranteeing a minimum income that ensures a decent standard of living for all individuals regardless of their social class, have been neglected (Abd ELgawad, 2017 : 126,127)

Moreover, proponents of functionalist approaches argue that inequality in wealth, power, status, and other aspects is a fundamental fact of human society, even in its primitive stages. Some functionalists go so far as to assert that state intervention to improve the conditions of the poor is useless. Others believe that various social welfare policies and measures will not succeed in eradicating poverty and deprivation, but may even hinder the poor from escaping poverty (Hegazy, 1996: 104, 105).

Critical Theory

One of the most significant and radical interpretations of poverty is that which views it as part of the nature of capitalist social systems. According to "Karl Marx", poverty is not a temporary or accidental phenomenon, but rather the core of the capitalist social order. There are powerful social

forces that have a vested interest in the perpetuation of poverty. Poverty is not merely an unfortunate consequence of the struggle for wealth, but rather a necessary condition for these social forces to monopolize the lion's share of wealth. According to this logic, breaking the cycle of poverty requires radical changes to the social system, and in the most radical view, this necessitates the abolition of the class system (ELsamaloty, 2010: 86,87).

For "Karl Marx", poverty is an inevitable result of class division and exploitation. The accumulation of wealth by the bourgeoisie does not occur through free competition between unrestricted parties, but rather through non-economic mechanisms such as oppression, extortion, and false consciousness (Hegazy, 1996 : 112).

From the preceding presentation of poverty theories, it can be concluded that functionalism emerged primarily to study Western societies, while critical theory offered a completely different interpretation of the same societies. Researchers from developing countries should therefore bear this in mind. It is important to recognize that each society has its own unique social, economic, cultural, and historical characteristics. Therefore, researchers can benefit from both theories. Undoubtedly, rural communities in Egypt need social justice, as emphasized by critical theory. Since poverty is a dysfunction in the social structure, as functionalism suggests, it is necessary to work on rectifying this dysfunction through various development efforts undertaken by the state and civil society. It is worth noting that the real issue lies in creating an equal playing field where everyone has a fair chance. (Younes, 2007: 237).

Concepts Related to the Research

Concept of Poverty

Historically, poverty has been associated with income, which remains the heart of the concept to this day. However, income itself is a concept that is no less problematic than poverty and should be studied carefully. (United Nations Development Program, 2006: 5) Moreover, the concept of poverty is a relative concept that can be defined in various ways depending on the subject and situation. Poverty is more than just income, and manifestations unrelated to income, such as deprivation of a decent standard of living, social exclusion, lack of decent jobs, and conditions that prevent people from achieving their potential, all affect human well-being and development. (Sarangi, Niranjana, Abu-Ismael, Elliaithy, Ramadan, 2015: 9) Therefore, it is necessary to define both the concepts of the poor and poverty when conducting any study related to poverty in a given society.

Concept of the Poor

The poor are generally defined from three basic perspectives: subjective, social, and objective, as follows:

Self-defined Poverty

From a subjective perspective, a person feels poor when they believe they are not getting the basic necessities they need.

Socially Defined Poverty

The poor are those who receive social assistance from the community. The cutoff point for poverty is the official minimum level of social assistance that an individual receives when they rely on social aid.

Objectively Defined Poverty

The poor are those who are unable to achieve a minimum standard of living. (Bouksani and Osman, 2014: 3).

"Amartya Sen's" writings have presented a different approach to addressing poverty, one that is much broader than the approach of income poverty and monetary poverty. It relies on the capability approach. This approach has provided a conceptual framework for viewing poverty as a lack of enjoyment of basic rights and freedoms in life that form the basis for measuring multidimensional poverty (Arab Planning Institute, Arab States University, 2019: 7). The United Nations has defined multidimensional poverty as deprivation, and deprivation is defined through three dimensions: health, education, and living standards (UN, 2015: 2). Multidimensional poverty covers 105 countries

worldwide, with a population of 5.7 billion, of which 1.3 billion suffer from multidimensional poverty. The proportion of those suffering from multidimensional poverty in the Arab region is 19.2% (Arab Planning Institute, Arab States University, 2019: 1, 7), the rate of multidimensional poverty in Egypt is 16% (United Nations Economic and Social Commission for Western Asia (ESCWA) and others, 2023: 45).

Classifications of Poverty Based on Measurement Method

Poverty is classified according to its measurement method into two types: absolute poverty and relative poverty (Lahlilh and Jassass, 2010: 174).

Absolute Poverty

The term absolute poverty refers to a fixed and specific standard of living. In this case, it is measured by the real value of a certain amount of goods that guarantee a minimum standard. (Bellu, and Paolo Liberati, 2005: 4). The concept of absolute poverty is based on estimating the minimum necessities to meet an individual's basic needs. An individual is considered materially poor when their life is on the brink of survival. In this context, the World Bank defines absolute poverty in its 1980 Development Report as follows: "Poverty is characterized by malnutrition, illiteracy, and disease, where an individual's income is below a decent standard of living" (Bouksani and Osman, 2014: 3, 4). Absolute poverty is also defined as a situation where a family earns less than \$1.25 per person per day. (Permanent Committee for Economic and Commercial Cooperation of the organization of Islamic cooperation (COMCEC), Statistical, Economic and Social Research and Training Centre for Islamic Countries (SESRIC) , 2015 : 8).

