ESTABLISHING THE ANTECEDENTS AND OUTCOMES OF SERVICE CLIMATE

by

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Submitted in fulfilment of the requirements for the degree

PhD in Marketing Management

in the Faculty of Economic and Management Sciences

at the

University of Pretoria

Promoter:

Prof. P.G. Mostert

March 2021

REMARKS

The reader is informed of the following:

- The thesis is structured in the form of three articles prepared for publication in academic journals.

- The first article (presented in Chapter 2) was submitted to the *Services Marketing Quarterly*, a Taylor and Francis publication. The editorial policy and guidelines for authors of this journal are available in Appendix A (p. 324).

- The second article (presented in Chapter 3) was prepared for submission to the *Journal of Service Theory and Practice*, a journal of Emerald Publishing. At the time of the submission of this thesis, the article was being finalized for submission. The journal's aims and scope and the author guidelines are available in Appendix B (p. 328).

- The third article (presented in Chapter 4) was prepared for submission to *Marketing Intelligence & Planning*, a journal of Emerald Publishing. At the time of the submission of this thesis, the article was being finalized for submission. The journal's aims and scope and the author guidelines are available in Appendix B (p. 328).

- The three journals do not indicate a preference for US over UK English or vice versa. The whole thesis was therefore prepared in South African English following the spelling conventions outlined in the *South African Concise Oxford Dictionary* (2002).

- Following the recommendations in the seventh edition of the *Publication Manual of the American Psychological Association,* I used the active voice, the first-person plural pronoun 'we', and the plural possessive determiner 'our' in Chapters 2, 3, and 4 of this thesis. This ensures clear, direct, and concise sentences. I used the first-person plural pronoun 'we' and the plural possessive determiner 'our' because, once published, the three articles will list me as the first author and my supervisor as the second author. The three journals indicated above to which the articles will be submitted all contain several recent examples of quantitative articles in which the authors have used the active voice, the plural pronoun 'we', and the possessive determiner 'our'.

- To ensure consistency in referencing, the Harvard referencing style used by both the journals of Emerald Publishing was applied throughout this thesis (Appendix B, p. 328).

This referencing style requires that the abbreviation *et al.* be used from the first citation to a source with three or more authors.

- The participating retailer requested that its name should not be revealed. All references to the retailer's brand name were consequently removed from the thesis.

- The thesis was edited by Mr Mike McCoy, a professional proof-reader and editor. A letter of confirmation of language editing is included in Appendix C (p. 335).

- Dr Marthi Pöhl, a statistical consultant, checked the statistical analyses conducted for this thesis. A letter of confirmation from Dr Pöhl is included in Appendix D (p. 337).

- The prescribed declaration regarding plagiarism is included in Appendix E (p. 339).

ACKNOWLEDGEMENTS

I wish to express my sincere gratitude to everyone who encouraged and supported me during my PhD journey.

To my promotor, Prof. Pierre Mostert: A sincere thank you for your patience, expert guidance, unwavering motivation, and warm friendship.

My heartfelt gratitude to Dr Marthi Pöhl and Prof. Arien Strasheim for guiding me through the many pitfalls and complexities of structural equation modelling, and for patiently answering all my statistical questions. A sincere thank you to Mike McCoy for his sterling work and fast turnaround times in copy-editing this thesis.

A special word of thanks to Prof. Alex Antonites, who encouraged me and gave me the space to pursue this PhD; and to all my other colleagues in the Department of Business Management for your interest, advice, and continuous encouragement. I am honoured to be part of the team.

I also wish to thank the management and staff of the participating retailer. Although you cannot be named, I am forever grateful for your kindness and your willingness to support my research.

To my parents, Izak and Henriëtte; my sister, Leona-Louise; and my mother-in-law, Ronica: Your love made me strong! Thank you for believing in me and for encouraging me to persevere.

Above all, I wish to thank my soulmate and wife, Gail, with all my heart. You shared the many tears, frustrations, and 'potholes' on this journey with me. I could not have done this without your unwavering love and support!

Finally, love and kisses to Christoffel and Lulu who kept me company during the many long hours I spent behind the computer, and who took me for walks when I needed to think.

DECLARATION OF ORIGINALITY AND ETHICS STATEMENT

Declaration of originality

I, Theuns Gerhard Kotzé, declare that this thesis, which I hereby submit for the degree PhD in Marketing Management at the University of Pretoria, is my own work and has not previously been submitted by me at this or any other tertiary institution.

Ethics statement

I, Theuns Gerhard Kotzé, have obtained, for the research described in this work, the applicable ethics approval. I declare that I have observed the ethical standards required in terms of the University of Pretoria's *Code of ethics for researchers* and *Policy guidelines for responsible research*.

SUMMARY OF THE THESIS

The overall aim of this article-based thesis was to develop and test four structural models of the antecedents and outcomes of service climate on data collected from frontline employees, store managers, and customers nested in 70 physical stores of a South African retailer of home improvement products. The thesis used a quantitative survey methodology and was guided by social information processing theory which explains how shared organizational climates, such as service climate, arise in work units.

The first article in the thesis explored the extent to which frontline employees' perceptions of six service-oriented high-performance work practices (SO-HPWPs) predict their work engagement and psychological service climate perceptions at an individual level of analysis. The results showed that service-oriented training predicted both psychological service climate and work engagement, while staffing and involvement also predicted service climate. This article contributed by simultaneously investigating the relationships between multiple SO-HPWPs, service climate, and work engagement in a single model.

The second article compared two rival structural models of the interrelationships between service-oriented high performance work systems (SO-HPWS), collective work engagement, and service climate as predictors of frontline employees' collective in-role and extra-role service performance. These models were tested at a store level of analysis on aggregated data. The findings supported the climate-centric model in which service climate functions as a direct antecedent of frontline employees' collective in-role and extra-role service performance. This article's contribution lies in the fact that, as far as could be determined, it is the first to test two competing structural models about the interrelationships between the focal constructs indicated above.

The third article tested an expanded store-level structural model in which SO-HPWS and collective work engagement predict service climate, which, in turn, predicts customer satisfaction and, ultimately, also store loyalty. This model fitted the data well, confirming that service climate is a key mediator that links internal organizational variables (i.e., SO-HPWSs and collective work engagement) to important customer responses (i.e., overall customer satisfaction and store loyalty). Surprisingly, the relationships between frontline employees'

collective in-role and extra-role service performance and customer satisfaction were not statistically significant. This may be due to a range restriction in the customer satisfaction ratings. As far as could be determined, this is the first paper to jointly investigate the relationships between SO-HPWSs, work engagement, service climate, customer satisfaction, and customer loyalty in a single store-level structural model.

Overall, the thesis confirmed the importance of service climate in linking what frontline employees experience in their respective stores in the form of service-oriented high-performance work practices and work engagement to valued customer outcomes in the form of customer satisfaction and store loyalty.

LIST OF KEY TERMS

The key terms used in this thesis are defined below. These terms refer to the constructs included in the study's main structural model, and are listed in the order in which they appear in this model (see Figure 1, p. 202). The list of key terms concludes with an explanation of the terms used to distinguish the different levels of analysis used in this thesis and in other studies on service climate. The abbreviations used in the thesis are listed on p. xvi below.

- **Service-oriented high performance work system (SO-HPWS)**

A 'service-oriented high-performance work system' (SO-HPWS) is a coordinated system of human resource management (HRM) practices that aim to enhance frontline employees' ability, motivation, and opportunity to deliver high-quality service to customers (Jiang *et al.*, 2015; Liao *et al.*, 2009; Luu, 2019). The HRM practices that constitute an SO-HPWS are also known as service-oriented high-performance work practices (SO-HPWPs). The SO-HPWS in the current study consisted of six SO-HPWPs: service-oriented staffing, training, financial compensation, non-financial rewards and recognition, involvement, and employee empowerment.

- **Collective work engagement**

Schaufeli *et al.* (2002, p. 74) define 'work engagement' as "a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption". In this definition, 'vigour' indicates a willingness to invest high levels of energy in one's work as well as mental resilience while working; 'dedication' refers to a strong involvement and identification with one's job; while 'absorption' implies that one is fully engrossed in and concentrated on one's work (Torrente *et al.*, 2012).

Chapter 2 in this thesis focused on frontline employees' work engagement at an individual level of analysis, as defined above, while Chapters 3 and 4 focused on collective work engagement at the store-level of analysis. 'Collective work engagement' is defined as a positive, fulfilling, work-related motivational state that is *shared* by the frontline employees who work together as a team in the same retail store, and that is characterized by the

collective vigour, dedication, and absorption that emerge from the interaction and the shared experiences of these employees (Eldor, 2020; García-Buades *et al.*, 2016; Gracia *et al.*, 2013; Torrente *et al.*, 2012).

- **Service climate**

'Service climate' refers to employees' perceptions of the extent to which the workplace policies, practices, and procedures they experience and the behaviours they observe as being expected, supported, and rewarded emphasize the delivery of high-quality service to customers (Bowen and Schneider, 2014; Hong *et al.*, 2013; Jiang *et al.*, 2016; Liao and Chuang, 2007; Salanova *et al.*, 2005; Schneider *et al.*, 1998).

Service climate can be studied as a psychological climate at an individual level of analysis, or as a shared organizational climate at a unit or organizational level of analysis. At the individual level, 'service climate' refers to an individual frontline employee's perceptions of the extent to which the organizational policies, practices, and procedures he/she experiences require, support, and reward the provision of high-quality service to customers (Carrasco *et al.*, 2011; Li and Huang, 2017; Wilder *et al.*, 2014). These individual-level perceptions are often labelled 'psychological service climate perceptions' (e.g., Chen and Kao, 2014; Wang and Xu, 2017). At the unit or organizational level, 'service climate' refers to frontline employees' *shared* perceptions of the aforementioned aspects. Thus, it reflects the extent to which frontline employees collectively perceive that their unit or organization as a whole emphasizes the delivery of high-quality service to customers (Bowen and Schneider, 2014; Hong *et al.*, 2013).

Chapter 2 in this thesis focused on frontline employees' psychological service climate perceptions at an individual level of analysis, while Chapters 3 and 4 focused on service climate as an organizational climate at the store level of analysis.

