

# The Impact of Poultry Production on the Empowerment of Rural Women: Lessons from the Indigenous Poultry Value Chain Project

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## ABSTRACT

The main objective of this study was to investigate the impact of poultry production on women's empowerment in Mwenzei District, Zimbabwe. A two-stage multi-sampling procedure was used to select 20 participants for the study. A mixed methodology that combines both qualitative and quantitative data was used to collect the data. The data was collected using a semi-structured questionnaire. Quantitative data were analyzed using descriptive statistics such as frequency counts, percentages, means, standard deviation, cross-tabulations, ranking, and chi-square analysis. A two-stage weighted mean procedure in Excel was used to rank the most important functions of poultry. Qualitative data was organized into themes and analyzed manually. According to the findings, the mean number of chickens per respondent was  $(24.6 \pm 2.96)$ . The findings also indicated that farmers prioritized chickens primarily for household consumption and income generation. Analysis showed that there was a positive correlation between education level and the number of chickens owned. Household heads with higher levels of education had a higher number of chickens, which is a potential indicator that the level of education is an important precursor to the adoption of improved management practices. According to the results of the study, the poultry project managed to achieve four key empowerment dimensions for women, i.e., empowering them to be financially independent through poultry sales, generating power and voice for women through contributing to household income, helping women build their assets, therefore improving their social status, and enhancing their leadership through helping them take up key leadership and decision-making positions in the management and maintenance of hatcheries.

**Keywords** – Indigenous chickens, livelihoods, women, empowerment, food security

## INTRODUCTION

Despite the importance of indigenous chickens (IC) in the livelihoods of smallholder farmers, poultry production has never been intentional. Indigenous chickens are frequently regarded as “hardy” animals which require little or less attention. As a result, indigenous chicken production has remained significantly low [1], as witnessed by low egg production per hen per year (30-80 eggs per hen per year), low growth rate, longer brooding periods, and late maturity. This ultimately reduces egg and meat consumption [2]. However, the increased intensity, and frequency of climate events aggravated by climatic unpredictability among smallholder farmers who have limited coping mechanisms, necessitates improved management practices for farmers to reap optimum benefits from the rearing of indigenous chickens. Indigenous chickens have numerous advantages to smallholder farmers, including being prolific [3], having a short reproduction cycle [4] and not being seasonal [5]. They are the cheapest to acquire when compared to other types of livestock and represent the first stage of entry onto the livestock ladder [6]. As a result, they are ubiquitous, found in almost every household, even among the poorest within communities. They are a very important social safety as they can be liquidated easily when there is a crisis or an emergency. Indigenous chickens are

also important particularly in rural areas as they can be used as a form of currency to exchange goods and facilitate better exchange.

Indigenous chicken provides a low-cost source of high-quality protein in the form of meat and eggs. Meat and eggs from indigenous chickens are densely packed with macro and micronutrients. Furthermore, animal protein has better bioavailability of iron, Vitamin A, Vitamin B12, zinc, and riboflavin compared to plant protein which is commonly consumed by smallholder farmers [7]. Poultry ownership is mostly associated with women in Zimbabwe while men retain ownership, control and decision making over large livestock. Sociocultural norms normally prevent women from owning larger livestock [8]. Despite their contribution to global food security, women farmers remain undervalued as their work is predominantly unpaid work [9], and the contribution of individual chickens at the household level remains nominal. While several studies have documented the impact of poultry on the livelihoods of smallholder farmers, a few have documented the impact of poultry on women's empowerment in rural areas. This paper presents the evidence of how the Indigenous Poultry Value Chain poultry project which was implemented by Action Contre la Faim (ACF) in partnership with Nutrition Action Zimbabwe (NAZ) in Mwenezi district empowered women.

### **Background Of The Indigenous Poultry Value Chain Project**

The Indigenous Poultry Value Chain project is a project that was implemented by Action Contre La Faim in partnership with Nutrition Action Zimbabwe (NAZ) with the aim of strengthening the Indigenous Poultry Value Chain for diversified livelihoods and improved household income in Chiredzi and Mwenezi districts. The patriarchal society and socio-cultural norms prevents women from having access to, ownership, control over the income particularly of large livestock. This project, which started on the 1<sup>st</sup> of May 2022 and ended on the 31<sup>st</sup> of July 2023, sought to empower marginalized rural women who lack equitable access to production and economic means. The project had a deliberate bias towards women and aimed not only at strengthening their access to markets but also improving poultry productivity through providing incubators and access to extension services. Project participants/farmers were organized into indigenous poultry business units or clusters. The hypothesis is that organizing farmers into business groups helps to alleviate marketing challenges, increase market access and access to inputs. The groups were mentored, which ultimately enabled them to have strong networks with input and offtake markets. This study seeks to document the impact of this poultry project on the empowerment of women.

