

CHAPTER III

RESEARCH METHODOLOGY

This chapter describes the research methodology used in the study and explains the research design, conceptual framework, variables and statistical tools used in the study. It gives a systematic method for analyzing WLB, WS, and WP of the women commercial drivers in the Coimbatore District. This systematic approach guarantees the credibility and authenticity of the results, providing essential information regarding females' portrayals in the transport industry.

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3.3 Framework of the Analysis

3.1 Research Design

3.1.1 Research Method

A descriptive study design is extremely useful to study work-life balance (WLB), work satisfaction (WS) and work performance by women commercial drivers in the Coimbatore District. Such an approach allows for the collection and analysis of a combination of quantitative and qualitative data in an explorative manner. The qualitative aspect provides in-depth insights into the experiences of women drivers and elucidates the dimensions influencing WLB, WS, and performance at work. Conducting in-depth interviews and focus groups to study drivers' motivations, challenges, and coping mechanisms will make up a large part of this. The quantitative part is a survey instrument in another study involvement of the data collection will be targeted at women commercial drivers in Coimbatore District, Demographic information, work schedule characteristics, validated WLB scales (Heyman, 2005), job satisfaction measures (Spector, 1997), and performance indicators that are relevant to the commercial driving industry will be included in this survey.

3.1.2 Locale of the Study

The study is conducted in the Coimbatore District in the state of Tamil Nadu in India, an industrial centre with women increasingly entering formerly male-dominated careers such as commercial driving. In addition, the socio-economic landscape of the region, characterized by accelerated industrial development and urbanization, offers a distinctive context for examining the interrelationships between work-life balance, work satisfaction and work performance among women in this sector, thus filling an important void in existing literature.

The unique context of Coimbatore offers important insights into the needs and potentials of female commercial drivers, insights that are not easily transferable to other contexts with different socio-economic factors. Few studies have focused in this area, and none examined regional differences in women's experience in non-traditional professions. Exploring women drivers in the conservative city of Coimbatore can reveal insights with larger implications for similar professions throughout India where socio-economic conditions vary widely. The distinct environment of the district provides a crucial lens for this inquiry, emphasizing the significance of regional context in better understanding the journey of women in non-traditional roles and their experiences maintaining work-life

harmony and job satisfaction. The also provides a map of Tamil Nadu showing the Coimbatore District Figure 3 and a map of the Coimbatore District showing the Taluks Figure 3.



Figure 3 Geographical Location of the study

Coimbatore District, also termed the "Manchester of South India" since the district has an enormous textile industry, is a significant industrial and commercial hub in the state of Tamil Nadu. With this industrialization, there was also a flourishing transport sector and a surge in demand for commercial drivers. Ironically, it is observed that women are beginning to take up non-traditional occupations like commercial driving in the district

(The Times of India, 2022). Coimbatore offers a unique setting, combining rapid industrialization and urbanization with traditional societal norms. This environment provides an ideal backdrop for exploring how these dynamics affect the work-life balance of women commercial drivers (The Indian Express, 2023).

3.1.3 Population and Sampling Strategy

The study targets self-employed women commercial drivers in the road transport sector of Coimbatore District, with a total population of 213 drivers, as reported by the Regional Transport Office (RTO) in each zone of the district for the years 2022-2024. Given the manageable size of this population and the feasibility of reaching all respondents, a census sampling technique was used to ensure comprehensive data collection from the entire population. Figure 4 shows a detailed layout of Coimbatore city, divided into distinct administrative zones.



Figure 4 Coimbatore District (Zone map)

Table 3.1 Number of Women Commercial Drivers in Coimbatore District

S.No	District Zone	No. of Self-Employed Women Commercial Drivers
1	West	62
2	North	28
3	Central	32
4	South	43
5	East	48
Total		213

Source: Region's RTO offices

Table 3.1 provides an overview of the sampling design for a study focused on self-employed female commercial drivers in the Coimbatore District. The study adopts a census sampling method, ensuring that all respondents who meet the study's criteria are included. Coimbatore District is divided into four zones: West, North, Central, South and East. According to zone-wise commercial license registration, the sample includes 62 drivers from the West zone, 28 from the North, 32 from the Central, 43 from the South and 48 from the East totaling 213 respondents. This comprehensive approach aims to capture the full population of self-employed female commercial drivers across the district.

