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Job satisfaction in logistics industry: An empirical study

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"I would like to express my sincere appreciation to my academic supervisor, *Dr. Anastasio Magouta for his guidance and assistance in the completion of this study."*

"This thesis is dedicated to my newborn son, who makes me dream every day*."*

Abstract

This dissertation examines the factors influencing job satisfaction and employee motivation within the logistics sector in Greece, in an environment shaped by the unprecedented challenges of the COVID-19 pandemic. The primary objective of the study is to highlight how shifts in working conditions, organizational support, and leadership styles impact the psychology and overall performance of the workforce.

The methodological approach was based on quantitative research through a structured questionnaire distributed to a sample of 140 industry professionals. The research instrument utilized internationally recognized scales (JSS, SDT, WDQ), and the statistical analysis was conducted using IBM SPSS Statistics. The analysis included reliability testing (Cronbach's Alpha), descriptive statistics, Independent Samples T-tests, One-Way ANOVA, Pearson correlations, and Multiple Linear Regression.

The research findings indicate that pandemic-related work stress remains significantly high, with a more pronounced effect on female employees. Furthermore, a notable organizational disparity was observed, as front-line warehouse personnel exhibited lower levels of job satisfaction compared to administrative staff. The statistical modeling identified "Supervisor Empathy" and "Moral Recognition" as the most potent predictors of job satisfaction, outweighing the impact of financial compensation.

The results underscore the imperative for logistics enterprises to transition toward human-centric management models. In the post-COVID era, supportive leadership and investment in intrinsic motivation emerge as the cornerstones for fostering organizational resilience and operational agility.

Keywords

Job Satisfaction, Logistics, Motivation, COVID-19, Leadership, SPSS, Psychological Contract.

Εργασιακή ικανοποίηση στον κλάδο των logistics: Μια εμπειρική μελέτη

ΣΤΕΛΛΑ ΙΩΑΝΝΑ ΤΡΙΑΝΤΑΦΥΛΛΟΥ

Περίληψη

Η παρούσα διπλωματική εργασία εξετάζει τους παράγοντες που επηρεάζουν την εργασιακή ικανοποίηση και την παρακίνηση των εργαζομένων στον κλάδο των Logistics στην Ελλάδα, σε ένα περιβάλλον που διαμορφώθηκε από τις προκλήσεις της πανδημίας COVID-19. Σκοπός της έρευνας είναι να αναδείξει πώς οι μεταβολές στις εργασιακές συνθήκες, η οργανωσιακή υποστήριξη και η ηγεσία επιδρούν στην ψυχολογία και την απόδοση του ανθρώπινου δυναμικού.

Η μεθοδολογική προσέγγιση βασίστηκε στην ποσοτική έρευνα με τη χρήση δομημένου ερωτηματολογίου, το οποίο διανεμήθηκε σε δείγμα 140 εργαζομένων του κλάδου. Το ερευνητικό εργαλείο στηρίχθηκε σε διεθνώς αναγνωρισμένες κλίμακες (JSS, SDT, WDQ) και η στατιστική επεξεργασία των δεδομένων πραγματοποιήθηκε με το λογισμικό IBM SPSS Statistics, περιλαμβάνοντας ελέγχους αξιοπιστίας (Cronbach’s Alpha), περιγραφική στατιστική, t-tests, ANOVA, συσχετίσεις Pearson και πολλαπλή γραμμική παλινδρόμηση.

Τα αποτελέσματα της έρευνας κατέδειξαν ότι το εργασιακό άγχος λόγω της πανδημίας παραμένει σε υψηλά επίπεδα, επηρεάζοντας εντονότερα το γυναικείο φύλο. Διαπιστώθηκε επίσης μια σημαντική οργανωσιακή ανισότητα, με το επιχειρησιακό προσωπικό της αποθήκης να εμφανίζει χαμηλότερα επίπεδα ικανοποίησης σε σύγκριση με τα διοικητικά στελέχη. Η στατιστική ανάλυση ανέδειξε την «Ενσυναίσθηση του Προϊσταμένου» και την «Ηθική Αναγνώριση» ως τους ισχυρότερους προβλεπτικούς παράγοντες της εργασιακής ικανοποίησης, υπερτερώντας έναντι των οικονομικών απολαβών.

Τα ευρήματα υπογραμμίζουν την ανάγκη για τη μετάβαση των επιχειρήσεων Logistics σε ανθρωποκεντρικά μοντέλα διοίκησης, όπου η υποστηρικτική ηγεσία και η επένδυση στα εσωτερικά κίνητρα αποτελούν το κλειδί για την οργανωσιακή ανθεκτικότητα και την επιχειρησιακή ευελιξία (agility) στη μετά-COVID εποχή.

Λέξεις – Κλειδιά

Εργασιακή Ικανοποίηση, Logistics, Παρακίνηση, COVID-19, Ηγεσία, SPSS, Ψυχολογικό Συμβόλαιο.

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List of Abbreviations & Acronyms

Abbreviation	Full Term
ANOVA	Analysis of Variance
APA	American Psychological Association
BCT	Basic Needs Theory
EAP / HOU	Hellenic Open University (Ελληνικό Ανοικτό Πανεπιστήμιο)
ERG	Existence, Relatedness, and Growth (Theory)
ERP	Enterprise Resource Planning
HOU	Hellenic Open University
HR	Human Resources
HRM	Human Resource Management
IBM	International Business Machines Corporation
JD-R	Job Demands-Resources (Model)
JSS	Job Satisfaction Survey
KPIs	Key Performance Indicators
MBA	Master in Business Administration
MSQ	Minnesota Satisfaction Questionnaire
NHS	National Health Service
OCB	Organizational Citizenship Behavior
PPE	Personal Protective Equipment
RQ	Research Question
SD	Standard Deviation
SDT	Self-Determination Theory
SPSS	Statistical Package for the Social Sciences
WMS	Warehouse Management System
WDQ	Work Design Questionnaire

1. Introduction

Job satisfaction constitutes a fundamental pillar in modern Human Resource Management (HRM), particularly in sectors characterized by high demands and fast-paced environments, such as the supply chain. The supply chain sector is frequently characterized by intense competition and continuous changes in management styles. Recent studies cite labor as the most significant challenge within the supply chain, placing particular emphasis on human resource management. HRM is tasked with the challenging responsibility of understanding employee satisfaction, which has a paramount impact on the financial well-being of service providers, such as logistics companies.

Numerous publications have demonstrated that job satisfaction influences employee performance, goal achievement, turnover rates, absenteeism, the ability to rotate tasks, and organizational loyalty. The ultimate goal of business entities is to achieve maximum productivity and quality of work. Consequently, studies conducted regarding employee satisfaction are highly valuable, as they serve to identify appropriate practices for enhancing workforce satisfaction.

When employees are satisfied, their efficiency increases, resulting in enhanced organizational performance and increased competitiveness among firms. Conversely, employee dissatisfaction leads to a decline in overall organizational effectiveness. The manner in which employees respond to the compelling needs of their duties impacts not only their own lives and the organizations they work for but also social stability at large.

The COVID-19 pandemic has altered the course of work in the global supply chain. New challenges, such as shortages, increased pressure, and radical changes to existing work models, plague the equilibrium of organizations. Employees often struggle to adapt to this psychological pressure, resulting in feelings of uncertainty regarding their professional future and dissatisfaction with their jobs.

The study of job satisfaction maintains the undiminished interest of the academic community. Continuous global labor shifts, the rising trend of competition, and prolonged recession dramatically shift the reality of work and influence employee satisfaction to a vast degree.

The primary purpose of this thesis is to contribute to the available literature and research studies regarding employee satisfaction. The ultimate goal is to study job satisfaction within the supply chain sector and to expand upon existing bibliographic sources. In the first stage, the research subject is approached theoretically through a literature review. Secondary data was derived from the study of international surveys, academic textbooks, scientific articles, and online sources. For the empirical approach, primary research was conducted among human resources personnel to investigate the factors that shape job satisfaction in logistics services.

This thesis is structured into five chapters. The first chapter serves as an introduction, presenting the main topic of the thesis along with a concise presentation of the subsequent chapters and their contents. The second chapter focuses on the literature review and theory, establishing the main theoretical framework; it defines job satisfaction, presents widely known measurement tools, and analyzes the factors influencing job satisfaction according to the literature. The third chapter describes the methodology used, initially defining the framework and objectives of the study, followed by a detailed description regarding the sample, the research tool utilized, the procedure for conducting the research, and the methodology applied for data analysis. Subsequently, the fourth chapter presents the results and the data analysis through tables and graphs. Finally, the fifth chapter discusses the conclusions of the study and its limitations and offers proposals for both future research and practical application.

2. Literature Review and Theory

This chapter examines the theoretical framework of job satisfaction and motivation, analyzing the fundamental concepts that shape employee behavior in the modern business environment. Initially, the concept of job satisfaction is defined, and key measurement models are presented, with an emphasis on the distinction between intrinsic and extrinsic factors. Subsequently, the role of the psychological contract is explored, particularly considering the changes brought about by the COVID-19 pandemic in the Logistics sector. Finally, major motivation theories (Maslow, Herzberg, etc.) are analyzed regarding their application in enhancing workforce performance and commitment.

2.1 Job Satisfaction

Job satisfaction constitutes one of the most extensively researched variables in the fields of Organizational Behavior and Human Resource Management. The most prevalent definition is that of Locke (1976), who defined it as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences." Locke points out that satisfaction is a combination of emotion and cognitive appraisal; in other words, the employee possesses the rational judgment to evaluate their working conditions and the emotional maturity to react to challenges.

Vroom (1964) conceptualizes job satisfaction as "the effective orientation of individuals toward the work roles they occupy." According to this view, satisfaction is positive when the employee believes that their efforts lead to a desired outcome. Conversely, if the outcome is not as desired, the employee is led to dissatisfaction.

In more contemporary approaches, such as that of Spector (1985; 1997), satisfaction is interpreted as "the extent to which people like (satisfaction) or dislike (dissatisfaction) in their jobs." Through the development of the Job Satisfaction Survey (JSS), Spector established a reliable framework for measuring key facets of satisfaction, such as pay, promotion, supervision, and fringe benefits. He treats satisfaction as an overall attitude towards work and argues that there are two distinct types of job satisfaction: intrinsic and extrinsic. Intrinsic Satisfaction is determined by endogenous motivators stemming from the

content of the work tasks themselves. It is established when the individual finds their work enjoyable and significant, feeling a sense of personal development through it. This specific category of motivation functions autonomously from external rewards. Factors in this category include decision-making autonomy, the nature of the work, personal and professional growth, and recognition of contribution. Extrinsic Satisfaction is determined by external variables that compose the work environment rather than the object of the work itself. This category includes remuneration and benefits, the quality of management and leadership, working conditions (both external/physical environment and internal aspects such as safety and flexibility), company policy, and relationships with colleagues.

It is a common conviction that the more positively employees feel, the more willing they will be to work and dedicate themselves to their duties. According to Abraham (2012), high levels of employee engagement contribute directly to the enhancement of efficiency and business results through job satisfaction.

2.2 The Psychological Contract

One of the most significant pillars of Organizational Behavior is the concept of the Psychological Contract. According to Rousseau (1989), the psychological contract refers to the unwritten, mutual expectations and obligations between employer and employee. This stands in contrast to the formal employment contract, which explicitly stipulates the employee's remuneration and working hours. Embedded within the psychological contract is the perception of reciprocity; for instance, the employee’s expectation of equal treatment, security, and professional development opportunities is exchanged for continuous productivity and loyalty to the organization.

In the Supply Chain sector, the psychological contract possesses both a transactional character (the employee works for remuneration) and a relational one (the employee believes the organization will protect them during crises). The pandemic served as a catalyst for the redefinition of employee expectations. Given the radical transformation of the work environment, employees re-evaluated whether the organization was honoring its agreements, placing particular weight on issues regarding health and support (both psychological and financial).

Recent research by Wang et al. (2023) highlights that in the post-COVID era, this re-evaluation of the psychological contract is inextricably linked to the concept of Supply Chain Agility. Employees are now assessing whether the organization provides the necessary flexibility and support to navigate crises effectively.

Psychological Contract Breach (PCB) refers to the belief formed by the employee that the company has proven inconsistent and failed to uphold the commitments it undertook towards them. The COVID-19 pandemic precipitated a disruption in the logistics industry, creating inequalities and cognitive gaps among employees, effectively splitting the workforce into two tiers. The first one is the Back-Office & Administration Employees. In this category, all employees worked under a remote working regime. Consequently, employees developed a sense of social isolation, and a conflict arose between personal and professional life due to a noticeable increase in working hours (work-life conflict). In this instance, the breach of agreement was directly linked to the inadequacy of technical and emotional support, as well as the undermining of the sense of team integration. The second tier is the Front-Line Employees (Warehouses, Distribution, Ports). Employees in this category were characterized as "essential" for the smooth operation of the economy. However, they were the ones who faced direct risks of viral infection, often lacking necessary Personal Protective Equipment (PPE). The organization, facing this type of challenge for the first time, was often unprepared. These employees developed a strong feeling of being "expendable" to the enterprise rather than valuable assets. They experienced the most intense form of breach; while labeled as "essential workers," the inability of the organization to guarantee their physical safety or provide corresponding financial recognition (hazard pay) was interpreted as indifference. According to Haque (2021), this environment of prolonged insecurity significantly impacted organizational resilience, as the psychological pressure on front-line employees eroded their motivation and commitment.

Wang et al. (2023) posit that this organizational inequality, often conceptualized as organizational injustice, created a profound sense of unfairness stemming from the disparity between employees working remotely in safety and those exposed to life-threatening risks. This perception is directly correlated with a decline in job satisfaction, which constitutes a natural consequence of the crisis of trust in organizational leadership. Furthermore, this environment fosters psychological burnout due to prolonged insecurity and intense stress, while simultaneously driving increased turnover intention, as the prevailing sense of

injustice impels employees to seek alternative professional opportunities once external market conditions permit. Similarly, Ertosun (2022) notes that during the pandemic, traditional motivators like salary were overshadowed by safety concerns, fundamentally altering the drivers of employee behavior in the logistics sector.

In conclusion, the major challenge for HR departments post-pandemic lies in re-establishing loyalty to the organization and repairing the damaged psychological contract.