Relative Poverty

The concept of relative poverty implies that the poor are considered more deprived compared to other social groups. Thus, the poor are those who do not obtain a minimum acceptable standard of living, which means that relative poverty refers to the level of satisfaction of basic needs, low living standards, quality of life, and characteristics and capabilities of individuals and groups within society (Bouksani and Osman, 2014: 4). The term relative poverty refers to a standard of living that is determined relative to the situation of other people in terms of income distribution or expenditure. In this sense, poverty is a phenomenon of inequality (Bellu, and P. L., 2005: 4). This concept of poverty is adopted in developed countries that seek to raise the standard of living for their citizens. Since individuals in society have different incomes, there will always be poor people from the perspective of relative poverty. They may be able to secure basic necessities and many luxuries. Poverty in this concept results from the way in which the fruits of development are distributed among members of society. If the distribution is poor, then we have relative poverty. If the distribution is fair and the rate of development is high, then absolute poverty will be limited or disappear, leaving only relative poverty, which is not considered poverty from the perspective of basic needs (Lahlilh and Jassass, 2010: 174, 175).

Poverty Measures

A reliable measure of poverty is essential for the political and economic agendas of all countries without exception. It should provide a clear picture of the situation in order to intervene. However, there is no universally accepted measure of poverty. This section reviews the most common poverty measures (Permanent Committee for Economic and Commercial Cooperation of the organization of Islamic cooperation (COMCEC), Statistical, Economic and Social Research and Training Centre for Islamic Countries (SESRIC), 2015 : 11).

Headcount Index

This is the simplest and most common of these measures, and it attempts to measure the incidence of poverty. This index represents the number of individuals or households in a society that fall below the poverty line. This index is easy to understand and explain, and it is also good for comparison purposes or for evaluating the effects of poverty reduction policies. However, it is not sensitive to differences in the depth of poverty, nor is it sensitive to the distribution of income among the poor. (Abdel Gawad, 2017: 102).

Multidimensional Poverty Index (MPI)

The Multidimensional Poverty Index was first used in the 2010 Human Development Report by the United Nations Development Programme (UNDP) and developed by the Oxford Poverty and Human Development Initiative (OPHI). It complements monetary measures of poverty by considering multiple deprivations. The MPI examines deprivation across the same three dimensions as the Human Development Index: education, health, and standard of living, which consists of ten indicators. It shows the number of people who are multidimensionally poor, meaning they are deprived in 33% of the weighted indicators. (Permanent Committee for Economic and Commercial Cooperation of the organization of Islamic cooperation (COMCEC), Statistical, Economic and Social Research and Training Centre for Islamic Countries (SESRIC), 2015: 13, 14) In 2023, ESCWA presented the revised Arab guide for multidimensional poverty, and the dimensions were health, education, housing, access to services, and assets, with each dimension including a number of indicators, totaling fourteen indicators. (United Nations Economic and Social Commission for Western Asia (ESCWA) and others, 2023: 42). The Multidimensional Poverty Index is a tool for measuring progress towards the Sustainable Development Goals (SDGs). It compares the multidimensional poverty headcount for more than 100 countries, 5.7 billion people, and monitors changes over time (UNDP, OPHI, 2019: 1). The Multidimensional Poverty Index (MPI) can be used according to region, ethnicity, and other groups, and is a tool used by policymakers. (United Nations Development Programme, 2016: 3).

Confronting Poverty

Poverty, in all its dimensions, is perhaps one of the greatest challenges facing the Arab region and the world. Eradicating it is the primary goal of the 2030 Agenda for Sustainable Development (United Nations, ESCWA, League of Arab States, UNICEF, OPHI, 2017: vii). In a number of regional and international forums, the international community has pledged to end poverty and hunger by 2030 (Food and Agriculture Organization of the United Nations, 2015: 24). Given that the poor rely on agriculture for their livelihood and that a large portion of their expenditure goes towards food, agriculture becomes a fundamental factor in interventions aimed at alleviating poverty and hunger. In most low- and middle-income countries, agriculture remains the largest sector providing employment opportunities for the poor. Poverty, along with malnutrition, disease, and lack of education, limits agricultural productivity. Therefore, providing social protection and pursuing integrated agricultural development provide synergies that increase the effectiveness of each. (Food and Agriculture Organization of the United Nations, 2015: xii). Despite the proven effectiveness of social protection, it cannot alone lift people out of poverty and hunger in a sustainable manner. Agriculture and social protection are fundamentally linked in the context of rural livelihoods. Poor households suffering from food insecurity rely primarily on agriculture for their livelihoods. Strengthening consistency between agriculture and social protection interventions can help protect the poor and smallholder farmers by helping them manage risks more effectively, improve agricultural productivity, leading to more sustainable livelihoods and progress towards ending poverty and hunger. (Food and Agriculture Organization of the United Nations, 2015: xv).

