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Workforce Challenges And Job Satisfaction In Quick Commerce

An Integrated Analysis Of Employee Dynamics In E-Commerce Firms

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Abstract: This study examines workforce dynamics in quick commerce (Q-commerce), analyzing how operational demands, workplace factors, and organizational strategies impact employee experiences. Through comprehensive research involving professionals across various roles, the study identifies key workforce challenges and satisfaction drivers in this fast-paced sector. Findings reveal that while employees acknowledge the intense nature of Q-commerce operations, they maintain moderate satisfaction levels, with training opportunities and recognition programs emerging as particularly effective initiatives. The research highlights two critical insights: first, mental fatigue and operational pressures represent significant concerns for Q-commerce workers; second, these experiences remain consistent across all employee demographics, including age, experience level, gender, and job function. This consistency indicates that workforce challenges in Q-commerce are systemic rather than specific to particular employee groups. These findings suggest that organizational interventions—particularly those addressing stress management, communication improvements, and skill development—can be implemented effectively as universal solutions across entire workforces. The study provides Q-commerce operators with practical, evidence-based recommendations for developing workforce strategies that balance operational efficiency with employee well-being, offering valuable guidance for this rapidly evolving sector.

Index Terms - Quick Commerce, Workforce Challenges, Employee Well-Being, Operational Stress, Organizational Strategies, Job Satisfaction.

I. INTRODUCTION

Quick commerce (Q-commerce) has rapidly emerged as a transformative force within the e-commerce landscape, characterized by its promise of delivering consumer goods within 10 to 15 minutes of order placement through mobile applications (Pachéé́é, 2022). This model has gained traction particularly in urban areas, leveraging "dark stores" for efficient last-mile delivery, which has become crucial in meeting the growing consumer demand for speed and convenience (Gupta, 2024; 2024; aPaché2). The rise of Q-commerce reflects a shift in consumer behaviour towards immediacy, challenging traditional retail paradigms and prompting retailers to revaluate their logistics and inventory management strategies (Esq. &, 2018). Furthermore, studies indicate that service quality significantly influences customer satisfaction and loyalty in Q-commerce, highlighting the importance of reliability and responsiveness in this competitive sector (Heriyati, 2023). However, the rapid growth of Q-commerce also raises concerns regarding sustainability and regulatory challenges, necessitating a balanced approach to foster its long-term viability (Hippner Sucky, 2023).

The expansion of quick commerce (Q-commerce) within the realm of e-commerce is propelled by a multitude of interconnected determinants. Mainly, more and more consumers want their deliveries quickly, usually in 10 to 15 minutes, which shows a shift toward wanting things fast and easy. This change requires new delivery systems like "dark stores" to improve the final step of getting products to customers (Paché, 2022). Furthermore, the quick expansion of tech developments, featuring smartphones and high-velocity internet availability, has allowed for the broad utilization of online shopping, consequently giving consumers convenient access to a larger variety of products (Sinha et al., 2015). In addition, the competitive dynamics inherent in the retail sector compel organizations to augment their delivery capabilities, with same-day delivery increasingly becoming a normative expectation (Lasisi et al., 2015). Lastly, customer satisfaction is profoundly affected by variables such as delivery speed, cost-effectiveness, and favourable feedback, highlighting the critical significance of a seamless delivery experience in ensuring customer retention (Kovač et al., 2017). Collectively, these determinants cultivate a vigorous environment conducive to the proliferation of Q-commerce.

II. REVIEW OF LITERATURE

The rapid growth of e-commerce has necessitated a revaluation of workforce skills, consumer behaviour, and organizational strategies in digital environments. Kovács and Keresztes (2022) highlight the increasing demand for diverse employability skills in e-commerce, emphasizing the importance of both hard and soft competencies for employees. Similarly, Soenandi et al. (2019) examine the cognitive demands of data entry tasks, revealing that mental workload significantly affects employee performance in this sector. Fouche (2015) further explores the role of employee well-being in e-commerce performance, using the Job Demands-Resources (JD-R) model to analyse engagement and burnout. The COVID-19 pandemic further complicated these dynamics, as Aprilia and Idulfilastri (2023) found that work-life quality (QWL) significantly influenced employee performance during social restrictions. Additionally, Bănescu et al. (2022) argue that e-commerce expansion has reshaped labor markets, with technological adoption and skilled human capital playing crucial roles in mitigating job displacement.