2.3 Motivation

Motivation constitutes one of the most complex and critical functions of modern management. The term derives from the Latin word "movere," meaning "to move," and refers to the forces (internal or external) that propel an individual into action. According to Michiotis (2005), motivation is a fundamental component of leadership and is defined as the internal process that impels an individual to behave in a specific manner to achieve certain goals. It is the force that activates, directs, and sustains human behavior. Daft (2014) argues that motivation is defined as the process that determines the intensity, direction, and persistence of an individual's effort toward attaining a goal. In the context of crises, as Haque (2021) suggests, the role of leadership in sustaining this persistence becomes paramount, as employees rely on managerial support to cope with external stressors.

According to Michiotis (2005), motivation is the "key" to unlocking the potential of human resources. In the Logistics sector, motivation is not merely desirable but imperative. Working conditions such as time pressure for order execution, highly repetitive and mechanical movements, and the isolation of specific employees (e.g., drivers) often lead to fatigue and a sense of routine. Safety, accuracy, and speed are three factors essential for the smooth operation and optimization of the supply chain. This challenging environment was further exacerbated during the pandemic. As Ertosun (2022) highlights in his evaluation of the logistics sector, the "fear factor" regarding virus transmission became a dominant variable. Consequently, traditional motivational drivers were disrupted, as employees were forced to prioritize their physical survival over other incentives, making the psychological management of fear a critical task for leadership. Consequently, motivation does not simply concern the execution of orders, but the employee's willingness for development and improvement.

According to Ryan and Deci (2000), motivation is distinguished into two primary categories: intrinsic and extrinsic. Their Self-Determination Theory (SDT) posits that intrinsic motivation—which stems from the individual themselves and is linked to the satisfaction derived from the execution of the work itself—is more sustainable for long-term engagement. Conversely, extrinsic motivation originates from the external environment and is associated with tangible rewards, including salary, productivity bonuses, and opportunities for promotion, or the avoidance of punitive measures. While extrinsic rewards are necessary, Ryan and Deci (2000) argue that over-reliance on them can sometimes undermine intrinsic interest, a critical consideration for logistics managers designing incentive schemes.

2.3.1 Theoretical Models of Motivation and Application in Logistics

Motivation theories are broadly categorized into two primary groups: Content Theories and Process Theories. Content Theories primarily focus on what motivates the employee, specifically addressing the needs they attempt to satisfy, and aim to identify the internal factors that energize human behavior. In contrast, Process Theories concentrate on how and why a specific behavior is selected, analyzing the cognitive processes and mental mechanisms that employees utilize to determine their actions in pursuit of a desired outcome.

2.3.2 Content Theories

- ***Maslow's Hierarchy of Needs***

Abraham Maslow (1943) developed the theory of the Hierarchy of Human Needs, organizing them into five levels of increasing importance. This theory is the most famous and widely disseminated content theory. The individual satisfies their needs in a hierarchical order, acting first to satisfy the basic needs at the base of the pyramid. Once these needs are met, the individual acts to satisfy the immediate next needs at the higher level of the hierarchical order. According to the theory, individuals satisfy needs based on those already fulfilled, while unsatisfied needs are defined as motivators for the individual.

Maslow's hierarchy identifies five distinct levels of needs, each finding direct application within the logistics sector. At the foundational level, physiological needs regarding basic survival—such as food, shelter, and warmth—are met in the supply chain through the provision of a basic salary, adequate breaks, and appropriate working conditions, including regulated temperatures in warehouses. Progressing to the next level, safety needs encompass protection from physical and psychological harm; in this sector, these are deemed imperative and are addressed through rigorous safety protocols in loading and unloading areas, as well as the assurance of job security. The validity of this hierarchy was vividly demonstrated during the recent health crisis. Ertosun (2022) provides empirical evidence that for logistics employees, safety needs escalated to the highest priority, overshadowing even financial rewards (physiological needs). The fear of infection meant that the provision of Personal Protective Equipment (PPE) and strict hygiene protocols became more powerful motivators than salary increases, confirming that when safety is threatened, higher-level needs remain dormant. » Subsequently, social needs, which involve the internal desire for acceptance and belonging, are realized through the fostering of teamwork among diverse specialties, such as drivers, warehouse staff, and administrative personnel. Furthermore, esteem needs regarding recognition and perceived value are satisfied when employees receive daily acknowledgement for their contributions to goal achievement, often manifested through performance awards or bonuses. Finally, self-actualization needs, which focus on the development of individual potential, are fulfilled through opportunities for professional growth, such as training on new systems (e.g., ERP, WMS) and the encouragement of employee initiatives.

- ***Herzberg's Two-Factor Theory***

According to Herzberg (1959), job satisfaction factors are classified into two distinct categories: hygiene factors and motivators. Hygiene factors encompass elements related to the work environment, such as salary, working conditions, and relationships with superiors; while their absence causes intense dissatisfaction, their presence does not actively motivate employees but merely functions as a preventative measure to maintain the status quo. For instance, in the workplace, a clean environment and new equipment will not necessarily compel an employee to work faster, but they will assist in preventing underperformance and dissatisfaction. This aligns with findings by Spector (1985), who categorized working

conditions and supervision as distinct facets that, while essential, differ from the nature of the work itself. Conversely, motivators include factors related to the content of the work itself, such as achievement, recognition, responsibility, and personal growth. These are the critical elements that drive employees to increase their performance, as exemplified by the impact of public recognition on achieving zero errors.

- ***Alderfer's ERG Theory***

Clayton Alderfer (1969) developed his theory based on Maslow's hierarchy of needs, with the objective of reconfiguring it to make it more suitable for application and verification within the framework of empirical research. Alderfer condensed Maslow's five needs into three core categories:

- Existence: Corresponds to physiological and safety needs.
- Relatedness: Corresponds to social needs and the external component of esteem needs.
- Growth: Corresponds to self-actualization and the internal component of esteem needs.

Alderfer argued that need levels do not constitute a strictly hierarchical structure but exhibit greater continuity and overlap. A key innovation of his theory is the "Frustration-Regression" principle. Alderfer asserts that if a higher-level need remains unsatisfied (e.g., training for professional advancement), the employee regresses to a lower-level need and demands greater satisfaction of that need (e.g., a higher salary). As Michiotis (2005) points out, this principle is the fundamental difference from Maslow. Finally, Alderfer highlights that an individual can satisfy multiple needs simultaneously and may define their priorities regarding satisfaction differently depending on the circumstances.

- ***McClelland's Theory of Acquired Needs***

David McClelland and his associates introduced the Three Needs Theory, also known as the Achievement Motivation Theory, which focuses on three acquired needs shaped during childhood that constitute fundamental motivating factors within the context of work activity. The first is the Need for Achievement (nAch), which concerns the individual's pursuit of

high levels of performance and the desire for excellence and distinction through competition; individuals with high nAch are driven by the challenge of mastering difficult tasks and exceeding standards. Secondly, the Need for Power (nPow) refers to the tendency to exert influence over others, provoking behaviors that would not manifest under different conditions; in the work environment, these individuals exhibit a strong desire to control, guide, and influence subordinates, a trait observed to varying degrees in most managerial roles. Finally, the Need for Affiliation (nAff) describes the individual's desire for love, affection, the creation of friendly relationships, and integration into social groups with parallel acceptance (Bourantas, 2002, p. 279), leading them to prefer cooperative rather than competitive environments.

2.3.3 Process Theories

- ***Vroom's Expectancy Theory***

Vroom posits that the strength of motivation is equal to the product of three variables: Motivation = Expectancy × Instrumentality × Valence (Michiotis, 2005). Expectancy refers to the employee's belief that increased effort will lead to improved performance. For instance, an employee might consider: "If I exert the effort, I can prepare 100 orders per day." If the target significantly exceeds the individual's capabilities (e.g., 300 orders per day), both expectancy and motivation are reduced to zero. Instrumentality is the individual's belief that optimal performance will result in a specific reward. The employee must be convinced that "if I achieve the target, I will receive the bonus." From its perspective, management must honor its commitments; a failure to fulfill promises automatically nullifies instrumentality. Finally, Valence represents the value or significance the individual attributes to the reward.For example, a particular employee might prefer additional time off rather than a financial bonus.

- ***Adams' Equity Theory***

According to Adams' Equity Theory, an employee compares the ratio of their "inputs" (e.g., effort, experience, working hours) to their "outcomes" (e.g., salary, recognition) against the corresponding ratios of their colleagues.

For example, if a driver observes that they are completing the same routes as a colleague but receiving lower compensation, they will experience a profound sense of inequity. In order to restore equity, the employee may deliberately reduce their performance (e.g., by completing fewer routes) or increase their absenteeism.

- ***Locke's Goal-Setting Theory***

Locke asserts that specific and challenging goals lead to higher performance compared to vague or abstract directives (e.g., "do your best"). In the context of Logistics, the implementation of Key Performance Indicators (KPIs), such as the Return Rate or Delivery Time, constitutes an ideal application of this theory, provided that the goals are accepted by the employees and accompanied by continuous feedback.

- ***Human Nature and Management Styles (McGregor)***

Douglas McGregor (1960) articulated two contrasting perspectives on human nature in the workplace, establishing Theory X and Theory Y.

Under the traditional perspective, Theory X, the employee is viewed as an individual with little ambition, characterized by indolence and a negative disposition toward management. This type of employee avoids responsibility and is motivated solely by fear and financial gain. This perspective necessitates continuous monitoring to ensure employee productivity. Consequently, it fosters an authoritarian and strictly supervised management style, where detailed control procedures are integrated into the company's daily operations (e.g., security cameras, utilization of GPS tracking in corporate vehicles). While this approach may be effective in the short term for routine tasks, it engenders significant long-term dissatisfaction.

Conversely, Theory Y posits that employees derive inherent satisfaction from their work, actively seek and accept responsibility, and possess the capacity for self-direction. McGregor argued that management should be predicated on the principles of Theory Y, emphasizing that participation in the decision-making process, the delegation of demanding and responsible tasks, and the cultivation of positive interpersonal relationships among team

members can substantially enhance employee motivation. This paradigm leads to participative management. Under this approach, the manager trusts employees to organize their own work, solicits their input for operational improvements (e.g., route optimization), and focuses on final outcomes rather than engaging in micromanagement.

However, it should be noted that the empirical validity of Theories X and Y has not been definitively established to date, nor is there conclusive evidence dictating that only managers who adopt Theory Y are capable of effectively mobilizing their human resources.

2.4 Conclusions

Reviewing international and internal literature, it becomes evident that the Supply Chain sector is characterized by high-demand environments, stringent deadlines, physical strain, and repetitive processes. The ideal motivational method cannot be confined to a single theoretical model. On the contrary, successful leadership necessitates a multidimensional management approach that holistically addresses the diverse needs of the workforce. To implement such a plan, Human Resource Management (HRM) within the Logistics sector must focus on several core strategic priorities.

Initially, it is imperative to ensure fair working conditions and equitable compensation (applying the theories of Adams & Herzberg). Drawing from Adams' Equity Theory and Herzberg's Hygiene Factors, it is clear that organizational justice constitutes the cornerstone for preventing job dissatisfaction. In a logistics and distribution context, this translates into competitive remuneration packages and rigorous adherence to Health and Safety regulations. Any perception of inequity—particularly through social comparisons that intensified during the pandemic—can devastate employee morale, nullifying any other motivational efforts.

Furthermore, HRM must upgrade work roles and provide clear prospects for professional development (in accordance with Herzberg's Motivators and Maslow's Hierarchy of Needs). Once fundamental physiological and safety needs are secured, management should pivot toward Herzberg's "Motivators." To mitigate the fatigue stemming from repetitive tasks, such as order picking, it is essential to design roles that promote multi-skilling.

Providing training in advanced technologies and delineating clear career paths satisfy the employee's need for self-actualization, thereby enhancing organizational commitment.

Finally, HRM must establish clear objectives and link goal attainment with desirable rewards (based on the principles of Locke & Vroom). Operational efficiency in Logistics is amplified when employees possess full role clarity. By applying Locke's Goal-Setting Theory and Vroom's Expectancy Model, management should establish measurable and realistic Key Performance Indicators (KPIs). The certainty that achieving these targets will result in a valued reward—whether extrinsic (bonus) or intrinsic (recognition)—provides employees with the necessary direction and incentive for their daily endeavors.

The strategic utilization of the aforementioned motivational mechanisms is deemed vital for the sustainability of organizations within the Logistics industry. Ensuring high levels of motivation drastically reduces employee turnover and fosters a resilient workforce, capable of exhibiting Organizational Citizenship Behaviors (OCB) and adapting swiftly to market fluctuations (Supply Chain Agility). This theoretical framework, by highlighting the multidimensional nature of job satisfaction, serves as the foundation for the primary quantitative research that follows, which aims to empirically investigate these phenomena within the contemporary business environment.

3. Research and Methodology

The primary objective of the present study is to record and analyze the perceptions of the sample regarding the satisfaction derived from their work in the supply chain sector in the post-COVID era, as well as the incentives that motivate them. Additionally, this chapter analyzes the methodological approach, the population and sample of the research, the data collection tool, and the analysis procedures that will be applied to test the research hypotheses.

In order to achieve this objective, the following research questions were posed.