- **Collective in-role service performance**

'In-role service performance' refers to the basic activities associated with a frontline employee's job description and work role. These activities are expected, and are evaluated as part of the employees' fundamental job responsibilities (Bettencourt and Brown, 1997;

Chaoluck, 2017; Luu, 2019; Schepers and van der Borgh, 2020). Expectations regarding in-role service performance are often specified in organizational policies, procedures, and service scripts, and in frontline employees' job descriptions and performance evaluation criteria (Bettencourt and Brown, 1997). In this study, store managers rated the *collective* in-role service performance of all the employees in their respective stores.

- **Collective extra-role service performance**

Bettencourt and Brown (1997, p. 41) define 'extra-role service performance' as the "discretionary behaviors of contact employees in serving customers that extend beyond formal role requirements". Extra-role service performance implies behaviours that are voluntary, fall outside the scope of employees' formal job prescriptions, are not directly and formally rewarded by the organization, do not carry negative sanctions if they are not performed, and refer to instances when frontline employees have 'gone the extra mile' while serving customers (Chaoluck, 2017; Schepers and van der Borgh, 2020). As such, these extra-role service behaviours constitute service-oriented organizational citizenship behaviours (OCBs) directed at customers (Lu *et al.*, 2016; Luu, 2019; Somech and Drach-Zahavy, 2016). Since several prior studies have used the terms 'extra-role service performance' and 'service-oriented OCBs' as synonyms (e.g., Dimitriades, 2007; Lu *et al.*, 2016; Schneider *et al.*, 2005; Tang and Tang, 2012), these terms are also used interchangeably in this thesis. In this study, store managers rated the *collective* extra-role service performance of all the employees in their respective stores.

- **Overall customer satisfaction**

In this thesis, 'overall customer satisfaction' refers to a customer's overall satisfaction with a specific visit to a specific retail store. It reflects a shopper's subjective evaluation of whether a specific store visit has met or exceeded the shopper's prior expectations (Bloemer and De Ruyter, 1998; Sands *et al.*, 2015).

- **Store loyalty**

Bloemer and De Ruyter (1998, p. 500) defined 'store loyalty' as "The biased (i.e. non-random) behavioural response (i.e. revisit), expressed over time, by some decision-making

unit with respect to one store out of a set of stores, which is a function of psychological (decision-making and evaluative) processes resulting in brand commitment". In essence, 'store loyalty' refers to a consumer's deeply held commitment to and intention to revisit a specific store (Koo and Kim, 2013; Rabbanee *et al.*, 2012).

- **Levels of analysis: Individual level, store level, and unit level**

Organizations are multilevel systems made up of many interacting layers (Costa *et al.*, 2013; Klein and Kozlowski, 2000). For example, in an organization, individual employees may be members of teams; multiple teams may be nested in departments, stores, branches, or other outlets; and multiple outlets may be nested in different business units or regions. Finally, multiple competing organizations may operate in the same industry or market. Although 'service climate' was initially conceptualized and investigated as a strategic organizational climate at a branch and department level (Schneider *et al.*, 1980; Schneider *et al.*, 1998), it can be investigated at any of the above-mentioned hierarchical levels in organizations. Studies of service climate, therefore, have to specify the unit(s) and level of analysis involved.

The 'units of analysis' of a study are the persons or other entities being studied (Carr *et al.*, 2018; Vogt, 2005). These can be individual people or high-level organizational collectives such as teams, departments, branches, or stores. The term 'level of analysis' refers to the organizational level to which data are aggregated and at which the data are analysed to test a study's hypotheses (Costa *et al.*, 2013). In this thesis, the term 'individual level' refers to studies conducted at an individual level of analysis on data collected from individual respondents, where the individual is the unit of analysis. The structural model presented in Chapter 2 was tested at an individual level of analysis with the individual frontline employees as the units of analysis. The term 'store level' specifically refers to studies conducted on data aggregated to the store level, where different retail stores served as the unit of analysis (e.g., Chuang and Liao, 2010; Jiang *et al.*, 2015). The structural models in Chapters 3 and 4 were all tested at a store level of analysis. Finally, the term 'unit level' is used more generically to refer to previous studies conducted on data aggregated to any higher-level organizational entities (e.g., teams; departments; stores, branches, or other outlets; or business units) with these higher-level entities as the units of analysis.

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ABBREVIATIONS

The following abbreviations are used in this thesis:

Abbreviation	Meaning
ABDC	Australian Business Deans Council
AIC	Akaike information criterion
AVE	Average variance extracted
ASA	Attraction–selection–attrition
BCI	Business confidence index
BER	Bureau for Economic Research
BIC	Bayes information criterion
CFA	Confirmatory factor analysis
CFI	Comparative fit index
CR	Composite reliability (also known as 'construct reliability')
GDP	Gross domestic product
HPWP(s)	High-performance work practice(s)
HPWS(s)	High-performance work system(s)
HRM	Human resource management
JD-R	Job Demands-Resources model
ML	Maximum likelihood
Mplus	Mplus version 8.3
OCB(s)	Organizational citizenship behaviour(s)
QES	Quarterly employment survey
RMSEA	Root mean square error of approximation
SEM	Structural equation modelling
SIPT	Social information processing theory
SO-HPWP(s)	Service-oriented high-performance work practice(s)
SO-HPWS(s)	Service-oriented high-performance work system(s)
SPSS	IBM SPSS Statistics for Windows version 26
SRMR	Standardized root mean square residual
UWES-9	Utrecht Work Engagement Scale, nine-item version

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CHAPTER 1

CONTEXTUALIZATION OF THE STUDY

1.1 INTRODUCTION

In traditional bricks-and-mortar retailing and other high-contact services, the frontline employees who intact with and serve customers are critical to the organization's success. These employees' customer-directed behaviours form a core part of the organization's market offering (Wirtz and Lovelock, 2018). Frontline employees also personify the firm's brand in its customers' eyes (Wirtz and Lovelock, 2018; Zeithaml *et al.*, 2018), while their actions drive sales and determine customer loyalty (Wirtz and Lovelock, 2018).

However, managers do not have full control over the behaviours of frontline employees. Instead, to guide these employees' customer-directed actions, managers have to create a service climate in the workplace that emphasizes and facilitates service excellence (Bowen and Schneider, 2014). Establishing a service climate involves multiple management activities that include planning, setting goals, and establishing rewards for service excellence; providing the necessary training and equipment to facilitate high-quality service delivery by the frontline; emphasising the importance of internal service quality between the frontline and back office support units; actively seeking customer feedback; and setting an example through service-focused leadership (Bowen and Schneider, 2014; Yagil, 2014).

When frontline employees consistently experience that service excellence is a strategic priority in their workplace, their behaviour towards customers will reflect this orientation (Bowen and Schneider, 2014; Yagil, 2014). A fundamental premise of service climate research is that the service-focused policies, practices, and procedures that frontline employees experience, and the customer-directed behaviours they perceive as being expected, supported, and rewarded, determine how they behave towards customers (Schneider *et al.*, 2005; Yagil, 2014). Ultimately, frontline employees' customer-directed behaviours determine customer satisfaction and thus affect customer loyalty and unit sales (Schneider *et al.*, 2005). In short, through service-focused policies, procedures, and actions, managers create an 'atmosphere' or service climate in a unit or organization that

accentuates service excellence as a strategic organizational priority (Schneider *et al.*, 2005). This climate motivates and guides employees' customer-oriented behaviours (Yagil, 2014).

Previous studies have highlighted how service climate links internal organizational policies and practices (e.g., human resource management practices (HRM), leadership, and internal service quality) to external customer experiences and, ultimately, to financial indicators of organizational performance (Bowen and Schneider, 2014; Hong *et al.*, 2013).

However, despite the rich body of research on the antecedents and outcomes of service climate, four key questions remain unanswered:

- Which specific service-oriented HRM practices have the strongest impact on frontline employees' service climate perceptions and work engagement at an individual level of analysis?

- Should collective work engagement be regarded as an antecedent or outcome of service climate at a unit level of analysis?

- Does service climate at a unit level affect customer satisfaction directly, or does it do so indirectly through frontline employees' in-role and extra-role service performance?

- What role does service climate play in linking frontline employees' shared perceptions of the SO-HPWSs in their respective stores and their collective work engagement to their collective in-role and extra-role service performance, as well as to overall customer satisfaction and store loyalty?

The three articles in this thesis sought to answer these questions. As such, the thesis responds to the calls made by Hong *et al.* (2013), Bowen and Schneider (2014), Jiang *et al.* (2015), Hoang *et al.* (2018), Tremblay (2019), and Shepherd *et al.* (2020) for further empirical research on the antecedents and outcomes of service climate. The thesis also adds to the scant research on service climate in South Africa (Govender, 1999, 2000).

1.2   THEORETICAL BACKGROUND

Previous studies on service climate have referred to several theories, including social information processing theory (SIPT) (Chuang and Liao, 2010; Graham *et al.*, 2020; Jiang *et al.*, 2015; Linuesa-Langreo *et al.*, 2017; Tang and Tang, 2012; Walumbwa *et al.*, 2018), social exchange theory (Hoang *et al.*, 2015; Hoang *et al.*, 2018; Tang and Tang, 2012), social learning theory (Jiang *et al.*, 2015; Linuesa-Langreo *et al.*, 2017), and the resource-based view of the firm (Hoang *et al.*, 2015).

This section introduces SIPT as the theory that underpins this thesis. This is followed by a general discussion of climate and its two manifestations: psychological climate at an individual level of analysis, and organizational climate at a unit or organizational level of analysis. Next, service climate is introduced as the focal construct investigated in this thesis. Thereafter, high-performance work systems and work engagement are discussed as antecedents of service climate. This is followed by a discussion of in-role service performance, extra-role service performance, customer satisfaction, and customer loyalty as direct and indirect outcomes of service climate. The discussion of the antecedents and outcomes of service climate is aligned with the main conceptual model tested in the thesis (see Figure 1, p. 202).