3.1.4 Sources of Data Collection, Tools and Measures

A survey method was adopted to collect primary data through structured interview schedules that can be used to have deep conversations with the respondents of the study. Special care is taken in designing the interview schedule so that it suits the research questions and objectives of the study. It brought very rich qualitative insight into drivers' personal experiences, perceptions, and challenges. A mix of people, with variation by locality, type of vehicle, and experience at work. The richness of the data also came from direct observations of their work settings, which provided a contextual understanding of their daily work environment. The established tools were used in the quantitative measures. Paul Spector's Job Happiness Survey (JSS) (1994), which measures several facets of job happiness, was used to measure work satisfaction. Heyman's (2005) Work-Life Balance Scale was applied to check whether the respondents were balancing their personal and professional duties. Campbell Self-Assessment Job Performance Scale (1990), which is a self-reported job performance measure was used to assess work

performance. This information proved very resourceful in being able to pursue and analyze it, so it formed a strong base from which to evaluate the work-life balance, work satisfaction, and work performance of independent female commercial drivers of the Coimbatore District.

3.1.5 Data Collection Period

The study was done from September 2022 to March 2023. During this period, data was collected in such a way that primary information, gathered with much care and attention, was given with respect to the accuracy and relevance of findings. Data was taken through personal interviews and telephonic interviews following the preference and availability of participants. Much time was taken to cover all the questions relevant to the respondents to understand the experience completely.

3.1.6 Pilot Study

A pilot study was conducted to assess the reliability and consistency of the Interview schedule. Sixty female commercial drivers from the road transport sector in Coimbatore participated in this preliminary phase. Based on feedback from the pilot study, several modifications, including additions, deletions, and adjustments, were made to improve the overall quality and effectiveness of the interview schedule. This process helped to refine the research tool before the full-scale implementation.

Normality Test

The results from the Shapiro-Wilk test indicate that all variables had a p-value greater than 0.05, suggesting that the data follow a normal distribution. Therefore, it can be concluded that the residuals are normally distributed, validating the use of parametric tests for further analysis. These results are summarized in Table 3.2.

Table 3.2 Shapiro Wilk Test

Constructs	Statistics	Sig.
Work-life balance	.935	.203
Work Satisfaction	.950	.115
Work Performance	.975	.265

Source: Computed Data

Homogeneity Test

Table 3.3 Levene test

Constructs	Levene Statistic	Sig.
Work-life balance	1.040	.382
Work Satisfaction	1.169	.330
Work Performance	1.611	.197

Source: Computed Data

Table 3.3 presents the Levene Statistic test results for work-life balance, work satisfaction, and work performance. The significance values for all constructs are greater than 0.05, with work-life balance at 0.382, work satisfaction at 0.330, and performance at 0.197. These values indicate that there are no issues with homogeneity, as the significant values exceed the 0.05 threshold. Therefore, it can be concluded that all constructs demonstrate homogeneity.

Reliability and Validity Test

Internal consistency is a method used to assess the reliability of a scale by examining the commonality of a set of items that measure a specific construct. In this study, Cronbach's Alpha was employed to test the internal consistency of the scales. As per Table 3.4, Cronbach's Alpha value greater than 0.7 indicates that the scale is reliable. The results show that Cronbach's Alpha values for work satisfaction (0.781), performance (0.710), challenges (0.756), and motivational factors (0.802) are all above 0.7, confirming the reliability of these constructs. Although Cronbach's Alpha for work-life balance is slightly below the threshold at 0.686, it is still considered acceptable for this research. Overall, the interview schedule is proven to be reliable for data collection, as the majority of the constructs meet the required reliability standard.

Table 3.4 Reliability and Validity Test

S.no	Variables	No. of Item	Range	Cronbach's Alpha	Validity AVE
1	Work Satisfaction	12	1-5	.781	.724
2	Work-Life Balance	5	1-5	.686	.715
3	Work Performance	5	1-5	.710	.764
4	Challenges	24	1-5	.756	.756
5	Customer Support	4	1-5	.732	.778
6	Family Support	4	1-5	.789	.705

Source: Computed Data

Table 3.4 shows that all five constructs have Cronbach's Alpha values exceeding 0.60, standard factor loading values above 0.50, AVE (Average Variance Extracted) greater than 0.50, and composite reliability exceeding 0.60. The AVE is considered a more stringent statistic for evaluating the adequacy of a measurement model, and the study demonstrates sufficient convergent validity (Krabbe, 2017). Discriminant validity was confirmed by calculating each construct's square root of the AVE values. Since the square root of the AVE for each construct was higher than the correlation between them, the model is deemed to have adequate discriminant validity.

3.1.7 Measuring Work-Life Balance (WLB)

Work-Life Balance (WLB), defined by Hayman (2005), refers to the harmony between activities connected to one's personal and professional lives. It involves efficiently allocating time, effort, and resources to maintain high productivity levels, contentment, and well-being. This construct also considers how work-related factors impact a person's personal life.

The Work-Life Balance Scale (Hayman, 2005)

The 10-item Work-Life Balance Scale, developed by Hayman (2005), evaluates various facets of work-life balance. This scale is a widely used self-report questionnaire designed to assess individuals' perceptions of the balance between their work and personal lives. It uses a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), with higher scores indicating a better work-life balance. The scale has been employed in numerous studies and has demonstrated excellent reliability and validity in measuring work-life balance.