Because the food system currently provides more jobs than any other sector in many countries, strengthening the agriculture sector can be one of the most powerful tools to fighting poverty. For ten years, the Bihar project has improved the livelihoods of over 1.8 million women from rural households in the state of Bihar, India. Domestic poultry, dairy production training, marketing assistance, and other initiatives helped increase annual income levels by 30% (The World Bank, 2017: 18). Investing in agriculture remains the most effective way to create income-generating opportunities and improve nutrition, especially for women and youth in rural areas. (Food and Agriculture Organization of the United Nations, 2015: VI).

Previous Studies

The study of "EL- Maghraby, and others, 2007"

Title" An economic study for factors affecting on consumption of poultry in Egypt", The main goal of this investigation was to identify the current production, of poultry meat consumption in Egypt in addition to studying the effects of following factors representing in the person's income and the price of red meat, chickens and fish. The study concluded that: - The production of poultry meat, the quantity available, its consumption, the average annually share per person have increased during the study, The

economic analysis shows that: - The rise in poultry prices, the rise in population are the most effective variables on poultry consumption.

The study of "Ramadan and Elmeligy, 2015"

Title "Rural women behavior in the field of safety breeding of home poultry in "Kafr –ELsheikh " governorate", This research aimed at determining knowledge, attitudes, and implementation level in the field of safety breeding of home poultry, identifying the variables associated with specific behavior of the respondents, and identifying the information sources of respondents in this field. The most important findings of this research were: 63.59% of the respondent's level knowledge was either moderate or low in the field of safety breeding of home poultry, and 95.39% of them had a low and moderate level of implements in this field. The main sources of respondent's information in the field of safe breeding of home poultry were: family and neighbors, veterinarian, T.V. programs, and husband and sons.

The study of "Bendary and others 2016"

Title "Rural woman implementation of the recommended practices to improve home recommended practices to improve home poultry raising in Perma village in Gharbia governorate", This research aimed to identify whether rural women apply the improved and recommended practices in raising home poultry in four areas which were (Purchasing, Nutrition, shelters, and veterinary care), determine the implementation level of these practices, and the extension services introduced to them as well as the problems they face in this area and their suggestions to overcome it. The most important results of the study were, the majority of the respondents expressed that extension was not their resources for purchasing poultry, the study revealed also that their implementation level of the recommended practices was moderate, Concerning the poultry shelters, (%85) were located in the category of high implementation level of these practices, (67%) of the respondents mentioned that they did not receive any services from the extension, and their important information resources in this area were: The experienced persons, the veterinarians, and the owners of the farms, The study also indicated that the problems facing the respondents in the field of raising home poultry, were: The lack of cash money to spend on raising, training and awareness-raising in this area, the lack of government veterinary services in the villages, The most important suggestions of the respondents were : Providing fodder for poultry feeding, vaccination and the necessary veterinary care, providing, rural women with loans if there is need to it.

The study of "Ghanem and Kamara 2020"

Title "The economic dimension of poverty in rural regions of Alexandria governorate", This study aimed to identify the economic dimension of the phenomenon of poverty in rural regions in Alexandria Governorate, this study showed that the poverty rate in the Alamria region in 2019 ranged between 21.38% and 29.82% at 95% confidence level. In the second village in the Apis region, the poverty rate in 2019 ranged between 16.03% and 24.37% at 95% confidence level. As for the fourth village in the Apis region, the poverty rate in 2019 ranged between 19.15% and 27.65% at a 95% confidence level. This study also showed that farm income has a relatively low impact on poverty reduction for rural areas in Alexandria Governorate, while the increase of non-farm income by 10% decrease in the poverty gap at a rate ranging 15.4% for the fourth village and 18.0% for the second village in the Apis region.

The study of " Kareem 2022"

Title "An analytical study of the economic and social determinants and the proposed policies to reduce poverty in Egypt", The problem of the research is represented in the following question: What are the reasons that led to the exacerbation of the problem of poverty in Egypt, especially in the rural area, "ruralization of poverty? The search results showed, Increasing the percentage and numbers of poverty and the poor below the national poverty line in Egypt, the poverty rates below the national poverty line in Egypt increased from about 24.3% in 1990/1991 to about 29.7% in 2019/2020. There is an inverse relationship between the Domestic credit to the private sector (% of GDP) and the rate of poverty, as an increase in the Domestic credit to the private sector (Dcps) will lead to a decrease in poverty rates in Egypt by (0.387). GDP per capita. There is a significant positive relationship between the unemployment rate (UNEMPR) and the poverty rate in Egypt. An increase in the unemployment

rate by 1% leads to an increase in the poverty rate by 0.384%, as a result of the lack of job opportunities & high unemployment rates will lead to a high rate of poverty in Egypt.