Consumer expectations and operational challenges also shape e-commerce success. Chen and Hu (2014) identify key factors leading to negative online shopping experiences, stressing the need for retailers to address these issues proactively. Wang et al. (2022) examine e-customer satisfaction, noting that competitive e-commerce environments require businesses to refine service quality. Meanwhile, Xia and Lv (2021) highlight the role of mobile technology and AI in e-commerce growth, though they also acknowledge emerging challenges such as market saturation. Kuzic and McKay (2004) outline barriers faced by large corporations in e-commerce, including skill gaps and security concerns, while Simon and Chan (2000) propose a structured approach to managing personnel roles in online retail. Rosmaladewi et al. (2023) suggest that improving service quality—particularly in delivery and refund policies—can enhance customer satisfaction. Finally, Alyoubi et al. (2020) and Jain (2018) emphasize e-commerce's economic potential in emerging markets, though logistical and trust-related challenges persist.

II.1 Research Gap

While existing studies highlight key aspects of e-commerce, such as workforce skills (Kovács & Keresztes, 2022), consumer behaviour (Chen & Hu, 2014), and operational challenges (Kuzic & McKay, 2004), there remains a lack of integrated research examining how these factors collectively influence organizational resilience in dynamic digital markets. Additionally, most studies focus on developed economies, leaving a gap in understanding the unique challenges and opportunities in emerging markets, particularly regarding workforce adaptability and regulatory impacts. Furthermore, while the role of AI and automation in e-commerce is acknowledged (Xia & Lv, 2021), there is limited empirical research on how these technologies reshape job roles and skill requirements. Future research should explore these intersections to provide a holistic framework for sustainable e-commerce growth.

II.2 Research Objectives:

1. To evaluate the impact of quick commerce's operational demands on employee job satisfaction and overall well-being.
2. To analyse the role of mental workload, employability skills, and workforce agility in shaping employee experiences in quick commerce settings.
3. To examine the interplay between job design, work-life balance, and organizational support in influencing workforce challenges in quick commerce.
4. To identify actionable strategies that e-commerce firms can implement to enhance job satisfaction and address workforce challenges specific to quick commerce.

II.3 Research Questions:

1. How do the operational demands of quick commerce influence employee job satisfaction and well-being?
2. What are the key factors, such as mental workload, employability skills, and workforce agility that shape workforce challenges in quick commerce?
3. How do job design, work-life balance, and organizational support interact to affect workforce satisfaction and retention in quick commerce settings?
4. What strategies can e-commerce firms adopt to mitigate workforce challenges and improve job satisfaction in quick commerce?

III. RESEARCH METHODOLOGY

III.1 Research Design - A cross-sectional survey was used to analyse the effect of operational demands on job satisfaction and to identify strategies to mitigate workforce challenges. The data were collected using a structured questionnaire that provided demographic details, employment information, and Likert-scale questions spread across multiple thematic sections.

III.2 Data Collection - The survey response was received during the period from December 6, 2024, through December 9, 2024. An online survey ensures easy access, thereby encouraging greater diversity in respondents. The respondent was asked about his or her job role and work environment along with the extent of satisfaction achieved and suggestions to improve the work environment.

III.3 Participants - The study targeted professionals across various age groups (18-40+ years), employment types (full-time and part-time), and work locations (urban and rural settings). Educational qualifications ranged from high school to postgraduate levels, while years of experience spanned from less than one year to over 15 years.

III.4 Questionnaire Design - The questionnaire consisted of four main categories:

1. Operational Demands: Assessed the speed and workload issues.
2. Job Satisfaction Factors: Assessed the job role contentment and factors that influence it.
3. Challenges in the Workforce: Identified challenges affecting the workforce's performance.
4. Improvement Strategies: Explored suggested solutions to increase job satisfaction and decrease stress.

Each section employed a 5-point Likert scale (e.g., Strongly Disagree to Strongly Agree) to quantify perceptions. Open-ended questions allowed respondents to provide qualitative insights.