Tool Development

Hayman (2005) created this psychometric tool specifically for organizational settings. It evolved from an earlier 19-item measure developed by Fisher-McAuley et al. (2003) into a more refined 15-item scale. This revised scale examines three key components of work-life balance: Work Interference with Personal Life (WIPL), Personal Life Interference with Work (PLIW), and Work-Personal Life Enhancement (WPLE).

Construct 1: Work Interference with Personal Life (WIPL)

This construct measures the extent to which work-related factors negatively influence an individual's personal life. It includes seven items that assess how work

interferes with personal life, such as: 1. My professional life interferes with my personal life, 2. My job makes my personal life challenging, 3. I struggle to balance work and non-work activities, 4. I ignore my personal needs because of work, 5. I put my personal life on hold for work, 6. I miss out on personal activities because of work, 7. I am not content with the amount of time I spend on non-work activities (Hayman, 2005).

Construct 2: Personal Life Interference with Work (PLIW)

This construct evaluates how personal life factors disrupt or influence work performance. It includes four items that measure the impact of personal life on work, such as: 1. My personal life depletes my energy for work, 2. I'm too exhausted to work effectively, 3. My personal life affects my work, 4. Personal issues make it difficult to work (Hayman, 2005).

Construct 3: Work-Personal Life Enhancement (WPLE)

This construct highlights the positive interactions between work and personal life, where each enhances the other. It includes four items that assess the mutual benefits of work and personal life, such as 1. I gain energy for my work from my personal life, 2. I gain energy from my work to engage in personal activities, 3. My personal life makes me happier at work, 4. My job makes me happier in my personal life (Hayman, 2005).

3.1.8 Measuring Work Satisfaction

Paul Spector

Paul Spector, a renowned researcher in the field of employee well-being and behavior, and a professor at the Muma College of Business at the University of South Florida, emphasizes that "Work Satisfaction is more of an attitude." As the author of *Job Happiness: From Assessment to Intervention*, Spector explains that work satisfaction is the degree to which individuals feel good about their work, hold a positive attitude, or maintain a favorable opinion about it. While not all content employees are actively engaged in their work, most engaged employees tend to be satisfied with their jobs. According to Spector, the most reliable way to gauge job satisfaction is by directly asking employees about their experiences. To facilitate this, Spector developed the widely-used Job Happiness Survey (JSS), which includes 36 questions covering nine key aspects of job satisfaction: compensation, opportunities for advancement, supervision, fringe benefits, performance-based rewards, organizational procedures, relationships with coworkers, and the nature of the work itself. Although the JSS was initially designed for human service

organizations, it is applicable across a broad range of both corporate and public sector organizations. The survey's comprehensive approach ensures it can effectively measure job satisfaction in various settings (Spector, 2022).

3.1.9 Work Performance Measurement

Work performance is a multifaceted concept shaped by a complex interplay of individuals and factors. Here's a breakdown of key elements that influence it:

Effective communication and strong interpersonal skills are vital for enhancing work performance. These skills not only improve teamwork and conflict resolution but also contribute to overall work satisfaction. For instance, Dulewicz and Higgs (2000) found that communication is a critical component of emotional intelligence, significantly impacting work performance, especially in roles requiring collaboration and leadership.

Work ethic and efficiency are closely linked, with studies showing that individuals who demonstrate a strong work ethic are more likely to be productive and achieve higher levels of work satisfaction. Furnham et al. (1993) argue that a strong work ethic positively correlates with efficiency and effectiveness in the workplace.

Adaptability and decision-making are also crucial, particularly for self-employed individuals. Pulakos et al. (2000) emphasize that the ability to adapt to change and solve problems effectively is directly related to successful performance outcomes.

Continuous learning and professional development are essential for sustaining high performance, especially in self-employment contexts where individuals must keep their skills up-to-date. Maurer et al. (2002) found that a strong commitment to learning and development leads to improved work performance and career progression.

