

Economy-wide effects of VAT-free chicken meat in South Africa: Implications for food security

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Abstract

The broiler industry is the largest contributor to South Africa's agricultural sector, playing a critical role in food security by providing an affordable protein source, especially for low-income households. Despite increased domestic production, the poultry industry continues to face sustainability and competitiveness challenges due to rising input costs, disease outbreaks, and price volatility, which have contributed to rising poultry meat prices and affordability constraints. This study investigates the economy-wide effects of removing Value Added Tax (VAT) on poultry meat in South Africa, a measure increasingly advocated to support food security and relieve financial pressure on vulnerable households. Using the Dynamic Equilibrium Model for Economic development, Resources and Agriculture (DEMETRA), calibrated to a disaggregated 2019 South African Social Accounting Matrix (SAM), the study simulates policy scenarios including the removal of VAT on poultry and potential fiscal compensation mechanisms. Results are expected to show the impact of VAT removal on poultry consumption, household welfare, particularly among low-income groups, industry performance, and government revenue. The findings aim to inform tax and food security policy by highlighting the trade-offs between enhancing affordability of essential food items and maintaining fiscal sustainability in a constrained economic environment.

Key words: VAT, poultry industry, food security, computable general equilibrium (CGE), fiscal policy, SAM

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1. Background and justification

The broiler industry is the largest single contributor to the agricultural sector in South Africa, measured by contribution to the agricultural gross value, animal product gross value, and animal feed consumption. In 2022, the gross value of the broiler industry grew by 16.6% to R59.02 billion, compared to 2021. Combined with the egg sector, they both contributed 16.3% of the agricultural gross value and 33.9% of the animal product gross value (DALRRD, 2021). South Africa's production of broiler chicken has increased significantly by 8% from 1.70 million tons in 2019 to 1.83 million tons in 2022 (SAPA, 2023). Despite the recent increase in domestic broiler production, the country still requires imports to meet the domestic demand. In 2022, the total consumption of poultry meat was 2.51 million tonnes, which is 61% more than the combined 1.53 million tonnes of beef, pork, mutton and goat (SAPA, 2023). This is owing to the poultry meat being one of the cheapest alternative sources, making it essential for ensuring food security in the country.

Despite the industry's importance to the economy as well as being an important and affordable protein source especially for low-income households, its sustainability and competitiveness depends on various factors. These include the recurrence of diseases outbreaks such as the avian influenza, input costs (i.e., electricity, feed, and fuel, etc.), as well as the quantity and price of imports. Eskom's 18% tariff increase in electricity prices came into effect in April 2023, which added further strain on domestic producers in terms of costs of production. The nexus of these challenges has led to consistent rise in chicken meat prices and resulting to affordability constraints among low-income households. Given the importance of poultry meat as the cheapest source of protein especially for impoverished households and the ongoing challenges that poultry sector is facing which drives price increases and threatens the industry's sustainability, profitability and competitiveness; there has been an increased advocacy for the removal of Value Added Tax (VAT) in chicken meat related products. Chicken meat an essential commodity for safeguarding and enhancing food security within the country. Currently, South Africa's poultry meat is subject to the 15% VAT unlike other essential food products such as maize meal, brown bread, samp, rice, vegetables and fruits, eggs, edible legumes and pulses of leguminous plants, among other basic food stuffs which are exempted from the VAT.

VAT is the second most source of revenue after personal income tax for the South African government. In 2022/24 financial year, the government collected about R1 686.7 billion, of which personal income tax contributed a share of 35.7% while VAT contributed about 25%, followed by a 20.6% generated from Corporate Income Tax. Given that current economic climate characterized by stagnant economic growth, high levels of unemployment and poverty, it is justifiable to lobby for the zero VAT rating on some of the essential food products such as poultry meat. The argument that is presented in favour of exemption poultry meat from VAT indicates that VAT reduces disposable income which suppresses domestic demand and strain low-income households. Therefore, zero-rating VAT on chicken products could help alleviate the financial strain on vulnerable households, enhance food security, and support domestic demand in a challenging economic environment. On the other hand, this will affect tax collection, which has potential to affect government spending on such things as infrastructure development and maintenance, job creation enabling investments, among other things.

Consequently, the aim of this paper is to assess the economy-wide effects of removing VAT on poultry meat in South Africa. Economy-wide modelling of the removal of VAT on poultry meat in South Africa can provide insights into the broader economic impacts of such a policy move. This approach helps capture both direct and indirect effects across various sectors, households, and regions, considering the multiplier effect of tax collection.