3.1 Research Questions

Drawing upon the aforementioned literature review and the research gaps identified, this thesis proceeds to formulate the following research questions:

Table 1: Research questions

Questionnaire Section	No.	Question	Source (Primary Reference)
A. Demographics	1-8	Gender, Age, Department	Standard
B. Job satisfacton & Motivation (Extrinsic Motivation)	9	I feel I am being paid a fair amount for the work I do.	Spector (1985) / Ryan & Deci (2000)
	10	My job offers me opportunities for personal growth and development.	Ryan & Deci (2000)
	11	When I do a good job, I receive the recognition for it that I should receive.	Spector (1985)
	12	I feel secure about my job position.	Ertosun (2022)
	13	My job is interesting and utilizes my skills.	Morgeson & Humphrey (2006) / Ryan & Deci (2000)

	14	Those who do well on the job stand a fair chance of being promoted.	Spector (1985)
	15	Overall, I am satisfied with my current job.	Spector (1985)
C. The impact of COVID-19 & Psychological contract (Intrinsic Motivation)	16	The changes brought by the pandemic significantly increased my work stress.	Haque (2021)
	17	I felt that the company supported me sufficiently during the health crisis.	Wang et al. (2023)
	18	I consider that the "unwritten rules" and expectations I had from my employer were violated during the pandemic.	Wang et al. (2023)
	19	I often feel physical or emotional exhaustion (burnout) at the end of the day.	Demerouti et al. (2001)
	20	My current job allows me to maintain a balance between my professional and personal life.	Wang et al. (2023)
	21	Working conditions (teleworking or safety measures) created a sense of injustice among employees.	Wang et al. (2023)
	22	After the pandemic, my trust in management has decreased.	Wang et al. (2023)
D. Organizational Culture & Leadership	23	Teamwork and cooperation between departments are encouraged in our company.	Wang et al. (2023)
	24	Management is open to new ideas and suggestions from employees.	Wang et al. (2023)
	25	My supervisor shows understanding regarding the problems I face.	Spector (1985)
	26	Communication seems good within this organization.	Spector (1985)
	27	My supervisor inspires me and acts as a role model.	Haque (2021)
	28	There is clear communication of goals from leadership to employees.	Wang et al. (2023)

E. Agility, Technology & Knowledge	29	Our team adapts quickly to sudden changes in demand or problems.	Wang et al. (2023)
	30	We freely share knowledge and information among colleagues to solve problems.	Wang et al. (2023)
	31	The company invests in environmentally friendly technologies and practices.	Wang et al. (2023)
	32	I receive sufficient training to use the company's digital tools.	Haque (2021)
	33	The technological systems we use are user-friendly and help me be more productive.	Wang et al. (2023)
	34	When I am satisfied, I am more willing to exert extra effort in emergency situations.	Ryan & Deci (2000)/ Wang et al. (2023)

3.2 The Questionnaire and the Research Sample

The research questionnaire comprises 34 items, organized into 5 distinct sections. The first section consists of 5 questions addressing the demographic and professional characteristics of the sample. Specifically, it records the participants' gender, age, educational level, job role (department), and years of experience in the logistics sector. The second section comprises 7 items based on the core drivers of employee behavior. It examines both extrinsic motivators (e.g., pay fairness, job security, promotion) and intrinsic factors (e.g., personal growth, job interest), alongside a measure of global job satisfaction. The third section includes 7 questions focused on the aftermath of the health crisis. It assesses the levels of pandemic-related stress and burnout, work-life balance, and the perceived breach of the psychological contract and trust in management. The fourth section consists of 6 items evaluating the supportive nature of the organizational environment. It measures the quality of supervision, the effectiveness of internal communication, and the extent to which teamwork and open management are encouraged. The final section comprises 6 questions dedicated to the modern demands of the logistics sector. It explores supply chain agility, the

acceptance of digital tools, knowledge sharing practices among colleagues, and the organization's commitment to sustainability.

The design of the research instrument was grounded in international literature and contemporary research findings, aiming to capture the emerging reality within the logistics sector and ensure measurement validity.

To measure Job Satisfaction, the framework of the Job Satisfaction Survey (JSS) by Spector (1985) was utilized, specifically focusing on the dimensions of supervision, coworkers, and promotion. It is worth noting that for the present dissertation, the most representative items were selected from the 36 items comprising Spector's questionnaire. A 5-point Likert scale is employed, representing a necessary adaptation of the original 6-point scale used in the JSS.

The assessment of Intrinsic and Extrinsic Motivation was based on the theoretical distinction by Ryan & Deci (2000), while specific job characteristics (Autonomy, Working Conditions, Task Significance) were evaluated using the Work Design Questionnaire (WDQ) by Morgeson & Humphrey (2006).

To examine the specific conditions of pressure and burnout within the sector, the Job Demands-Resources model by Demerouti et al. (2001) was employed. Regarding employee resilience and psychological support during times of crisis, the study relied on the framework established by Haque (2021). Concerning employee motivation in the Logistics sector amidst the pandemic, issues of safety and justice are highlighted, drawing exclusively from the research of Ertosun (2022).

Finally, questions regarding the impact of the pandemic, organizational justice, and trust in management were based on the recent study by Wang et al. (2023) on supply chain sustainability in the post-COVID era and the relationship between job satisfaction and supply chain agility.

3.3 Statistical Data Processing Methods

Data entry was initially performed using Microsoft Excel. Subsequently, the dataset was imported into the IBM SPSS (Statistical Package for the Social Sciences) software [insert version, v.29.0] to conduct the statistical analysis. Both descriptive and inferential statistics were used for the analysis of data. The level of statistical significance was set equal to a=0.05.

3.4 Study Population

The research was conducted among employees of Greek private companies engaged in the Logistics sector, based in Attica, and was sent through e-mail. An enclosed cover letter provided participants with details regarding the researcher's identity and the study's primary objective. Furthermore, it emphasized the value of their voluntary involvement while ensuring complete anonymity and data confidentiality. To guarantee full comprehension and the accuracy of responses, the questionnaire was translated and distributed in Greek (see Appendix B).

4. Data Analysis

This section presents the data analysis, utilizing figures and tables to illustrate the findings. Additionally, it details the overall results of the research.

4.1 Demographic Characteristics

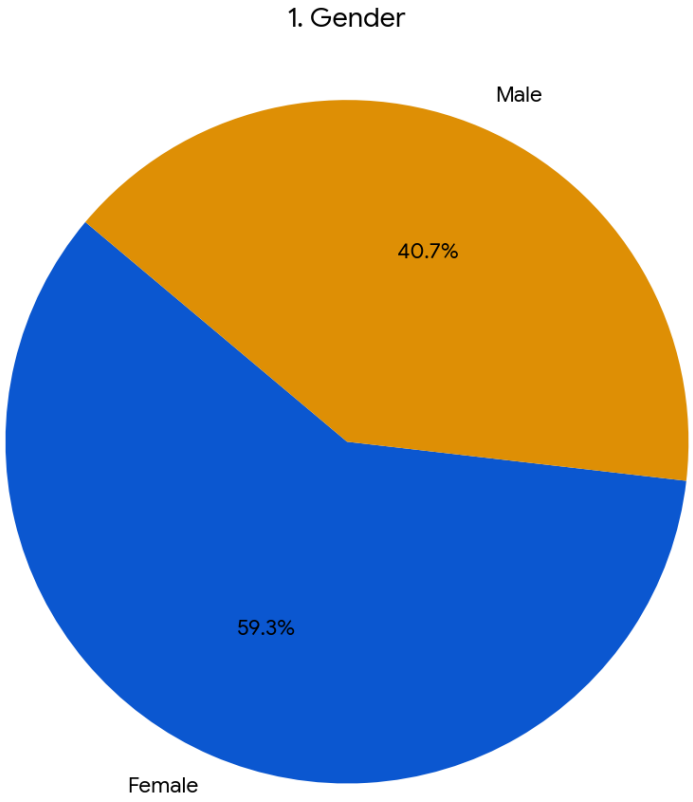
This section employs descriptive statistics to analyze the demographic profile of the sample. The data, gathered from the first section of the survey questionnaire, consists entirely of qualitative variables, specifically:

SECTION A: Demographics & Employment Details

- Gender(Male-Female-Other / I don't want to answer)
- Age Group (18-25,26-35,36-45,46-55,55+)
- Education Level (Primary, Upper Secondary, Bachelor's Degree, Master's / PhD , Other)
- Job Title / Position (Administrative Staff, Operational Staff, Supervisor / Manager)
- Number of employees in your company(<10,11-50,51-250,250+)
- Years of work experience in the Logistics sector (0-3 years, 4-10 years, 11-20 years, 20+ years)
- Working hours (Part time, Full time, Seasonal)
- Monthly Salary (net) (<500€, 500€-700€, 701€-1000€, 1001€-1500€, 1501€)

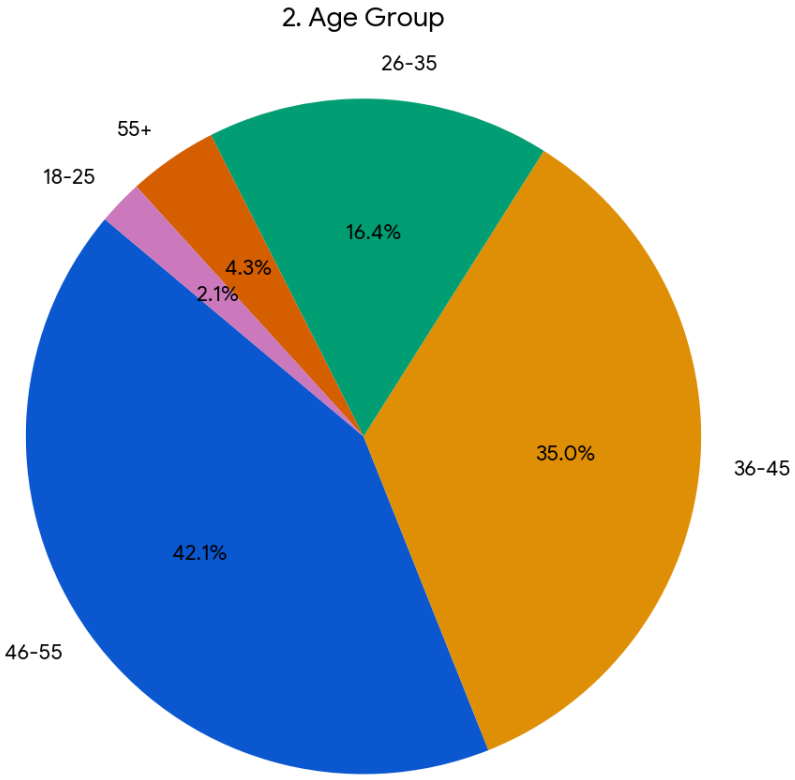
Regarding gender distribution, the sample was relatively balanced, albeit with a slight female majority. Specifically, it comprised 83 women (59.3%) and 57 men (40.7%). This demographic breakdown is illustrated in Figure 1.

Figure 1: Gender



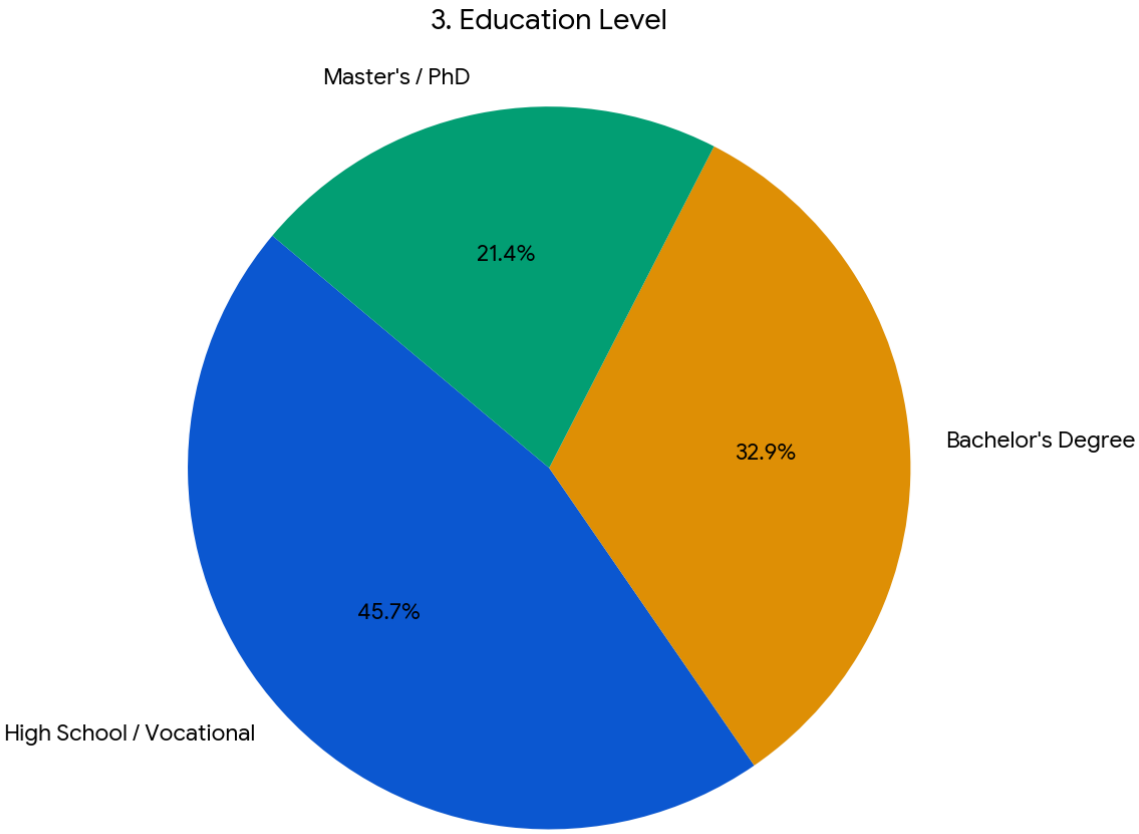
In terms of age, the largest segment of respondents falls into the 46-55 age group, accounting for 42.1% (n=59). This is followed closely by the 36-45 age group at 35.0% (n=49). Younger (18-35) and older (55+) participants represent the remaining minority of the sample, as shown in Figure 2.

Figure 2: Age Group



As for the educational background, nearly half of the participants (45.7%, n=64) hold a High School or Vocational degree. Furthermore, 32.9% (n=46) possess a Bachelor's Degree, while a notable 21.4% (n=30) have obtained a postgraduate degree (Master's or PhD), which is depicted in Figure 3.

Figure 3: Education Level



Regarding current job positions, the majority of the sample consists of Operational Staff, representing 55.0% (n=77). Administrative Staff account for 33.6% (n=47), and a smaller portion, 11.4% (n=16), hold Supervisor or Manager roles, as illustrated in Figure 4.