1.2.1   <u>Social information processing theory (SIPT)</u>

This thesis draws upon SIPT, developed by Salancik and Pfeffer (1978). Although this theory was initially developed to explain the formation of individual employees' job attitudes (Salancik and Pfeffer, 1978), it was subsequently used as an underpinning theory in several studies of focused organizational climates, including studies of service climate (e.g., Chuang and Liao, 2010; Jiang *et al.*, 2015; Linuesa-Langreo *et al.*, 2017; Tang and Tang, 2012; Walumbwa *et al.*, 2018), innovation climate (e.g., Liu *et al.*, 2020; Newman *et al.*, 2020), green organizational climate (e.g., Zientara and Zamojska, 2016), ethical climate (e.g., Kuenzi *et al.*, 2019), and justice climate (e.g., Li and Cropanzano, 2009). SIPT provides a theoretical framework that explains the emergence of different focused organizational climates (including service climate) and indicates how these climates affect employees' work-related attitudes and behaviours (Lam and Mayer, 2014; Priesemuth *et al.*, 2014). A

number of studies on different aspects of organizational climate published in leading marketing journals have used SIPT as their guiding theory (e.g., Auh *et al.*, 2014; Auh *et al.*, 2018; Menguc *et al.*, 2017; Young *et al.*, 2009).

In their original exposition of SIPT, Salancik and Pfeffer (1978) indicated that, while this theory primarily explains individual job attitudes, it can also be applied to organizational climate. In this regard, Salancik and Pfeffer (1978) highlighted three key points. First, they indicated that organizations as a whole, and the units (e.g., teams, stores, departments, and business units) within organizations, are social units in which employees develop shared perceptions of reality through the communication and interaction processes that take place between co-workers. These shared perceptions serve as powerful situational constraints on the attitudes and behaviours of individual employees (Salancik and Pfeffer, 1978). Second, Salancik and Pfeffer (1978) indicated that SIPT defines organizational climate "in terms of [employees'] shared perceptions of what attitudes and needs are appropriate, the shared definitions of job and work environments, and the [shared] definitions of how people should relate to that environment". Third, these authors argued that the effect of organizational climate as a situational constraint on employees' attitudes and behaviours is a function of the consistency or unanimity of the shared perceptions present among employees working together in a unit (Salancik and Pfeffer, 1978).

Organizational climate scholars who draw on SIPT typically emphasize the following aspects derived from this theory. SIPT accentuates that employees do not function in an organizational vacuum. As adaptive organisms, employees seek to make sense of their work environments by interacting, communicating, and exchanging information with one another (Li and Cropanzano, 2009; Priesemuth *et al.*, 2014; Yang *et al.*, 2019). SIPT further postulates that the social information obtained from co-workers and immediate supervisors is most important for employees when the situations they face in the workplace are uncertain, complex, and ambiguous. In such situations, employees tend to reply on interactions and communication with their co-workers and frontline supervisors to help them make sense of the work situation (Li *et al.*, 2015; Yang *et al.*, 2019).

As a result of these interactions, employees' attitudes and behaviours are formed and influenced by the information they collect from their social work environment (Li and

Cropanzano, 2009; Newman *et al.*, 2020; Walumbwa *et al.*, 2018). More specifically, SIPT posits that the social environment in which employees work provides them with information and other cues about *desired and appropriate* opinions, beliefs, attitudes, and behaviours (Kuenzi *et al.*, 2019; Mayer and Kuenzi, 2010; Newman *et al.*, 2020; Woznyj *et al.*, 2019). This is in line with the fundamental premise of SIPT, that "individuals, as adaptive organisms, adapt [their] attitudes, behavior and beliefs to their social context" (Salancik and Pfeffer, 1978, p. 226). In particular, the actions of others in the workplace inform individual employees about which specific workplace behaviours are appropriate and are likely to be rewarded. Individuals use these cues to determine the desired and appropriate ways to behave (Kuenzi *et al.*, 2019; Lam and Mayer, 2014; Mayer and Kuenzi, 2010).

Since employees who work together in the same unit are subject to the same organizational policies, procedures, and management practices (Mayer and Kuenzi, 2010), they develop shared perceptions of the organization and its functioning, and of the behaviours that are acceptable and expected (Chuang and Liao, 2010; Jiang *et al.*, 2015; Li *et al.*, 2015). Over time, these shared perceptions provide the basis for the formation of focused organizational climates, such as service climate (Priesemuth *et al.*, 2014).

The specific climates that co-exist in an organization or organizational unit are critical components of the organization's social context, as they convey the values, norms, and expectations of the organization that are shared among the employees (Woznyj *et al.*, 2019). In this regard, Lam and Mayer (2014), for example, state that service climate creates the normative standard that high-quality service delivery and customer-focused behaviours are expected, encouraged, and rewarded in the work environment. This signals to employees the priority they should place on customer service.

In other words, SIPT underlines that the shared meaning the climate creates helps employees to interpret workplace events and makes certain aspects of their unit more salient, thus helping them to prioritize specific organizational policies and practices over others (Woznyj *et al.*, 2019). The organizational climate sends consistent information that specific behaviours are expected, supported, and rewarded (Liu *et al.*, 2020; Newman *et al.*, 2020; Woznyj *et al.*, 2019). As such, the climate in a unit or organization is an important

source of information about what constitutes required and appropriate workplace behaviour (Liu *et al.*, 2020; Newman *et al.*, 2020).

Against this background, the next section focuses on climate in general and on its two manifestations – namely, psychological climate and organizational climate. This general discussion serves as background to the introduction of service climate in Section 1.2.3 (p. 14).

1.2.2   Climate, psychological climate, and organizational climate

1.2.2.1   *Climate defined*

'Climate' is an important construct in the organizational sciences (Luria, 2019), because it exerts an important influence on organizations and on the employees who work there (Kuenzi and Schminke, 2009). Climate researchers investigate the subjective perceptions employees have about their work environment, and how these perceptions – individually and collectively – affect their attitudes and behaviours (Kuenzi and Schminke, 2009). In essence, climate focuses on how employees observe, experience, and make sense of their work environment (Ostroff *et al.*, 2013).

'Climate' can broadly be defined as employees' perceptions of the formal and informal policies, practices, and procedures they experience in their unit or organization (Schulte *et al.*, 2006). Ostroff *et al.* (2013), similarly, define 'climate' as employees' perceptions of what the organization is like in terms of its policies, practices, procedures, routines, and rewards. In essence, 'climate' reflects employees' experience-based descriptions of what happens in their unit or organization (Ostroff *et al.*, 2013). It captures their summary impressions about 'how we do things around here' or 'what we focus on around here' (Yagil, 2014).

1.2.2.2   *The role of climate perceptions in organizations*

Employees' climate perceptions inform them about the types of role behaviour that are expected, supported, and rewarded in the organization and, as such, guide their work-related attitudes and behaviours (Ehrhart *et al.*, 2014; Ostroff *et al.*, 2013; Schneider, 2020; Zohar, 2010; Zohar and Hofmann, 2012). In short, climate perceptions influence both

individual and group attitudes and behaviours, which, in turn, affect individual, unit, and organizational performance, efficiency, and effectiveness (Ostroff *et al.*, 2013).

1.2.2.3 *Psychological climate versus organizational climate*

Climate has been studied at different levels of analysis, including at an individual level, at the level of teams, branches, stores, or other units in an organization, and at an organizational level across multiple independent organizations (Luria, 2019). When studying employees' climate perceptions, one should distinguish between psychological and organizational climate.

'Psychological climate' refers to individual employees' idiosyncratic perceptions of the climate in their workplace at an individual level of analysis (Ehrhart *et al.*, 2014; Luria, 2019; Schulte *et al.*, 2006). When the employees who work together in a unit or organization agree on or share their psychological climate perceptions, then a shared unit or organizational climate exists (Luria, 2019; Schulte *et al.*, 2006). More formally, 'organizational climate' can be defined as "the shared meaning organizational members attach to the events, policies, practices and procedures they experience and to the behaviors they see being rewarded, supported and expected" (Ehrhart *et al.*, 2014, p. 69). Schneider *et al.* (2017, p. 468), similarly, indicate that organizational climate "is a summary perception derived from a body of interconnected experienced with organizational policies, practices and procedures … and observations of what is rewarded, supported and expected in the organization with these summary perceptions becoming meaningful and shared based on the natural interactions of people with each other …".

Psychological and organizational climate are conceptually related, but operate at different levels of analysis (Schulte *et al.*, 2006). Psychological climate functions at the individual level of analysis, and reflects how individual employees make sense of the organizational policies, practices, and procedures they experience in their workplace (Schulte *et al.*, 2006). According to Schulte *et al.* (2006), different employees' psychological climate perceptions can be unique even when they are exposed to the same work setting.

Organizational climate is rooted in the individual-level psychological climate perceptions of co-workers in the same unit or organization, but reflect the *shared* perceptions these employees have about the policies, practices, and procedures in their work environment (Kuenzi and Schminke, 2009; Schulte *et al.*, 2006). In this regard, Schulte *et al.* (2006, p. 647) argue as follows: "Organizational climate emerges from these idiosyncratic interpretations of the work environment when individuals within a particular unit … share similar perceptions of the situation". Importantly, only when the individuals who work together in the same unit or organization *agree* sufficiently in their perceptions of their work environment can their individual climate perceptions be aggregated to a higher level of analysis to represent a unit or organizational climate (Schulte *et al.*, 2006).

Organizational climate as a collective phenomenon is typically described as an emergent property of a unit or a whole organization (Zohar and Hofmann, 2012). Klein and Kozlowski (2000b) explain that "[a] phenomenon is emergent when it originates in the cognitions, affect, behaviors or other characteristics of individuals, is amplified by their interactions, and manifests as a higher-level, collective phenomenon …".

While psychological climate is a property or characteristic of individual employees, organizational climate is widely regarded as a characteristic of a unit (e.g., a team, branch, store, department) or of a whole organization (Ehrhart *et al.*, 2014; Kuenzi and Schminke, 2009; Schneider *et al.*, 2011b; Schulte *et al.*, 2006). Psychological climate researchers tend to focus on individual-level outcomes (e.g., job satisfaction, individual performance), while organizational climate scholars tend to focus on unit- or organization-level outcomes (e.g., customer satisfaction, unit sales, financial performance) (Ehrhart *et al.*, 2014). The difference between *psychological climate* as an individual perception and *organizational climate* as a shared perception at a unit or organizational level of analysis is widely accepted (Ehrhart *et al.*, 2014; Luria, 2019; Ostroff *et al.*, 2013; Schneider *et al.*, 2011a).

