



Self-checkout adoption and customer satisfaction: A case study at Decathlon, Chennai

R Srinivasan

Assistant Professor, Department of Commerce (A&F), SRM Arts and Science College, Kattankulathur, India

Abstract

The increasing deployment of self-checkout (SCO) systems has transformed how customers complete purchases in retail environments across the globe. This research explores the effect of perceived ease of use, perceived usefulness, checkout speed, perceived safety of transactions, and the availability of staff assistance on overall customer satisfaction with self-checkout facilities at Decathlon outlets in Chennai. Data was gathered from 200 customers who utilized Decathlon's SCO kiosks or mobile scan-and-pay features, using a structured survey instrument. The dataset was analyzed through descriptive statistics, correlation tests, and multiple linear regression. The findings reveal that perceived usefulness ($\beta = 0.286$, $p < 0.001$), ease of use ($\beta = 0.210$, $p < 0.001$), staff support ($\beta = 0.198$, $p < 0.001$), and checkout speed ($\beta = 0.179$, $p = 0.001$) significantly influence customer satisfaction. Perceived security, however, demonstrated a weaker and statistically non-significant impact ($\beta = 0.068$, $p = 0.099$). The regression model accounted for approximately 31.3% of the variation in satisfaction levels ($R^2 = 0.313$). The study concludes that enhancing customer perceptions of usefulness and simplicity, ensuring staff presence near SCO points, and maintaining high checkout speed are essential to improving satisfaction with self-checkout systems. Practical recommendations specific to Decathlon Chennai are included.

Keywords: Self-checkout, customer experience, retail automation, decathlon, chennai, scan-and-pay

Introduction

Digital self-service technologies are redefining today's retail environment by allowing shoppers to complete the checkout process on their own. Self-checkout systems minimise the need for cashier involvement, reduce waiting time, and enable customers to complete their purchases more quickly. Decathlon, an international leader in sports retail, has introduced both kiosk-based and mobile scan-and-pay self-checkout options in several of its stores across India, including those located in Chennai.

Retail automation is rapidly gaining momentum in India. Recent industry insights indicate that customers increasingly favour automated checkout solutions because they offer greater speed and convenience (Retail Technology Adoption - India Retail & CIO ET Insights, 2024) [10]. Despite this emerging trend, there is a noticeable lack of academic studies examining whether self-checkout genuinely enhances customer satisfaction within physical retail outlets in the Indian context.

Therefore, this study focuses on evaluating how shoppers perceive and adopt self-checkout at Decathlon Chennai, with the objective of identifying the key factors that influence their satisfaction levels.

Review of Literature

Self-service technologies (SSTs) refer to systems that enable customers to complete a service process on their own without direct assistance from employees (Bitner *et al.*, 2002) [2]. Within studies related to SST adoption, two core determinants consistently emerge as foundational:

- Perceived Ease of Use (PEOU)
- Perceived Usefulness (PU)

The Technology Acceptance Model (TAM), introduced by Davis (1989) [1], proposes that these two perceptions strongly shape users' attitudes and overall satisfaction toward technology usage.

Past research on self-checkout (SCO) highlights the following insights

Construct: Summary of Literature Insights

Perceived Ease of Use: Higher system simplicity results in increased acceptance of SCO (Ingale, 2024) [6].

Perceived Usefulness: Customers opt for SCO due to its effectiveness and convenience (Business Perspectives, 2024) [7].

Checkout Speed: Faster processing is a key benefit compared to traditional cashier-led billing (Retail CIO, 2024) [10].

Staff Support: Assistance from employees enhances confidence and reduces errors (Business Perspectives, 2024) [7].

Security Perception: Concerns about payment security may reduce willingness to use SCO (AP & Business Insider, 2024) [9].

Research Gap

There is a lack of empirical studies examining the adoption of self-checkout systems specifically within sports retail outlets in Chennai.

Research Objectives

- E satisfaction level of customers using the self-checkout facility at Decathlon, Chennai.
- To examine how ease of use, usefulness, checkout speed, perceived security, and support from staff affect customer satisfaction.
- To provide strategic recommendations to improve customer experience and strengthen usage of self-checkout systems.

Hypotheses

H1: Perceived ease of use has a positive effect on customer satisfaction.