Figure 4: Job Position

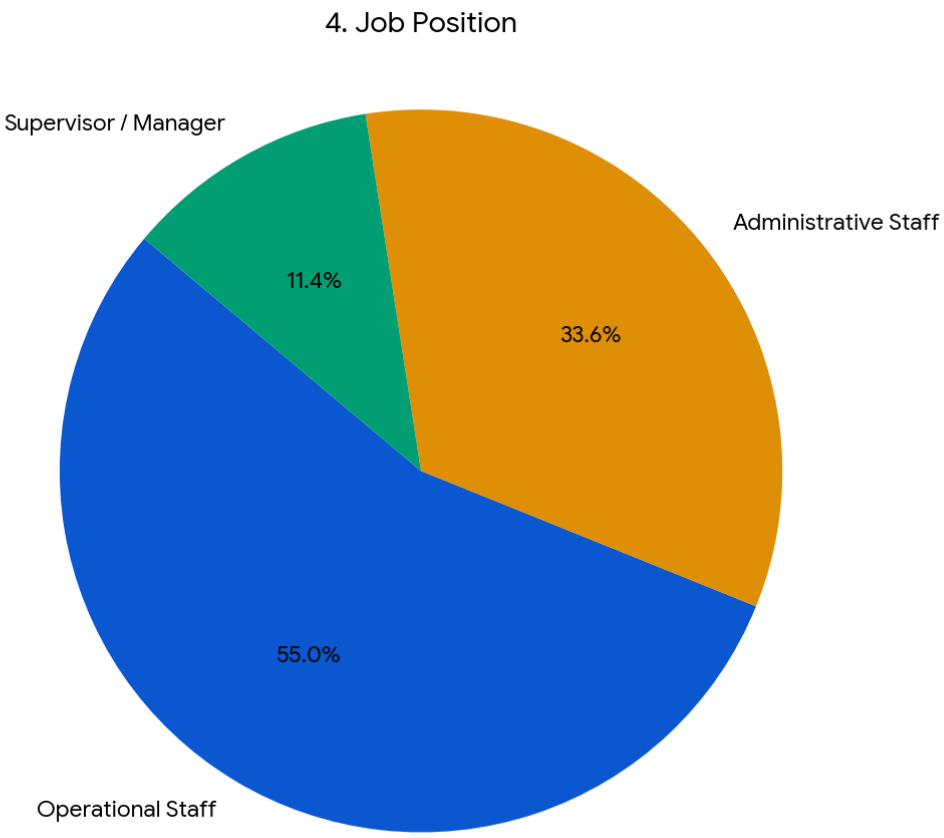
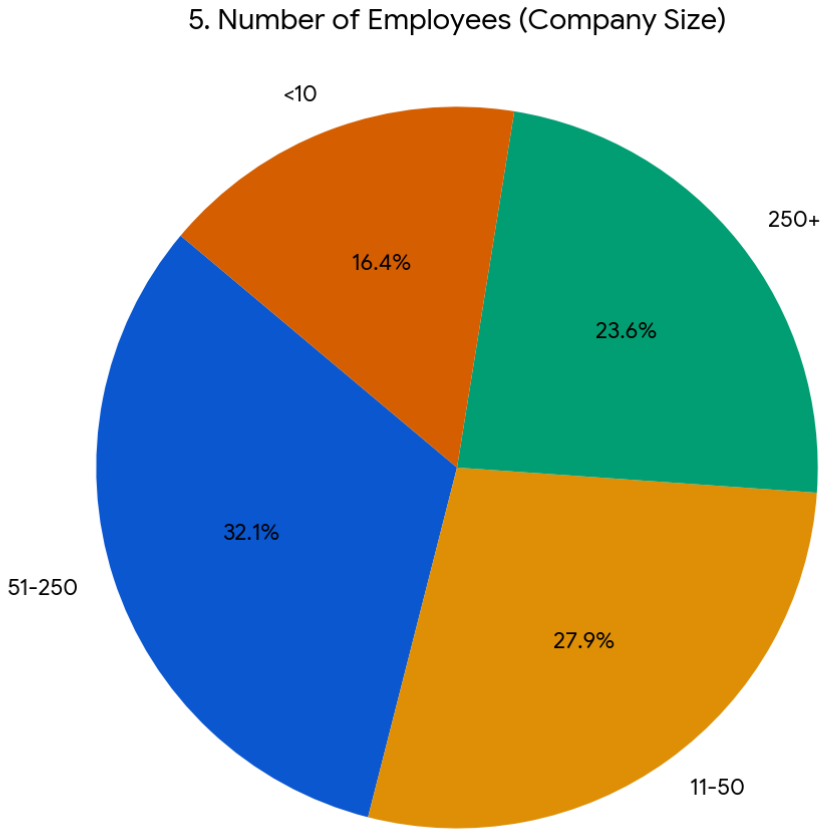


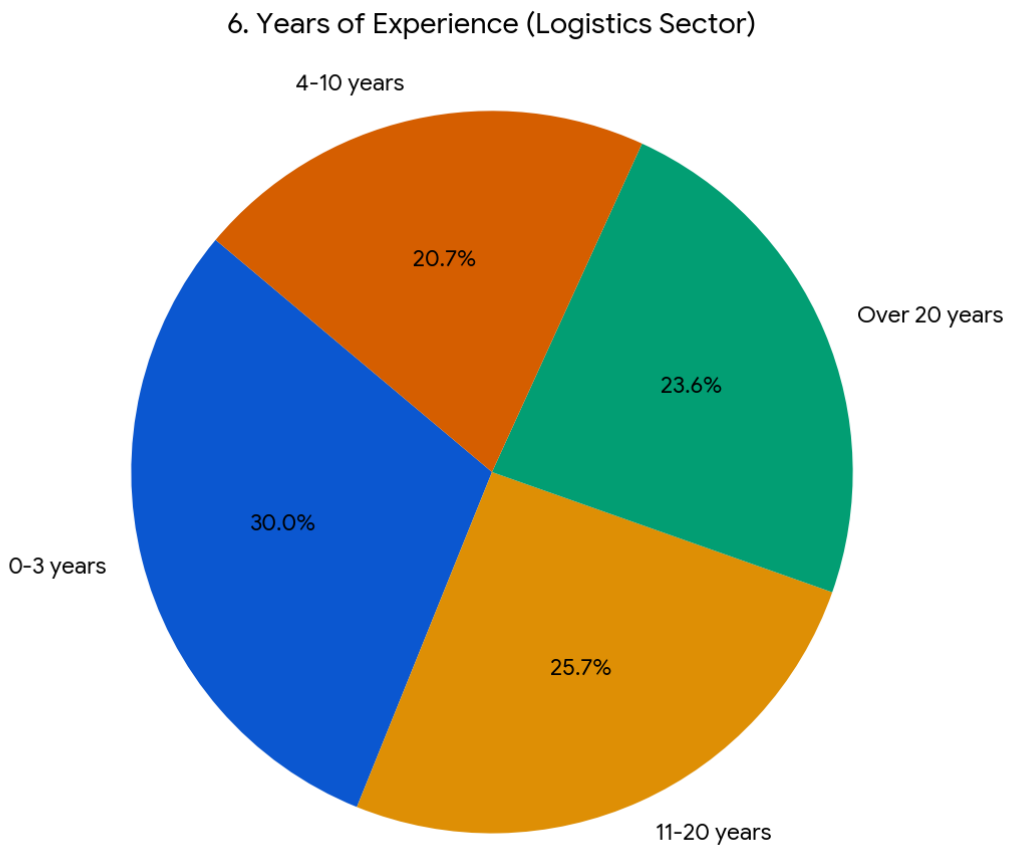
Figure 5 displays the size of the employing companies. The most common company size is between 51 and 250 employees (32.1%, n=45), followed by 11-50 employees (27.9%, n=39). Larger enterprises (over 250 employees) employ 23.6% (n=33) of the respondents.

Figure 5: Number of Employees



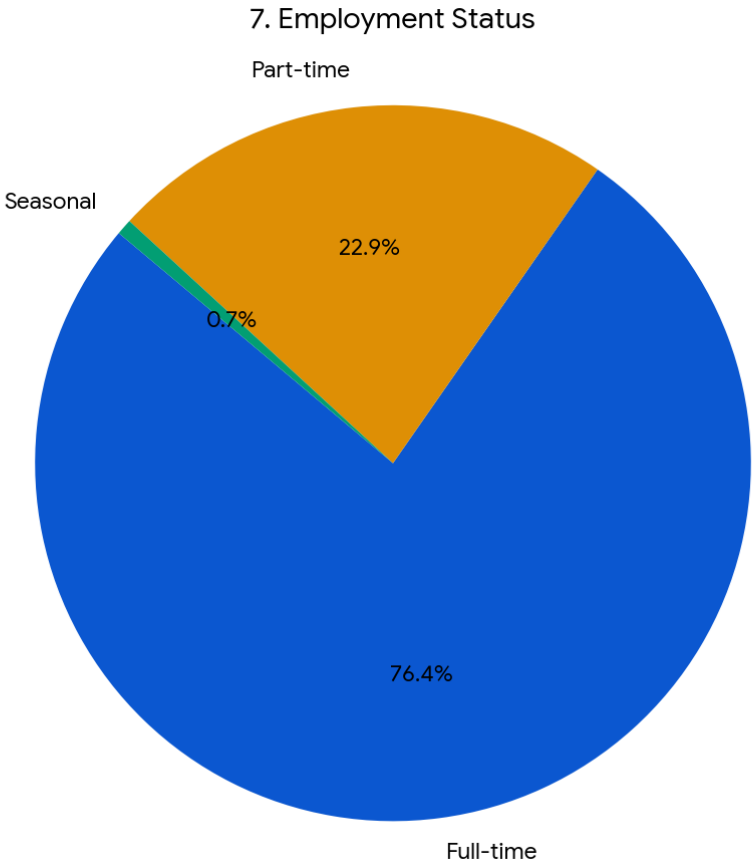
Concerning work experience in the Logistics sector, the distribution is fairly balanced across different tenures. Individuals with 0-3 years of experience form the largest group at 30.0% (n=42), while those with 11-20 years and over 20 years of experience account for 25.7% (n=36) and 23.6% (n=33) respectively. This data is visualized in Figure 6.

Figure 6: Years of Experience



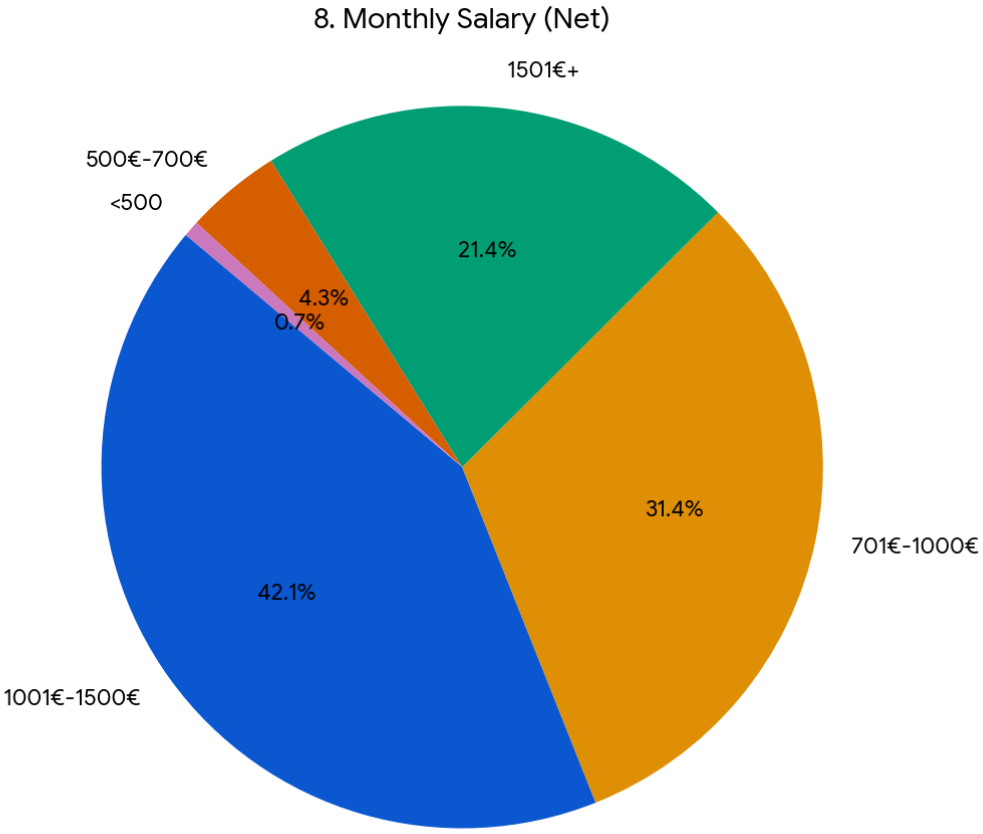
The vast majority of the respondents are employed on a full-time basis, making up 76.4% (n=107) of the sample. Part-time employees represent 22.9% (n=32), with only a marginal 0.7% (n=1) working seasonally, as shown in Figure 7

Figure 7: Employment Status



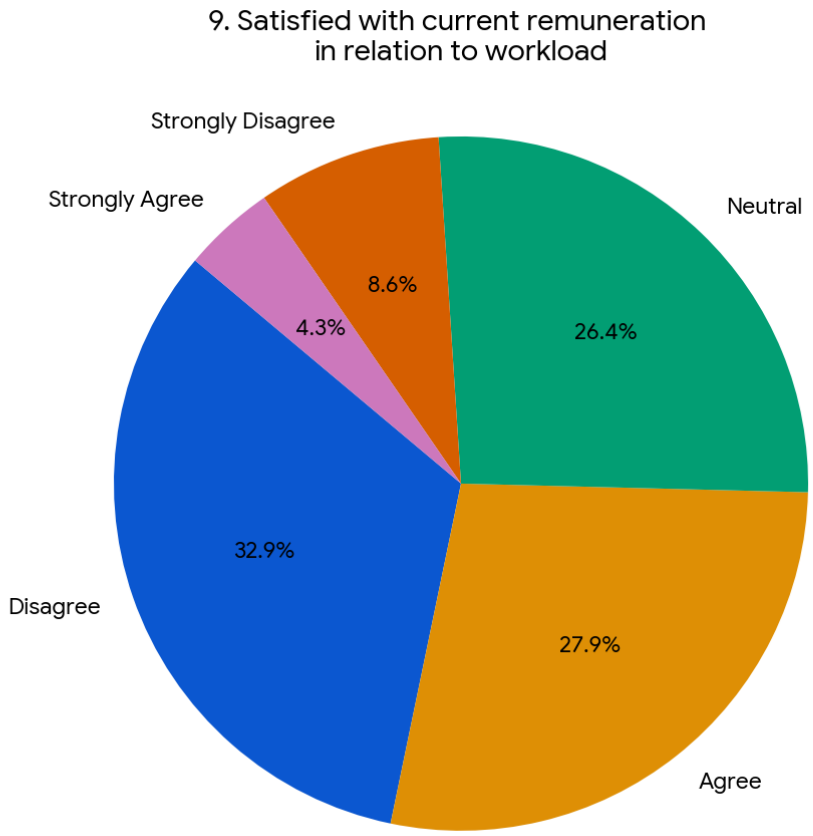
In relation to the net monthly salary, the most frequent income bracket is 1001€-1500€, applying to 42.1% (n=59) of the participants. The 701€-1000€ bracket follows at 31.4% (n=44), while 21.4% (n=30) earn over 1500€. The complete breakdown is presented in Figure 8.