1.2.2.4   *Demonstrating that organizational climate perceptions are shared*

The idea of agreement or consensus in employees' climate perceptions is central to the conceptualization of organizational climate at a unit or organizational level of analysis (Schneider *et al.*, 2011a). To represent organizational climate at the unit level, researchers

typically survey individual employees within multiple organizational units using a suitable multiple-item rating scale. Next, they assess the degree of agreement or consensus in respondents' answers within and across units, and then aggregate the individual-level scores to the unit level by calculating a mean climate rating for each unit based on the answers provided by the respondents in each unit. For the mean climate rating to represent the whole unit meaningfully, frontline employees' climate perceptions must be shared within the unit (Ehrhart *et al.*, 2014; Schneider *et al.*, 2011a). Researchers typically assess the level of within-unit agreement or consensus in employees' climate perceptions with aggregation statistics such as $r_{wg(j)}$, ICC(1), and ICC(2) prior to aggregating the individual-level ratings to the unit level (Ehrhart *et al.*, 2014). These aggregation statistics are discussed in more detail on p. 65 under the heading 'Data aggregation'.

1.2.2.5   *Facet-specific or focused climates*

In their review of the history and evolution of climate research, Ehrhart *et al.* (2014) note that early climate researchers focused on broad, multidimensional conceptualizations of climate. However, the value of these conceptualizations was soon challenged as fuzzy, ambiguous, and questionable. Ehrhart *et al.* (2014) further indicate that Schneider (1975) addressed these concerns in an influential paper in which he argued that climate studies should be more focused, and that the term 'climate' should refer to "a climate for something". This perspective is now widely endorsed in the climate literature (Kuenzi and Schminke, 2009; Schneider and Barbera, 2014; Schneider *et al.*, 2011a; Schneider *et al.*, 2017). As a result, climate researchers have increasingly focused on facet-specific or focused climates that relate to specific aspects of an organization's internal functioning (e.g., diversity, ethics, or fairness) or to specific strategic outcomes (e.g., innovation, safety, or service) (Ehrhart *et al.*, 2014; Kuenzi and Schminke, 2009; Schneider *et al.*, 2017). In fact, the focused climate approach has become the dominant approach to studying climate (Ehrhart *et al.*, 2014).

From this perspective, 'focused psychological climate perceptions' refers to individual employees' perceptions of the policies, procedures, and practices, and the kinds of behaviours that are expected, supported, and rewarded with regard to a specific aspect of their organization's functioning or with regard to a specific organizational strategic priority. 'Focused organizational climate perceptions', in turn, refers to the *shared* perceptions co-

workers in the same unit or organization have about the aforementioned issues (Zohar and Hofmann, 2012). In essence, a focused approach to the measurement of a particular climate assesses how employees perceive the priority given to the focal internal process or strategic priority in their unit or organization (Schneider, 2020).

Ehrhart *et al.* (2014) refer to focused climates related to an organization's internal functioning as 'process climates', and label climates related to specific strategic organizational outcomes as 'strategic climates'. These strategic climates can usually be measured by external criteria, such as customer satisfaction scores (Ehrhart *et al.*, 2014). Examples of process climates include ethical climate (Jiang *et al.*, 2016), justice climate (Whitman *et al.*, 2012), and diversity climate (McKay *et al.*, 2011), while examples of strategic climates include innovation climate (Newman *et al.*, 2020), safety climate (Griffin and Curcuruto, 2016), and service climate (Bowen and Schneider, 2014).

Focused climates are essentially about alignment (Ehrhart *et al.*, 2014). If an organization's policies, practices, procedures, and reward systems send a consistent message about a specific internal issue of interest (e.g., ethics or fairness) or about a particular strategic priority (e.g., service or safety), then employees have a greater chance of receiving a clear message about the organization's priorities in this regard. Because of this alignment, employees will be more likely to behave in accordance with the climate, thus leading to improved organizational outcomes (Ehrhart *et al.*, 2014).

A major benefit of focusing on specific process or strategic climates is that these climates can be more clearly related to relevant antecedents and outcomes (Ostroff *et al.*, 2013), thus improving the predictive validity of climate studies (Schneider *et al.*, 2013). For example, studies of service climate have found positive relationships with outcomes such as customer satisfaction, customer-perceived service quality, and financial performance (Ehrhart *et al.*, 2014; Hong *et al.*, 2013; Ostroff *et al.*, 2013). A focused approach also makes climate research more relevant to practitioners by highlighting the specific practices and behaviours that organizations can use to enhance a particular focused climate (Schneider *et al.*, 2013).

Because different focused climates relate to different aspects of organizational functioning or to different strategic outcomes, multiple focused climates co-exist simultaneously in a unit

or organization (Ostroff *et al.*, 2013; Schneider *et al.*, 2013; Schulte *et al.*, 2006; Zohar and Hofmann, 2012). For example, a retailer may simultaneously have focused climates for ethics, service, and cross-selling (e.g., Jiang *et al.*, 2016; Yu *et al.*, 2018).

1.2.2.6 *The formation of psychological and organizational climates*

Climate research is rooted in Gestalt psychology, which emphasizes that climate is a composite – a Gestalt or whole – of many perceptions and experiences that employees have in the workplace (Schneider *et al.*, 2017). In this regard, Schneider *et al.* (2017) indicate that climate is "a summary perception derived from a body of interconnected experiences with organizational policies, practices and procedures (e.g., from leadership and HR practices, and so forth) and observations of what is rewarded, supported, and expected in the organization …". Schneider (2020) similarly argues that employees perceive bundles of connected workplace experiences, and assign meaning to these experiences. The meaning that employees attach to these bundles of connected experiences represents the climate they perceive, and helps them to identify the kinds of behaviour that are appropriate in their workplace (Schneider, 2020).

For example, if a frontline employee experiences that his/her supervisor often talks about the importance of customer service and spends time personally interacting with customers; observes that his/her co-workers are reprimanded for not following the unit's service standards; sees that a fellow employee is rewarded for going the extra mile for a customer; notices that his/her unit is provided with the technology and other resources necessary to provide high-quality customer service; and regularly receives feedback on his/her unit's customer satisfaction scores, the employee may form the summary perception that providing high-quality customer service is a priority in the unit. This summary perception represents the employee's individual-level psychological service climate perception (Hong *et al.*, 2013; Perry *et al.*, 2013).

Over time, employees who work together in the same unit begin to share perceptions of the climate of their workplace. These shared perceptions arise through the normal interaction processes and communication that occur between co-workers, and result in unique organizational climates for the units in which these interactions occur (Ehrhart *et al.*, 2014;

Ostroff *et al.,* 2013; Schneider and Reichers, 1983; Zohar and Hofmann, 2012). For example, if the employees who work together in a store *agree* – based on their shared experiences of applicable organizational events, policies, practices, and procedures, as well as the behaviours they see being rewarded, supported, and expected – that the provision of high-quality customer service is a priority in their store, then a store-level focused organizational climate in the form of a service climate exists.

While the exact process by which climate perceptions become shared in a work group is not well-understood (Kuenzi and Schminke, 2009; Zohar and Hofmann, 2012), Ostroff *et al.* (2013) have identified five factors that influence the emergence of shared organizational climate perceptions in units and organizations.

First, shared organizational climate perceptions can emerge if the policies, procedures, and practices that form the basis of these perceptions are implemented in such a way that they are internally consistent and coherent, are made very visible in the organization, are communicated clearly and widely, and are consistently administered (Ostroff *et al.*, 2013).

Second, according to the 'ASA model', the emergence of shared organizational climate perceptions is also supported by the attraction, selection, and attrition (ASA) processes in an organization (Ostroff *et al.*, 2013). The ASA model argues that individuals are attracted to organizations that are similar to their own views, values, and other attributes. Selection processes try to ensure that newly hired employees will fit the organizational context, and employees tend to resign when the work context does not fit their characteristics. Consequently, organizations are likely to consist of very similar individuals. These effects may be further strengthened through socialisation processes that align individual employees' attributes, goals, and values with those of the organization. As a result of such processes, similar individuals may communicate more frequently, develop stronger bonds, and perceive the organization similarly, thus leading to shared organizational climate perceptions (Ostroff *et al.*, 2013).

Third, the emergence of shared organizational climate perceptions are also facilitated through the social interaction between co-workers. In this regard, Ostroff *et al.* (2013) indicate that shared perceptions of organizational policies, practices, procedures, and

workplace events arise from the communication and interaction between co-workers in the same unit. More specifically, when employees are confronted with complex and ambiguous work situations, they engage in a process of sense-making in which they discuss the work situation and their interpretations thereof with their colleagues. In this process, a consensual interpretation of the meaning of the ambiguous workplace events emerges; in other words, co-workers develop a shared understanding of workplace events (Zohar and Hofmann, 2012). Because employees in the same unit interact more often with one another than with employees in other units, they are likely to develop shared perceptions of the climate in their unit (Schneider and Reichers, 1983; Zohar and Hofmann, 2012). Previous research has shown that the degree of consensus in employees' shared organizational climate perceptions is positively related to the extent of social interactions between employees, the density of organizational communication networks, and the strength of affective ties in the workplace (Ostroff *et al.*, 2013).

Fourth, the processes within an employee's immediate unit are particularly important for the formation of shared organizational climate perceptions (Ostroff *et al.*, 2013). In this regard, Ostroff *et al.* (2013) indicate that group processes such as information sharing, interdependence, the coordination of efforts, group identification, and group cohesion are important for the development of shared organizational climate perceptions within a unit. Ehrhart *et al.* (2014), similarly, indicate that organizational climates are stronger when units are smaller, more cohesive and interdependent; when the level of within-unit social interaction is high; when there is a dense social network in the unit; when unit members engage in high levels of sense-making; and when the average tenure in the unit is high.

Finally, managers, especially frontline supervisors, play a crucial role in the emergence of shared organizational climate perceptions (Ostroff *et al.*, 2013). They serve as interpretive filters of organizational policies, processes, and procedures for all unit members and, as such, contribute to the development of shared climate perceptions (Kuenzi and Schminke, 2009; Ostroff *et al.*, 2013; Zohar and Hofmann, 2012). In addition, by exposing employees to the same policies, practices, and procedures, managers function as 'climate engineers' (Ostroff *et al.*, 2013).