2. Literature review

2.1. The role of poultry in South Africa's agro-food system

Poultry plays a crucial role in South Africa's agricultural sector, contributing significantly to food security. The poultry industry provides substantial employment opportunities and supports poverty alleviation. In 2018, the broiler industry alone employed approximately 47,025 people, while the egg industry added another 7,503 jobs. The poultry industry is essential not only for meeting the growing demand for affordable protein but also for supporting the livelihoods of millions of South Africans, both in farming and across related industries such as processing and retail. Additionally, the poultry sector plays a vital role in the country's economy through foreign earnings.

South Africa is one of the world's leading consumers of poultry, especially chicken (USDA, 2020). Poultry meat is relatively inexpensive and widely available, making it the most important source of protein in the diet of the majority of South Africans (SAPA, 2023). In 2023, the total consumption of poultry meat and eggs reached 2.713 million tons, which is 76% more than the combined 1.542 million tons of beef, pork, mutton, and goat meat consumed over the same period. Of this total, 2.235 million tons were poultry meat products (including imports), and 0.479 million tons were eggs and egg products (AgriSETA, 2023). Key factors driving poultry consumption include income levels, changes in spending power, population growth, and urbanization. However, with income growth stagnating in recent years, the overall growth in meat consumption has slowed compared to the early 2000s (BFAP, 2020). Projections indicate that poultry consumption will increase by 1.88% in 2025, driven by a slight increase in consumer purchasing power and a decline in food inflation (USDA, 2024).

The cost structure of poultry production in South Africa is influenced by several factors, including feed prices, labor costs, and energy expenses. The price of maize, a key component of poultry feed, plays a significant role in determining production costs, as fluctuations in maize prices can directly impact overall production expenses (SAPA, 2023). Additionally, the cost of energy and water for farming operations further affects the cost structure. Disease outbreaks also pose a threat to poultry production. For example, the weighted average producer price for broilers was R31.70 per kg in 2023, an 8.0% increase from R29.36 per kg in 2022, partly due to avian influenza outbreaks and global animal feed price inflation (SAPA, 2023). Price dynamics in the poultry market are also influenced by import tariffs, which protect local producers from cheaper imported poultry, but these tariffs can result in higher prices for consumers (SAPA, 2023).

2.2. Introduction to vat policy and food security in South Africa

VAT is a new and more advanced tax system emerging in the mid-20th century as a consumption-based tax, aimed at improving revenue collection efficiency and reducing tax evasion. While taxes have existed for centuries on income, wealth and sales, VAT was implemented in France in 1954 formally before becoming a dominant tax model worldwide (Von Berg, 2020).

VAT can be traced back to World War I, where the concept of tax consumption was introduced as a means of raising state revenue (Von Berg, 2020). Previously, before VAT adoption most countries relied on general sales taxes (GST), which applied a single tax rate to the final sale of goods and services. However, the sales tax inefficiencies, being included in every stage of production and difficulties in administration led to the transition towards VAT (Erero, 2021). After France became the first country to introduce VAT, most countries globally started to use the system. By the late 20th century numerous countries replaced their traditional sales tax systems by adopting VAT. The adoption was driven by its efficiency in broadening the tax base and increasing compliance (Erero, 2021).

In 1991, South Africa introduced VAT, replacing the previous General Sales Tax (GST) of 13% (Kwebulane & Oyekale, 2024). The introduction followed recommendations from the Margo Commission, which identified major inefficiencies in GST, particularly in tax recovery and high evasion rates (Von Berg, 2020). Initially VAT was set at 10% but increased in 1993 to 14% in response to economic conditions and government fiscal needs (Erero, 2021). When the VAT rate increased, the government introduced more zero-rated products to mitigate VAT's regressive impact on low-income households (Von Berg, 2020). Over the years, adjustments to the VAT rate such as the increase from 14% to 15% in 2018 have aimed to increase revenue collection while sparking debates about the impact on affordability for low-income households (Roos et al. 2020).

In the 2022/23 financial year, the government collected approximately R1 686.7 billion in tax revenue, with Personal Income Tax accounting for 35.7%, VAT contributing 25%, and Corporate Income Tax contributing 20.6%. These Tax contributions enable the government to finance growth through increased investments in national security, welfare, public infrastructure, education, and health care. The VAT system in South Africa is governed by the Value-Added Tax Act (VAT Act No. 89 of 1991) and operates under the authority of SARS. VAT being a crucial revenue source for the government and the second-largest contributor to tax revenue, followed by personal income tax (Von Berg, 2020). However, VAT remains controversial due to its regressive nature poorer households spend a larger proportion of their income on VAT-taxed goods compared to wealthier individuals (Erero, 2021).