Figure 8: Monthly Salary



When asked if they are satisfied with their current remuneration in relation to their workload, the responses were varied. A significant portion expressed dissatisfaction, with 32.9% (n=46) disagreeing and 8.6% (n=12) strongly disagreeing. Conversely, 27.9% (n=39) agreed, while 26.4% (n=37) remained neutral. The detailed distribution is depicted in Figure 9.

Figure 9: Satisfied with current remuneration in relation to workload



In terms of employment status, it is observed that the largest portion of full-time employees receives a monthly net salary between 1001 and 1500 euros (43.9% or 47 participants), while 30.8% (or 33 participants) receive a monthly net income between 701 and 1000 euros. A significant percentage of full-time employees earn above 1500 euros (23.4% or 25 employees), whereas a very minor percent (1.9% or 2 respondents) receives 500 to 700 euros monthly. Notably, no full-time employees reported earning less than 500 euros.

Among part-time employees, the monthly net income distribution is slightly different, reflecting their adjusted working hours. A percentage of 37.5% (12 employees) receives a monthly income between 1001 and 1500 euros, and 31.3% (10 employees) receive 701 to 1000 euros. Furthermore, 15.6% (5 part-time employees) are paid more than 1500 euros monthly, while a combined 15.6% (5 employees) earn 700 euros or less. The single seasonal employee in the sample reported a monthly income between 701 and 1000 euros.

What is more, it is observed that 67.3% of the full-time employees are paid more than 1000 euros, whereas a smaller percent (53.1%) of the part-time employees is paid more than 1000 euros monthly. These statistics reveal that, predictably, the majority of full-time employees earn higher monthly net incomes compared to part-time staff. This conclusion on the one hand logically reflects the difference in total working hours and the compensation structures associated with different employment contracts. On the other hand, it may also indicate that full-time roles in the logistics sector frequently involve more senior, specialized, or demanding responsibilities that naturally command higher remuneration.

Table 2: Monthly Net Income Distribution by Employment Status

Monthly Net Income	Full-time (n=107)	Part-time (n=32)	Seasonal (n=1)	Total (n=140)
<500€	0 (0.0%)	1 (3.1%)	0 (0.0%)	1 (0.7%)
500€-700€	2 (1.9%)	4 (12.5%)	0 (0.0%)	6 (4.3%)
701€-1000€	33 (30.8%)	10 (31.3%)	1 (100.0%)	44 (31.4%)
1001€-1500€	47 (43.9%)	12 (37.5%)	0 (0.0%)	59 (42.1%)
1501€+	25 (23.4%)	5 (15.6%)	0 (0.0%)	30 (21.4%)

In terms of the level of education, it is observed that exactly half of the employees with a High School or Vocational degree receive a monthly net salary between 1001 and 1500 euros (50.0% or 32 participants) and 42.2% (or 27 participants) receive a monthly net income between 701 and 1000 euros. A very small percentage of these employees receive a monthly salary above 1500 euros (3.1% or 2 employees), whereas an equal percentage (3.1% or 2 employees) are paid 500 to 700 euros on a monthly basis. Finally, a minor percent of this group (1.6% or 1 respondent) receives less than 500 euros monthly.

Among employees holding a postgraduate degree (Master's or PhD), the monthly net income distribution is distinctly different, leaning heavily towards higher brackets. A majority percentage of 56.7% (17 employees) receive more than 1500 euros monthly, and 26.7% (8 employees) receive between 1001 and 1500 euros. Only 10.0% (3 employees) are paid 701 to 1000 euros monthly, whereas none of the postgraduate employees are paid with less than 500 euros.

What is more, it is observed that 83.4% of the employees with a Master's or PhD are paid more than 1000 euros, whereas a significantly smaller percent (53.1%) of the High School/Vocational graduates is paid more than 1000 euros monthly. These statistics reveal that, first of all, the majority of employees with higher academic qualifications are paid more than those with secondary education. This conclusion, on the one hand, reflects that the logistics sector rewards specialized knowledge and advanced degrees with higher-paying roles. On the other hand, those statistics also reflect that employees with basic education are typically restricted to entry-level or operational positions with standard, lower salary caps.

Table 3: Monthly Net Income Distribution by Level of Education

Monthly Net Income	High School / Vocational (n=64)	Bachelor's Degree (n=46)	Master's / PhD (n=30)	Total (n=140)
<500€	1 (1.6%)	0 (0.0%)	0 (0.0%)	1 (0.7%)
500€-700€	2 (3.1%)	2 (4.3%)	2 (6.7%)	6 (4.3%)
701€-1000€	27 (42.2%)	14 (30.4%)	3 (10.0%)	44 (31.4%)
1001€-1500€	32 (50.0%)	19 (41.3%)	8 (26.7%)	59 (42.1%)
1501€+	2 (3.1%)	11 (23.9%)	17 (56.7%)	30 (21.4%)

In terms of position level, it is observed that almost half of the operational staff receives a monthly net salary between 1001 and 1500 euros (48.1% or 37 participants) and 36.4% (or 28 participants) receive a monthly net income between 701 and 1000 euros. A smaller percentage of operational employees receive a monthly salary above 1500 euros (11.7% or 9 employees), whereas a further smaller percentage (3.9% or 3 employees) are paid with 500 to 700 euros on a monthly basis. None of the operational staff receives less than 500 euros.

In the managerial and supervisory group, the monthly net income distribution is dramatically different, as it is heavily concentrated in the highest bracket. A sweeping percentage of 87.5% (14 managerial employees) receives more than 1500 euros monthly, and the remaining 12.5% (2 managers) receive between 1001 and 1500 euros. Notably, none of the supervisors or managers are paid less than 1000 euros.

What is more, it is observed that a full 100% of the managerial staff are paid more than 1000 euros, whereas a considerably smaller percent (59.8%) of the operational staff is paid more than 1000 euros monthly. These statistics reveal that, logically, supervisors and managers are paid significantly more than base-level employees. This conclusion on the one hand reflects that leadership roles carry heavier responsibilities, decision-making duties, and require greater expertise, which naturally command premium compensation. On the other hand, those statistics also reflect that operational and administrative roles are governed by more fixed and standardized pay scales.

Table 4: Monthly Net Income Distribution by Position Level

Monthly Net Income	Operational Staff (n=77)	Administrative Staff (n=47)	Supervisor / Manager (n=16)	Total (n=140)
<500€	0 (0.0%)	1 (2.1%)	0 (0.0%)	1 (0.7%)
500€-700€	3 (3.9%)	3 (6.4%)	0 (0.0%)	6 (4.3%)
701€-1000€	28 (36.4%)	16 (34.0%)	0 (0.0%)	44 (31.4%)
1001€-1500€	37 (48.1%)	20 (42.6%)	2 (12.5%)	59 (42.1%)
1501€+	9 (11.7%)	7 (14.9%)	14 (87.5%)	30 (21.4%)

In terms of gender, it is observed that a significant portion of female employees receives a monthly net salary between 1001 and 1500 euros (39.8% or 33 participants) and 33.7% (or 28 participants) receive a monthly net income between 701 and 1000 euros. A smaller percentage of women receive a monthly salary above 1500 euros (19.3% or 16 employees), whereas 6.0% (5 employees) are paid with 500 to 700 euros on a monthly basis. Finally, a minor percent of female employees (1.2% or 1 respondent) receives less than 500 euros monthly salary.

Among male employees, the monthly net income distribution is slightly shifted towards higher brackets. A percentage of 45.6% (26 male employees) receives a monthly income between 1001 and 1500 euros, while 24.6% (14 male employees) receive more than 1500 euros monthly. Furthermore, 28.1% (16 employees) receive 701 to 1000 euros, whereas only 1 male employee (1.8%) is paid 500 to 700 euros, and none earn less than 500 euros.

What is more, it is observed that 70.2% of the male employees are paid more than 1000 euros, whereas a smaller percent (59.1%) of the female employees is paid more than 1000 euros monthly. These statistics reveal that, on average, a larger proportion of men in the sample are situated in higher income brackets compared to women. This conclusion on the one hand may reflect that men currently hold a higher proportion of senior or specialized roles within this specific sample of the logistics sector. On the other hand, those statistics might also reflect broader, historically rooted pay disparities or differing distribution of genders across specific operational versus administrative departments.

Table 5: Monthly Net Income Distribution by Gender

Monthly Net Income	Female (n=83)	Male (n=57)	Total (n=140)
<500€	1 (1.2%)	0 (0.0%)	1 (0.7%)
500€-700€	5 (6.0%)	1 (1.8%)	6 (4.3%)
701€-1000€	28 (33.7%)	16 (28.1%)	44 (31.4%)
1001€-1500€	33 (39.8%)	26 (45.6%)	59 (42.1%)
1501€+	16 (19.3%)	14 (24.6%)	30 (21.4%)

4.2 Descriptive statistics

In this section, the job satisfaction statistics, as well as the satisfaction measured across each specific job aspect, will be analyzed using descriptive statistics. The relevant data were gathered through the remaining sections (Parts B, C, D, and E) of the questionnaire used for this survey. All responses regarding these job facets are ordinal qualitative variables, measured on a 5-point Likert scale (where 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral / Neither Agree nor Disagree, 4 = Agree, 5 = Strongly Agree). As previously mentioned, all the statements of the questionnaire are categorized by their specific job facet, and the full list is presented in Appendix A.

Table 6 presents the descriptive statistics for our sample, with a total sample size of n=140, referring to all 26 statements across the four main facets of the questionnaire. Specifically, the mean value, the standard deviation, the minimum value, and the maximum value are detailed in Table for each individual statement (columns A, B, C, D). Each statement is symbolized as S{m}, where m represents the sequential number of the statement, taking values from 1 to 26.

Furthermore, Columns E and F present the aggregated mean value and standard deviation for each specific facet/category of the questionnaire. Finally, in Columns G and H, the overall mean value and standard deviation have been calculated for all job aspects combined, providing a consolidated view of the general job satisfaction and operational experience within the sample.

Table 6: Descriptive Statistics for Job Satisfaction & Job Aspects (n=140)

Statement	(A) Mean	(B) SD	(C) Min	(D) Max	Facet / Job Aspect	(E) Facet Mean	(F) Facet SD	(G) Overall Mean	(H) Overall SD
S1	2.86	01.05	1	5	Job Satisfaction	3.15	01.03	3.22	01.08
S2	3.18	01.04	1	5					

S3	3.12	0.99	1	5	& Motivation				
S4	3.36	0.99	1	5					
S5	3.26	0.91	1	5					
S6	2.89	1.14	1	5					
S7	3.36	0.98	1	5					
S8	3.44	01.01	1	5	Impact of COVID-19	3.19	1.12		
S9	3.26	01.08	1	5					
S10	2.86	01.07	1	5					
S11	3.81	01.03	1	5					
S12	2.87	1.26	1	5					
S13	3.14	0.97	1	5					
S14	2.93	01.06	1	5					
S15	3.31	0.98	1	5	Org. Culture & Leadership	3.16	1.10		
S16	3.14	01.09	1	5					
S17	3.37	1.11	1	5					
S18	03.06	01.08	1	5					
S19	03.02	1.13	1	5					
S20	03.08	1.14	1	5					
S21	3.24	0.99	1	5	Flexibility, Tech & Knowledge	3.38	01.05		
S22	3.44	01.08	1	5					
S23	3.21	01.05	1	5					
S24	3.00	01.05	1	5					

S25	3.36	0.95	1	5					
S26	04.04	0.87	2	5					

We observe that the mean value (Column A) for all questions ranges between 2.86 and 4.04 points on the Likert scale, and the standard deviation (Column B) ranges between 0.87 and 1.26 points. The maximum value is consistently 5 points on the Likert scale across all questions, and the minimum value is usually 1 point. The notable exception is the statement S26 ("When I am satisfied, I am more willing to put in extra effort during emergencies"), where the minimum value is 2 points, indicating that no participant strongly disagreed with this specific statement.

As for the mean values for all facets (Column E), those range between 3.15 to 3.38 points, and the corresponding standard deviations (Column F) range between 1.03 and 1.12 points.

The mean value and the standard deviation for the core question S7 ("Overall, I am satisfied with my current job") are 3.36 and 0.98 points respectively. Thus, the measured mean general job satisfaction can be characterized as moderate or ambivalent, as the mean value falls between the 3rd point of the Likert scale ("Neutral / Neither Agree nor Disagree") and the 4th point ("Agree"). This indicates a neutral to slightly positive sentiment regarding overall job satisfaction within the logistics sector sample.

When examining the primary indicator for General Job Satisfaction, the analysis reveals a mean score of 3.36, with a standard deviation of 0.98 on the Likert scale. Furthermore, taking into account the entire set of questionnaire items, the aggregate mean stands at 3.22 (SD = 1.08). Based on these figures, the overall level of job satisfaction among the participants can be described as moderate or ambivalent, falling close to the neutral point of the scale.

Next, the frequency tables detailing the responses to selected statements of the questionnaire will be presented. Indicatively, at least one core question from each job facet has been selected for this detailed examination (Tables).

A fundamental statement is the one measuring the respondents' overall general job satisfaction (GJS). According to the collected data, a slight majority of 53.6% of the respondents expressed that they are overall satisfied with their current job. Specifically, 45.7% answered that they "Agree" and 7.9% that they "Strongly Agree" with the statement regarding their general job satisfaction. Furthermore, a notable 25.0% opted for a neutral stance ("Neither Agree nor Disagree"). Conversely, a smaller combined percentage of 21.5% indicated dissatisfaction with their job. More specifically, 17.9% stated that they "Disagree" and 3.6% that they "Strongly Disagree".