Against this background, the next section introduces service climate as the focal strategic climate investigated in this thesis.

1.2.3   Service climate

1.2.3.1   *Service climate defined*

Service climate is an example of a strategic climate (Schneider *et al.*, 2011a) which can either be studied as a psychological climate at an individual level of analysis or as an organizational climate at a unit or organizational level of analysis (Carrasco *et al.*, 2011; Li and Huang, 2017). Table 1 lists examples of studies that have investigated service climate at both levels of analysis.

Table 1:   Studies of service climate at different levels of analysis

Level of analysis	Example studies	
Service climate as a **psychological climate** at an individual level of analysis	Barnes and Collier (2013) Chang and Chang (2017) Chen and Kao (2014) Dimitriades (2007) Fung *et al.* (2017) Gabler *et al.* (2018) Hoang *et al.* (2018) Kang and Busser (2018) Kopperud *et al.* (2014) Li and Huang (2017)	Martin (2008) Mathies and Ngo (2014) Mendoza-Sierra *et al.* (2014) Mechinda and Patterson (2011) Perry *et al.* (2013) Steinke (2008) Wang and Xu (2017) Wilder *et al.* (2014) Zhang *et al.* (2011)
Service climate as an **organizational climate** at a unit or organizational level of analysis	Abdelhadi and Drach-Zahavy (2012) Auh *et al.* (2016) Auh *et al.* (2011) Carrasco *et al.* (2011) Chan *et al.* (2017) Chuang and Liao (2010) De Jong *et al.* (2004) Ehrhart *et al.* (2011) Gracia *et al.* (2010) Graham *et al.* (2020) Greenslade and Jimmieson (2011) Hunter *et al.* (2013) Jiang *et al.* (2016) Jiang *et al.* (2015) Lam and Mayer (2014) Liao and Chuang (2007)	Menguc *et al.* (2016) Myer *et al.* (2016) Potočnik *et al.* (2011) Salanova *et al.* (2005) Salvaggio *et al.* (2007) Schneider *et al.* (2009) Schneider *et al.* (2005) Schneider *et al.* (2002) Schneider *et al.* (1998) Shepherd *et al.* (2020) Tang and Tang (2012) Towler *et al.* (2011) Walumbwa *et al.* (2018) Walumbwa *et al.* (2010a) Walumbwa *et al.* (2010b) Wang (2009)

Level of analysis	Example studies	
	Liao and Chuang (2004)	Way *et al.* (2010)
	Lin and Liu (2016)	Yavas *et al.* (2010)
	Ling *et al.* (2016)	Yeh (2012)
	Linuesa-Langreo *et al.* (2017)	Yu *et al.* (2018)

At the individual level, 'service climate' refers to an individual frontline employee's perceptions of the extent to which the organizational policies, practices, and procedures he/she experiences require, support, and reward the provision of high-quality service to customers (Carrasco *et al.*, 2011; Li and Huang, 2017; Perry *et al.*, 2013; Wilder *et al.*, 2014). At the unit or organizational level, 'service climate' refers to frontline employees' *shared* perceptions of the above-mentioned aspects. Thus, it reflects the extent to which frontline employees collectively perceive that their unit or organization as a whole emphasizes the delivery of high-quality service to customers (Bowen and Schneider, 2014; Hong *et al.*, 2013). In essence, service climate represents the degree to which employees – individually or collectively – experience the internal functioning of their unit or organization as one that is focused on service excellence (Schneider and White, 2004). According to Ehrhart *et al.* (2011), service climate encompasses employees' perceptions of their unit or organization's service strategy, service support, service-oriented human resource management (HRM) practices, customer orientation, service-oriented managerial practices, communications regarding service, and customer feedback.

Chapter 2 focused on frontline employees' individual-level psychological service climate perceptions. More specifically, this chapter investigated the extent to which frontline employees' perceptions of six service-oriented high-performance work practices (SO-HPWSs) predict their *psychological service climate perceptions* and their *work engagement* at an individual level of analysis.

Chapters 3 and 4 both focused on service climate as a strategic organizational climate at the store level of analysis. In other words, in both chapters service climate was treated as a unit-level construct. In these chapters, the service climate ratings obtained from frontline employees nested in 70 stores were aggregated to the store level after an evaluation of the degree of agreement in the individual-level employee ratings obtained within each store. The aggregated store-level service climate scores represented service climate as a form of

organizational climate, and were used to relate service climate to its antecedents and outcomes at a store level of analysis. The store-level focus in Chapters 3 and 4 is aligned with the dominant approach taken in service climate studies (see Table 1, p. 14), in which the aim is to predict unit-level performance metrics such as customer satisfaction and loyalty (Ehrhart *et al.*, 2014; Schneider and Barbera, 2014; Schneider *et al.*, 2013).

1.2.3.2 *The importance of service climate to service organizations*

As mentioned, an employee's individual-level *psychological service climate perceptions* represent the extent to which he/she perceives that a unit or organization expects, supports, and rewards high-quality service delivery to customers (Carrasco *et al.*, 2011; Perry *et al.*, 2013). When a frontline employee perceives that his/her service-related work directed at customers is expected, supported, and rewarded by the organization, the employee will recognize the importance of service excellence, and will feel obligated and motivated to meet the organization's performance expectations in this regard (Kang and Busser, 2018; Li and Huang, 2017; Zhang *et al.*, 2011). In short, it is more likely that an individual employee will deliver high-quality customer service if he/she perceives that the unit or organization expects, supports, and rewards such behaviours (Mendoza-Sierra *et al.*, 2014).

Perry *et al.* (2013) argue that frontline employees' psychological service climate perceptions are important in predicting individual-level outcomes, as it is these perceptions that have the most direct influence on individual employees' service-related attitudes and behaviours. Furthermore, since frontline employees' individual psychological service climate perceptions form the basis of service climate as a focused organizational climate at a unit or organizational level of analysis, it is necessary to understand its individual-level antecedents and outcomes (Hong *et al.*, 2013; Li and Huang, 2017).

Studies of frontline employees' psychological service climate perceptions have shown that these perceptions are directly related to several desirable individual-level outcomes, including individual employees':

- work engagement (Barnes and Collier, 2013; Kang and Busser, 2018);

- job involvement (Dimitriades, 2007);

- job satisfaction (Martin, 2008; Mathies and Ngo, 2014);

- service orientation (Li and Huang, 2017);

- perceived empowerment (Wilder *et al.*, 2014);

- self-rated service-oriented OCBs (Chang and Chang, 2017; Dimitriades, 2007);

- self- and supervisor-rated service performance (Li and Huang, 2017; Mechinda and Patterson, 2011; Wang and Xu, 2017; Zhang *et al.*, 2011);

- self-rated service quality (Mendoza-Sierra *et al.*, 2014; Steinke, 2008);

- self-rated empathy towards customers (Wilder *et al.*, 2014); and

- self-rated anticipation (i.e., the ability to predict customer needs before they are verbalized) (Wilder *et al.*, 2014).

While several of the studies listed in Table 1 (p. 14) have investigated frontline employees' individual-level psychological service climate perceptions, service climate is predominantly regarded as a focused organizational climate and modelled at a unit level of analysis (Bowen and Schneider, 2014; Hong *et al.*, 2013). Service climate as a focused organizational climate is important to service organizations for four main reasons.

First, previous unit-level research summarized in the meta-analysis of Hong *et al.* (2013) and the narrative review of Bowen and Schneider (2014) indicates that service climate is an important mediating variable that links internal organizational policies and practices (e.g., internal service quality, HRM practices, and leadership approaches) to external customer experiences (e.g., perceived service quality, customer satisfaction, and customer loyalty) and, ultimately, to indicators of a unit or organization's financial performance. For this reason, Hong *et al.* (2013, p. 239) describe service climate as the "missing link in the service profit chain", while Wang and Xu (2017, p. 535) indicate that it is "one of the most pivotal linkages in translating internal management philosophy into service performance …".

Second, previous studies have shown that service climate at a unit level is a direct positive predictor of several desirable *unit-level* outcomes, including:

- employees' and managers' ratings of frontline employees' in-role and extra-role service performance (Chuang and Liao, 2010; Jiang *et al.*, 2015; Jiang *et al.*, 2016; Linuesa-Langreo *et al.*, 2017; Schneider *et al.*, 2005);

- customer-rated employee service performance (Salanova *et al.*, 2005);

- objective measures of frontline employees' in-role performance (Yavas *et al.*, 2010);

- frontline employees' sales behaviour (Hunter *et al.*, 2013);

- customer-perceived service quality (De Jong *et al.*, 2004; Ehrhart *et al.*, 2011; Gracia *et al.*, 2010; Schneider *et al.*, 2002; Schneider *et al.*, 1998);

- customer satisfaction (Auh *et al.*, 2011; Graham *et al.*, 2020; Schneider *et al.*, 2009; Towler *et al.*, 2011);

- share of customer (i.e., the number of services purchased from a service provider) (De Jong *et al.*, 2004);

- manager-rated store performance (Lin and Liu, 2016); and

- company financial performance (Myer *et al.*, 2016).

Multi-level studies have also shown that service climate at a unit level positively predicts valuable *individual-level* employee reactions, including:

- Nurses' individual-level patient-centred care behaviours (Abdelhadi and Drach-Zahavy, 2012);

- Frontline employees' self- and manager-rated individual-level service performance (Liao and Chuang, 2004; Yeh, 2009); and

- Frontline employees' individual-level organizational citizenship behaviours (OCBs) as rated by their direct supervisors (Walumbwa *et al.*, 2010a).

Third, owing to the unique characteristics of services (i.e., heterogeneity, intangibility, perishability, simultaneity, and customer participation), the supervisors of frontline employees are unable constantly and directly to control employees to ensure high-quality service delivery or to deal with service failures (Yagil, 2014). Consequently, organizations must create a climate that facilitates service excellence. As such, a unit's or organization's service climate serves as an 'implicit form of control' and a 'motivation force' to ensure that

frontline employees are enabled, motivated, and guided to provide high-quality service (Ehrhart *et al.*, 2011; Hong *et al.*, 2013; Liao and Chuang, 2007; Yagil, 2014).