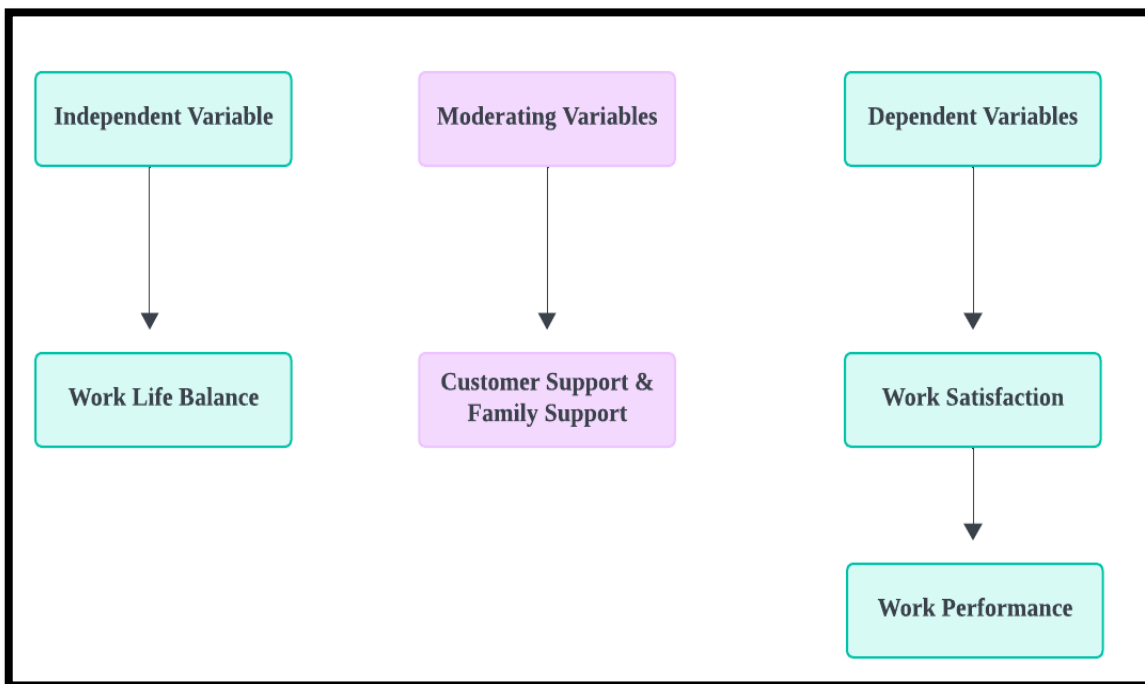
Finally, *teamwork and collaboration* are fundamental to achieving high performance, particularly in roles that require coordination with others. A study by Salas et al. (2005) found that effective teamwork contributes to better outcomes, including higher productivity, innovation, and work satisfaction.

3.1.10 Ethical Considerations

Before data collection began, approval was obtained from the Regional Transport Office (RTO) to conduct the study. The study was also approved by the Human Ethical Committee (IHEC) with the reference number AUW/IHEC/COM-22-

23/XMT-18. Participants were informed of the study’s purpose and their rights, including the assurance that their data would remain confidential and used exclusively for research purposes. Respondents were also assured that their participation would not disrupt their regular activities. Each interview was conducted at a time convenient for the respondent, allowing sufficient time to complete the process without pressure. These steps were taken to ensure that participants felt comfortable and respected throughout the data collection phase.

3.1.11 Variables under the study



Source: Compiled Data

Figure 5 Variables

Independent Variable

Work-Life Balance (WLB) plays a crucial role in helping individuals manage both professional responsibilities and personal lives. This is especially important for women commercial drivers, who often face challenges like irregular work hours and extended time away from home. Effective WLB can lead to improved job satisfaction, better mental and physical health, and overall well-being. Numerous studies underscore the significance of WLB. For example, Greenhaus, Collins, and Shaw (2003) found that maintaining a positive balance between work and personal life is closely linked to higher work satisfaction and enhanced personal well-being. Similarly, Allen, Herst, Bruck, and Sutton (2000) highlighted the negative consequences of poor WLB, such as increased stress and job dissatisfaction, emphasizing the importance of managing work-family conflict. Kossek

and Ozeki (1998) also showed that organizational policies can help reduce work-family conflict, leading to better job and life satisfaction. Additionally, Aryee, Srinivas, and Tan (2005) explored the factors contributing to WLB among employed parents and its positive effects on job and family satisfaction. These studies collectively form a strong foundation for understanding the importance of WLB, particularly in how it influences work satisfaction and overall well-being among women commercial drivers.

Moderating Variables

When examining the impact of work-life balance (WLB) on work satisfaction and work performance among women commercial drivers, it is essential to consider the moderating roles of customer and family support. These factors can significantly shape the relationship between WLB and work satisfaction.

I. Customer Support

This is the kind of encouraging interaction and support that car drivers get from their customers. Helpful customers can reduce the effects of job stress and increase female commercial driver work satisfaction by enhancing feelings of worth and self-esteem. Positive customers tend to make their work seem less hectic and will receive greater value for services given. These interactions have been able to increase work satisfaction along with reducing turnover intention according to Homburg et al. (2009). Besides, loyal customers can help to reduce work-related stress; thus, enhancing the overall well-being of drivers (Hartline & Ferrell, 1996).

II. Family Support

Family support is the emotional, psychological, and sometimes financial support that people get from their family members. For women commercial drivers, good family support can alleviate the stress of juggling work and personal life, hence reducing the stress and improving job satisfaction. Research has shown that family support positively influences employees' work attitudes and helps reduce work-family conflict (Frone, Russell, & Cooper, 1997). As Kossek et al. (2011) point out, women feel comparatively better balanced both at work and in life when family members support them.

