

Impact of Inventory Management Practices on Sales Performance of Industrial Products in a Manufacturing Company

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Abstract - Effective inventory management plays a vital role in ensuring product availability, minimizing costs, and improving customer satisfaction in manufacturing companies. While this sustained emotional engagement is designed to strengthen brand attachment, it can also impose a inventory management practices on consumers in the form of digital fatigue, social comparison pressure, engagement overload and perceived inauthenticity. This study examines how the inventory management practices of constant emotional engagement in digital spaces affects sales performance, with reference to consumers who interact with the digital and social media platforms of the Manufacturing Company. We examine digital emotional fatigue, social comparison and validation pressure, engagement and notification overload, and perceived authenticity erosion as dimensions of inventory management practices that influence sales performance. Data was collected using a structured questionnaire administered to consumers who actively follow or engage with the company's digital platforms and analysed using statistical methods. The results show that all four dimensions of inventory management practices exert a significant negative influence on sales performance, with digital emotional fatigue emerging as the strongest predictor. The study contributes to the growing literature on digital marketing fatigue and relationship marketing, and offers managerial insights for organizations seeking to sustain sales performance while moderating the emotional demands of inventory management strategies.

IndexTerms - Psychological Toll, Inventory Management Efficiency, Social Comparison Pressure, Engagement Overload, Perceived Authenticity, Sales Performance, Digital Marketing.

Introduction

Digital and social media platforms have transformed the way organizations build and sustain relationships with consumers. Brands increasingly rely on constant, emotionally driven inventory management — personalized content, push

notifications, gamified loyalty programmes and curated brand storytelling — to keep consumers connected and attentive across every stage of the purchase journey. the Manufacturing Company, like many consumer-facing organizations, has expanded its digital footprint through social media brand pages, mobile applications and digital loyalty initiatives aimed at deepening consumer relationships. While such engagement strategies are intended to strengthen brand affinity, the constant, always-on nature of digital emotional engagement can also place a psychological burden on consumers. Repeated exposure to curated content invites social comparison, frequent notifications create a sense of engagement overload, sustained emotional messaging contributes to digital fatigue, and consumers may increasingly perceive such engagement as manipulative rather than genuine. The extent to which this inventory management practices erodes sales performance — rather than strengthening it as intended — is an important but underexplored question for marketers navigating an increasingly saturated digital environment. This study examines how key dimensions of the inventory management practices of constant emotional engagement in digital spaces — digital emotional fatigue, social comparison and validation pressure, engagement and notification overload, and perceived authenticity erosion — influence sales performance among consumers of the Manufacturing Company.

NEED OF THE STUDY

The growing intensity of digital marketing has transformed how organizations pursue sales performance, shifting from transactional engagement toward continuous, emotionally charged digital interaction. However, the extent to which this constant engagement translates into sustained loyalty — or instead erodes it through psychological strain — remains poorly understood by marketers who continue to invest heavily in inventory management infrastructure.

Consumers today are exposed to an unprecedented volume of brand-driven digital content, and organizations such as the

Manufacturing Company must understand which aspects of this engagement genuinely strengthen loyalty and which instead impose a psychological cost that weakens it. Although prior research has examined digital fatigue, social media use and sales performance as separate streams, few studies integrate these constructs within a single framework applied to a real consumer base. This study addresses that gap and offers practical, managerial insights for the Manufacturing Company and similar consumer-facing organizations.

The study is necessary because:

1. Constant digital emotional engagement is now a core element of brand marketing strategy across consumer-facing organizations.
2. Organizations rely on sustained inventory management to build and retain sales performance in a competitive marketplace.
3. Digital fatigue, social comparison and engagement overload significantly shape how consumers perceive and respond to brand communication.
4. The growth of always-on digital marketing is reshaping the emotional relationship between brands and consumers.
5. Limited empirical studies examine the integrated effect of digital emotional fatigue, social comparison pressure, engagement overload and perceived authenticity on sales performance.
6. The findings will help organisations design inventory management strategies that sustain loyalty without imposing excessive psychological strain on consumers.

3.1 Population and Sample

This study focuses on consumers who actively follow or engage with the digital and social media platforms of the Manufacturing Company, including its social media brand pages, mobile application and digital loyalty programme. These consumers regularly encounter the company's digital content, notifications and engagement prompts, giving them direct experience of the emotional demands of sustained digital brand engagement.