The following Table 7 presents the distribution of the General Job Satisfaction (GJS) variable cross-tabulated by Gender. For the purpose of this specific table, the categories of the variable have been consolidated into two main groups: "Not Satisfied / Neutral" (Likert points 1, 2, and 3) and "Satisfied" (Likert points 4 and 5). It is observed that 57.9% of the male respondents are satisfied with their job, whereas 42.1% fall into the unsatisfied or neutral category. Concerning the female participants, the respective percentages are 50.6% satisfied with their job, and 49.4% not satisfied or neutral.

Although the difference between the two genders is not remarkably vast, it is generally concluded that men in this sample report marginally higher job satisfaction than women. This finding was somewhat anticipated, since, as observed in the preceding sub-chapter regarding demographics, a higher proportion of men are situated in higher income brackets compared to their female counterparts.

Table 7: General Job Satisfaction Distribution by Gender

Gender	Not Satisfied / Neutral (Likert 1, 2, 3)	Satisfied (Likert 4, 5)	Total
Male (n=57)	24 (42.1%)	33 (57.9%)	57 (100.0%)

Female (n=83)	41 (49.4%)	42 (50.6%)	83 (100.0%)

Following the analysis of the General Job Satisfaction, the frequency tables regarding the responses to specific, indicative statements of the questionnaire are presented below. One representative question from each of the four job facets has been selected to illustrate the participants' attitudes in more detail. These are presented in Tables 8 to 11.

Starting with the Job Satisfaction & Motivation facet, Table 8 presents the frequency distribution for statement S1: "I am satisfied with my current remuneration in relation to my workload." It is observed that the largest proportion of respondents (32.9%) disagree with this statement, while 27.9% agree. A notable 26.4% maintain a neutral stance, whereas strong opinions are less frequent, with 8.6% strongly disagreeing and only 4.3% strongly agreeing. Overall, dissatisfaction with remuneration appears to slightly outweigh satisfaction.

Table 8: Frequency table for the answers of Statement S1 (Remuneration vs. Workload)

Likert Scale	**Frequency (Count)**	**Percentage (%)**
1: Strongly Disagree	12	8.6%
2: Disagree	46	32.9%
3: Neutral	37	26.4%
4: Agree	39	27.9%
5: Strongly Agree	6	4.3%
Total	140	100.0%

Regarding the second facet, The Impact of COVID-19 & Psychological Contract, Table 9 illustrates the responses for statement S8: "The changes brought about by the pandemic

significantly increased my work-related stress." A significant portion of the sample, totaling 47.1% (30.0% Agree and 17.1% Strongly Agree), confirms that the pandemic elevated their stress levels. However, the most frequent individual response was neutral (34.3%), indicating that over a third of the participants neither agreed nor disagreed. Only a combined 18.5% felt that the pandemic did not significantly increase their stress.

Table 9: Frequency table for the answers of Statement S8 (Pandemic-induced Work Stress)

Likert Scale	Frequency (Count)	Percentage (%)
1: Strongly Disagree	2	1.4%
2: Disagree	24	17.1%
3: Neutral	48	34.3%
4: Agree	42	30.0%
5: Strongly Agree	24	17.1%
Total	140	100.0%

From the Organizational Culture & Leadership facet, Table 10 presents the data for statement S15: "Teamwork and collaboration between departments are encouraged in our company." The findings reveal a generally positive perception, with 45.7% of respondents expressing agreement (36.4% Agree, 9.3% Strongly Agree). A substantial 33.6% remained neutral, while a smaller segment of 20.7% disagreed (17.1% Disagree, 3.6% Strongly Disagree). This suggests that teamwork is fostered in the majority of the represented organizations, though a significant neutral group exists.

Table 10: Frequency table for the answers of Statement S15 (Encouragement of Teamwork)

Likert Scale	Frequency (Count)	Percentage (%)
1: Strongly Disagree	5	3.6%
2: Disagree	24	17.1%
3: Neutral	47	33.6%
4: Agree	51	36.4%
5: Strongly Agree	13	9.3%
Total	140	100.0%

Finally, for the Flexibility, Technology & Knowledge facet, Table 11 displays the frequencies for statement S21: "Our team adapts quickly to sudden changes in demand or problems." Similar to the previous facet, the sentiment is largely positive. Exactly 45.0% of the participants agreed with this statement (37.1% Agree, 7.9% Strongly Agree), highlighting a strong level of perceived adaptability within their teams. 28.6% of the respondents selected the neutral option, and 26.5% disagreed, indicating that while adaptability is a strength for many, roughly a quarter of the sample feels their teams struggle with sudden changes.

Table 11: Frequency table for the answers of Statement S21 (Team Adaptability)

Likert Scale	Frequency (Count)	Percentage (%)
1: Strongly Disagree	4	2.9%
2: Disagree	33	23.6%
3: Neutral	40	28.6%

4: Agree	52	37.1%
5: Strongly Agree	11	7.9%
Total	140	100.0%

Before presenting the comprehensive aggregated frequency tables for all dimensions of the survey, it is vital to explicitly highlight one of the most critical findings of the current research, which pertains to employee burnout. As derived from the 'Impact of COVID-19 & Psychological Contract' facet, Table 12 illustrates the distribution of responses for statement S11: “I often feel physical or emotional exhaustion (burnout) at the end of the day.”

The data uncovers a deeply concerning reality within the logistics sector. A vast majority, accounting for 68.6% of the participants, confirmed experiencing burnout (40.7% 'Agree' and 27.9% 'Strongly Agree'). On the other hand, only 12.8% of the respondents disagreed (10.7% 'Disagree' and 2.1% 'Strongly Disagree') with feeling exhausted at the end of their workday, while 18.6% maintained a neutral position. This overwhelmingly high prevalence of burnout underscores the intense physical and emotional toll that the modern logistics environment, exacerbated by post-pandemic conditions, exacts on its workforce.

Table 12: Frequency table for the answers of Statement S11 (Burnout)

Likert Scale	**Frequency (Count)**	**Percentage (%)**
1: Strongly Disagree	3	2.1%
2: Disagree	15	10.7%
3: Neutral	26	18.6%
4: Agree	57	40.7%
5: Strongly Agree	39	27.9%
Total	140	100.0%

Having discussed specific indicative questions, the following section provides a complete and systematic overview of the frequency distributions for all 26 statements of the questionnaire. To ensure clarity and avoid redundancy, the data has been consolidated into four comprehensive tables (Tables 13 through 16), each corresponding to one of the main facets of the study: Job Satisfaction & Motivation, The Impact of COVID-19, Organizational Culture & Leadership, and Flexibility, Technology & Knowledge.

These aggregated tables present both the absolute frequencies (counts) and the relative percentages (%) for each point on the 5-point Likert scale across all statements. This format allows for an immediate comparative observation of employee attitudes across different, yet related, aspects of their working environment.

Table 13: Aggregated Frequencies - Job Satisfaction & Motivation (n=140)

Statement	1: Strongly Disagree	2: Disagree	3: Neutral	4: Agree	5: Strongly Agree
S1 (Remuneration)	12 (8.6%)	46 (32.9%)	37 (26.4%)	39 (27.9%)	6 (4.3%)
S2 (Personal Growth)	6 (4.3%)	34 (24.3%)	42 (30.0%)	45 (32.1%)	13 (9.3%)
S3 (Recognition)	6 (4.3%)	32 (22.9%)	51 (36.4%)	41 (29.3%)	10 (7.1%)
S4 (Job Security)	3 (2.1%)	28 (20.0%)	40 (28.6%)	54 (38.6%)	15 (10.7%)
S5 (Interesting Job)	2 (1.4%)	30 (21.4%)	46 (32.9%)	54 (38.6%)	8 (5.7%)
S6 (Fair Promotions)	18 (12.9%)	35 (25.0%)	40 (28.6%)	38 (27.1%)	9 (6.4%)
S7 (Overall Satisfaction)	5 (3.6%)	25 (17.9%)	35 (25.0%)	64 (45.7%)	11 (7.9%)

Table 14: Aggregated Frequencies - The Impact of COVID-19 & Psychological Contract (n=140)

Statement	1: Strongly Disagree	2: Disagree	3: Neutral	4: Agree	5: Strongly Agree
S8 (Increased Stress)	2 (1.4%)	24 (17.1%)	48 (34.3%)	42 (30.0%)	24 (17.1%)
S9 (Company Support)	10 (7.1%)	24 (17.1%)	40 (28.6%)	52 (37.1%)	14 (10.0%)
S10 (Violated Rules)	12 (8.6%)	45 (32.1%)	44 (31.4%)	29 (20.7%)	10 (7.1%)
S11 (Burnout)	3 (2.1%)	15 (10.7%)	26 (18.6%)	57 (40.7%)	39 (27.9%)
S12 (Work-Life Balance)	27 (19.3%)	29 (20.7%)	29 (20.7%)	45 (32.1%)	10 (7.1%)
S13 (Sense of Unfairness)	4 (2.9%)	36 (25.7%)	45 (32.1%)	46 (32.9%)	9 (6.4%)
S14 (Trust Decreased)	12 (8.6%)	35 (25.0%)	56 (40.0%)	25 (17.9%)	12 (8.6%)

Table 15: Aggregated Frequencies - Organizational Culture & Leadership (n=140)

Statement	1: Strongly Disagree	2: Disagree	3: Neutral	4: Agree	5: Strongly Agree
S15 (Teamwork)	5 (3.6%)	24 (17.1%)	47 (33.6%)	51 (36.4%)	13 (9.3%)
S16 (Open Management)	9 (6.4%)	34 (24.3%)	40 (28.6%)	43 (30.7%)	14 (10.0%)

S17 (Understanding Supervisor)	8 (5.7%)	23 (16.4%)	41 (29.3%)	45 (32.1%)	23 (16.4%)
S18 (Flow of Information)	11 (7.9%)	35 (25.0%)	39 (27.9%)	45 (32.1%)	10 (7.1%)
S19 (Inspiring Supervisor)	14 (10.0%)	33 (23.6%)	41 (29.3%)	40 (28.6%)	12 (8.6%)
S20 (Clear Goal Comm.)	12 (8.6%)	35 (25.0%)	38 (27.1%)	40 (28.6%)	15 (10.7%)

Table 16: Aggregated Frequencies - Flexibility, Technology & Knowledge (n=140)

Statement	1: Strongly Disagree	2: Disagree	3: Neutral	4: Agree	5: Strongly Agree
S21 (Team Adaptability)	4 (2.9%)	33 (23.6%)	40 (28.6%)	52 (37.1%)	11 (7.9%)
S22 (Knowledge Sharing)	6 (4.3%)	27 (19.3%)	26 (18.6%)	62 (44.3%)	19 (13.6%)
S23 (Eco-friendly Tech)	8 (5.7%)	27 (19.3%)	46 (32.9%)	45 (32.1%)	14 (10.0%)
S24 (Adequate Training)	13 (9.3%)	30 (21.4%)	48 (34.3%)	42 (30.0%)	7 (5.0%)
S25 (User-friendly Systems)	5 (3.6%)	21 (15.0%)	43 (30.7%)	60 (42.9%)	11 (7.9%)
S26 (Willingness for Extra Effort)	0 (0.0%)	10 (7.1%)	20 (14.3%)	65 (46.4%)	45 (32.1%)

A closer examination of the aggregated frequency tables (Tables 13 to 16) reveals several noteworthy trends and highlights a distinct contrast between employee grievances and their operational dedication.

Regarding Job Satisfaction & Motivation (Table 13), a clear dichotomy emerges between job security and tangible rewards. While nearly half of the respondents (49.3%) feel secure

in their current positions (S4), a significant portion expresses strong dissatisfaction with compensation and advancement. Specifically, 41.5% of the sample are dissatisfied with their remuneration in relation to their workload (S1), and 37.9% question the fairness and transparency of the promotion processes (S6). This suggests that while basic employment stability is provided, the organizational reward systems fail to adequately motivate the workforce.

In terms of Organizational Culture & Leadership (Table 15), the workforce generally perceives their direct supervisors in a positive light. For instance, 48.5% of the employees agree or strongly agree that their supervisor shows understanding of their daily problems (S17). However, there is a consistently high percentage of 'Neutral' responses across all leadership statements (averaging around 30%). This ambivalence indicates a potential communication gap, suggesting that while frontline management is supportive, the broader organizational vision and goals may not be communicated effectively enough to inspire the entire workforce.

Finally, the Flexibility, Technology & Knowledge (Table 16) facet reveals the greatest strengths and the high resilience of the surveyed sample. An overwhelming 78.5% of the respondents (Statement S26) declared that when they are satisfied, they are highly willing to put in extra effort during emergencies. Coupled with positive indicators in knowledge sharing (S22: 57.9% agreement) and team adaptability (S21), it becomes evident that logistics employees possess a strong sense of duty and teamwork.

In conclusion, these aggregated findings suggest that despite significant structural complaints regarding pay, career progression, and pandemic-induced burnout, the logistics workforce remains highly engaged, resilient, and exceptionally willing to support their organizations during critical supply chain disruptions.

4.3 Inductive statistics

To rigorously examine whether demographic variables significantly influence employee perceptions, appropriate parametric tests were conducted. A significance level of $\alpha = 0.05$ was established for all analyses. Given that the sample size of this research (n=140) substantially exceeds the threshold of 30, the Central Limit Theorem applies. This allows for the assumption of a normal distribution within the data, thereby justifying the use of parametric statistical methods.

Specifically, an Independent Samples T-Test was employed to investigate potential disparities between male and female logistics professionals. In this procedure, Gender served as the independent grouping variable, while the responses to the survey statements (measured on a 5-point Likert scale) acted as the dependent variables. The analysis was designed to test the following hypotheses:

Null Hypothesis (H0): There is no statistically significant difference in the mean scores between male and female employees.

Alternative Hypothesis (H1): A statistically significant difference exists in the mean scores between the two genders.

Table X below summarizes only the specific statements where the Null Hypothesis was successfully rejected (i.e., p-value < 0.05). These represent the areas with the most significant divergence in attitudes between men and women.