Dependent Variables

The dependent variables of work performance and work happiness are crucial for comprehending the professional experiences and results of female commercial drivers.

I. Work Satisfaction

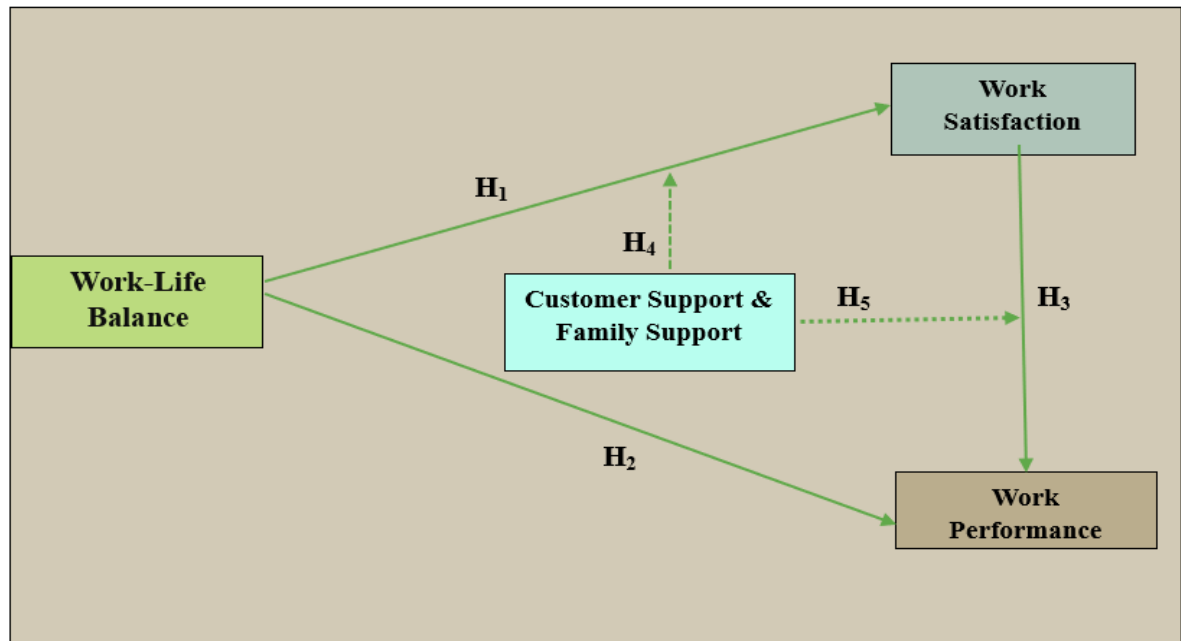
This refers to the overall contentment and positive attitude employees have toward their jobs. For women commercial drivers, work satisfaction involves factors like the nature of their work, the work environment, compensation, and their ability to balance work and personal life. High work satisfaction is linked to greater job commitment, lower turnover, and improved mental health. Research shows that work satisfaction is a key determinant of job performance and well-being (Judge, Thoresen, Bono, & Patton, 2001). In the physically and mentally demanding transportation sector, maintaining high levels of satisfaction is critical for ensuring a motivated and productive workforce.

II. Work Performance

Work performance measures how effectively employees fulfill their job duties, including productivity, service quality, and safety compliance. For women commercial drivers, performance can be shaped by various factors such as work satisfaction, work-life balance, customer support, and family support. High work performance contributes not only to organizational success but also to the drivers' sense of achievement and professional growth. Studies show that satisfied employees tend to perform better, demonstrate higher engagement, and often exceed job expectations (Bakker & Demerouti, 2008). In the transportation industry, strong work performance is essential for operational efficiency and customer satisfaction.

3.2 Development of Conceptual Framework

The identification of relationships based on the Social Exchange Theory model (Figure 6) frames the conceptual model that will be tested. Additionally, the relationship between a few selected factors has been explained, and theories have been constructed accordingly. Building on this theoretical framework, Perengki Suzanto et al. (2022) examined the interplay between work-life balance, work satisfaction, and work performance, emphasizing the role of family support. This study adopts SET to explore how family and customer support impact work satisfaction, work-life balance, and performance among self-employed female commercial drivers.



Source: Compiled Data

Figure 6 Conceptual Framework of the Study

3.2.1 Work-Life Balance (WLB) and Work Satisfaction

Work-life balance (WLB) and work satisfaction are closely intertwined across many professions. Studies by Heyman (2018) on nurses and Grzywacz & Bass (2003) across various industries have found a positive correlation between WLB and job satisfaction, indicating that balancing work demands with personal life leads to higher well-being, motivation, and job satisfaction. Though self-employment has its own advantages like flexibility of schedule and control over the work done that might improve WLB (Brush, 2010), disadvantages are also there. Work and personal life do not clearly separate, and a clear break is not possible at all times, which leads to an imbalance (Gunnars & Richardson, 2017). Besides, working long hours for attaining financial goals will definitely adversely affect WLB and decreases work satisfaction (Brush, 2010).