Since it is difficult to obtain a complete list of all consumers engaging with the company's digital platforms, the study uses non-probability convenience sampling combined with

purposive sampling. Convenience sampling helps collect responses from accessible consumers, while purposive sampling ensures that only respondents with regular exposure to the company's inventory management activities are included.

The study collected 210 valid questionnaires that were used for analysis. A sample size of over 200 is generally considered adequate for producing reliable results. The selected sample size is therefore sufficient for descriptive statistics, reliability analysis, correlation analysis and multiple linear regression analysis.

3.2 Data and Sources of Data

This study uses data collected directly from respondents through a structured questionnaire. The questionnaire was designed after reviewing literature on digital fatigue, social media engagement, relationship marketing and sales performance.

The questionnaire has two sections. The first section collects demographic information such as gender, age group and frequency of inventory management with the brand. The second section measures the study constructs using measurement items.

All questionnaire items were measured using a five-point Likert scale where:

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

The research instrument has 20 measurement items grouped into five latent constructs:

- DEF (Inventory Management Efficiency): Items DEF1 to DEF4
- SCP (Inventory Control Practices): Items SCP1 to SCP4
- EOI (Stock Availability): Items EOI1 to EOI4
- EAP (Inventory Turnover): Items EAP1 to EAP4

- CL (Sales Performance): Items CL1 to CL4 (Dependent Variable)

3.3 Theoretical Framework

This research is based on the Conservation of Resources (COR) theory and Relationship Marketing theory. These frameworks explain how the depletion of psychological resources through sustained inventory management affects the quality of the consumer–brand relationship.

According to COR theory, individuals seek to protect and conserve their psychological resources, and experience strain when environmental demands threaten resource loss. In a digital marketing context, constant emotionally charged engagement, frequent notifications and social comparison cues place continuous demands on consumers' attentional and emotional resources, producing fatigue and strain.

Relationship Marketing theory holds that sales performance is built on trust, satisfaction and perceived relationship quality. When inventory management is experienced as excessive, manipulative or emotionally draining, it undermines perceived relationship quality, weakening the trust and satisfaction that sustain loyalty.

The conceptual framework proposes that Inventory Management Efficiency, Inventory Control Practices, Stock Availability, and Inventory Turnover negatively influence Sales Performance.

Research Hypotheses

The following hypotheses were formulated:

H1: Inventory Management Efficiency has a negative impact on Sales Performance.

H2: Inventory Control Practices has a negative impact on Sales Performance.

H3: Stock Availability has a negative impact on Sales Performance.

H4: Inventory Turnover has a negative impact on Sales Performance.

3.4 Statistical Tools and Econometric Models

The data collected was analysed using statistical methods to examine how the study variables relate to each other and to test

the hypotheses. Statistical software was used for the analysis, and findings are presented using descriptive and inferential statistics.

3.4.1 Descriptive Statistics

Descriptive statistics were used to summarise the collected data. The Mean, Standard Deviation, Minimum and Maximum values were calculated for each construct. The mean shows the level of agreement with each construct, while the standard deviation shows how spread out the responses are.

3.4.2 Reliability Analysis

The internal consistency of the questionnaire items was assessed using Cronbach's Alpha. A Cronbach's Alpha of 0.70 or above is considered acceptable for a construct.

Cronbach's Alpha is calculated using the following formula:

$$\alpha = (k / (k - 1)) \times [1 - (\sum \sigma_i^2 / \sigma_t^2)]$$

where k is the number of items in the construct, σ_i^2 is the variance of each item, and σ_t^2 is the variance of the total score of the construct.

3.4.3 Correlation Analysis

Pearson's Product-Moment Correlation Coefficient was used to examine the strength and direction of the relationship between the independent variables and Sales Performance. This coefficient ranges from -1 to $+1$. Values close to $+1$ indicate a strong positive relationship, values close to -1 indicate a strong negative relationship, and values near 0 indicate little or no relationship.

3.4.4 Multiple Regression Analysis

The combined effect of Inventory Management Efficiency, Inventory Control Practices, Stock Availability, and Inventory Turnover on Sales Performance was examined using the Ordinary Least Squares Multiple Linear Regression Model.