### **Towards The Empowerment Of Women Through Poultry**

#### **A. 'Women's Empowerment'-a working definition.**

For decades, empowering women has been an implicit and explicit objective of sustainable development. As a result of this programming evidence and research, empowering women and enhancing women's status can play a significant role in the success of numerous development programs and contribute to positive societal transformation. Achieving gender equality is recognized as a central objective of the 2030 Agenda for Sustainable Development. Improving health and nutrition, guaranteeing food security, eradicating hunger, and reducing poverty are integral to achieving the objective of women's empowerment. In most cases including in this paper, the justification for focusing on women is based on both efficiency and fairness: Not only are women, and rural women, disadvantaged relative to men but supporting them also sets the next generation on the right path in terms of gender justice, as women are typically the leading contributors to Agriculture and food production worldwide. Women account for approximately 43% of the total agricultural labor force and 50% of the total food production worldwide [10]. It has been observed that when women are given more control over how household income is spent, the proportion of money spent on nutrition insecurity decreases, as women prefer to spend more on nutritive and high-quality foods than men, who prefer to spend money on unhealthy foods, personal gratification through recreation, and alcohol [11]. Therefore, empowering women and enhancing women's status can play a significant role in the achievement

of numerous development outcomes and contribute to a positive transformation of society by reducing household vulnerability to poverty and food and nutrition insecurity [12].

[13] define empowerment as a system by which individuals, societies, and institutions gain control over the obstacles that cause them the most distress. [14], for example, defines women's empowerment as the increase in resources and skills that enables women to contribute, negotiate, influence, regulate, and accept responsibility for institutions that cause distress in their lives. [15] defines women's empowerment as the capacity for women to exercise voice and strategic forms of control over their lives and to generate regular and independent sources of income. Thus, the paper borrows much of its theoretical and conceptual understanding of women's empowerment from these scholars such as utilizing [13] who defines empowerment as the process by which people increase their capacity to make strategic life decisions, particularly in contexts where this capacity was previously denied. This definition includes three elements: resources (access to and future claims on material, human, and social resources), agency (decision-making and negotiation), and achievements (self-defined results or objectives). In addition, women's empowerment in agriculture is defined as the capacity of women farmers to realize their full potential as economic and social actors through their ability to make decisions on agriculture-related matters and their access to the material and social resources necessary to implement those decisions along the value chain ([16]; [17]; [18]). Women and men must have equal access to and control over productive resources and economic assets for gender equality, women's empowerment, and sustainable development to be achieved. The study aims to document the role of poultry in women's empowerment.

## **B. Links between Poultry and Women's Empowerment**

The debate on poultry and its contribution to empowerment has raged for decades, with measurement and definition constituting the primary points of contention. Bill Gates heightened the debate in 2016 when he asserted that a woman could earn \$1,000 per year with just five chickens.<sup>[1]</sup> In the meantime, Melinda Gates emphasizes the empowerment aspect, stating that "raising chickens is considered women's work, and the money from selling chickens and eggs belongs to women to spend as they see fit."<sup>[2]</sup> This international spotlight on chickens contributed to bringing the discourse on women's empowerment through chickens to the attention of development practitioners. The major point of contention was that merely distributing chickens with the expectation that they will improve livelihoods is, of course, not so simple. As such, initiatives were always required to consciously establish a method for measuring the anticipated changes over time. The Women's Empowerment in Livestock Index (WELI) was released by the International Livestock Research Institute (ILRI) in 2018 to address the shortcomings of the Women's Empowerment in Agriculture Index (WEAI) developed by the International Food Policy Research Institute (IFPRI) in 2012. The WEAI had failed to account for livestock, particularly poultry and small ruminants, which are owned and controlled by women in most global south communities. Beyond 2018, it became standard practice for projects on women's empowerment and livestock to assess themselves in terms of one or more of the WELI's six dimensions, namely (1) decisions regarding agricultural production, (2) decisions regarding nutrition, (3) access to and control over resources, (4) control and use of income, (5) access to and control over opportunities, and (6) workload and control over their own time. This study utilizes the definition given by [19] which states that empowerment is a process by which people expand their ability to make strategic life choices, particularly in contexts where this ability was previously denied to them. In like manner, this paper aims to evaluate the impact of poultry on women empowerment focusing on four key empowerment dimensions for women: decisions regarding agricultural production, decisions regarding nutrition, access and control over resources and control and use of income.

## **Research Question**

What is the impact of poultry production on women's empowerment?