IV. DATA ANALYSIS AND INTERPRETATION

The analytical methods used are deliberately kept straightforward yet robust to maintain clarity and applicability. Descriptive statistics will summarize key trends, while Cronbach's Alpha ensures the internal consistency of constructs. ANOVA and independent samples the t-tests will compare group differences such as age, experience, and gender, while the correlation analysis will identify relationships between variables such as workload and job satisfaction. This approach balances rigor with practicality, making the findings accessible to industry practitioners while maintaining academic validity. The primary data analysis is carried out in three stages mentioned below:

Stage-1: Reliability Analysis Stage-2: Descriptive Statistics

Stage-3: Inferential Statistics (Objective based Hypotheses Testing)

IV.1 Stage-1: Reliability Analysis

The four sections involved in the research scale are used to the internal consistency among the statements of each section using Cronbach's Alpha. The reliability results are mentioned in the following table.

Table-1. Reliability Analysis

S. No.	Scale Unit	Cronbach's Alpha	Interpretation
1	Impact of Operational Demands on Job Satisfaction	0.936	Excellent
2	Role of Mental Workload, Employability Skills, and Workforce Agility	0.916	Excellent
3	Interplay of Job Design, Work-Life Balance, and Organizational Support	0.938	Excellent
4	Strategies to Mitigate Workforce Challenges and Improve Job Satisfaction	0.957	Excellent

The reliability analysis indicates excellent internal consistency for all four scales, with Cronbach's Alpha values ranging from 0.916 to 0.957, well above the 0.9 threshold, confirming that the items within each scale are highly reliable in measuring their respective constructs. This strong reliability suggests that the scales assessing operational demands, mental workload, job design, and mitigation strategies are robust. Researchers can confidently use these scales to explore relationships between these factors and job satisfaction, workforce agility, or organizational support, knowing that the constructs are measured with high precision and consistency.

IV.2 Stage-2: Descriptive Statistics

Under the descriptive statistics, the mean and standard deviation of the primary responses corresponding to the statements of each section are provided below.

S. No.	Code	Statement	Mean	S.D.
Impact of Operational Demands on Job Satisfaction				
1	IODJS.1	My job requires me to consistently work at a fast pace.	3.36	1.248
2	IODJS.2	The demands of quick commerce create excessive stress in my role.	3.32	1.081
3	IODJS.3	My workload is manageable despite the rapid operational requirements.	3.54	1.232
4	IODJS.4	The speed of delivery targets impacts my ability to maintain quality.	3.46	1.115
5	IODJS.5	The expectations of my job are clearly communicated to me.	3.56	1.158
Role of Mental Workload, Employability Skills, and Workforce Agility				
1	RMEW.1	My role requires a high level of concentration throughout the day.	3.44	1.146
2	RMEW.2	I often feel mentally fatigued after work.	3.25	1.100
3	RMEW.3	I possess the necessary skills to succeed in my job.	3.49	1.184
4	RMEW.4	My job challenges me to continuously improve my skills.	3.55	1.121
5	RMEW.5	I am given opportunities for training to handle quick commerce tasks.	3.59	1.099
Interplay of Job Design, Work-Life Balance, and Organizational Support				
1	IJWO.1	My job role is clearly defined and structured.	3.30	1.180
2	IJWO.2	I feel the organization values my contributions.	3.33	1.115
3	IJWO.3	My work schedule allows me to maintain a healthy work-life balance.	3.42	1.170
4	IJWO.4	I receive regular feedback about my performance.	3.49	1.154
5	IJWO.5	I feel encouraged to express concerns about my workload.	3.48	1.109
Strategies to Mitigate Workforce Challenges and Improve Job Satisfaction				
1	SMWCJS.1	Providing additional training can help improve workforce efficiency.	3.41	1.205
2	SMWCJS.2	Regular mental health programs can reduce job stress.	3.44	1.165
3	SMWCJS.3	Enhanced communication channels improve employee satisfaction.	3.50	1.203
4	SMWCJS.4	Offering flexible working hours would benefit employees.	3.50	1.128
5	SMWCJS.5	Recognition programs motivate employees to perform better.	3.54	1.243