The study of "Abdel-Latif 2023"

Title "Economic analysis of the obstacles for the Egyptian poultry industry and its treatment policies" the study aimed at studying and analyzing the most important obstacles to the poultry industry and how to deal with it ,through studying several topics which were, the economic importance of poultry industry in Egypt, the development of poultry production in Egypt, the development of poultry consumption in Egypt, the most important protective measures which were taken by the ministry of agriculture for poultry industry, study the obstacles of poultry industry , develop a proposal and vision for the most important policies and the mechanism to implement to deal with obstacles in the poultry industry .The results showed an increase in the volume of national production of white meat at a rate of 0.06% annually, and of national consumption of white meat by about 0.05% annually. there are no added investments for this sector, as the estimates showed an increase in the price of wheat bran by about 0.1% per year, and the price of soybean gain by about 0.1% per year, and the price of yellow corn by about 0.14% per year for the period (2010 - 2019).

****Based on the previous review of previous studies we can say that, regarding domestic poultry studies concentrates on the practices which domestic poultry are cared for through it ,the studies related to poultry conditions in Egypt focused on the investment sector not the domestic, as for poverty studies are interested in studying the current situation of poverty and its impact, they also explain the relationship between unemployment and poverty and the greatest success of development plans is the fair distribution of income among the society members.**

2. Methodology

Scientific Methodology Used

A descriptive research methodology was employed for this study, utilizing a partial social survey with a sample.

Study Area

The geographical scope of the study was defined as Fayoum Governorate, considered a representative of traditional rural areas in Upper Egypt. The governorate is famous for poultry farming, with a production capacity of 4.5 million chickens. The research was conducted in Fayoum district, in the villages of Zawyet El-Kardasa and Beni Saleh. Fayoum Center is famous for its gray fig production and poultry hatching. (Ministry of Local Development, 2016: 2-8).

Human Dimension

The research was conducted in Fayoum district, Zawyet El-Kardasa Local Unit, specifically in the villages of Zawyet El-Kardasa and Beni Saleh. Zawyet El-Kardasa has a population of 17,490 inhabitants, while Beni Saleh has a population of 19,160 inhabitants (Ministry of Local Development, 2003: 138). The agricultural land area of Zawyet El-Kardasa is 1220 feddans, and that of Beni Saleh is 1550 feddans (Fayoum Governorate, Land Ownership Records, Service Register 2, 2023).

Study Population and Sample

The study population was defined as all landowners in the villages under study. The total number of landowners in the villages was as follows: 920 landowners in Zawyeit El-Kardasa village and 820 landowners in Beni Saleh village (Fayoum Governorate, Land Ownership Records, Service Register 2, 2023). A regular random sample of landowners was selected from the villages according to the Krejcie and Morgan formula (Krejcie & Morgan, 1970: p607-610). A sample of 100 respondents was taken from each village, resulting in a total sample size of 200 respondents, all of whom had domestic poultry.

Data Collection Method

A questionnaire was used to collect data through personal interviews with household members. This was done after pre- testing the questionnaire to ensure it aligned with the study's objectives. Data collection took place during April and May 2023.

Statistical Analysis Tools

The data was quantitatively processed and statistically analyzed using frequencies, percentages, and tabular display as statistical analysis tools.

3. Results

Characteristics of the study sample

From the results of table (1) which describes the sample characteristics we can say that the most important of them are as follows:

- ** It is clear that the majority of the research sample consists of females aged between 35 and 50 years. Their household size ranges from 4 to 6 members, and most of them are illiterate and married.
- ** Approximately 49.5% of the sample has a monthly household income of less than 3000 Egyptian pounds. Meanwhile, 27% have no income, while 17.5% have a household income of more than 6000 Egyptian pounds. Finally, 6% of the sample has a household income ranging between 3001 and 6000 Egyptian pounds. These figures align with the poverty rate in Fayoum, which stands at 36% (the Ministry of Local Development, 2017, 37)
- ** It was found that 49% of the research sample owns less than one fadden of land. This is close to the Ministry of Agriculture's statistics which indicate that holdings of less than one fadden in Egypt constitute 43.5% of the total number of holdings (Ministry of Agriculture and Land Reclamation, 2009: 5). Meanwhile, 23.5% of them do not own any agricultural land, while 19% own between one and 1.5 Fadden, and finally, 8.5% own more than 1.5 Fadden. This result aligns with the percentage of agricultural landholders owning less than five Fadden, which is 78.05% of the total agricultural landholders in Egypt (Central Agency for Public Mobilization and Statistics, 2022: 32). This percentage highlights the high level of land fragmentation among the sample members, and the negative impacts this on development programs in general.
- ** Furthermore, 33.5% of the respondents in the research sample possess between 1 and 2 animals, 27.5% possess between 3 and 4 animals, 24% do not possess any animals, and 15% possess 5 or more animals.