- H2:** Perceived usefulness has a positive effect on customer satisfaction.
- H3:** Faster checkout speed positively influences customer satisfaction.
- H4:** Perceived security positively influences customer satisfaction.
- H5:** Availability of staff support positively influences customer satisfaction.

Research Methodology

Component: Description

Research nature: Descriptive and empirical investigation

Study location: Decathlon outlets located within Chennai city

Sampling approach: Convenience sampling (customers who used self-checkout were selected)

Sample size: 200 respondents

Research tool: Structured questionnaire based on a 5-point Likert scale (1= strongly disagree → 5 = strongly agree)

Data analysis tools: Descriptive analysis, correlation testing, and multiple regression (SPSS/ R / Python)

Instrument Variables

Construct/Variable	Measurement Scale
Perceived Ease of Use	5-point Likert scale
Perceived Usefulness	5-point Likert scale
Checkout Speed	5-point Likert scale
Perceived Security	5-point Likert scale
Staff Assistance	5-point Likert scale
Customer Satisfaction	5-point Likert scale

Table 1: Descriptive Statistics (n = 200)

Construct	Mean	Standard Deviation
Perceived Ease of Use	3.95	0.68
Perceived Usefulness	3.81	0.78
Checkout Speed	4.08	0.66
Perceived Security	3.44	0.90
Staff Assistance	3.71	0.89
Customer Satisfaction	3.90	0.61

Table 2: Multiple Regression Output

Predictor Variable	Beta Coefficient (β)	Significance (p-value)
Perceived Usefulness	0.286	0.000
Perceived Ease of Use	0.210	0.000
Staff Assistance	0.198	0.000
Checkout Speed	0.179	0.001
Perceived Security	0.068	0.099 (Not significant)

Findings

Customers primarily choose self-checkout because they find it simple and convenient.

The presence of staff improves customer confidence when using the system.

Speed of billing significantly enhances customer satisfaction.

Perceived security plays a minimal role in overall satisfaction when compared to other factors.

Recommendations

Include user guidance on the kiosk screen to help new users quickly understand the process.

Designate a fast-track self-checkout zone for customers with fewer items.

Ensure trained staff are available near self-checkout counters during busy hours.

Provide security assurance messages on the screen to improve trust.

Conclusion

The use of self-checkout significantly enhances customer satisfaction at Decathlon Chennai. Customers appreciate the system’s simplicity, usefulness, and rapid processing. Although technology enables efficiency, human assistance remains essential, as it reassures customers and encourages adoption.

Reference

1. Davis FD. Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*,1989;13(3):319-340. <https://doi.org/10.2307/249008>
2. Bitner MJ, Ostrom AL, Meuter ML. Implementing successful self-service technologies. *Academy of Management Executive*,2002;16(4):96-108. <https://doi.org/10.5465/ame.2002.8951333>
3. Meuter ML, Ostrom AL, Roundtree R, Bitner MJ. Self-service technologies: Understanding customer satisfaction with technology-based service encounters. *Journal of Marketing*,2000;64(3):50-64. <https://doi.org/10.1509/jmkg.64.3.50.18024>
4. Wang C, Harris J, Patterson P. Customer responses to self-service technology: The role of convenience and perceived control. *Journal of Service Management*,2012;23(1):3-23. <https://doi.org/10.1108/09564231211208970>
5. Weijters B, Rangarajan D, Falk T, Schillewaert N. Determinants and outcomes of customers’ use of self-service technology. *Journal of Service Research*,2007;10(1):3-21. <https://doi.org/10.1177/1094670507302990>
6. Ingale K. Evaluating service quality and customer satisfaction of self-checkout users in sports retail. *Innovative Marketing Journal*,2024;20(2):45-59.
7. Business Perspectives. Delighting customers through self-checkout efficiency. *Business Perspectives Journal*,2024;18(1):12-25.
8. Economic Times CIO. How Decathlon enhances shopping using self-checkout, 2024. <https://cio.economicstimes.indiatimes.com/>
9. Business Insider & Associated Press. Retailers modify self-checkout due to misuse and customer dissatisfaction, 2024. <https://www.businessinsider.com/>
10. Forbes Retail Technology. How automation and self-checkout reshape consumer retail behavior, 2024. <https://www.forbes.com/>