The descriptive statistics reveal that respondents generally moderately agree (mean scores between 3.25–3.59) with statements across all four sections, indicating that operational demands, mental workload, job design, and mitigation strategies are perceived as significant but not extreme. The standard deviations (1.081–1.248) suggest moderate variability in responses, meaning employees' experiences vary but cluster around the mid-point of the scale. Notably, training opportunities (3.59), manageable workload (3.54), and recognition programs (3.54) received slightly higher agreement, while mental fatigue (3.25) and fast-paced demands (3.36) scored lower, highlighting areas needing attention. The data reflects balanced yet varied perceptions, suggesting room for targeted improvements in stress management, communication, and organizational support.

IV.3 Stage-3: Inferential Statistics (Objective based Hypotheses Testing)

This research adopts an objective-based analytical approach to systematically examine the key factors influencing employee experiences in quick commerce. By structuring the analysis around specific research objectives, the study ensures a focused and logical progression from hypothesis testing to actionable insights. Each objective corresponds to a distinct aspect of workforce dynamics—operational demands, mental workload, job design, and strategic interventions—allowing for a clear, systematic investigation of the challenges and opportunities in this fast-paced sector.

By anchoring the analysis to predefined objectives, the study ensures that each research question is answered methodically, leading to targeted recommendations for improving employee well-being and operational efficiency in quick commerce.

IV.3.1 Objective 1: To evaluate the impact of quick commerce's operational demands on employee job satisfaction and overall well-being.

Null Hypothesis (H_{01}): Quick commerce's operational demands have no significant impact on employee job satisfaction and overall well-being.

Sub-Hypotheses:

IV.3.1.1 H_{01a}: There is no significant difference in the impact of operational demands on job satisfaction across different age groups.

One-way ANOVA will be used to compare mean differences in job satisfaction scores among employees categorized into different age groups (e.g., 18–25, 26–35, 36–45, etc.).

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
IODJS.1	BG	0.522	2	0.261	0.166	0.848
	WG	215.899	137	1.576		
	Total	216.421	139			
IODJS.2	BG	0.625	2	0.313	0.265	0.768
	WG	161.91	137	1.182		
	Total	162.536	139			
IODJS.3	BG	0.301	2	0.15	0.098	0.907
	WG	210.521	137	1.537		
	Total	210.821	139			
IODJS.4	BG	2.523	2	1.262	1.015	0.365
	WG	170.298	137	1.243		
	Total	172.821	139			
IODJS.5	BG	0.136	2	0.068	0.05	0.951
	WG	186.407	137	1.361		
	Total	186.543	139			

***BG – Between Groups, **WG – Within Groups**

Interpretation: The one-way ANOVA results for H01a indicate that there is no statistically significant difference in the impact of operational demands on job satisfaction across different age groups, as all Sig. (p) values (ranging from 0.365 to 0.951) are greater than 0.05. The F-statistics (ranging from 0.050 to 1.015) further confirm that the between-group variation (BG) is not significantly larger than the within-group variation (WG) for any of the five job satisfaction indicators (IODJS.1 to IODJS.5). Therefore, we fail to reject the null hypothesis (H01a), concluding that age does not significantly influence how operational demands affect job satisfaction in this sample. The consistency in responses across age groups suggests that operational demands impact employees similarly regardless of age.

IV.3.1.2 H_{01b}: There is no significant difference in the impact of operational demands on well-being based on years of experience.

One-way ANOVA will be applied to assess whether well-being scores differ significantly across experience-based groups (e.g., <1 year, 1–3 years, >3 years).

ANOVA						
		Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
IODJS.1	BG	3.825	4	0.956	0.607	0.658
	WG	212.596	135	1.575		
	Total	216.421	139			
IODJS.2	BG	4.661	4	1.165	0.996	0.412
	WG	157.875	135	1.169		
	Total	162.536	139			
IODJS.3	BG	2.196	4	0.549	0.355	0.840
	WG	208.625	135	1.545		
	Total	210.821	139			
IODJS.4	BG	1.603	4	0.401	0.316	0.867
	WG	171.219	135	1.268		
	Total	172.821	139			
IODJS.5	BG	2.447	4	0.612	0.449	0.773
	WG	184.096	135	1.364		
	Total	186.543	139			
***BG – Between Groups, **WG – Within Groups**						

IV.3.2 Objective 2: To analyze the role of mental workload, employability skills, and workforce agility in shaping employee experiences in quick commerce settings.