Interestingly, a more complex relationship between WLB and work satisfaction was found in research. For example, Moore & Grunberg (2019) indicated that the majority of self-employed mothers appreciated the autonomy and control over the schedule, even though the hours worked were longer. That means that, for some, the flexibility and independence of self-employment might outweigh the downsides of a less traditional work-life balance. Considering such diversity in views, the present study can

explore how scheduling flexibility, financial constraints, and perceived autonomy might shape the experiences of women commercial drivers. Such a richer analysis might explain the dynamics between WLB and work satisfaction within such a specific context.

H_{a1}: There is a positive relationship between work-life balance and work satisfaction among women commercial drivers in the road transport sector.

3.2.2 Work-Life Balance and Work Performance

There are numerous factors that affect work performance, but one of the most important is work-life balance. Workers who are more efficient in balancing work and personal life are likely to have higher productivity and job performance. For instance, Grzywacz and Bass (2003) suggested that employees with good WLB tend to perform better in their jobs because they are less stressed and more focused. Similarly, Greenhaus et al. (2003) suggested that a well-balanced work-life routine promotes performance through reduced stress and increased focus on the work. This is in tandem with Konrad and Mangel (2000) who concluded that work-life balance programs positively impact the work performance of employees, increasing productivity and reducing absenteeism.

However, the association of WLB with WP is not always uniformly positive. Some studies suggest that the benefits of WLB for performance are overstated or context-dependent. For example, Haar et al. (2014) have found that though WLB increases job satisfaction, it may have little direct effect on work performance in environments with extreme pressure where performance measures are tightly controlled. Similarly, Kelly et al. (2008) found that because of the pressure for high performance, the demand may outweigh the benefits gained by WLB programs. Therefore, the performance at work could not be much enhanced.

Some others argue that by focusing on WLB, it inadvertently facilitates the decline in job performance. Kelliher and Anderson (2010) identified that although flexible work arrangements are great for WLB, they depress employee's availability and engagement. The popular strategy of telecommuting as seen by Golden (2001) tends to bring isolation and loss of cohesion within a team as a result of which some collaborative tasks decline and finally, job performance. Despite these mixed findings, most research supports that WLB positively influences job performance, especially when organizational

culture and job design support a healthy balance between professional and personal responsibilities.

H_{a2}: Work-life balance positively influences work performance among women commercial drivers in the road transport sector.

3.2.3 Work Satisfaction and Work Performance

Work satisfaction (WS) is widely recognized as a critical factor influencing job performance. Numerous studies have established that higher levels of work satisfaction are linked to increased productivity and improved performance. For instance, Spector (1985) demonstrated that work satisfaction significantly impacts various aspects of employee behavior, including job performance. Similarly, Judge et al. (2001) found that satisfied employees are more motivated and committed, leading to better performance outcomes. This positive relationship has been confirmed by various other studies, which suggest that work satisfaction enhances work performance by boosting motivation, commitment, and reducing turnover intentions. Fisher (2003) also highlighted that employees with higher work satisfaction tend to perform better due to increased engagement and motivation.

However, the relationship between work satisfaction and performance is not always straightforward. Some studies suggest that contextual factors can mediate or even weaken this link. For example, Iaffaldano and Muchinsky (1985) found a weak correlation between work satisfaction and job performance, indicating that other factors may have a more significant influence on performance. Bowling (2007) further suggested that common method biases and extraneous variables inflate the perceived relationship between satisfaction and performance. Moreover, Schleicher, Watt, and Greguras (2004) also suggested that individual differences and job characteristics might complicate the relationship sometimes resulting in a weak or no correlation. It might seem that most research found support for a positive connection of the nature between work satisfaction and performance; however, there is more in the specific context with moderating factors about that connection. Thus, the hypothesis will be:

H_{a3}: Work satisfaction positively influences the work performance of women commercial drivers in the road transport sector.

3.2.4 Moderating Role of Customer and Family Support

Beyond the direct effects of work-life balance (WLB) on work satisfaction, customer and family support plays significant moderating roles. Supportive customer

interactions can enhance the positive impact of a healthy WLB on work satisfaction, as they help alleviate work stress and foster a more positive work environment (Bakker & Demerouti, 2007; Grandey et al., 2002). Positive customer support can buffer stress, making employees feel more appreciated and motivated. However, for female commercial drivers, limited direct interaction with customers may reduce customer support's influence on WLB and work satisfaction. Additionally, negative customer interactions can increase stress, weakening the positive association between WLB and work satisfaction (Brotherhood et al., 2018).