Table 1: Sample characteristics

Variables	No.	%
Respondent gender		
Mail	89	44.5
Female	111	55.5
Respondent age		
(19 – 34)Years	43	21
(35 – 50)Years	95	48
(51 & more) Years	62	31
Respondent Family Size:		
(1 – 3) members	33	16.5
(4 – 6) members	148	74
(7 & more) members	19	9.5
Respondent education		
Illiterate	111	55.5
Primary school	10	5
Prep school	8	4
Secondary school	67	33.5
University graduate	4	2
Marital status		
Single	2	1
Married	188	94
Divorced	4	2
Widowed	6	3
Basic Profession		
Agriculture	114	57
Non- agriculture	86	43
Additional profession		
Non	121	60.5
Agriculture	25	12.5

Non- agriculture	54	27
Average monthly income for household		
No Income	54	27
Less than 3000 pounds	99	49.5
(3001 – 6000) pounds	12	6
More than 6000 pounds	35	17.5
Ownership of machinery & equipment		
Doesn't Owen	184	92
Owens 3 – 4 machines	7	3.5
Owens more than 5 machines	9	4.5
Land Ownership		
Doesn't Owen	47	23.5
Owens less than one Fadden	98	49
Owens 1 – 1.5 Fadden	38	19
Owens more than 1.5 Fadden	17	8.5
Animal ownership		
Doesn't Owen	48	24
Owens 1 – 2 animals	67	33.5
Owens 3 – 4 animals	55	27.5
Owens more than 5 animals	30	15
Real estate ownership		
Doesn't Owen	5	2.5
Owens one real estate	167	83.5
Owens two real estates	24	12
Owens three real estate	4	2
Productive projects ownership		
Doesn't Owen	149	74.5
Owens one project	40	20
Owens two projects	7	3.5
Owens three projects	4	2
Collected and calculated from the questionnaire		

The general objective of the research is to identify the role of domestic poultry in reducing poverty among rural families in the study area. This objective has been expressed in a set of specific objectives as follows:

First Objective:

To identify the importance of domestic poultry as a source of income for rural families in the study area.

To identify the importance of domestic poultry as a source of income, it was necessary to know the income that the breeder receives from domestic poultry, as well as how to spend that income.

Income from domestic poultry

"In the distribution of the research sample according to the weekly income from domestic poultry, the data in Table (2) indicated that 30.5% of the respondents in the study area do not obtain income from domestic poultry. This is often attributed to the high income of this segment of the sample, as they represent 23.5% of the sample members as shown in Table (1). Additionally, 46.5% of the research sample members obtain an income of less than 1000 Egyptian pounds per week from domestic poultry, implying that poultry farming does not represent a significant source of income for this group. Moreover, it was found that 13.5% of the respondents obtain a weekly income of more than 1500 Egyptian pounds from domestic poultry, and finally, 9.5% of the respondents obtain between 1001 and 1500 Egyptian pounds per week from domestic poultry. It can be concluded that the latter two groups are the ones that achieve good income domestic poultry."

Table 2: Distribution of the sample according to income from domestic poultry

Income	No.	%
No income	61	30.5
Less than 1000 pound weekly	93	46.5
From 1001 – 1500 weekly	19	9.5
More than 1500 weekly	27	13.5
Total	200	100

Collected and calculated from the questionnaire

Spending domestic poultry income:

To understand how the income from poultry sales is utilized, the data in Table (3) indicated that 60% of the research sample members spend this income on household needs, while 14% of these respondents spend this income from poultry farming on school expenses. These two figures reflect the current economic crisis and its impact on the sample members, as this result clarifies the extent of the crisis that forces the sample members to spend the income generated from domestic poultry on household needs and school expenses. Referring back to Table (1), we notice that the lowest income groups represent 76.5%, which is a percentage that is very close to the percentage of sample members who spend the return from poultry farming on household needs and school expenses, as they represent 74% of the sample members, which clarifies the extent of the economic crisis experienced by the sample members and reflects the economic crisis experienced by the society as a whole. Meanwhile, 12% of the research sample members spend the return from poultry farming on their daughters' weddings, while 8% of the respondents mentioned that they save this return, and finally, 6% of the respondents purchase durable goods (refrigerator, washing machine, gas stove, etc.). It can be said that these last three groups may consist of middle-income groups and above, as they represent 23% of the sample members as shown in Table (1)."

Table 3: Sample distribution according to spending the income from domestic poultry

S	Items	No.	%
1	Home needs	120	60
2	School expenses	28	14
3	Girls wedding expenses	24	12
4	Savings	16	8
5	Buying durable goods	12	6
6	Total	200	100

Collected and calculated from the questionnaire

The findings from Tables (2) and (3) support the conclusion that domestic poultry contributes to improving rural household incomes and reducing poverty, thereby validating the study's first objective.

The second objective

To identify the importance of domestic poultry as a source of food for rural families in the study area.