Null Hypothesis (H_{02}): Mental workload, employability skills, and workforce agility have no significant role in shaping employee experiences in quick commerce settings.

Sub-Hypotheses:

IV.3.2.1 H_{02a}: There is no significant relationship between mental workload and employee experiences across age groups.

One-way ANOVA will be used to compare mean differences in mental workload's impact on employee experiences among different age groups (e.g., 18–25, 26–35, 36–45, 46 and above).

ANOVA						
		Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
RMEW.1	BG	3.638	4	0.909	0.687	0.602
	WG	178.784	135	1.324		
	Total	182.421	139			
RMEW.2	BG	2.75	4	0.688	0.561	0.692
	WG	165.5	135	1.226		
	Total	168.25	139			
RMEW.3	BG	3.524	4	0.881	0.621	0.648
	WG	191.469	135	1.418		
	Total	194.993	139			
RMEW.4	BG	1.429	4	0.357	0.278	0.892
	WG	173.221	135	1.283		
	Total	174.65	139			
RMEW.5	BG	7.688	4	1.922	1.619	0.173
	WG	160.284	135	1.187		
	Total	167.971	139			
***BG – Between Groups, **WG – Within Groups**						

Interpretation: The one-way ANOVA results for H02a show no statistically significant differences in the relationship between mental workload and employee experiences across age groups, as all p-values (ranging from 0.173 to 0.892) exceed the 0.05 threshold. The F-statistics (ranging from 0.278 to 1.619) indicate that between-group (BG) variation is not significantly greater than within-group (WG) variation for any of the five mental workload indicators (RMEW.1 to RMEW.5). Thus, we fail to reject the null hypothesis (H02a),

concluding that age does not significantly moderate the impact of mental workload on employee experiences in quick commerce settings. Employees across all age groups perceive mental workload's effects similarly.

IV.3.2.2 H_{02b}: Workforce agility does not have a significant impact on employee experiences across different employment roles.

One-way ANOVA will be applied to assess whether workforce agility's effect on employee experiences differs significantly based on employment roles (Delivery Executive, Operations Manager, Customer Service, IT/Tech Support, and House Wife).

ANOVA						
		Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
RMEW.1	BG	4.46	4	1.115	0.846	0.499
	WG	177.962	135	1.318		
	Total	182.421	139			
RMEW.2	BG	9.303	4	2.326	1.975	0.102
	WG	158.947	135	1.177		
	Total	168.25	139			
RMEW.3	BG	3.358	4	0.84	0.591	0.669
	WG	191.635	135	1.42		
	Total	194.993	139			
RMEW.4	BG	4.015	4	1.004	0.794	0.531
	WG	170.635	135	1.264		
	Total	174.65	139			
RMEW.5	BG	5.008	4	1.252	1.037	0.39
	WG	162.963	135	1.207		
	Total	167.971	139			
***BG – Between Groups, **WG – Within Groups**						

Interpretation: The one-way ANOVA results for H02b reveal no statistically significant differences in workforce agility's impact on employee experiences across employment roles (p-values range from 0.102 to 0.669, all > 0.05). The F-statistics (ranging from 0.591 to 1.975) suggest that differences between roles (BG) are negligible compared to individual variations (WG). Consequently, we fail to reject the null hypothesis (H02b), indicating that workforce agility's influence on employee experiences does not vary significantly by job role (e.g., Delivery Executive, Operations Manager). This implies that agility-related challenges or benefits are uniformly perceived across different positions in quick commerce.

IV.3.3 Objective 3: To examine the interplay between job design, work-life balance, and organizational support in influencing workforce challenges in quick commerce.

Null Hypothesis (H_{03}): Job design, work-life balance, and organizational support do not significantly influence workforce challenges in quick commerce.

Sub-Hypotheses:

IV.3.3.1 H_{03a}: There is no significant difference in the impact of job design on workforce challenges across different job locations.

One-way ANOVA will be used to compare mean differences in job design's impact on workforce challenges among employees working in different locations (e.g., urban, suburban, rural).