Family support is also expected to moderate the relationship between WLB and work satisfaction (WS). Strong family support can amplify the positive effects of WLB on work satisfaction. Parasuraman et al. (1996) found that employees receiving substantial family support are better able to balance work and personal demands, resulting in higher work satisfaction. Similarly, Frone et al. (1997) highlighted that family support helps individuals manage work demands more effectively, thereby increasing work satisfaction. Family support acts as a crucial buffer, mitigating the stress of balancing work and personal responsibilities, which, in turn, enhances work satisfaction.

Social Exchange Theory (SET) has been widely applied to the context of entrepreneurship and self-employment, demonstrating how reciprocal relationships positively influence success and well-being in these fields. One critical area of study focuses on the role of family support in enhancing entrepreneurial outcomes. Feng Xu et al. (2020) found that family support, as a key component of social exchange, can significantly moderate the relationship between entrepreneurial stressors and well-being. Their research revealed that family support helps mitigate financial stressors, allowing entrepreneurs to navigate business challenges more effectively, thereby improving their emotional well-being and job satisfaction. Similarly, family support can alleviate work-related stress by providing emotional and practical assistance, which is especially vital for self-employed individuals balancing personal and professional demands. These findings underscore the importance of supportive family dynamics in fostering resilience and enhancing performance in entrepreneurial endeavors.

In addition to family support, customer relationships also play a crucial role in the success of self-employed individuals. Positive interactions with customers contribute to higher levels of work satisfaction and motivation, which in turn enhance overall

performance (Zeithaml, Berry, & Parasuraman, 1996). The reciprocal nature of these exchanges where entrepreneurs meet customer needs and, in return, receive customer loyalty and satisfaction creates a reinforcing cycle that promotes business growth. Studies by Lam and Foo (2017) further highlight how self-employed individuals benefit from networking and building reciprocal relationships with clients, as these interactions generate opportunities, feedback, and resources that help sustain and grow businesses. Therefore, the hypotheses are:

H₀₄: Customer support and family support will not strengthen the positive effect of work-life balance on work satisfaction.

H₀₅: Customer support and family support will not strengthen the positive effect of work satisfaction on work performance.

3.2.5 Work-Life Balance, Work Satisfaction and Work Performance

Research on the relationship between work-life balance, work satisfaction, and work performance across demographic groups has yielded mixed results. Some studies suggest demographic factors play a significant role, while others have not found strong correlations. For instance, studies by Moen & Roehling (2005) and Rotundo (1998) on age did not identify a clear link between age and work-related outcomes such as satisfaction and performance. Similarly, research by Petersen & Aronson (2000) and Blair-Loy & McEvoy (2003) found no definite connection between educational attainment and work-life balance, work satisfaction, or work performance. Marital status has also shown limited predictive power in these areas. Abele & Russell (1994) found that marital status was not associated with work experiences. Similar inconsistent findings were also yielded for income and experience. Clark et al. (2004) and Grzywacz & Noon (1996) also reported that income and experience did not relate well to work-life balance or job performance.

However, the demographics and work experiences are known to be complex in that there are various contextual factors at play. For example, Bianchi et al. (2000) and Hook (2006) argue that for some women, raising children may increase their levels of work satisfaction because a sense of purpose is derived. Other authors also showed similar findings by Bond et al. (1998) and Ng & Spitze (2003) where older workers, specifically near retirement, have higher prioritization on work-life balance as compared to younger workers. Industry-specific factors and job characteristics can also act as moderators of

demographics in relation to work experiences. According to Kinick & Coltrane (2006), workplace work-life conflict can be managed well for mothers. However, the most essential factor in enhancing work-life balance for working parents is that related to access to childcare facilities, Webster Jr. & Hewlett (2009). Considering such complexity, the paper would work for analysis based on the nuances among demographic variables on work-life balance, work satisfaction, and work performance of the commercial driving woman. Therefore, the research will consider how age, educational background, marital status, income, and experience factor into work-related outcomes; hence, more detailed dynamics will be brought out.

H₀₆: There is no significant difference exist in the work-life balance, Work Satisfaction and Work Performance among Age, Education, Marital status, Income, and Experience variables.

H_{a7}: There is a positive relationship between a linear combination of the Work-Life Balance, work satisfaction and Work Performance

3.3 Framework of the Analysis

The research methodology outlined in this chapter offers a comprehensive approach to studying women commercial drivers in the Coimbatore District, Tamil Nadu, India. A variety of statistical tools were employed, including MANOVA using SPSS, Weighted Average, Garrett Ranking, Path Analysis, Correlation, Multiple Regression, Moderation Analysis (Smart PLS), and Factor Analysis. These methods were carefully selected to address different aspects of the research objectives.

- **Descriptive Statistics** were used to understand the demographic profile of respondents as it provides a clear and simple way to represent data in relative terms, making it easier to analyze and interpret patterns or trends. By converting raw data into percentages, comparisons among different demographic categories, such as age, education, or income, become more intuitive and meaningful.