To identify the importance of domestic poultry as a food source for rural families, it was necessary to identify the weekly quantities consumed of these domestic poultry. The results obtained indicated the following:"

1. Chicken consumption

The findings in Table (4), which show that 58% of respondents consume one chicken per week, related to the low-income levels reported in Table (1). This consumption pattern, combined with the region's low per capita protein intake (15g/day), (Ministry of Local Development, 2016: 8), while the recommended dietary allowance is 33 grams/day highlights the importance of domestic poultry production in enhancing the nutritional status of rural households.

Table 4: Distribution of sample members according to Chicken consumption.

Quantity consumed weekly	No.	%
One chicken	117	58
Two chickens	54	27
Three chickens	13	7
Four chickens	12	6
Five chickens	4	2
Total	200	100

Collected and calculated from the questionnaire

2. Egg consumption

The findings in Table (5) indicate that 23% of respondents do not consume eggs, suggesting that egg production is primarily for income generation, especially among low-income households. The majority (50.5%) consume moderate quantities, influenced by household size and income. Higher consumption levels were observed among other groups, supporting the study's objectives."

Table 5: Sample distribution according to egg weekly consumption.

Quantity consumed weekly	No.	%
Doesn't consume	46	23
Consume (3-25) Eggs	101	50.5
Consume (26 - 48) Eggs	26	13
Consume (49-) Eggs	27	13.5
Total	200	100

Collected and calculated from the questionnaire

3. Duck consumption

Table (6) reveals that 29.5% of respondents do not consume duck, suggesting it's primarily sold. The majority (48.5%) consume 1 duck weekly, aligning with the low-income group. Higher consumption is linked to middle-to-higher income households. This aligns with Egypt's sustainable agriculture strategy, which states that domestic poultry is the primary source of ducks, geese, pigeons, turkeys, and rabbits (Ministry of Agriculture and Land Reclamation, 2009: 15).

Table 6: Sample distribution according to duck weekly consumption.

Quantity consumed weekly	No.	%
Doesn't consume	59	29.5
Consume one duck	97	48.5
Consume two ducks	35	17.5
Consume three ducks	4	2
Consume four ducks	3	1.5
Consume five ducks	2	1
Total	200	100

Collected and calculated from the questionnaire

Tables (4, 5, and 6) clearly demonstrate the validity of the study's second objective. They show that chicken, eggs, and duck are used to improve the nutritional status of rural families. Notably, duck consumption is more prevalent among middle-income and higher-income families, further supporting the second objective. Tables (7 to 10) will illustrate the significance of other types of domestic poultry as a food source or a source of income.

4. Turkey consumption

The results presented in Table (7) reveal that 96.5% of the respondents do not consume turkey in their meals, indicating that the primary purpose of raising turkey is to sell it to increase family income.

This confirms the study's first objective. As one of the study participants mentioned, turkeys are considered the family's "bank" during crises. Additionally, 2.5% of the study samples consume 1 turkey per week, while 1% consume 2 turkeys per week.

Table 7: Sample distribution according to turkey weekly consumption.

Quantity consumed weekly	No.	%
Doesn't consume	193	96.5
Consume one turkey	5	2.5
Consume two turkeys	2	1
Total	200	100

Collected and calculated from the questionnaire

5. Gees consumption

Table (8) reveals that 96% of the respondents do not consume geese in their meals, indicating that the primary purpose of raising goose for families is to increase income. Additionally, 2.5% of the study samples consume 1 goose per week, while 1.5% consume 2 geese per week.

Table 8: Sample distribution according to gees weekly consumption.

Quantity consumed weekly	No.	%
Doesn't consume	192	96
Consume one goose	5	2.5
Consume two gees	3	1.5
Total	200	100

Collected and calculated from the questionnaire

6. Pigeon consumption

Table (9) shows that 95% of respondents do not consume pigeons in their meals, indicating that pigeons are primarily used to increase family income. However, 3% of respondents consume 4 pigeons per week, and 2% consume 5 pigeons per week. These last two categories may be attributed to individuals with a monthly income exceeding 6000 Egyptian pounds, which represent 17.5% of the sample.

Table 9: Sample distribution according to pigeon's weekly consumption.

Quantity consumed weekly	No.	%
Doesn't consume	190	95
Consume four pigeons	6	3
Consume five pigeons	4	2
Total	200	100

Collected and calculated from the questionnaire

7. Rabbit consumption

Table 10 indicates that 91% of respondents do not consume rabbits in their meals, suggesting that rabbits are primarily raised to increase family income. This might be due to the relatively high price of rabbits and the lower income levels among the sample population as shown in Table (1). Additionally, 5% of respondents consume 1 rabbit per week, 2.5% consume 2 rabbits per week, and 1.5% consume 3 rabbits per week.

Table 10: Sample distribution according to rabbit's weekly consumption

Quantity consumed weekly	No.	%
Doesn't consume	182	91
Consume one rabbit	10	5
Consume two rabbits	5	2.5
Consume three rabbits	3	1.5
Total	200	100

Collected and calculated from the questionnaire

Results from Tables (7) to (10) highlight the significance of other poultry types, such as turkey, goose, pigeon, and rabbit, both as a food source and a source of income for rural families. Over 90% of the sample population primarily relies on these poultry types as a source of income, confirming the study's first objective for these specific poultry species.