South Africa's VAT system applies to some goods and services at the standard rate while others may be exempt or zero-rated (Roos et al. 2020). This approach reflects a policy intent to balance revenue needs with socio-economic priorities like food access (Davies Tax Committee, 2016). According to Kearney and van Heerden (2004), VAT is regressive in nature, disproportionately affecting low-income households as they spend a larger proportion of their income to consumption goods. Zero rating food is considered to alleviate poverty for poor households by reducing the regressive effect of VAT system in South Africa. For food, a list of 21 items is zero rated to alleviate tax burden on low-income households. These include staples like brown bread, maize meal, rice, vegetables, fruit, milk, eggs, and dried beans, among others (National Treasury).

There have been ongoing discussions to expand this list, with proposals to include items like certain chicken products to make this essential food more affordable for low-income households (SAPA, 2024).

South Africa's VAT policy is designed to ensure affordable access to nutritious food, particularly for low-income households (South Africa's Ministry of Finance, 2018). According to the Food and Agriculture Organisation of the United Nations [FAO], (1996), food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life. In South Africa, food security remains a challenge for the country due to increasing economic pressures and rising food prices. While South Africa is considered to be food secure at the national level, many households are food insecure, since not all households have access to adequate food. Low-income households often struggle to afford basic food items due to low income and high food prices. According to Statistics South Africa (Stats SA, 2023), approximately 3.7 million households faced moderate to severe food insecurity, while 1.5 million households endured severe hunger in 2023. VAT policy directly supports food security by zero-rating essential food items, reducing the cost of food items for poor households.

3. Methodology and data

This study employs a single-country computable general equilibrium (CGE) modelling approach which allows for the assessment of indirect and direct effects of exogenous changes to the different parts of the economy. Basically, CGE models make account for all interlinkages between all sectors in the economy (countries, households, firms, and governments) (UNCTAD., 2013; Burfisher., 2021; Yalew et al., 2023). Bessler et al. (2014) state that CGE models are a class of theoretically based models that are able to simulate the reaction of an economy to various changes in terms of prices, production, factor use, household income, and other factors.

Specifically, the study adopts the Dynamic Equilibrium Model for Economic development Resources and Agriculture (DEMETERA) model to simulate the impact of VAT removal, considering both direct and indirect effects across different sectors and households. The DEMETERA model is an extension of the STAGE_DEV model documented in (McDonald et al., 2016). The model allows for the investigation of the economy-wide and distributional impacts of specific policies and/or structural shocks, sectoral transmission of sector-specific policies for sectors, agents and regions. DEMETERA has been widely employed to produce ex-ante impact analyses mainly of food security related topics (Nechifor et al., 2021; Omoju et al., 2024; Agyei-Holmes et al., 2024).

The DEMETERA model will be calibrated using an updated and modified South Africa 2019 Social Accounting Matrix (SAM) as described by van Seventer and Davies (2023). The 2019 SAM is based on a supply and use tables (SUTs) for 2019 published by Statistics South Africa (Stats SA) and on national accounts available from the South African Reserve Bank which will be used as a base data source. The SAM will be disaggregated to include the poultry sector and households by income groups. Additionally, data from the National Treasury on VAT rates, exemptions, and contributions of various sectors to VAT revenue will be considered. The study will also estimate the production and consumption elasticities specific to poultry meat in order to capture price and demand responses.

4. Policy simulation scenarios

The study will simulate different scenarios to assess the impacts of VAT removal:

- Baseline scenario: The economy with VAT on poultry.
- Policy scenario: The economy after the removal of VAT on poultry meat, assuming all other taxes and policies remain the same.
- Alternative fiscal compensation showing an increase in VAT on other goods given that removing VAT will reduce government revenue, scenarios will also include compensatory tax adjustments such as an increase in VAT on other goods or direct income taxes.

5. Expected results and potential policy implications

The removal of VAT on poultry could potentially have the following effects, which would be measured in the CGE model. Firstly, with poultry being a staple for many households, may see increased demand, particularly benefiting lower-income households. Reduced prices for poultry meat due to the removal of VAT may lead to greater accessibility, but the extent of price transmission to consumers depends on market structure and competition. Moreover, the poultry industry may experience changes in production, employment, and investment. These effects could differ between commercial producers and smaller farms. Furthermore, a reduction in VAT revenue would likely occur, and its magnitude depends on the size of the poultry market and the elasticity of demand. Lastly, depending on the significance of the poultry sector, there could be broader effects on GDP, employment, and household welfare.

This analysis would contribute to ongoing debates on food security, tax policy, and economic development in South Africa, offering a data-driven basis for considering VAT exemptions on essential goods like poultry. The results would offer insights for policymakers regarding the trade-offs between promoting food security and affordability for low-income households by reducing the cost of a basic good, as well as, managing fiscal sustainability, as the loss of VAT revenue needs to be addressed either by cutting public spending or increasing taxes elsewhere.

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