Finally, changes in unit-level service climate may serve as lead indicators of future changes in important customer and financial metrics. In this regard, Hong *et al.* (2013, p. 253) argue as follows: "As service climate is a more proximal reflection of an organization's philosophy and practices [regarding service excellence] than other outcomes, measuring service climate instead of employee and customer outcomes can provide a more immediate diagnosis that helps formulate an action plan when issues arise". This argument is supported by a longitudinal study that found that employees' service climate perceptions in 1990 predicted customers' satisfaction scores three years later, in 1993 (Schneider *et al.*, 1998), as well as by further research that reported statistically significant relationships over a three-year period between service climate, customer satisfaction, and Tobin's Q, an index of a firm's financial and market performance (Schneider *et al.*, 2009).

1.2.3.3 *Service climate level versus service climate strength*

Researchers studying service climate at a unit level distinguish between service climate level and service climate strength (Bowen and Schneider, 2014; Ehrhart *et al.*, 2014; Schneider *et al.*, 2002; Sowinski *et al.*, 2008). 'Service climate level' refers to the 'positiveness' of employees' perceptions of the service climate in a particular service setting, and is operationalized as the average of employees' scores on a measure of service climate within a specific unit (Bowen and Schneider, 2014). The higher this average rating, the higher the service climate level in the specific unit or organization. For example, if the average composite score calculated across employees' ratings of service climate on Schneider *et al.*'s (1998) global service climate scale in Store A is 3.5, and the corresponding score for Store B is 4.5, then Store B has a higher service climate level than Store A.

'Service climate strength', in turn, refers to the extent of variance in the service climate ratings of employees working in the same unit. The lower the variance in employees' service climate ratings within a specific unit, the higher the degree of consensus employees have about the service climate in their unit or organization, and the stronger the unit's service climate (Bowen and Schneider, 2014; Ehrhart *et al.*, 2014).

Research indicates that service climate level is positively correlated with customer evaluations such as customer satisfaction, while service climate strength, in turn, may be a moderator of such relationships (Bowen and Schneider, 2014; Schneider *et al.*, 2002). Since most prior service climate studies have focused on service climate level only (for exceptions, see Potočnik *et al.*, 2011; Schneider *et al.*, 2002; Sowinski *et al.*, 2008), this thesis has a similar focus.

1.2.3.4 *Reasons for differences in employees' service climate perceptions across organizational units*

Most prior studies of service climate as a strategic organizational climate have focused on organizational units (e.g., departments, branches, or stores) within the same organization as the units of analysis (Yagil, 2014). These studies implicitly assume, and have empirically demonstrated, that employees' shared service climate perceptions differ across organizational units, even within the same organization. According to Yagil (2014), there are several reasons for between-unit variations in employees' shared service climate perceptions. First, organizational policies and procedures are often meant as general guidelines rather than specific instructions, and cannot cover all situations. Unit managers, therefore, have some discretion in how they interpret and apply these policies and procedures, leading to between-unit differences. Second, frontline employees' service climate perceptions may also differ across units because of differences in the units' external environments (e.g., differences in customer profiles and associated service expectations). Third, managers tend to allocate more resources to units that have been most successful in the past, and thus have the biggest chance of success in the future. This uneven resource allocation may also affect frontline employees' service climate perceptions across units.

The next two sections focus on SO-HPWSs and work engagement – the two antecedents of service climate included in the main structural model of this thesis (see Figure 1, p. 202).

1.2.4   High-performance work systems (HPWSs)

1.2.4.1   *High-performance work systems (HPWSs) and high-performance work practices (HPWPs)*

Several previous studies conducted in service contexts have investigated the relationships between HRM practices and service climate (e.g., Chuang and Liao, 2010; Jiang *et al.*, 2015; Lin and Liu, 2016; Tang and Tang, 2012; Wang and Xu, 2017). Most of these studies focused on high-performance work systems (HPWSs). Chuang and Liao (2010, p. 153) describe an HPWS as "a system of internally coherent [HRM] practices aligned with organizational strategy …". Posthuma *et al.* (2013) similarly indicate that an HPWS can be viewed as a coordinated bundle of HRM practices that create synergistic effects in which the different practices reinforce each other to increase organizational efficiency and effectiveness. The individual HRM practices that constitute an HPWS are also known as 'high-performance work practices' (HPWPs) (Posthuma *et al.*, 2013).

While some authors use the terms 'high-performance work systems' (HPWSs) and 'high-performance work practices' (HPWPs) synonymously to refer to *systems* of coordinated and synergistic HRM practices (e.g., Huertas-Valdivia *et al.*, 2018; Tang and Tang, 2012), Posthuma *et al.* (2013) and Boselie (2010) distinguish clearly between the two terms, and regard HPWPs as the individual components of an organization's overall HPWS. This thesis will follow the latter convention. In the discussion below, the terms 'HPWPs' and 'HRM practices' are sometimes used interchangeably.

1.2.4.2   *Generic and service-oriented high-performance work systems (SO-HPWSs)*

Authors also distinguish between generic HPWSs and service-oriented HPWSs (Jiang *et al.*, 2015; Liao *et al.*, 2009). The former refers to systems of HPWPs that "are intended to improve employees' general abilities, motivation and empowerment to perform …" (Hong *et al.*, 2013, p. 239). Although these generic HPWSs do not specifically focus on customer service, they relate to service climate by enhancing the organization's overall expectations of employee performance (Hong *et al.*, 2013). SO-HPWSs, on the other hand, are specifically targeted at improving service quality (Hong *et al.*, 2013; Wang and Xu, 2017). As Jiang *et al.* (2015, p. 1091) explain, SO-HPWSs "place emphasis on enhancing front-line

service employees' human capital, motivation, and empowerment in delivering high-quality service". This thesis specifically focused on SO-HPWSs and on the individual SO-HPWPs they contain as antecedents of service climate.

1.2.4.3 *SO-HPWSs as antecedents of service climate*

A service organization's SO-HPWS is important because it communicates the organization's strategic focus to employees, and indicates what the organization expects, supports, and rewards in this regard (Chuang and Liao, 2010; Hong *et al.*, 2013; Tang and Tang, 2012). As such, an organization's SO-HPWS contributes to the formation and strengthening of its service climate. Schneider and White (2004, p. 125) note the following:

> "organizations tell employees what is important through the [HRM] practices it has in place and, more specifically, the focus of those practices. If service is strategically important, one way employees get this message is through what they encounter in the way of [HRM] practices."

Both generic and SO-HPWSs are positively related to service climate (Hong *et al.*, 2013; Jiang *et al.*, 2015; Lin and Liu, 2016). As already mentioned, the former focuses on improving employees' general abilities, motivation, and empowerment to perform, and will positively relate to service climate by enhancing and communicating the organization's overall expectations of high performance to employees. SO-HPWSs, on the other hand, are more specifically targeted at enhancing service quality, and thus communicate a more distinctive message to employees regarding the importance of providing high-quality service to customers – a message that reflects the agreement among the organization's decision-makers about the strategic importance of service excellence to the organization (Hong *et al.*, 2013). As such, SO-HPWSs should have a stronger relationship with service climate than generic HPWSs do (Chuang and Liao, 2010; Hong *et al.*, 2013; Jiang *et al.*, 2015).

In a meta-analysis of unit-level studies on the antecedents and outcomes of service climate, Hong *et al.* (2013) found that both generic and service-oriented HRM practices were positively related to service climate. Importantly, there was a significantly stronger meta-analytic correlation between service-oriented HRM practices and service climate than between generic HRM practices and service climate. Only one of the studies included in this

meta-analysis (i.e., Chuang and Liao, 2010) focused on an SO-HPWS involving multiple SO-HPWPs. The aforementioned positive relationships were subsequently confirmed in five other primary studies involving both generic HPWSs (Lin and Liu, 2016; Tang and Tang, 2012) and service-oriented HPWSs (Hoang *et al.*, 2018; Jiang *et al.*, 2015; Wang and Xu, 2017). Based on these findings, Chapters 3 and 4 in this thesis specifically investigated the relationship between employee-rated SO-HPWSs and service climate at the store level of analysis.

1.2.4.4   *Specific SO-HPWPs as antecedents of service climate*

While the relationship between SO-HPWSs and service climate has been investigated at both the individual (Hoang *et al.*, 2018; Wang and Xu, 2017) and unit (Chuang and Liao, 2010; Jiang *et al.*, 2015) levels of analysis, the direct relationships between specific SO-HPWPs and service climate have received less research attention. As far as could be determined, only two previous studies have investigated the extent to which multiple individual HPWPs predict service climate at an individual (Lux *et al.*, 1996) and a unit level (Chuang and Liao, 2010) of analysis respectively. This is surprising, because researchers and practitioners can gain valuable insights by considering the varying relationships between individual SO-HPWPs and service climate.

In this regard, Hong *et al.* (2017) note that employers are typically concerned about labour costs, and so have to weigh the benefits of investing in HPWSs against the costs involved. Such decisions can be facilitated by a clearer understanding of the different impacts of individual HPWPs or specific HPWP bundles on service climate. Hauff (2019) similarly argues that human resource managers want to know more than just that HPWSs matter; they want to know which specific HPWPs are most important, and where to focus their investments. Given this, it is necessary to supplement analyses involving HPWSs with analyses at the level of individual HPWPs.

Chapter 2 in this thesis consequently focused on the relationship between six specific SO-HPWPs and service climate at an individual level of analysis. These six SO-HPWPs – service-oriented staffing, training, financial compensation, non-financial rewards and recognition, involvement, and empowerment – are defined in Table 2 (p. 24). These SO-

HPWPs were selected because they were included in several previous studies involving SO-HPWSs (e.g., Jiang *et al.*, 2015; Liao *et al.*, 2009; Luu, 2019) and were relevant to the participating retailer.