ANOVA						
		Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
IJWO.1	BG	5.887	2	2.944	2.151	0.12
	WG	187.513	137	1.369		
	Total	193.4	139			
IJWO.2	BG	0.814	2	0.407	0.324	0.724
	WG	172.072	137	1.256		
	Total	172.886	139			
IJWO.3	BG	0.808	2	0.404	0.292	0.747
	WG	189.328	137	1.382		
	Total	190.136	139			

IJWO.4	BG	0.663	2	0.331	0.246	0.782
	WG	184.308	137	1.345		
	Total	184.971	139			
IJWO.5	BG	0.94	2	0.47	0.379	0.685
	WG	169.996	137	1.241		
	Total	170.936	139			
***BG – Between Groups, **WG – Within Groups**						

Interpretation: The one-way ANOVA results for H_{03a} reveal no statistically significant differences in how job design impacts workforce challenges across different locations (urban, suburban, rural). All significance values (ranging from 0.120 to 0.782) exceed the 0.05 threshold, with F-statistics between 0.246 and 2.151 indicating minimal between-group variation. These findings suggest that geographic work location does not significantly moderate the relationship between job design and workforce challenges in quick commerce settings. We therefore fail to reject the null hypothesis (H03a), concluding that job design's influence on workforce challenges remains consistent regardless of whether employees work in urban, suburban, or rural locations.

IV.3.3.2 H_{03b}: Work-life balance does not significantly influence workforce challenges across genders.
Independent samples t-test will be applied to assess whether work-life balance's effect on workforce challenges differs significantly between male and female employees.

Independent Samples Test						
		Levene's Test for Equality of Variances		**t-test for Equality of Means**		
		F	**Sig.**	**t**	**df**	**Sig. (2-tailed)**
IJWO.1	**EVA**	2.257	0.135	1.498	138	0.137
	EVNA			1.504	136.905	0.135
IJWO.2	**EVA**	1.031	0.312	1.114	138	0.267
	EVNA			1.119	137.171	0.265
IJWO.3	**EVA**	3.832	0.052	0.095	138	0.925
	EVNA			0.095	134.815	0.924
IJWO.4	**EVA**	1.014	0.316	1.777	138	0.078
	EVNA			1.784	136.876	0.077
IJWO.5	**EVA**	13.187	0	0.844	138	0.4
	EVNA			0.854	122.524	0.395
***EVA - Equal Variances Assumed, **EVNA - Equal Variances Not Assumed**						

Interpretation: The independent samples t-tests for H_{03b} show no statistically significant gender differences in how work-life balance affects workforce challenges. All two-tailed p-values (ranging from 0.077 to 0.925) remain above the 0.05 significance level, with t-statistics between 0.095 and 1.784. Levene's tests indicate equal variances for most measures (except IJWO.5), supporting the robustness of these results. These findings lead us to fail to reject the null hypothesis (H03b), suggesting that work-life balance's impact on workforce challenges does not differ meaningfully between male and female employees in quick commerce operations. The challenges appear gender-neutral in their relationship to work-life balance factors.

IV.3.4 Objective 4: To identify actionable strategies that e-commerce firms can implement to enhance job satisfaction and address workforce challenges specific to quick commerce.
Null Hypothesis (H_{04}): There are no actionable strategies that significantly enhance job satisfaction or address workforce challenges in quick commerce.
Sub-Hypotheses:

IV.3.4.1 H_{04a}: Proposed strategies do not significantly improve job satisfaction across different employment roles.
One-way ANOVA will be used to compare mean differences in job satisfaction improvement scores among employees in different roles (Delivery Executive, Operations Manager, Customer Service, IT/Tech Support, and House Wife).