Furthermore, the Sustainable Agricultural Development Strategy (Ministry of Agriculture and Land Reclamation, 2009:47) emphasizes the importance of the second objective by advocating for appropriate technological alternatives for managing these flocks. This approach empowers rural women to manage these flocks on a medium scale with technological and economic efficiency, thereby providing additional income for rural families and ensuring a reasonable level of food security. Consequently, the study's second objective is achieved.

Third objective: understanding the gender roles played by the sample members in domestic poultry in the study area.

1. Distribution of roles in poultry care

Table (11) indicates that poultry care roles are primarily associated with women, as evident from the table. Wives undertake 58% of these roles, followed by daughters at 22%. Meanwhile, husbands and sons collectively perform 20% of the tasks, often related to buying veterinary drugs and feed. This aligns perfectly with traditional customs in Egyptian villages, or it might happen sometimes to compensate for the absence of wives or daughters for any reason. Based on this result, it is clear that one of the ways to improve the productivity of domestic poultry is to direct awareness and training programs specifically towards women in this field, as they are the major contributors to poultry care roles.

Table 11: Sample distribution according to gender roles in domestic poultry

Gender roles in domestic poultry	No.	%
Husband	28	14
Wife	116	58
Sons	12	6
Daughters	44	22
Total	200	100

Collected and calculated from the questionnaire

2. Who does what concerning poultry care?

Table (12) illustrates the various activities involved in poultry care and the family members responsible for them. It is evident that women, particularly wives, bear the primary responsibility for rising and caring for poultry. Wives perform at least (75%) of the different poultry care roles, with the exception of only two activities: vaccination (56%) and feed buying (65%). In these two activities, the husband's participation increases to (25%) for vaccination, which is the highest level of husband participation in these roles, followed by his participation in fodder buying at (21%). As previously mentioned, this aligns with traditional Egyptian village customs. Daughters follow the husband in terms of participation, with the highest level of participation in vaccination at (17%). This may be due to the higher education level among girls, making their participation in this activity possible. Next is their participation in cleaning the coop at (16%), an activity that girls typically perform in rural families. Sons' participation follows, with the highest level in waste disposal at (13%) and fodder buying at (8%). As for poultry sales, they are almost exclusively carried out by wives, with limited participation from other family members. Wives sell poultry at home at a rate of (86%) and in the market at (94%). It is important to note here, as stated by (IFAD, FAO, and INFPO, 2012: 4), that understanding gender relations and their implications in poultry care is crucial for developing appropriate and successful interventions. This is necessary to contribute to poverty reduction, as technicians do not always have the appropriate tools to introduce a gender perspective into their work. Consequently, there may be negative consequences for programs operating in this field if they are implemented without gender awareness. Developing gender awareness empowers households to improve their income and food security and highlights the contributions of family members to household life. As shown above, poultry

care and rising is mainly female activity. This can be used to reduce poverty in rural families, as income that reaches women benefits all family members. Additionally, considering that women are responsible for poultry care, any guidance on nutrition, veterinary care, or other related matters should be delivered by female advisors or rural female leaders at times that suit rural women. And accordingly, the third objective of the research is achieved.

Table 12: Sample distribution according to who does what in domestic poultry.

Activities	Husband	%	Wife	%	Sons	%	Daughters	%	Total	%
Feeding	8	4	178	89	2	1	12	6	200	100
Cleaning the nest	6	3	148	74	14	7	32	16	200	100
Vaccination	50	25	112	56	4	2	34	17	200	100
Buying fodder	42	21	130	65	16	8	12	6	200	100
Selling at home	16	8	172	86	2	1	10	5	200	100
Selling in market	8	4	188	94	2	1	2	1	200	100
Waste disposal	20	10	150	75	26	13	4	2	200	100

Collected and calculated from the questionnaire

Fourth objective

Defining the sources of information that the sample members refer to regarding domestic poultry in the study area.

To achieve the fourth objective, the results presented in Table (13) show that the sources were ranked according to their importance and frequency of use, as reported by the sample members. These results indicate that rural residents primarily rely on themselves, their knowledge (75%), and their neighbors (67%) as primary sources of information, suggesting their confidence in their own knowledge in this field. Other sources follow with relatively close percentages, implying the need to build trust between rural community members and these other information sources to enable them to provide rural residents with their information needs. It is important to note that rural women are the most frequently interacted with in this area, and the way information is presented to them should be appropriate and at times that suit them. This result is similar to that of Ramadan and Elmeligy (Ramadan, and Elmeligy, Egyptian Journal of Agricultural Research, 2015: 1011), who stated that the most important sources of information for their research subjects in the field of safe poultry rearing were family and neighbors (88.5%). Thus, the fourth objective of the research is achieved.

