

Appendix 3

PESTEL Analysis of the Nigerian economic and business environment of tomato processing

Political factors

- **Government inconsistent policies**
 - **Import tariffs and restrictions:** The Nigerian government's policy on tomato paste imports significantly impacts the local processing industry. High tariffs encourage local production, but can also lead to higher prices for consumers, if local supply is insufficient. Import bans, while intended to boost local industry, can be ineffective, if local processors lack capacity or face infrastructural challenges.
- **Agricultural subsidies and support programmes:**
 - Food Safety Regulations and approvals
 - Bureaucracy, complex regulatory procedures can hinder the growth of tomato processing businesses.
 - Corruption within the public sector and regulatory agencies.
 - Insecurity in tomato-growing regions, problem of Boko haram, herders-farmers clashes, insurgency, etc. can disrupt production, supply chains, and investments.
 - Trade Agreements: Trade agreements with other countries can impact both the import of raw tomatoes and the export of processed tomato products.

Economic factors

- **Economic growth and consumer income:** Nigeria's economic growth and rising consumer income levels influence the demand for processed tomato products, like tomato paste, sauce, and juice.
- **Inflation rate:** High inflation rates can increase the cost of inputs (fertilizers, pesticides, packaging materials, energy, etc.) for both tomato farmers and processors, impacting profitability.
- **Exchange rate:** Fluctuations in the exchange rate affect the cost of imported equipment, packaging materials, and potentially imported raw tomatoes (if needed to supplement local supply). A weaker Naira makes imports more expensive.
- **Interest rates:** High interest rates can make it difficult for tomato processing businesses to access financing for expansion and upgrades.
- **Availability of credit:** Access to affordable credit is essential for farmers to invest in improved farming practices and for processors to acquire new equipment.
- **Employment rate:** The employment rate affects the availability of labour and wage levels in the industry.
- **Market size and demand:** The size of the Nigerian market and the demand for processed tomato products determine the potential for growth in the processing industry.
- Growing middle class and urban migration will increase demand for processed tomato products.

Social factors

- **Consumer preferences and habits:** Nigerians traditionally consume a lot of tomato-based dishes. Understanding consumer preferences for different tomato products (paste, sauce, fresh tomatoes) and packaging sizes is crucial.
- **Health consciousness:** Increasing awareness of health and nutrition can drive demand for healthier tomato products with lower sugar and salt content.

- **Urbanisation:** Urbanisation leads to changes in lifestyle and dietary habits, increasing the demand for convenience foods, like processed tomato products.
- **Food Safety Concerns:** Consumer trust in processed food products is critical. Food safety scares and concerns about adulteration can negatively impact demand.
- **Cultural factors:** Regional variations in cuisine and tomato usage patterns need to be considered when marketing and distributing tomato products.

Technological factors

- **Availability of modern processing technologies:** Access to efficient and cost-effective tomato processing technologies (e.g., sorting, washing, pulping, evaporation, sterilisation, packaging) is vital for improving productivity and product quality.
- **Agricultural technology:** Improved tomato varieties, irrigation systems, and pest control methods can significantly increase tomato yields and reduce post-harvest losses.
- **Supply chain management technologies:** Technologies for tracking and managing the tomato supply chain can help to reduce waste, improve efficiency, and ensure product quality.
- **Research and development:** Investment in R&D to develop new tomato varieties, processing techniques, and packaging solutions is essential for long-term competitiveness.
- **Automation:** The level of automation in processing plants impacts efficiency and labour costs.
- **Packaging technology:** Advanced packaging technologies can extend shelf life and maintain product quality.

Environmental factors

- **Climate change:** Changes in rainfall patterns, temperature, and extreme weather events can significantly impact tomato production, leading to crop failures and supply disruptions.
- **Water scarcity:** Water is essential for tomato farming and processing. Water scarcity in certain regions can limit production capacity.
- **Waste management:** Tomato processing generates significant amounts of waste, including tomato skins, seeds, and wastewater. Effective waste management practices are needed to minimise environmental impact.
- **Sustainable farming practices:** Promoting sustainable farming practices, such as reducing pesticide use and improving soil health, is crucial for long-term viability.
- **Environmental regulations:** Environmental regulations regarding waste disposal and pollution control can impact the costs of tomato processing.

Legal factors

- **Food safety laws:** Compliance with food safety laws and regulations is essential for ensuring the safety and quality of processed tomato products.
- **Labour laws:** Labour laws regarding wages, working conditions, and employee benefits affect the costs of labour in the processing industry.
- **Environmental laws:** Environmental laws regarding waste disposal, pollution control, and water usage can impact the costs of tomato processing.
- **Contract law:** Clear and enforceable contracts with tomato farmers are essential for ensuring a reliable supply of raw materials.
- **Intellectual property laws:** Protection of trademarks and patents is important for encouraging innovation in the processing industry.
- **Land ownership laws:** Clear land ownership laws are necessary to encourage investment in tomato farming and processing facilities.