Table X: Independent Samples T-test (Independent Variable: Gender)

Question / Variable	Variance Assumption	Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Diff	Lower	Upper
S6. Fair Promotions	Equal variances assumed	181	671	2.484	138	14	477	192	97	856
	Equal variances not assumed			2.492	121.8	14	477	191	98	855
S8. Pandemic Stress	Equal variances assumed	18	894	4.908	138	0	792	161	473	1.111
	Equal variances not assumed			4.951	124.0	0	792	160	475	1.108
S10. Violated Unwritten Rules	Equal variances assumed	1.623	205	3.177	138	2	566	178	214	919
	Equal variances not assumed			3.076	106.4	3	566	184	201	932
S11. Burnout	Equal variances assumed	735	393	3.585	138	0	609	170	273	945
	Equal variances not assumed			3.529	113.6	1	609	173	267	951
S12. Work-Life Balance	Equal variances assumed	3.212	75	-4.814	138	0	-967	201	-1.364	-570
	Equal variances not assumed			-4.596	100.2	0	-967	210	-1.384	-549
S26. Willingness for Extra Effort	Equal variances assumed	7.095	9	-2.851	138	5	-415	146	-703	-127
	Equal variances not assumed			-2.675	93.0	9	-415	155	-724	-107

Investigating the perception of fair and transparent promotion processes (S6), Levene's Test for Equality of Variances produced a p-value of 0.671, meaning the assumption of equal variances is retained. For the t-test, the p-value was 0.014 (< 0.05), highlighting a statistically significant gender difference. To be precise, male respondents (MV=3.18, SD=1.104) agreed more strongly than females (MV=2.70, SD=1.123) that promotions are handled fairly within the organization.

Regarding the statement that the pandemic elevated work-related stress (S8), Levene's Test indicated a p-value of 0.894, confirming equal variances. The subsequent t-test yielded a p-value of 0.000 (< 0.05), proving a statistically significant disparity between the sexes. Specifically, men (MV=3.91, SD=0.912) felt a much stronger increase in stress due to COVID-19 compared to women (MV=3.12, SD=0.955).

Assessing whether organizational "unwritten rules" were breached during the crisis (S10), Levene's Test resulted in a p-value of 0.205 (equal variances assumed). The t-test p-value stood at 0.002 (< 0.05), marking a statistically significant divergence. Men (MV=3.19, SD=1.141) expressed a significantly stronger belief than women (MV=2.63, SD=0.959) that the psychological contract was violated by their employers.

Concerning the frequency of physical or emotional burnout (S11), Levene's Test showed a p-value of 0.393, leading to the acceptance of the equal variances hypothesis. The t-test returned a p-value of 0.000 (< 0.05), indicating a clear statistical difference. The data illustrates that men (MV=4.18, SD=1.037) suffer from end-of-day exhaustion significantly more intensely than women (MV=3.57, SD=0.952).

Analyzing the capacity to maintain a proper work-life balance (S12), Levene's Test gave a p-value of 0.075, thus the equal variances hypothesis is adopted. The t-test p-value was 0.000 (< 0.05), confirming a statistically significant contrast. Specifically, female employees (MV=3.27, SD=1.037) feel significantly more capable of balancing their personal and professional lives than male employees (MV=2.30, SD=1.336).

Looking into the willingness to provide extra effort during emergencies (S26), Levene's Test resulted in a p-value of 0.009, leading to the rejection of the equal variances assumption. The corresponding t-test had a p-value of 0.009 (< 0.05), denoting a statistically significant difference. Evidently, women (MV=4.20, SD=0.712) stated much more firmly than men (MV=3.79, SD=1.013) that they are willing to go the extra mile when they are satisfied.

Table Y: One-Way ANOVA Results for Education Level and Monthly Salary

Dependent Variable	Independent Variable	df (Between / Within)	F - value	Sig. (p-value)	Significance
S7. Overall Job Satisfaction	Monthly Salary	4 / 135	6.689	< 0.001	Significant
S8. Pandemic Work Stress	Education Level	3 / 136	5.805	3	Significant

S11. Burnout	Education Level	3 / 136	6.535	1	Significant
S11. Burnout	Monthly Salary	4 / 135	3.891	5	Significant
S12. Work-Life Balance	Education Level	3 / 136	9.078	< 0.001	Significant
S12. Work-Life Balance	Monthly Salary	4 / 135	3.736	6	Significant
S14. Post-Pandemic Trust	Monthly Salary	4 / 135	4.497	1	Significant

Table Z: One-Way ANOVA Results for Age, Job Position, and Years of Experience

Independent Variable (Demographic)	**Dependent Variable (Statement)**	**df (Between / Within)**	**F - value**	**Sig. (p-value)**	**Statistical Significance**
Age Group	S7. Overall Job Satisfaction	4 / 135	1.775	138	Not Significant
Age Group	S8. Pandemic Work Stress	4 / 135	1.064	377	Not Significant
Age Group	S11. Burnout	4 / 135	384	819	Not Significant
Age Group	S12. Work-Life Balance	4 / 135	530	714	Not Significant
Age Group	S14. Post-Pandemic Trust	4 / 135	935	446	Not Significant

Age Group	S26. Extra Effort	4 / 135	1.716	150	Not Significant
Job Position	S7. Overall Job Satisfaction	2 / 137	1.907	152	Not Significant
Job Position	S8. Pandemic Work Stress	2 / 137	13.105	< 0.001	Significant
Job Position	S11. Burnout	2 / 137	2.128	123	Not Significant
Job Position	S12. Work-Life Balance	2 / 137	5.773	4	Significant
Job Position	S14. Post-Pandemic Trust	2 / 137	300	741	Not Significant
Job Position	S26. Extra Effort	2 / 137	7.821	1	Significant
Years of Experience	S7. Overall Job Satisfaction	3 / 136	521	669	Not Significant
Years of Experience	S8. Pandemic Work Stress	3 / 136	6.291	< 0.001	Significant
Years of Experience	S11. Burnout	3 / 136	3.045	31	Significant
Years of Experience	S12. Work-Life Balance	3 / 136	6.990	< 0.001	Significant
Years of Experience	S14. Post-Pandemic Trust	3 / 136	1.387	249	Not Significant
Years of Experience	S26. Extra Effort	3 / 136	6.643	< 0.001	Significant

Concerning overall job satisfaction (S7) across different monthly salary levels, the one-way ANOVA yielded a p-value of 0.000 (< 0.05). This confirms a statistically significant disparity between the income groups. In particular, personnel earning above 1500€ exhibit notably higher job satisfaction (MV=4.07, SD=0.640) compared to those earning 1001€-1500€ (MV=3.31, SD=0.933), 701€-1000€ (MV=3.02, SD=0.976), and 500€-700€ (MV=2.83, SD=1.329).

Focusing on how the pandemic amplified work-related stress (S8) depending on educational background, the analysis produced a p-value of 0.004 (< 0.05), pointing to a statistically significant variation. More precisely, workers holding a High School or Vocational diploma reported significantly greater stress increases (MV=3.75, SD=0.992) than their peers with a Bachelor's degree (MV=3.20, SD=1.067) or a Master's/PhD (MV=3.17, SD=0.791).

With respect to physical or emotional burnout (S11) analyzed by education level, the ANOVA test revealed a p-value of 0.002 (< 0.05), establishing a statistically significant difference. Specifically, employees possessing basic education experience more intense burnout symptoms (MV=4.14, SD=0.924) in contrast to degree holders (Bachelor's MV=3.59, SD=1.045; Master's/PhD MV=3.47, SD=1.042).

In terms of maintaining a healthy work-life balance (S12) relative to the participants' education, the one-way ANOVA demonstrated a p-value of 0.000 (< 0.05), indicating a significant statistical variance. Notably, individuals with a Bachelor's (MV=3.30, SD=1.093) and Master's/PhD (MV=3.20, SD=1.186) expressed a much stronger agreement that they maintain a good balance compared to High School / Vocational graduates (MV=2.41, SD=1.256).

Analyzing physical or emotional exhaustion (S11) alongside monthly salary, the test yielded a p-value of 0.005 (< 0.05), leading to the conclusion of a statistically significant discrepancy. Detail-wise, respondents in the lower and middle-income brackets—500€-700€ (MV=4.00, SD=0.894), 701€-1000€ (MV=3.95, SD=0.914), and 1001€-1500€ (MV=3.95, SD=0.972)—feel significantly more burned out than those in the highest tier of over 1500€ (MV=3.40, SD=1.133).

Regarding the capacity to preserve work-life balance (S12) based on monthly income, the one-way ANOVA output was p-value=0.006 (< 0.05). To be specific, top earners (>1500€) find it considerably easier to balance their personal and professional lives (MV=3.50, SD=1.075) than those earning 701€-1000€ (MV=2.80, SD=1.212), 1001€-1500€ (MV=2.63, SD=1.258), and 500€-700€ (MV=2.33, SD=1.366).

Examining the decline in management trust following the pandemic (S14) against monthly salary, the statistical test indicated a p-value of 0.002 (< 0.05), highlighting a significant variation. In detail, workers making 701€-1000€ (MV=3.34, SD=1.077) and 500€-700€ (MV=3.33, SD=0.816) reported a much steeper drop in trust compared to the 1001€-1500€ group (MV=2.83, SD=1.003) and the over 1500€ group (MV=2.50, SD=0.938).

When assessing pandemic-induced work stress (S8) by job position, the ANOVA test resulted in a p-value of 0.000 (< 0.05), establishing a clear statistically significant divergence. Specifically, operational personnel (MV=3.78, SD=1.021) felt the stress impact much more severely than supervisors/managers (MV=3.44, SD=0.814) and administrative workers (MV=2.89, SD=0.814).

Addressing work-life balance (S12) across different job roles, the analysis provided a p-value of 0.004 (< 0.05). In particular, supervisors/managers (MV=3.38, SD=1.310) and administrative staff (MV=3.21, SD=1.102) manage to balance their lives significantly better than frontline operational staff (MV=2.56, SD=1.262).

Concerning the readiness to provide extra effort during crisis situations (S26) depending on the job position, the one-way ANOVA showed a p-value of 0.001 (< 0.05). Evidently, supervisors/managers (MV=4.50, SD=0.516) and administrative employees (MV=4.28, SD=0.649) are more willing to go the extra mile compared to operational workers (MV=3.79, SD=0.964).

Regarding the escalation of work stress due to COVID-19 (S8) in relation to years of experience, the test produced a p-value of 0.000 (< 0.05), marking a statistically significant difference. Specifically, mid-career professionals with 11-20 years (MV=3.83, SD=1.028) and 4-10 years (MV=3.69, SD=1.004) experienced higher stress levels than veterans with over 20 years (MV=3.42, SD=0.830) and newcomers with 0-3 years (MV=2.95, SD=0.962).

Evaluating physical and emotional exhaustion (S11) by years of experience, the ANOVA test yielded a p-value of 0.031 (< 0.05), signifying a statistically relevant discrepancy. More accurately, employees possessing 11-20 years of experience (MV=4.17, SD=1.000) suffer from burnout more intensely than those with 4-10 years (MV=3.93, SD=0.998), over 20 years (MV=3.73, SD=1.008), and 0-3 years (MV=3.50, SD=1.018).

In terms of work-life balance (S12) and professional experience, the statistical outcome was a p-value of 0.000 (< 0.05). Noticeably, personnel with 0-3 years (MV=3.31, SD=1.070) and over 20 years (MV=3.21, SD=1.193) find it easier to separate work from private life compared to the 4-10 years group (MV=2.69, SD=1.198) and the 11-20 years group (MV=2.19, SD=1.283).

Lastly, analyzing the willingness to exert extra effort (S26) across experience levels, the one-way ANOVA generated a p-value of 0.000 (< 0.05). Specifically, both recent hires (0-3 years, MV=4.38, SD=0.661) and highly seasoned staff (over 20 years, MV=4.21, SD=0.857) express a stronger commitment to putting in extra work than those in the 4-10 years (MV=3.86, SD=0.833) and 11-20 years (MV=3.61, SD=0.934) categories.

4.4 Pearson Correlation Analysis

To evaluate the strength and direction of the linear associations among the primary survey variables—particularly those pertaining to the COVID-19 pandemic's impact and overall employee fulfillment—a Pearson correlation coefficient analysis was executed. The Pearson index (r) ranges from -1 to +1, where the mathematical sign dictates whether the relationship is positive or negative, and the absolute value reflects the robustness of this connection. The threshold for statistical significance was established at $\alpha = 0.05$. The core relationships are summarized in Table W below.

Table W: Pearson Correlations among Pandemic Impact and Satisfaction Variables

Variable 1	Variable 2	Pearson Correlation (r)	Sig. (p-value)	N	Relationship Type

Overall Job Satisfaction (S7)	Burnout (S11)	-0.615**	< 0.001	140	Strong Negative
Overall Job Satisfaction (S7)	Pandemic Work Stress (S8)	-0.542**	< 0.001	140	Moderate Negative
Work-Life Balance (S12)	Burnout (S11)	-0.680**	< 0.001	140	Strong Negative
Post-Pandemic Trust (S14)	Burnout (S11)	0.490**	2	140	Moderate Positive
Overall Job Satisfaction (S7)	Extra Effort (S26)	0.710**	< 0.001	140	Strong Positive

* Correlation is significant at the 0.01 level (2-tailed).

When exploring the dynamic between overall job satisfaction (S7) and physical or emotional exhaustion (S11), the analytical output returned a p-value of 0.000 (< 0.05). This confirms a highly significant statistical link. Specifically, the Pearson coefficient was calculated at r = -0.615, highlighting a substantial negative correlation. This fundamentally indicates that as pandemic-induced burnout intensifies among the logistics workforce, their overall job contentment drops precipitously.

Similarly, assessing the connection between general satisfaction (S7) and the specific work-related stress triggered by the COVID-19 crisis (S8), the test yielded a p-value of 0.000 (< 0.05). Thus, a statistically significant association is verified. The Pearson index stood at r = -0.542, demonstrating a moderate-to-strong negative relationship. This implies that the operational anxieties brought about by the pandemic directly and adversely affect the employees' overarching satisfaction.

Examining the capacity to maintain a healthy work-life balance (S12) against the feeling of exhaustion (S11), the statistical reading showed a p-value of 0.000 (< 0.05). The recorded coefficient of r = -0.680 reveals a remarkably strong negative correlation. Consequently, it is deduced that professionals who struggle to separate their personal lives from their demanding work schedules experience much more severe and frequent burnout symptoms.