Table 13: Sample distribution according to Sources of information about domestic poultry

Sources of information	No.	%
Personal experience	150	75
Neighbors	134	67
Spouse	57	28.5
Veterinary supply outlets	48	24
Poultry farms	46	23
Agriculture extension	40	20
Extension bulletins	28	14
T.V programs	24	12
Female rural leaders	20	10

Collected and calculated from the questionnaire

Fifth objective

To identify the problems faced by the sample members while raising domestic poultry in the study area.

In order to develop domestic poultry, it was necessary to identify the challenges faced by poultry farmers. The results presented in Table (14) showed that the most significant challenges were: high fodder prices (90%), followed by high veterinary drug prices (60.5%), and difficulty in obtaining

vaccinations (50%). When looking at these problems, most of the farmers agreed that they lack essential supplies for poultry farming, such as feed, medicines, vaccines, and good chicks. This shows a clear need to provide these supplies at prices that small farmers can afford, so they can produce food at a good price. Therefore, the officials should focus on solving these problems to improve domestic poultry in rural Egypt. This matches the new strategy for sustainable farming (Ministry of Agriculture and Land Reclamation, 2020: 209) which aims to protect local products and keep prices fair. So, the fifth goal of this research has been met.

Table 14: Sample distribution according to poultry raising problems.

The problem	No.	%
High prices of fodder	180	90
High prices of veterinary drugs	121	60.5
Difficulty in getting vaccines	100	50
Difficulty in getting good quality chicks	80	40
Lack of seminars and training programs related to domestic poultry and its recommendations	37	18.5
Lack of continues cleaning and sanitization of farms	30	15
Lack of safe waste management	25	12.5
The weakness of veterinary unites role in villages and lack of in site veterinarians	13	6.5

Collected and calculated from the questionnaire

Sixth objective

To identify the suggestions of the sample members to reduce the problems they face with domestic poultry in the study area. To improve domestic poultry, after finding out the problems faced by breeders, the breeders themselves gave some ideas on how to solve these problems Table (15) shows these ideas.

Table 15: Sample distribution according to poultry raising suggestions.

The suggestions	No.	%
Supporting fodder and veterinary drugs prices	160	80
Facilitate getting good quality chicks	100	50
Enhance control over markets	90	45
Raising awareness of breeders on how to preserve poultry from weather changes	85	43
Conducting seminars for breeders about the right ways of raising poultry	62	31
Increasing vaccination sales outlets	60	30
Activating the role of the veterinary units in villages	40	20

Collected and calculated from the questionnaire

Based on the previous results and the specific proposals of the respondents to address the challenges of domestic poultry, it is clear that there is a diverse range of needs. These include government support for poultry production inputs, as well as the activation of government institutions at the village level to support domestic poultry production in various ways. This includes disseminating accurate information about proper domestic poultry methods to small-scale breeders, providing adequate market information about local and surrounding cities, and ensuring proper market monitoring. Such support would empower breeders to play their role effectively.

Since these proposals come directly from small-scale breeders, it is crucial for authorities to support them. Notably, the sustainable agricultural development strategy (Ministry of Agriculture and Land Reclamation, 2009: 47) emphasizes providing improved local breeds, intensifying vaccination and veterinary care programs for backyard flocks, and offering alternatives to the use of available feed sources. Additionally, the Ministry of Agriculture (Ministry of Agriculture and Land Reclamation, 2020: 204) seeks to provide logistical, financial, and technical support to small-scale poultry breeders to improve and enhance the efficiency of their poultry.

Among the noteworthy proposals is the increase in market monitoring, as suggested by (45%) of the sample. It is worth mentioning that the sample members market their products in local village and

district markets. The number of daily random markets in Fayoum district, where the research data was collected, is 12 daily markets and 12 weekly markets (Ministry of Local Development, 2016: 90). Workers in these markets complain about the lack of government attention, while the officials in the governorate mentions (Ministry of Local Development, 2016: 91) the difficulty of controlling these markets due to their conditions. Furthermore, those involved in this activity adopt an attitude that hinders any effective interaction or participation between the two parties. This means that the government needs to build trust with market workers in order to improve market monitoring and enable domestic poultry producers, among others, to obtain fair prices for their products. Based on the foregoing, the sixth objective of the research has been achieved

Recommendations

- 1- State cooperation represented by the ministry of agriculture with civil society to provide finance and appropriate technology to support rural home poultry sector.
- 2- Adding a section related to gender roles in the training technical courses related to home poultry breeding, as developing awareness of gender roles provides household members with an opportunity to improve their income and explains the contributions of household members.
- 3- Organizing training courses for rural home poultry breeders to fill the gap in information in the field of home poultry breeding.
- 4- Rationalizing social safety net programs, so that its defects are avoided to enhance the resilience of the rural poor.
- 5- Building trust between the state and the workers in markets selling agricultural products, so producers can get fair prices for their products.
- 6- State support for polices, institutions and investments which works to insure food security.

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