



ORIGINAL RESEARCH PAPER

Economy

FAST FOOD AND SUSTAINABLE DEVELOPMENT: ECONOMIC, SOCIAL AND ENVIRONMENTAL IMPACTS AND THE ROLE OF INNOVATION

KEY WORDS: Fast food; sustainable development; externalities; innovation; Sustainable Development Goals; sustainability.

Bhaswatee Das

PhD Research Scholar, Department of Economics, Gauhati University, Guwahati, Assam, India.

ABSTRACT

The fast food sector has experienced rapid growth globally, driven by increasing urbanization, globalization, changing lifestyles, technological advancements and rising demand for convenient and affordable food options. However, the sector's growth has also raised concerns about its environmental, social, and economic impacts. The study examines the impact of fast food sector from a sustainable development perspective. The study also assesses the positive and negative externalities of the fast-food sector's growth. The paper tries to identify key areas for innovation and intervention that can enhance the fast food sector's positive contribution to both the local economy and global sustainability agendas. The study is based on secondary data and follows a descriptive and analytical approach. The findings may provide useful insights for policymakers, businesses, researchers, and other stakeholders seeking to promote a more sustainable and socially responsible fast-food sector.

1. INTRODUCTION

The fast food industry has been growing tremendously over the past few decades, driven by the forces of globalization and urbanization (Banaji, 1996), (Vepa, 2004), (Anand, 2011), (Panwar and Patra, 2017). The rise of fast food consumption has also become a global phenomenon, reflecting broader socio-economic, cultural, and technological changes. Urbanization, globalization, and changes in lifestyle have collectively influenced dietary patterns, shifting them from traditional, home-cooked meals to fast and processed foods (Bishwajit, 2015). Vepa (2004) discusses the impact of globalization on food consumption in urban India. Due to sedentary and fast-paced lifestyle of the urban people, fast foods have gained popularity among the people making them a staple in their day to day lives (Stowe, 2017; Popkin, 2009).

The expansion of the fast-food sector has significant implications for economic development. The industry generates employment opportunities across different segments, including food preparation, restaurant operations, delivery services, logistics, marketing, and supply-chain activities. It also promotes entrepreneurship by creating opportunities for small-scale food businesses, local vendors, franchise operators, and delivery-based enterprises. As a result, the growth of the fast-food sector can contribute to income generation, business development, and employment creation.

The environmental implications of the fast-food sector are equally significant. The industry generates substantial amounts of food waste and packaging waste, particularly through the use of single-use plastics and non-biodegradable materials. The production, processing, transportation, refrigeration, and delivery of food also require considerable amounts of energy and natural resources. Therefore, the growth of this industry can also generate negative externalities that require attention from businesses, policymakers, and consumers.

Sustainable development emphasizes the need to achieve economic progress while ensuring social well-being and environmental protection. The Sustainable Development Goals (SDGs) established by the United Nations provide an important framework for examining these interconnections. The fast-food sector has potential linkages with several SDGs. However, the fast-food industry is often associated with issues such as environmental degradation, excessive waste generation, labor exploitation, and adverse health effects.

Enhancing the sustainability of fast-food businesses requires a combination of innovative strategies that address environmental impact, resource efficiency, and consumer demand for ethical and eco-friendly dining options.

Against this background, the present paper examines the fast-

food sector from the perspective of sustainable development. It explores the impacts associated with the growth of the industry, including both its positive and negative externalities. The paper further analyses the sector's relationship with selected SDGs and examines the role of innovation in promoting more sustainable business practices. By identifying the opportunities, challenges, and potential areas for intervention, the study seeks to contribute to a broader understanding of how the fast-food sector can balance economic growth with social responsibility and environmental sustainability.

2. RESEARCH OBJECTIVES

- To analyze the economic, social, and environmental impacts of the fast-food industry, including its positive and negative externalities
- To evaluate the sector's alignment with selected SDGs.
- To examine the role of innovation in promoting sustainability within the fast-food sector.
- To suggest strategies and policy measures for enhancing sustainability practices in the fast food industry.

3. DATA AND METHODOLOGY

The present study is based entirely on secondary data and follows a descriptive and analytical research approach. The study examines the relationship between the fast-food sector and sustainable development by analysing its economic, social, and environmental impacts.