### **C. Objectives**

1. To understand how socio-economic characteristics of farmers affect poultry production.
2. To determine the contribution of poultry in the livelihoods of the smallholder farmers
3. To determine how the indigenous chicken poultry value chain contributed to women empowerment of the participants?

## **METHODOLOGY**

### **D. Study Area**

The research was conducted in Mwenezi District in Zimbabwe. Mwenezi district is in southeast of Zimbabwe in Masvingo District. The total geographical area of Mwenezi District is 1,339,680 hectares, which is comprised of communal Areas, Intensive Conservation Areas for large- and small-scale wildlife large-scale commercial plantations, and reclaimed land. The district straddles agro-ecological regions IV and V which are characterized by average annual rainfall ranging between 450mm to 650 mm received mostly between the months of November and March. The diurnal range of temperatures averages 30-35°C [19]. The soil is predominantly sandy as is the case with most of the district [20]). Vegetation is predominantly tree savannah and tree bush savannah [21].

### **E. The Socio- Cultural Background of Livestock Ownership**

Approximately 86% of women depend on the land for their subsistence and their family's food production [22]. In Zimbabwe, most smallholder farmers are rural women. Land ownership, resource access, and resource control are typically skewed toward males[23]. The system is extremely patriarchal, with women occupying subordinate positions as opposed to equal partnerships. Women are expected to consult with their spouses before making decisions, especially regarding livestock. Women lack the same decision-making authority regarding access to and ownership of larger livestock. Men pay little attention to poultry because, according to them, the money derived from it is often too little for them to pay attention. Due to the patriarchal system and cultural norms that frequently oppress women, poultry is typically considered "poor man's" livestock and owned by women. They maintain possession and control of small livestock, including goats and chickens. The cultural system forbids women from speaking in public, particularly when they are men. As a result, women are not confident enough to take on leadership positions. Therefore, poultry is an indispensable instrument for empowering women, allowing them to achieve previously unattainable domains of empowerment.

### **F. Experimental design and sampling**

Twenty respondents from Mwenezi district participated in the research study. The respondents were chosen through a two-stage, non-probability, and purposive sampling procedure. The initial stage of the process involved choosing the district which was Mwenezi. The following stage involved randomly selecting 20 participants who were part of the two projects i.e., the past project and the current project.

### **G. Data collection**

A semi-structured questionnaire that captured both qualitative and quantitative data was used. Qualitative data was collected by conducting key informant interviews with the project beneficiaries of the Indigenous Poultry Value Chain project.

### **H. Data analysis**

All data were entered, checked, verified, and analyzed with Statistical Package for Social Scientists (SPSS). Descriptive statistics were generated to represent respondents' opinions on various aspects of the role of

chickens in the livelihoods of smallholder farmers. These descriptive statistics included frequencies, means, and cross-tabulations of the identified variables. Association between various categorical variables and socio-demographic factors were tested with the chi-square test for independence. Associations were considered significant at ( $P < 0.05$ ).

All ranked data were analyzed in MS Excel using the two-stage weighted mean procedure as proposed by [24] according to the following formulae:

- Weighting index per criterion (WI)

$$WI = [3 \times \text{Propn ranking 1}] + [2 \times \text{Propn ranking 2}] + [1 \times \text{Propn ranking 3}]$$

- Ranking index

$$\text{Ranking index (RI)} = \frac{\text{Weighting index per criterion}}{\sum \text{weighting indices for all criteria}}$$

## RESULTS AND DISCUSSION

This section is structured based on the three research objectives. First, we present the household demographics and how they affect poultry production. Then we present the role of poultry on the livelihoods of women. Finally, we present the role of poultry on women empowerment.

### I. Household characteristics of respondents.

The mean age of the respondents was  $43 \pm 2.2$ . The majority of respondents (50%) were between the ages of 40 and 49 years old. While 30% were between the ages of 30 and 39 years old, 10% were between the ages of 51 and 59 years old, and the remaining 10% were between the ages of 60 and 69 years old. 70% of the total respondents were married, while 20% were widowed and 10% were single. 80% of the respondents were female, while 20% were male.