The formula for Percentage Analysis is:

$$\text{Percentage} = \left(\frac{\text{Part}}{\text{Total}} \right) \times 100$$

Where:

Part = The specific category or subgroup being analyzed

Total = The overall population or sample size

This method is widely used in social research as it simplifies complex data, highlights proportional relationships, and supports effective decision-making.

- The **Weighted Average Method** is used to evaluate work-life balance (WLB), work satisfaction (WS), and work performance (WP) as it accounts for the varying importance of different factors influencing these variables. This method assigns weights to individual factors based on their significance, ensuring a more accurate and representative assessment. By incorporating the relative importance of each factor, the weighted average method provides a comprehensive understanding of how different elements contribute to WLB, WS, and WP.

The formula for the Weighted Average Method is:

$$\text{Weighted Average} = \frac{\sum (w_i \cdot x_i)}{\sum w_i}$$

Where:

- w_i = Weight assigned to each factor
- x_i = Value of each factor
- \sum = Summation of all factors

This approach ensures a balanced analysis by considering both the magnitude and relevance of contributing factors.

- **Multiple Regression Analysis** was done to explore the impact of work-life balance (WLB) techniques on the performance of female commercial drivers. This statistical method identifies and quantifies the relationship between multiple independent variables (WLB techniques) and a dependent variable (performance). By analyzing how various WLB practices influence performance, it provides insights into which factors have the most significant impact, enabling targeted interventions to enhance outcomes.

The formula for Multiple Regression is:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + \epsilon$$

Where:

Y = Dependent variable (Performance)

β_0 = Intercept

$\beta_1, \beta_2, \dots, \beta_n$ = Coefficients of independent variables

X_1, X_2, \dots, X_n = Independent variables (WLB techniques)

ϵ = Error term

This method allows for a detailed understanding of how WLB strategies influence drivers' performance, supporting evidence-based decision-making.

- **Correlation Analysis** was carried out to examine the relationship between work-life balance (WLB) and work satisfaction (WS) among women commercial drivers. This statistical method measures the strength and direction of the association between two variables, helping to determine whether improvements in WLB are linked to increased WS.

The formula for correlation (Pearson's correlation coefficient) is:

$$r = \frac{\sum (X - \bar{X})(Y - \bar{Y})}{\sqrt{\sum (X - \bar{X})^2 \cdot \sum (Y - \bar{Y})^2}}$$

Where:

r = Correlation coefficient

X, Y = Variables (WLB and WS)

\bar{X}, \bar{Y} = Means of XX and YY

The value of r ranges from -1 to +1, indicating the strength and direction of the relationship. A positive correlation suggests that better WLB is associated with higher WS, providing insights into how balancing work and life can enhance satisfaction among drivers.

- **Path Analysis** was employed to investigate the significant association between work satisfaction (WS) and work performance (WP). This statistical technique extends regression analysis by examining direct, indirect, and total effects among variables within a structured model. Path analysis provides a deeper understanding of how WS influences WP while considering the mediating or intervening variables in the relationship.
- **Exploratory Factor Analysis (EFA)** was applied to identify the challenging factors that women commercial drivers face in the driving field. This statistical method helps uncover underlying patterns by grouping related variables into factors, simplifying the analysis of complex data. EFA is particularly useful in identifying the key dimensions of challenges, such as workplace, family, and personal issues, that influence WLB.
- **Multivariate Analysis of Variance (MANOVA)** was carried out to analyze the impact of work-life balance (WLB) on work satisfaction (WS) and work performance (WP) across demographic factors of women commercial drivers. This statistical technique examines the differences in multiple dependent variables (demographic factors) simultaneously across groups, considering the influence of WLB, WS and WP as an independent variable.
- **Garrett Ranking Analysis** was done to rank the motivational factors influencing women's choice of commercial driving as a profession. This method helps identify and prioritize the most significant factors by converting ranks assigned by respondents into scores, providing a clear hierarchy of motivations.

The formula for calculating Garrett scores is:

$$\text{Garrett Score} = \frac{100 \cdot (R_{ij} - 0.5)}{N_j}$$

Where:

R_{ij} = Rank given by the ii-th respondent for the jj-th factor

N_j = Total number of ranks

The factors are then averaged and ranked based on their scores, enabling the study to pinpoint key motivators such as better income, flexibility, and passion for driving, offering actionable insights to support women in this field.

- **Moderation Analysis using Smart PLS** was conducted to examine the moderating effects of family support and customer support on work-life balance (WLB), work satisfaction (WS), and work performance (WP). This technique allows for the exploration of how family and customer support influence the strength or direction of the relationships between WLB, WS, and WP. By using Smart PLS (Partial Least Squares), the analysis can model complex relationships and account for both direct and indirect effects in a simple yet effective way.