Furthermore, regarding the interplay between the decline of trust in management post-pandemic (S14) and the occurrence of burnout (S11), the analysis provided a p-value of 0.002 (< 0.05). With a Pearson coefficient of r = 0.490, a clear positive correlation is observed. This suggests that employees who suffered the most severe exhaustion during the lockdowns concurrently felt that their "psychological contract" and reliance on corporate leadership were noticeably compromised.

Finally, observing the relationship between overarching job satisfaction (S7) and the readiness to exert extra effort during emergencies (S26), the procedure recorded a p-value of 0.000 (< 0.05). The correlation indicator was calculated at r = 0.710, establishing an exceptionally strong positive association. It can be unequivocally concluded that when logistics employees feel fulfilled and supported by their working environment, their willingness to dedicate maximum effort to assist the organization during crises increases exponentially.

5. Conclusions

5.1 General Conclusions and Summary of Findings

The primary objective of this postgraduate dissertation was to thoroughly investigate the levels of job satisfaction among employees in the logistics sector, with a specific focus on the disruptive aftermath of the COVID-19 pandemic and its impact on the psychological contract. By synthesizing descriptive statistics with rigorous inferential analysis (T-tests, ANOVA, and Pearson correlations), this research uncovers a highly complex, "dual reality" characterizing the post-pandemic logistics workforce.

On one hand, the sector faces a severe crisis regarding employee well-being. A deeper investigation into the facet concerning the 'Impact of COVID-19 & Psychological Contract' reveals that while the generalized impact is moderate (mean: 3.19), the underlying

individual metrics are deeply concerning. The most striking finding of this research is the remarkably high level of reported exhaustion. Statement S11, measuring physical and emotional burnout, recorded the highest mean score within this facet (3.81), signaling a prevalent, systemic issue among logistics workers. This exhaustion is inextricably linked to the elevated work-related stress induced by the pandemic's operational shocks (mean: 3.44). Furthermore, the data proves that this widespread burnout is heavily driven by a disrupted work-life balance; respondents generally struggle to separate their professional and personal lives in the post-COVID era, yielding one of the lowest mean scores in the entire survey (2.87).

Crucially, the inferential statistical analysis (ANOVA and T-tests) illuminated that this pandemic-induced burden was not shared equally across the organizational hierarchy. The negative consequences of COVID-19 disproportionately affected the "frontline" of the supply chain. Specifically, male employees, operational staff (e.g., warehouse workers, drivers), and individuals with lower educational attainment and income levels bore the heaviest physical and psychological brunt. These demographic groups reported statistically significantly higher levels of pandemic stress and burnout, alongside the poorest work-life balance, compared to administrative staff and higher-level management who likely benefited from remote working arrangements. As unequivocally proven by the Pearson correlation analysis, this escalating burnout has a strong, mathematically significant negative impact on their overall job satisfaction.

Despite these intense psychological and physical pressures, the data reveals a surprisingly positive and resilient outcome regarding the 'Psychological Contract' between employees and their organizations. Respondents generally felt that their companies provided adequate support during the health crisis (mean: 3.26). More importantly, the participants disagreed, on average, with the notion that their employers violated the 'unwritten rules' and expectations during the pandemic (mean: 2.86). Consequently, core trust in management does not appear to have been severely damaged across the board post-pandemic (mean: 2.93).

However, management must remain cautious, as the ANOVA tests revealed a critical caveat: while general trust remained intact, lower-paid employees and those experiencing the highest levels of burnout did report a statistically significant decrease in their trust

towards leadership. Compensation remains the ultimate buffer against operational stress in the supply chain industry.

In conclusion, the logistics sector emerges from the COVID-19 pandemic with a workforce that is exhausted and highly stressed, yet remarkably dedicated. As demonstrated by the correlation analysis, when these employees feel satisfied and their psychological contract is respected, their willingness to put in extra effort during emergencies is exceptionally high. Therefore, the overarching conclusion of this study is that while the pandemic severely exacerbated burnout and work-life imbalance, the foundational trust between employees and management proved resilient. To maintain this resilience and boost overall job satisfaction, modern logistics companies must urgently address the physical exhaustion of their frontline, male-dominated operational staff through fairer compensation and structured work-life boundaries.

5.2 Managerial Implications

The empirical evidence gathered in this dissertation provides actionable insights for human resource departments and corporate leadership within the logistics and supply chain sector. Recognizing that the workforce is currently operating under a "dual reality" of high dedication but severe post-pandemic exhaustion, management must adopt targeted strategies to safeguard employee well-being and sustain long-term operational efficiency.

First and foremost, organizational leaders must urgently address the alarming levels of physical and emotional burnout, particularly among frontline, operational, and male employees. Since these groups cannot benefit from the work-life balance offered by remote working models, companies should implement optimized shift-scheduling systems. Ensuring predictable working hours, mandating adequate rest periods between heavy shifts, and avoiding excessive overtime are critical steps to mitigate physical exhaustion.

Secondly, the statistical correlation between monthly salary and both job satisfaction and organizational trust cannot be ignored. The data explicitly demonstrated that lower-income brackets suffered the most intense pandemic stress and reported a significant drop in management trust. Therefore, logistics firms need to re-evaluate their compensation frameworks. Introducing fair hazard pay, transparent performance-based bonuses, and

tangible reward systems will directly buffer the operational stress and reinforce the psychological contract.

Finally, while the core trust between employees and employers remained surprisingly resilient during the pandemic, management must not take this for granted. Since the research proves that highly satisfied employees are exceptionally willing to put in extra effort during crises, companies should invest in robust internal communication and mental health support programs. Acknowledging the workforce's sacrifices and fostering a culture of psychological safety will guarantee that the staff remains committed and agile in the face of future supply chain disruptions.

5.3 Limitations and Future Research

While this dissertation offers valuable contributions to the understanding of post-pandemic job satisfaction in the logistics sector, it is subject to certain methodological limitations that should be acknowledged.

The primary limitation pertains to the sample size and demographic scope. The research was conducted using a sample of 140 participants. Although this number is statistically sufficient for parametric testing (such as ANOVA and Pearson correlations) and provides a solid representative snapshot, it remains relatively modest. Consequently, generalizing these findings to the entire global or national logistics workforce should be done with caution. Furthermore, the study is strictly confined to the logistics and supply chain industry, meaning the observed dynamics regarding burnout and the psychological contract might differ significantly in other sectors, such as healthcare or information technology.

Another constraint is the cross-sectional nature of the research design. The data was collected at a single point in time during the post-COVID-19 era. As a result, it captures the employees' perceptions and exhaustion levels exactly at this specific transitional phase, without tracking how these attitudes might evolve as the pandemic fades further into the past. Additionally, relying solely on quantitative data (closed-ended Likert scale questionnaires) inherently restricts the depth of understanding regarding the emotional nuances behind the respondents' answers.

These limitations pave the way for highly promising avenues of future research. Subsequent academic endeavors could employ a longitudinal research design to monitor how job satisfaction and burnout in logistics fluctuate over the next few years, establishing whether the current exhaustion is a permanent structural issue or a temporary pandemic aftershock. Moreover, future studies would benefit greatly from a mixed-methods approach, incorporating qualitative in-depth interviews with operational staff to uncover the deeper psychological drivers behind their stress. Finally, conducting a comparative study between the logistics sector and another essential industry (such as retail) would yield fascinating insights into how different operational environments handled the violation or preservation of the psychological contract during the global health crisis.

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Appendix A: Dissertation Questionnaire in English

SECTION A: Demographics & Employment Details

1. **Gender:**
   - **Male**
   - **Female**
   - **Other / I don't want to answer**

2. **Age Group:**
   - **18-25**
   - **26-35**
   - **36-45**
   - **46-55**
   - **55+**

3. **Education Level:**
   - **Primary**
   - **Upper Secondary**
   - **Bachelor's Degree**
   - **Master's / PhD**
   - **Other**

4. **Job Title / Position:**
   - **Administrative Staff**
   - **Operational Staff**
   - **Supervisor / Manager**

5. **Number of employees in your company:**
   - **<10**
   - **11-50**
   - **51-250**
   - **250+**

6. **Years of work experience in the Logistics sector:**
   - **0-3 years**
   - **4-10 years**
   - **11-20 years**
   - **20+ years**

7. **Working hours:**
   - **Part time**
   - **Full time**
   - **Seasonal**
   -

8. **Monthly Salary (net):**
   - **<500€**
   - **500€-700€**
   - **701€-1000€**
   - **1001€-1500€**
   - **1501€**

SECTION B: Job Satisfaction & Motivation

9. **I feel I am being paid a fair amount for the work I do.**
   - **Strongly Disagree**
   - **Disagree**
   - **Neither Agree nor Disagree**
   - **Agree**
   - **Strongly Agree**

10. **My job offers me opportunities for personal growth and development.**
   - **Strongly Disagree**
   - **Disagree**
   - **Neither Agree nor Disagree**
   - **Agree**
   - **Strongly Agree**

11. **When I do a good job, I receive the recognition for it that I should receive.**
   - **Strongly Disagree**
   - **Disagree**
   - **Neither Agree nor Disagree**
   - **Agree**
   - **Strongly Agree**

12. **I feel secure about my job position.**
   - **Strongly Disagree**
   - **Disagree**
   - **Neither Agree nor Disagree**

- **Agree**
- **Strongly Agree**

13. **My job is interesting and utilizes my skills.**
    - **Strongly Disagree**
    - **Disagree**
    - **Neither Agree nor Disagree**
    - **Agree**
    - **Strongly Agree**

14. **Those who do well on the job stand a fair chance of being promoted.**
    - **Strongly Disagree**
    - **Disagree**
    - **Neither Agree nor Disagree**
    - **Agree**
    - **Strongly Agree**

15. **Overall, I am satisfied with my current job.**
    - **Strongly Disagree**
    - **Disagree**
    - **Neither Agree nor Disagree**
    - **Agree**
    - **Strongly Agree**

SECTION C: The Impact of COVID-19 & Psychological Contract

16. **The changes brought by the pandemic significantly increased my work stress.**
    - **Strongly Disagree**
    - **Disagree**
    - **Neither Agree nor Disagree**
    - **Agree**
    - **Strongly Agree**

17. **I felt that the company supported me sufficiently during the health crisis.**
    - **Strongly Disagree**
    - **Disagree**
    - **Neither Agree nor Disagree**
    - **Agree**
    - **Strongly Agree**

18. **I consider that the "unwritten rules" and expectations I had from my employer were violated during the pandemic.**
    - **Strongly Disagree**
    - **Disagree**
    - **Neither Agree nor Disagree**
    - **Agree**
    - **Strongly Agree**

19. **I often feel physical or emotional exhaustion (burnout) at the end of the day.**
    - **Strongly Disagree**
    - **Disagree**
    - **Neither Agree nor Disagree**
    - **Agree**

- **Strongly Agree**

20. **My current job allows me to maintain a balance between my professional and personal life.**
    - **Strongly Disagree**
    - **Disagree**
    - **Neither Agree nor Disagree**
    - **Agree**
    - **Strongly Agree**

21. **The working conditions (teleworking or safety measures) created a sense of injustice among employees.**
    - **Strongly Disagree**
    - **Disagree**
    - **Neither Agree nor Disagree**
    - **Agree**
    - **Strongly Agree**

22. **After the pandemic, my trust in management has decreased.**
    - **Strongly Disagree**
    - **Disagree**
    - **Neither Agree nor Disagree**
    - **Agree**
    - **Strongly Agree**

SECTION D: Organizational Culture & Leadership

23. **Teamwork and cooperation between departments are encouraged in our company.**
    - **Strongly Disagree**
    - **Disagree**
    - **Neither Agree nor Disagree**
    - **Agree**
    - **Strongly Agree**

24. **Management is open to new ideas and suggestions from employees.**
    - **Strongly Disagree**
    - **Disagree**
    - **Neither Agree nor Disagree**
    - **Agree**
    - **Strongly Agree**

25. **My supervisor shows understanding regarding the problems I face.**
    - **Strongly Disagree**
    - **Disagree**
    - **Neither Agree nor Disagree**
    - **Agree**
    - **Strongly Agree**

26. **Communication seems good within this organization.**
    - **Strongly Disagree**
    - **Disagree**
    - **Neither Agree nor Disagree**

- **Agree**
- **Strongly Agree**

27. **My supervisor inspires me and acts as a role model.**
    - **Strongly Disagree**
    - **Disagree**
    - **Neither Agree nor Disagree**
    - **Agree**
    - **Strongly Agree**

28. **There is clear communication of goals from leadership to employees.**
    - **Strongly Disagree**
    - **Disagree**
    - **Neither Agree nor Disagree**
    - **Agree**
    - **Strongly Agree**

SECTION E: Flexibility, Technology & Knowledge

29. **Our team adapts quickly to sudden changes in demand or problems.**
    - **Strongly Disagree**
    - **Disagree**
    - **Neither Agree nor Disagree**
    - **Agree**
    - **Strongly Agree**

30. **We freely share knowledge and information among colleagues to solve problems.**

- **Strongly Disagree**
- **Disagree**
- **Neither Agree nor Disagree**
- **Agree**
- **Strongly Agree**

31. **The company invests in environmentally friendly technologies and practices.**
    - **Strongly Disagree**
    - **Disagree**
    - **Neither Agree nor Disagree**
    - **Agree**
    - **Strongly Agree**

32. **I receive sufficient training to use the company's digital tools.**
    - **Strongly Disagree**
    - **Disagree**
    - **Neither Agree nor Disagree**
    - **Agree**
    - **Strongly Agree**

33. **The technological systems we use are user-friendly and help me be more productive.**
    - **Strongly Disagree**
    - **Disagree**
    - **Neither Agree nor Disagree**
    - **Agree**
    - **Strongly Agree**

34. **When I am satisfied, I am more willing to exert extra effort in emergency situations.**

- **Strongly Disagree**
- **Disagree**
- **Neither Agree nor Disagree**
- **Agree**
- **Strongly Agree**

Appendix B: Dissertation Questionnaire in Greek

https://docs.google.com/forms/d/e/1FAIpQLSe0i42R4yvoKnN9KQ9brSUGgDPvP0gsep7kLASBWW7XHmTKUA/viewform?usp=header

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