### J. Impact of Education on the adoption of good poultry production practices

The overall education level attained by the majority of the respondents was secondary education 65%, while 30% had attained primary education and only 5% of respondents attained no formal education. The level of education is one of the most important factors that affect the adoption of improved technologies. This is consistent with results that were found by [25], [26]). Most of the farmers in this study were educated with the majority of farmers attaining at least primary education. In this study, we found that the mean number of chickens was  $24.6 \pm 2.96$ . These results are similar to [27] who also found that the mean number of chickens in Gutu District which is in a similar geographical area in Zimbabwe was 22.7. Chi-square analysis showed that there was a relationship between the level of education and the number of chickens that are owned at ( $P < 0.05$ ). This could be attributed to the fact that people with higher levels of education are quick adopters of technologies compared to those that do not have formal education. Feedback from the project participants indicates that the indigenous poultry value chain project provided both poultry inputs and training to farmers. Those farmers who had higher levels of education, and who had studied up to secondary level were more likely to implement the training and practices of the project. However, on the other end, those with no formal education had less likelihood to implement training and practices from the project.

### K. Impact of poultry on household income

The mean monthly income from the chickens reported by the women was \$62 USD. The monthly income was derived mainly from the sale of chickens. The farmer with highest income had generated \$104. The

farmers who had a high number of chickens were the ones who reported to be frequently selling as compared to those with low numbers. Very few farmers reported to be selling eggs. This could be attributable to the fact that within these rural settings, eggs are typically maintained for reproduction than sale. Increasing the income of women has been shown to improve household welfare through investments in household and children. Approximately 90% of the women mentioned that in previous years their main source of income was crop production. However, for the past three years due to the impact of climate change, there has been drought which adversely affected the cropping in the area. As a result, they were now gaining most of their income from poultry production.

**L. Relationship between socio-demographic factors and total Income from Poultry**

In this study, no significant relationship was found between age, marital status, and the total income from poultry. These results are similar to results that have been documented by others [28] who also documented that they were no significant relationship between socio-demographic factors such as age, marital status and the total income.

Table 1. Relationship Between Sociodemographic Factors And Factors Influencing Income From Chicken Production

Relationship	Estimate	S.D	Sig
Income* Chickens	111.17	0.233	NS
Sex* Chickens	16.875	0.205	NS
Age* Chickens	145.833	0.162	NS
Education* Chickens	40.000	0.039	**
Marital Status*Chickens	29.286	0.298	NS

**M. Role of Chicken in the livelihoods of Farmers**

Farmers mentioned that chickens were also important particularly for human consumption, income generation and payment for school fees for children. Farmers prioritized the use of chickens for human consumption, income generation. The income that is generated from the sale of chickens is used to pay school fees and buy stationery. These results are similar to results found by [29] and [29]. The respondents also mentioned that chickens play an important role in paying medical bills. Albeit the small income that they contribute, chickens can be easily liquidated in the case of an emergency and be used to pay for medical bills. These results corroborate with results found by [30] who mentioned that chickens play an important role in paying for medical costs. About 10% of the elderly farmers mentioned that they had sold most of their chickens for medical expenses.

Table 2. Ranking Of The Importance Of Chickens

Item	Ranking %			Sum	Index	Rank
Human consumption	9	8	2	45	0.39	1
Income generation			11	37	0.32	2
School Fees	5	5	1	4	0.22	3

**I. Poultry impact on household consumption**

Farmers mentioned that chickens were an important nutrition source. This is congruent with the results found by [31] who found out that the chief role of chicken in the Eastern Cape of South Africa is for meat

provision. [31] also found out that farmers prioritized chicken consumption in Ethiopia. Women indicated that poultry provides them autonomy to determine nutritious consumption within their families. Women enjoy the decision-making power they have overconsumption of chicken as they rarely have to consult their husbands on the decision to slaughter a chicken. Compared to other forms of livestock chickens are easily disposed. The participants mentioned that they slaughtered chickens for home consumption at least once a week. As chickens have a relatively small body and lower cost of acquisition. Farmers have little or no emotional attachment to chickens. Farmers mentioned that there was generally a lack of protein sources which makes the chicken the preferred animal of choice.

## J. Role of Poultry on Women Empowerment

1) Poultry impact on asset creation: Forty percent of the participants mentioned that they used the income generated from poultry sales to engage in ISAL groups. The ISAL groups allow farmers to save so that they can get income which they used to acquire larger livestock such as goats. The farmers mentioned that before the project they could not afford to save, as a result attaining larger livestock was very difficult for them. Poultry has been well documented as an important pathway into entrance into the livestock ladder for farmers particularly women [30].

*“Last time I exchanged 24 (2months) boschveld chicks to a nearby farmer with four goats who wanted the boschveld chickens.” (Respondent 1, Mwenezi District Zimbabwe)*

2) Impact on Poultry on Decision Making: In this study, 80% of the women confirmed overall responsibility for poultry decision-making concerning selling the livestock. Decision making in poultry involves the decision to sell chickens, decision for the consumption of chickens and the decision also to give chickens as gifts to guests [32]. The women explained that since they were the beneficiaries of the project it fostered ownership and decision-making toward the chickens. The women attested to this.