Secondary information for the study has been collected from published industry reports, company reports, official publications, and other relevant secondary sources. The study also draws upon information related to the SDGs to examine the potential contribution of the fast-food sector towards sustainable development.

As the study is based on secondary sources, its findings are primarily descriptive and analytical in nature. The study does not attempt to establish causal relationships or provide statistical estimates of the overall impact of the fast-food sector.

4. DISCUSSION OF OBJECTIVES

4.1 Economic, Social, and Environmental impacts of the Fast food sector

Economic Impacts

1) Job Creation: The fast food industry provides employment opportunities, particularly for young people and those with limited skills. Many fast-food chains employ young workers, offering both part-time and full-time employment opportunities. The growth of food delivery platforms like Swiggy and Zomato has created additional job opportunities for delivery personnel, customer support, and digital marketing professionals, driving local employment (Hussain, 2023).

2)Economic Growth: The expansion of the fast food sector contributes to economic activity through revenue generation and supply chain linkages. This sector also supports local agriculture thereby boosting the demand for agricultural goods. The fast-food sector contributes a significant share to GDP, particularly in urban markets where demand for QSRs continues to rise (Steven et al., 2024).

3)Supply chain integration: The presence of global fast-food chains in Guwahati, such as McDonald's, Domino's, and KFC, reflects an increasing consumer purchasing power and urban economic growth. Their operations drive local supply chains, benefiting suppliers, manufacturers, and distributors in the region (Hussain, 2023).

4)Affordability of the fast food: Fast food offers a quick and affordable meal option, particularly in urban areas where people have little time to cook. Value meals, a large number of outlets, and affordability are the major drivers for the fastest growth of fast food sector and a large number of transactions.

5)Potential Negative Impact on Local Economies: The dominance of large fast food chains can negatively impact local restaurants and other food businesses, potentially leading to job losses and reduced economic diversity. Especially due to the growth of fast food restaurants the local businesses of traditional foods or dishes are at stake.

Social Impacts

1)Convenience and Accessibility: Fast food provides a readily available and convenient meal option, particularly for busy individuals and families. The ready to eat option in fast food provides convenience for people with hectic lifestyles. The accessibility of fast food increases its demand compared to other meal options. The expansion of drive-thru and 24*7 delivery has further increased accessibility.

2)Public Health Concerns: The fast-food industry's emphasis on high-calorie, high-sodium, and processed foods has been linked to obesity & diabetes, heart disease & hypertension (Kaushik et al., 2011).

3)Cultural Food Traditions: The prevalence of fast food can erode traditional food cultures and dietary habits, leading to a decline in the consumption of locally sourced and nutritious foods. For example, due to the increased consumption of fast foods, the consumption of traditional pithas in Assam has declined among the younger generation.

4)Labor Practices: Concerns have been raised regarding the working conditions and wages in the fast food industry, with reports of low pay and limited opportunities for advancement. Studies reveal that there occurs labour exploitation by giving low wages to workers working in the fast food sector and also due to precarious working conditions (Gunapala et al., 2025).

Table 2- SDGs

SDGs	Potential Positive Impact	Challenges
SDG 2- Zero Hunger	The fast-food industry provides affordable and accessible food to urban populations, addressing food security concerns. Affordable street-vendor fast food can help alleviate hunger in low-income populations.	The food wastage from fast-food chains can exacerbate global hunger and resource misallocation.
SDG 3: Good Health and Well-being	Introducing healthier menu options, such as plant-based alternatives, contributes to achieving this goal. Also, investment in food safety and hygiene practices can lead to minimization of health risks, which can ultimately lead to good health among the people.	However high consumption of unhealthy fast food is linked to obesity, diabetes, and cardiovascular diseases. The fast food industry promotes highly processed, low-nutrient foods, which often contradicts to this goal.
SDG 8: Decent Work and Economic Growth	The fast-food sector generates millions of jobs globally, from supply chain workers to restaurant employees, which fulfils this objective.	However, many jobs in the sector are lowwage , with poor working conditions and job inse-curity. Also labour exploitation, particularly in developing economies, remains a concern.