Table 2: Definitions of the six specific SO-HPWPs investigated in Chapter 2

SO-HPWPs	Definition
Staffing	Staffing, which encompasses recruitment and selection, refers to the process through which a service organization "… ensures that it always has the proper number of employees with the appropriate skills in the right jobs, at the right time, to achieve organizational objectives" (Mondy and Martocchio, 2016, p. 418).
Training	Training consists of a service organization's "… planned efforts to help employees acquire job-related knowledge, skills, abilities, and behaviors, with the goal of applying these on the job" (Noe *et al.*, 2016, p. 201).
Financial compensation	Financial compensation refers to the remuneration in the form of the wages, salaries, commissions and/or monetary bonuses that employees receive in return for their labour (Mondy and Martocchio, 2016).
Non-financial rewards and recognition	Non-financial rewards and recognition refer to non-monetary rewards through which an organization tangibly indicates its appreciation to employees for quality work and related achievements (Yang, 2012).
Involvement	Employee involvement refers to the encouragement of information sharing, employee voice and open, two-way communication in the workplace (Browning *et al.*, 2009). Employee involvement can also refer to the extent to which employees have an opportunity to participate in organizational decision-making processes (Aktar and Pangil, 2018).
Empowerment	Empowerment refers to the autonomy and decision-making power frontline employees have to make on-the-spot decisions regarding customer service (Babakus *et al.*, 2017; Mendoza-Sierra *et al.*, 2014). Empowerment, therefore, provides frontline employees with the authority and responsibility to act quickly for customers without having to follow a long chain of command (Babakus *et al.*, 2003).

The next section introduces work engagement as the second antecedent of service climate investigated in this thesis (see Figure 1, p. 202).

1.2.5   Work engagement

1.2.5.1   *Work engagement defined*

Bailey *et al.* (2017) identified six distinct definitions of work engagement in their narrative review of engagement research. However, the widely-cited definition of Schaufeli *et al.* (2002) is the dominant definition, and was adopted in 86% of the studies they reviewed.

According to this definition, work engagement is "a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption" (Schaufeli *et al.*, 2002, p. 74). 'Vigour' refers to high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence even in the face of difficulties; 'dedication' is characterized by a sense of significance derived from one's work and by feelings of pride, inspiration, enthusiasm, and challenge; while 'absorption' is characterized by being fully concentrated on and deeply engrossed in one's work to the degree that time passes quickly and one finds it difficult to detach oneself from the work (Schaufeli *et al.*, 2002). In essence, work engagement is manifested as "energy, involvement and focused striving towards the achievement of organizational goals" (Albrecht *et al.*, 2015, p. 11).

1.2.5.2 *The importance of work engagement to service organizations*

Work engagement is important to service organizations because engaged employees have higher levels of job satisfaction, are less likely to leave the organization, and perform their jobs better (Park *et al.*, 2019). Engaged employees perform better than disengaged employees by displaying more positive emotions and higher levels of resourcefulness (Kang and Busser, 2018). They are also willing to go beyond normal job expectations, and are more involved in their organization. Engaged employees also stimulate the performance of their colleagues in the workplace (Kang and Busser, 2018). Kopperud *et al.* (2014) similarly point out that work engagement has been linked to a number of valuable work-related outcomes, including positive job-related attitudes, extra-role behaviours, organizational commitment, job satisfaction, personal initiative, proactive behaviour, learning motivation, and increased performance.

In addition, prior studies have linked work engagement to several desirable customer-related variables such as customers' perceptions of service employee performance (Menguc *et al.*, 2013), customers' evaluations of functional and relational service quality (García-Buades *et al.*, 2016), employees' service recovery performance (Karatepe and Olugbade, 2016), employees' creative performance (Karatepe and Olugbade, 2016), employees' service-oriented in-role and extra-role performance (Karatepe, 2013; Luu, 2019; Zheng *et al.*, 2020), the frequency with which employees display positive emotions towards customers (Carrasco *et al.*, 2011), as well as customer satisfaction and loyalty (Siddiqi, 2015).

1.2.5.3 *SO-HPWSs as a predictor of work engagement*

Previous research has shown that HPWSs in general (Cooke *et al.*, 2019; Huertas-Valdivia *et al.*, 2018; Karatepe and Olugbade, 2016) and SO-HPWSs in particular (Karatepe, 2013; Luu, 2019) are antecedents of frontline employees' work engagement in service contexts. However, studies that directly relate individual SO-HPWPs to work engagement are relatively scarce (e.g., Aktar and Pangil, 2018; Babakus *et al.*, 2017; Choo, 2016). Chapter 2, therefore, investigated the extent to which six specific SO-HPWPs each predict frontline employees' work engagement at an individual level of analysis (see Figure 1, p. 109).

Previous studies on the relationship between HPWSs and work engagement (e.g., Cooke *et al.*, 2019; Huertas-Valdivia *et al.*, 2018; Karadas and Karatepe, 2019), and between individual HPWPs and work engagement (e.g., Aktar and Pangil, 2018; Babakus *et al.*, 2017; Choo, 2016) have mostly been conducted at the individual level of analysis. However, work engagement can also be studied at higher levels of analysis, such as at the level of work teams (Gracia *et al.*, 2013; Salanova *et al.*, 2005; Torrente *et al.*, 2012), stores in the same retail chain (Eldor, 2020), or even at organizational level (Barrick *et al.*, 2015; Schneider *et al.*, 2018). When work engagement is studied at levels of analysis higher than the individual level, it is referred to as 'collective work engagement' (Eldor, 2020). Chapters 3 and 4, therefore, focused on the relationship between frontline employees' perceptions of the SO-HPWS in their store and their collective work engagement at the store level of analysis across multiple stores in the same retail chain (see Figure 1, p. 145 and Figure 1, p. 202).

1.2.5.4 *Work engagement as a predictor of service climate*

A review of relevant literature indicates that there are two rival perspectives on the relationship between work engagement and service climate. The first perspective treats work engagement as a direct antecedent of service climate (Kopperud *et al.*, 2014; Salanova *et al.*, 2005), while the second perspective holds the opposite view and regards service climate as a direct antecedent of work engagement (Abdelhadi and Drach-Zahavy, 2012; Barnes and Collier, 2013; Carrasco *et al.*, 2011; Kang and Busser, 2018; Perry *et al.*, 2013).

Chapter 3 compared two store-level structural models that reflect these two competing perspectives (see Figure 1, p. 145).

The next section introduces in-role and extra-role service performance as two of the direct outcomes of service climate considered in this thesis (see Figure 1, p. 145).

1.2.6   In-role and extra-role service performance

Bowen and Schneider (2014) argued that service climate by itself does not produce desired customer outcomes, such as customer-perceived service quality, satisfaction, or loyalty. Instead, it is frontline employees' service-oriented behaviours – specifically, their in-role and extra-role service performance – that tangibly yield these valued customer responses. Following Jiang *et al.* (2015) and Schneider *et al.* (2005), Chapters 3 and 4 in this thesis specifically focused on the store-level relationship between service climate and store managers' ratings of the collective in-role and extra-role service performance of the frontline employees working in their respective stores (see Figure 1, p. 145 and Figure 1, p. 202).

Several prior studies have differentiated between in-role and extra-role service performance (e.g., Bettencourt and Brown, 1997; Chen, 2016; Karatepe, 2013; Lu *et al.*, 2016; Luu, 2019). 'In-role service performance' refers to service-oriented behaviours that are expected of frontline employees when serving customers (Bettencourt and Brown, 1997; Lu *et al.*, 2016). These behaviours are typically explicitly stated in the employees' job descriptions (Maxham *et al.*, 2008) and poor in-role service performance normally results in reprimands, negative financial implications, or being dismissed (Yap *et al.*, 2009).

'Extra-role service performance' refers to "discretionary behaviors of contact employees in serving customers that extend beyond formal role requirements" (Bettencourt and Brown, 1997, p. 41). According to Chaoluck (2017), these behaviours fall outside the scope of employees' formal job prescriptions, are regarded as voluntary, are not formally and directly rewarded, do not have negative consequences for employees if they are not performed, and imply that the employees who exhibit these behaviours have 'gone beyond the call of duty' for customers.

A positive service climate signals to employees that high-quality service is expected, supported, and rewarded, and thus motivates employees to engage in high levels of both in-role and extra-role service performance (Hong *et al.*, 2013; Jiang *et al.*, 2016; Linuesa-Langreo *et al.*, 2017; Wang and Xu, 2017). As such, a strong service climate provides a "motivational force for employees to deliver better service" (Liao and Chuang, 2007, p. 1009).

Chapters 3 and 4 both focused on employees' collective in-role and extra-role service performance at the store level of analysis as evaluated by the store managers. Such a focus is justifiable for two reasons. First, many service encounters involve interactions between individual customers and multiple frontline employees (García-Buades *et al.*, 2016; Gracia *et al.*, 2013). For example, in the current study, a store patron's evaluation of his/her store visit may have been influenced by the service behaviours of the store security official, salesperson, cashier, warehouse assistant, and/or dispatch assistant, with any or all of whom the customer may have interacted. Since the frontline employees in a store have to work together as a team to ensure satisfactory service delivery, it is the overall level of the team members' collective in-role and extra-role service performance, not the performance of a specific individual employee, that determines the desired customer evaluations at the store level (García-Buades *et al.*, 2016; Gracia *et al.*, 2013; Liao and Chuang, 2004). Second, bottom-up processes such as socialisation, social information processing, attraction–selection–attrition, and the shared environment that employees are exposed to in a store tend to lead to relatively homogenous behaviours and performance levels among employees working together in the same store (Liao and Chuang, 2004). Consequently, a store-level focus on the relationships between service climate, collective in-role service performance, and extra-role service performance is appropriate.

The next section introduces overall customer satisfaction as the third direct outcome of service climate investigated in this thesis.

1.2.7 Overall customer satisfaction

In this thesis, 'overall customer satisfaction' refers to a customer's evaluation of his/her overall satisfaction with a specific visit to a specific retail store. It reflects a shopper's

subjective evaluation of whether a specific store visit has met or exceeded his/her prior expectations (Bloemer and De Ruyter, 1998; Sands *et al.*, 2015).

Several studies have reported positive correlations between service climate and customer satisfaction (e.g., Auh *et al.*, 2011; Dietz *et al.*, 2004; Graham *et al.*, 2020; Martínez-Tur *et al.*, 2011; Schneider *et al.*, 2009). Despite these findings, Schneider *et al.* (2005) and Bowen and Schneider (2014) are of the opinion that service climate does not lead to customer satisfaction by itself. Instead, it is frontline employees' in-role and extra-role service performance that results in customer satisfaction. This implies that frontline employees' collective in-role and extra-role service performance partially or completely mediate the relationship between service climate and customer satisfaction (Schneider *et al.*, 2005).