*“I own the chickens, so I decide how to care for them and when to slaughter them.” (Respondent 2, Mwenezi District).*

The indigenous poultry value chain project was also able to empower women in terms of income. The women were grouped into poultry business clusters and realized incomes from the project. The project managed to facilitate the marketing of poultry and eggs for farmers resulting in a guaranteed market for their produce. According to [33], the increase or the development of interventions that allow women to realize income is a form of empowering women economically. The women reported also having the power to control their income. Female entrepreneurship increases women decision making power, autonomy as well as financial independence [31]. They were however some instances where the women reported the inability to control their income and have to submit to their husbands. This is an indicator that while agriculture may empower women, patriarchy remains pervasive. There is a need to continuously engage the community to facilitate the change of socio-cultural norms.

*“Because I was the one who registered to receive the chickens, I am fully responsible for making decisions regarding the control of my chickens.” Though sometimes when he wants money for beer, he would just tell me that he has sold a hen but he doesn't give me the money, so I ignore since he is the head of the house and I have to submit to him because I want to safeguard my home.” Respondent 3 Mwenezi District.*

The third domain is concerned with asset ownership. The poultry project distributed an input package to the farmers. Each farmer was given a package that consisted of chicks, 25 starter, grower, and finisher feeds. The participants attributed the distribution of the poultry starter package to their success in poultry production. Since the beginning of the project, the mean number of chickens owned per farmer increased. Farmers attested to this. Among other assets introduced to the farmers was the use of the incubator. According to the participants before the project the hatchability of their chickens was low owing to the long

brooding period of their chickens. Now with the coming in of the incubator the hatchability of the chickens has increased.

*Chicken ownership has changed for me since the beginning of the project, I was not a poultry farmer and had only four chickens at home, but now, thanks to this project, I have 38 chickens and 25 eggs that I have placed in an incubator. This is a significant change for me. Respondent 4 Mwenezi District.*

3) Impact of Poultry on Leadership: The fourth domain investigated in this study was leadership. The leadership domain means enabling women to be part of a social or economic group. The indigenous poultry value chain project program trained and equipped lead farmers to manage and maintain solar-powered incubators. A total of 52 lead farmers were selected and trained by the project and 75% of the lead farmers were women. The farmers were also grouped into poultry business clusters which were envisaged to increase access to markets, access inputs, and contribute to the formation of cooperatives. The project specifically targeted lead farmers who are women to comprise the leadership of these groups. The lead farmers were also trained to become paravets and also be able to operate, manage, main, and repair incubators. These latter activities have always been a preserve for men. Culturally a woman is supposed to be quiet when they are men. As a result, women have not been able to take up leadership positions in the community. This situation has been aggravated by the patriarchal nature of the societies Women lack confidence to take up leadership positions. Women were trained in leadership skills and are now confident to take up leadership positions that are known to be taken by men. One of the women who participated in the project attested to this.

*“We created a poultry cooperative group of 22 poultry farmers where we sale 500 eggs monthly to the nearest hospital in our community and in this group, I am the chairlady in this group” Respondent 5 Mwenezi District*

## CONCLUSION

The study sought to evaluate the impact of poultry production on empowering rural women on four domains of empowerment. The study also evaluated the influence of socio-demographic factors on poultry production and the pathways that poultry contributed to the livelihood of smallholder farmers. The findings of the study suggested that socio demographic factors such as age, marital status did not have an influence on poultry production. However, the level of education affected the poultry production as, household heads with higher level of education had a higher number of chickens. From the study, it can be concluded that indigenous chickens are important in the livelihoods of the small holder farmers as they improve food security and generate income at household level. Farmers prioritize the use of chickens for household nutrition and generation of income. The project managed to empower women through the asset creation, decision making, and leadership. They were however instances where it was still evident that decision making particularly from the utilization of income was still limited to the men. This was attributed to patriarchy which is still pervasive. The change in norms takes time, therefore some of the empowerment domains need time to be realized.

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## FOOTNOTES

[1] [https://www.gatesnotes.com/Why-I-Would-Raise-Chickens?WT.mc\\_id=06\\_07\\_2016\\_20\\_CoopDreams\\_BG-EM1\\_&WT.tsrc=BGEM1](https://www.gatesnotes.com/Why-I-Would-Raise-Chickens?WT.mc_id=06_07_2016_20_CoopDreams_BG-EM1_&WT.tsrc=BGEM1)

[2] <https://medium.com/bill-melinda-gates-foundation/the-small-animal-thats-making-a-big-difference-for-women-in-the-developing-world-15d31dca2cc2#.4oi2o15nt>