Environmental Impacts

1)Massive plastic & packaging waste- Fast food chains generate enormous amounts of waste due to the usage of single-use plastics and disposable packaging. The key concerns include ocean & land pollution, and microplastic contamination.

2)High carbon footprint- The fast food industry's heavy reliance on meat, leads to a high carbon footprint. Intensive livestock farming is associated with methane emissions and energy-intensive supply chains, which means that the transportation, refrigeration, and processing of meat further increase emissions.

3)Deforestation- Fast food production relies on large-scale agriculture, including soy and palm oil cultivation, which leads to deforestation and biodiversity loss. Many fast food products contain palm oil, the production of which leads to habitat destruction, particularly in Southeast Asia.

4)Innovation in sustainable practices- Sustainable innovation involves the adoption of new technologies, business practices, production methods, and management strategies that can help balance economic growth with environmental protection and social responsibility. Fast-food businesses can reduce their environmental impact by sourcing ingredients from local and sustainable suppliers. Businesses can also promote the use of responsibly produced ingredients and increase the availability of plant-based food options. Innovation in packaging is another significant area for improving sustainability. Innovation in logistics and food delivery is becoming increasingly relevant with the rapid growth of online food-ordering platforms.

Positive and Negative Externalities of the Fast-Food Sector

Table 1- Dimension wise Externalities

Dimension	Positive Externalities	Negative Externalities
Economic	Job creation,Economic Growth, Supply chain integration, Affordability of the fast- food	Impact on Local Economies
Social	Convenience and accessibility	Health concerns, cultural food traditions, labour practices
Environ-mental	Innovation in sustainable practices	Massive plastic & packaging waste, High carbon footprint, Deforestation

4.2 Linkages between the Growth of Fast Food Sector and Sustainable Development Goals

The United Nations' SDGs provide a framework for evaluating the sector's impact on economic, environmental, and social sustainability. Below is a detailed analysis of how the fast-food sector aligns with the SDGs, highlighting both potential positive contributions and probable challenges.

SDG 9: Industry, Innovation, and Infrastructure	Technological advancements have led to the rise of delivery apps, which have gained popularity for their convenience and accessibility. With AI-driven personalized recommendations, digital payment systems, and automated kitchens, fast food chains are becoming more efficient and accessible.	Heavy reliance on industrialized agriculture contributes to deforestation and loss of biodiversity. Also supply chain vulnerabilities, including over-reliance on non-local suppliers, can cause disruptions.
SDG 12: Responsible Consumption and Production	Some companies are now shifting towards sustainable sourcing, including organic and ethically produced ingredients. Implementation of zero-waste initiatives and biodegradable packaging reduces environmental harm.	The fast food industry generates massive amounts of plastic waste and food waste, contributing to pollution. Also intensive farming practices associated with fast food sourcing, deplete natural resources.
SDG 13: Climate Action	Adoption of energy-efficient cooking technologies and carbon-neutral restaurant designs. Increasing investment in plant-based food options can lead to reduction in carbon footprint.	High greenhouse gas emissions from livestock production linked to the fast-food supply chain. Also extensive use of fossil fuels in transportation and packaging contributes to global warming.

4.3 Innovative strategies to enhance the sustainability of fast food businesses

Innovation can play an important role in addressing these sustainability challenges. Sustainable sourcing, eco-friendly packaging, efficient food-waste management, sustainable logistics, digital technologies, and responsible business practices can help reduce the environmental and social costs associated with the sector.

Here are some key approaches:

1. **Sustainable Sourcing**– This includes partnering with local farms to reduce carbon footprints and support regional economies. This is because food from local farms travels shorter distances, reducing fuel consumption and greenhouse gas emissions compared to imported or non-local goods.

2. **Eco-Friendly Packaging**- Locally sourced food often requires less packaging since it doesn't need extensive protective materials for long-distance shipping. Also, by replacing single-use plastics with biodegradable, compostable, or edible packaging, can lead to a healthy environment.

3. **Food Waste Management & Circular Economy**- Shorter supply chains help in less food spoilage as it remains fresh due to shorter distance. Also, by offering multiple portion sizes the fast food sector can reduce food wastage.