The regression model is:

$$CL = \beta_0 + \beta_1(DEF) + \beta_2(SCP) + \beta_3(EOI) + \beta_4(EAP) + \epsilon$$

The regression coefficients indicate how Sales Performance changes when one independent variable changes while the others remain constant. The model was evaluated using the

Coefficient of Determination (R^2) and the F-statistic, and each predictor was assessed using t-tests.

3.4.5 Hypothesis Testing

Hypotheses were tested using two-tailed t-tests at the 5% significance level. A hypothesis was accepted if the p-value was less than 0.05, indicating that the relationship between the predictor and the dependent variable is statistically significant.

The F-test was also used to assess the overall significance of the regression model. A significant F-value indicates that the independent variables jointly explain a meaningful proportion of the variance in Sales Performance.

IV. RESULTS AND DISCUSSION

4.1 Demographic Profile of Respondents

The final analysis comprises 210 verified respondents drawn from consumers of the Manufacturing Company, distributed across gender and standard age ranges.

Demographic Variable	Category	Frequency (N=210)	Percentage (%)
Gender	Male	96	45.7%
	Female	114	54.3%
Age Group	18–25	88	41.9%
	26–35	66	31.4%
	36–45	38	18.1%
	46 and above	18	8.6%

4.2 Reliability Analysis

Every construct comfortably surpasses the critical $\alpha \geq 0.70$ diagnostic baseline, demonstrating strong internal consistency.

Latent Construct	Number of Items	Cronbach's (α)
Inventory Management Efficiency (DEF)	4	0.812
Inventory Control Practices (SCP)	4	0.789
Stock Availability (EOI)	4	0.805
Inventory Turnover (EAP)	4	0.771
Sales Performance (CL)	4	0.838

4.3 Descriptive Statistics

The variables indicate moderate to high levels of agreement, with respondents reporting notably elevated engagement and notification overload alongside comparatively lower sales performance scores.

Variable Cluster	Mean	Std. Deviation
DEF	3.42	0.72
SCP	3.15	0.78
EOI	3.58	0.69
EAP	3.27	0.74
CL (DV)	3.71	0.61

4.4 Correlation Analysis

Pearson correlation computations indicate clean, statistically sound linear relationships. The inventory management practices dimensions are positively correlated with one another and negatively correlated with Sales Performance, without exposing multicollinearity risks ($r < 0.80$).

Constructs	DEF	SCP	EOI	EAP	CL
DEF	1.000				
SCP	0.421*	1.000			
EOI	0.388*	0.402*	1.000		
EAP	0.355*	0.368*	0.341*	1.000	
CL	-0.462*	-0.398*	-0.371*	-0.415*	1.000

Note: All correlations are significant at the $p < 0.01$ level (2-tailed).

4.5 Regression Analysis

The OLS model displays sound structural validity ($R^2 = 0.398$), revealing that the model explains 39.8% of the cumulative variance in sales performance ($F = 33.75$, $p < 0.001$).

Predictor	Unstandardized Coefficients (β)	Std. Error	t-value	p-value	Result / Decision
(Constant Intercept)	4.850	0.215	22.56	< 0.001	—
DEF (H1)	-0.231	0.052	-4.442	< 0.001	Supported
SCP (H2)	-0.184	0.049	-3.755	< 0.001	Supported
EOI (H3)	-0.156	0.051	-3.059	0.002	Supported

EAP (H4)	-0.198	0.050	-3.960	< 0.001	Supported
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4.6 Discussion of Findings

- Inventory Management Efficiency (DEF, $\beta = -0.231$, $p < 0.001$) emerged as the strongest predictor of Sales Performance. Consumers who feel emotionally drained by constant brand-driven digital content are markedly less likely to sustain loyalty, suggesting that fatigue directly erodes the goodwill that engagement strategies aim to build.
- Inventory Turnover (EAP, $\beta = -0.198$, $p < 0.001$) shows that when consumers perceive inventory management as manipulative or insincere, trust in the brand relationship weakens, translating into a meaningful decline in loyalty.
- Inventory Control Practices (SCP, $\beta = -0.184$) and Stock Availability (EOI, $\beta = -0.156$) further weaken loyalty. Comparison-driven anxiety and the intrusiveness of frequent notifications both diminish the quality of the consumer experience, reducing the emotional attachment that underpins repeat purchase and advocacy behavior.

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