ANOVA						
		Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
SMWCJS.1	BG	2.567	4	0.642	0.435	0.783
	WG	199.226	135	1.476		
	Total	201.793	139			
SMWCJS.2	BG	5.614	4	1.404	1.036	0.391
	WG	182.928	135	1.355		
	Total	188.543	139			
SMWCJS.3	BG	4.416	4	1.104	0.758	0.554
	WG	196.584	135	1.456		
	Total	201	139			
SMWCJS.4	BG	2.194	4	0.549	0.424	0.791
	WG	174.806	135	1.295		
	Total	177	139			
SMWCJS.5	BG	6.666	4	1.666	1.081	0.369
	WG	208.155	135	1.542		
	Total	214.821	139			
***BG – Between Groups, **WG – Within Groups**						

Interpretation: The one-way ANOVA results for H_{04a} indicate no statistically significant differences in how proposed strategies improve job satisfaction across different employment roles (Delivery Executive, Operations Manager, etc.). All p-values (ranging from 0.369 to 0.791) exceed the 0.05 threshold, with low F-statistics (0.424–1.081), suggesting that between-group (role-based) differences are negligible compared to within-group variations. These findings fail to reject the null hypothesis (H04a), implying that the effectiveness of job satisfaction strategies is consistent across all roles in quick commerce. Organizations can thus implement these strategies uniformly without tailoring them to specific job functions.

IV.3.4.2 H_{04b}: Proposed strategies do not significantly address workforce challenges based on years of experience.

One-way ANOVA will be applied to assess whether the effectiveness of strategies differs across experience-based groups (e.g., <1 year, 1–3 years, >3 years).

ANOVA						
		Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
SMWCJS.1	BG	4.301	4	1.075	0.735	0.57
	WG	197.492	135	1.463		
	Total	201.793	139			
SMWCJS.2	BG	3.376	4	0.844	0.615	0.652
	WG	185.167	135	1.372		
	Total	188.543	139			
SMWCJS.3	BG	2.654	4	0.663	0.452	0.771
	WG	198.346	135	1.469		
	Total	201	139			
SMWCJS.4	BG	3.615	4	0.904	0.704	0.591
	WG	173.385	135	1.284		
	Total	177	139			
SMWCJS.5	BG	4.725	4	1.181	0.759	0.554
	WG	210.096	135	1.556		
	Total	214.821	139			
***BG – Between Groups, **WG – Within Groups**						

Interpretation: For H_{04b}, the one-way ANOVA results show no significant differences in how strategies address workforce challenges based on years of experience (<1 year, 1–3 years, >3 years). All p-values (ranging from 0.554 to 0.771) are above 0.05, with F-statistics (0.452–0.759) confirming minimal between-group variation. This fails to reject the null hypothesis (H04b), indicating that the perceived effectiveness of these strategies does not vary by employee experience. Whether new or seasoned, employees report similar

benefits, suggesting that quick commerce firms can deploy these interventions broadly without experience-tiered adjustments.

V. FINDINGS OF THE STUDY

The study's three-stage analytical approach yielded comprehensive insights into workforce dynamics in quick commerce. Reliability analysis confirmed excellent internal consistency (α = 0.916–0.957) across all constructs, validating the measurement scales. Descriptive statistics revealed moderate agreement (means 3.25–3.59) with operational demands, mental workload, and mitigation strategies, with notable variability (SDs 1.081–1.248) suggesting diverse employee experiences. Inferential statistics systematically tested hypotheses through ANOVA and t-tests, revealing three key patterns: (1) No demographic differences emerged—age, experience, gender, role, and location showed no significant moderating effects (all $p > 0.05$) on how operational demands, job design, or strategies impacted outcomes; (2) Workforce challenges and satisfaction drivers (e.g., training needs, recognition) were consistently perceived across groups; and (3) Proposed strategies demonstrated uniform effectiveness regardless of employee characteristics. These findings collectively suggest that quick commerce workforce challenges are systemic rather than subgroup-specific.

VI. CONCLUSION

This study concludes that workforce challenges in quick commerce—including operational stress, mental workload, and work-life balance concerns—are pervasive across all employee demographics, as no significant differences were found based on age, experience, gender, role, or location. The consistent effectiveness of proposed strategies (training, flexibility, recognition) implies that e-commerce firms can implement standardized interventions without demographic customization. However, the moderate agreement scores and high variability in responses highlight an urgent need for industry-wide improvements in stress management, communication, and organizational support systems. By addressing these universal pain points through the identified strategies, companies can enhance job satisfaction and operational efficiency in this fast-paced sector, ultimately fostering a more sustainable workforce ecosystem.

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