4. **Energy & Water Efficiency**- By switching to renewable sources of energy like installing solar panels, using energy efficient appliances, the sector can reduce energy usage. Also, by investing in AI-driven appliances the sector can optimize energy and water use.

5. **Sustainable Logistics & Supply Chain**- By using Eco-Friendly Transportation for Ingredients and Carbon-Neutral Deliveries like optimizing supply chain routes and using hybrid or electric trucks, partnering with electric or bike delivery services to cut emissions can lead to sustainable logistics and supply chain.

6. **Sustainability information**- Promoting sustainability efforts through educational campaigns like, in-store displays, social media, and QR codes linking to sustainability information can increase sustainability in fast food sector.

7. **Community & Social Responsibility**- This could include partnering with the local NGOs or charities to donate the excess food, or ensuring fair wages and safe working conditions for employees working in the fast food sector.

4.4 Strategies and Policy Measures for Enhancing Sustainability Practices in the Fast-food Industry

Fast-food companies should implement sustainable alternatives, including biodegradable packaging, plant-based menu options, and responsible ingredient sourcing, to mitigate environmental challenges. Following are some of the recommendations for sustainable development-

- The Government should mandate biodegradable packaging and implement strict waste management

policies for fast-food outlets.

- The Government should also provide incentives for fast-food chains that adopt eco-friendly practices.
- Fast food businesses should integrate sustainable sourcing and energy-efficient operations.
- Fast food businesses should promote healthier menu options and sustainable choices.
- Supportive government policies, consumer awareness, and greater corporate responsibility are also essential for encouraging the transition towards a more sustainable fast-food industry.

5. CONCLUSION AND LIMITATIONS OF THE STUDY

The present study is based entirely on secondary sources and is therefore dependent on the availability, quality, and scope of existing literature and published information. The findings provide a broad analytical understanding of the relationship between the fast-food sector and sustainable development rather than direct empirical evidence from a specific geographical area or population. Future research may address these limitations by using primary data and conducting comparative or location-specific studies.

REFERENCES

1. Anand, R. (2011). A study of determinants impacting consumers food choice with reference to the fast food consumption in India. *Society and Business Review*, 6(2), 176-187.
2. Banaji, J. (1996). Globalisation and restructuring in the Indian food industry. *The Journal of Peasant Studies*, 24(1-2), 191-210.
3. Bishwajit, G. (2015). Nutrition transition in South Asia: the emergence of non-communicable chronic diseases. *F1000 Research*, 4.
4. Gunapala, R., Gangahagedara, R., Wanasinghe, W. C. S., Samaraweera, A. U., Gamage, A., Rathnayaka, C. ... & Merah, O. (2025). Urban Agriculture: A Strategic Pathway to Building Resilience and Ensuring Sustainable Food Security in Cities. *Farming System*, 100150.
5. Hussain, M. S. (2023). Learning to strike in the gig economy: Mobilization efforts by food delivery workers in Hyderabad, India. *Journal of south asian development*, 18(3), 431-456.
6. Kaushik, J. S., Narang, M., & Parakh, A. (2011). Fast food consumption in children. *Indian pediatrics*, 48(2), 97.
7. Panwar, D., & Patra, S. (2017). Localization in Fast Food industry: A case study on McDonald's strategy in India. *Journal of Arts, Science & Commerce*, 8(1), 70-74.
8. Popkin, B. M. (2009). Global changes in diet and activity patterns as drivers of the nutrition transition. In *Emerging societies-coexistence of childhood malnutrition and obesity* (Vol. 63, pp. 1-14). Karger Publishers.
9. Steven, T., Raphael, G., & Salvio, M. (2024). Economic benefits of fast food expansion. CEEOL. Retrieved from <https://www.ceeol.com/content-files/document-1294861.pdf>
10. Stowe, K. A. (2017). Influence of nutritional labelling on the choice of a fast food by young adults from the professional and clerk occupational groups in the City of Cape Town, South Africa (Doctoral dissertation, Cape Peninsula University of Technology).
11. Vepa, S. S. (2004). Impact of globalization on the food consumption of urban India. *Globalization of food systems in developing countries: impact on food security and nutrition*, 83, 215.