Chapter 4 in this thesis tested a store-level structural model in which service climate predicts overall customer satisfaction directly as well as indirectly through frontline employees' collective in-role and extra-role service performance (see Figure 1, p. 202).

The next section introduces store loyalty, the final indirect outcome of service climate investigated in this thesis.

1.2.8   Store loyalty

Hult *et al.* (2019) described customer satisfaction and loyalty as the "holy grail" of retailing, while Pan *et al.* (2012) noted that customer loyalty is a firm's most enduring asset. Customer loyalty is important to retailers because of its positive relationship with a retailer's long-term financial performance (Biscaia *et al.*, 2017; Yee *et al.*, 2010).

Customer loyalty can broadly be defined as "the strength of a customer's dispositional attachment to a brand (or a service provider) and his/her intent to rebuy the brand (or repatronize the service provider) consistently in future" (Pan *et al.*, 2012, p. 151). This thesis focused specifically on store loyalty, which Bloemer and De Ruyter (1998, p. 500) defined as: "The biased (i.e. non-random) behavioural response (i.e. revisit), expressed over time, by some decision-making unit with respect to one store out of a set of stores, which is a function of psychological (decision making and evaluative) processes resulting in brand

commitment". Store loyalty essentially refers to is a shopper's deeply held commitment towards and intention to revisit a particular store (Koo and Kim, 2013; Rabbanee *et al.*, 2012).

The fact that customer satisfaction is positively related to customer loyalty is well-established in the marketing literature. For example, Kumar *et al.* (2013, p. 258) stated the following empirical generalization in their extensive review of prior research on the satisfaction-loyalty relationship: "Overall, there is a positive relationship between customer satisfaction and loyalty". Three meta-analyses (i.e., Hogreve *et al.*, 2017; Pan *et al.*, 2012; Szymanski and Henard, 2001) confirmed this positive relationship at an individual level of analysis and reported positive sample size-weighted and corrected correlations between customer satisfaction and loyalty of 0.66, 0.61, and 0.52 respectively. A number of primary studies specifically conducted in retail contexts have also verified the positive relationship between customers' ratings of satisfaction and loyalty (e.g., Biscaia *et al.*, 2017; Hult *et al.*, 2019; Nesset *et al.*, 2011).

Surprisingly, the relationships between service climate, customer satisfaction, and customer loyalty have received comparatively little research attention at a unit level of analysis. In a multi-level study, Liao and Chuang (2004) reported that service climate at a store level predicted frontline employees' self-rated in-role service performance at an individual level of analysis. When aggregated to the store level, these ratings, in turn, predicted customer satisfaction and loyalty at the store level of analysis. However, this study did not consider the interrelationships between customer satisfaction and loyalty. In a unit-level study, Salanova *et al.* (2005) found that service climate affected customer loyalty indirectly through frontline employees' collective in-role service performance, while customer loyalty had a reciprocal direct impact on service climate. This study did not include customer satisfaction. In another multi-level study, Wang (2015) found that service climate at a unit level of analysis predicted customer loyalty at an individual level directly as well as indirectly through customers' service quality perceptions. This study did not include customer satisfaction. As far as could be determined, only one study (Towler *et al.*, 2011) has tested a unit-level model that included service climate, customer satisfaction, and customer loyalty simultaneously. However, Towler *et al.*'s (2011) conceptualization of service climate as consisting of two distinct constructs (i.e., concern for employees and concern for customers), and the

measurement scales used to operationalize these constructs, differ markedly from the typical conceptualization and measures used in the service climate literature.

To explore further the relationships between service climate, customer satisfaction, and customer loyalty, Chapter 4 tested a store-level structural model in which store loyalty functioned as an indirect outcome of service climate, mediated by overall customer satisfaction (see Figure 1, p. 202).

1.3 PROBLEM STATEMENT

The meta-analysis of Hong *et al.* (2013), the conceptual review of Bowen and Schneider (2014), and several recent primary studies (e.g., Hoang *et al.*, 2018; Jiang *et al.*, 2015; Jiang *et al.*, 2016; Linuesa-Langreo *et al.*, 2017; Shepherd *et al.*, 2020) indicate that there is a rich body of research on the antecedents and outcomes of service climate. Despite this, several important remaining knowledge gaps deserve further research attention. This thesis focused on the seven knowledge gaps described below.

Gap 1: The first gap this thesis sought to address relates to the fact that no previous studies have investigated the extent to which frontline employees' perceptions of the *individual SO-HWPS* they experience *simultaneously* predict both their work engagement and their psychological service climate perceptions at an individual level of analysis.

Prior research have shown that both generic (Huertas-Valdivia *et al.*, 2018; Karadas and Karatepe, 2019; Karatepe, 2013; Karatepe and Olugbade, 2016) and service-oriented HPWSs (Luu, 2019) are positively related to frontline employees' work engagement at an individual level of analysis. However, only four prior studies (i.e., Aktar and Pangil, 2018; Babakus *et al.*, 2017; Choo, 2016; Goyal and Patwardhan, 2020) have examined the relationships between multiple HPWPs and the work engagement of frontline service workers. These four studies found that different HPWPs have varying effects on frontline employees' work engagement. Of these studies, only Choo (2016) specifically focused on SO-HPWPs, while the other three studies investigated generic HPWPs. Consequently, little is known about the relationships between individual SO-HPWPs and the work engagement of frontline service employees.

Similarly, several prior studies have shown that both generic and SO-HPWSs positively predict frontline employees' service climate perceptions (e.g., Chuang and Liao, 2010; Graham *et al.*, 2020; Jiang *et al.*, 2015; Lin and Liu, 2016; Tang and Tang, 2012; Wang and Xu, 2017). These studies were all unit- or multi-level studies in which the HPWSs were represented at the unit level by single additive composite scores. Only three studies have focused on the relationships between multiple individual HPWPs and frontline employees' psychological service climate perceptions at an individual level of analysis (i.e., Lux *et al.*, 1996; Simon, 2020; Steinke, 2008). These studies all focused on *generic* HPWPs rather than on SO-HPWPs. Therefore, little is known about the extent to which multiple individual *SO-HPWPs* predict frontline employees' psychological service climate perceptions at an individual level of analysis.

Furthermore, as far as could be determined, no previous studies have investigated the extent to which several employee-rated SO-HPWPs *simultaneously* predict both psychological service climate and work engagement at an *individual* level of analysis. This is an important gap, because different SO-HPWPs may have varying impacts on service climate and on work engagement (Hauff, 2019). Understanding the varying impacts of different SO-HPWPs on service climate and work engagement is both theoretically and practically important. From a theoretical perspective, such insights may indicate whether it is appropriate to combine different SO-HPWPs into a single additive score to represent a SO-HPWS, or whether an alternative modelling approach would be more appropriate. From a managerial perspective, insights into the varying impacts of different SO-HPWPs on service climate and work engagement may help managers decide where to focus their HRM-related investments in order to enhance these two desirable outcome for employees.

By investigating the extent to which frontline employees' perceptions of six SO-HPWPs simultaneously predict both their individual psychological service climate perceptions and their work engagement, this study responded to the call by Hong *et al.* (2013) for more primary studies on the antecedents and outcome of psychological service climate at an individual level of analysis.

Gap 2: The second gap that this thesis focused on has to do with the fact that no previous studies have investigated the relationships between *employee-perceived* SO-HPWSs and *collective work engagement* at a unit level of analysis.

Most prior studies on the relationship between frontline service employees' perceptions of HPWSs and their work engagement were conducted at an *individual level* of analysis (Cooke *et al.*, 2019; Huang *et al.*, 2018; Huertas-Valdivia *et al.*, 2018; Karadas and Karatepe, 2019; Karatepe, 2013; Karatepe and Olugbade, 2016; Luu, 2019). Only two of these studies (i.e., Karatepe, 2013; Luu, 2019) specifically focused on SO-HPWSs, while the others investigated generic HPWSs. While work engagement is typically investigated at an individual level of analysis, a small number of studies have begun to investigate collective work engagement as a higher-level construct (i.e., Barrick *et al.*, 2015; Gracia *et al.*, 2013; Salanova *et al.*, 2005; Schneider *et al.*, 2018). However, as far as could be determined, none of these studies has investigated the relationship between employee-perceived SO-HPWSs and collective work engagement at a *unit level* of analysis. Exploring the relationship between employee-perceived SO-HPWSs and collective work engagement at a unit level of analysis is theoretically important, because one should not assume that relationships that hold at an individual level of analysis will necessarily generalize to higher levels of analysis in terms of their magnitude and/or direction (or vice versa) (Chan, 2006; Klein and Kozlowski, 2000a; Wong, 2015). From a practical perspective, Barrick *et al.* (2015) have shown that collective work engagement is positively related to firm performance. Managers, therefore, need to understand how frontline employees' shared perceptions of the SO-HPWSs they experience in their stores contribute to their collective work engagement at a store level of analysis and, ultimately, to indicators of store performance such as customer satisfaction and customer loyalty.

Gap 3: As far as could be determined, no previous studies have investigated the relationships between frontline employees' perceptions of SO-HPWSs as a multidimensional construct and service climate at a unit level of analysis. This represents the third gap this thesis sought to address.

The meta-analysis of Hong *et al.* (2013) found that both generic HRM practices and service-oriented HRM practices are positively correlated with service climate at a unit level of

analysis. This study also reported a significantly stronger meta-analytic correlation between service-oriented HRM practices and service climate than between generic HRM practices and service climate. The meta-analysis included nine studies that focused specifically on the relationship between service-oriented HRM practices and service climate at a unit level of analysis (Hong *et al.*, 2013). However, of these nine studies, only Chuang and Liao (2010) used a multi-dimensional conceptualization of SO-HPWSs containing several SO-HPWPs. The other eight studies each focused on two or three individual SO-HPWPs instead of on a comprehensive SO-HPWS. As far as could be determined, only two studies (i.e., Chuang and Liao, 2010; Jiang *et al.*, 2015) have investigated the unit-level relationship between multidimensional conceptualizations of SO-HPWSs and service climate to date. In both these studies, managers instead of frontline employees rated the SO-HPWSs. This is an important gap, since managers' perceptions of HPWSs often differ markedly from those of frontline employees (Den Hartog *et al.*, 2012; Jiang *et al.*, 2017). Consequently, additional research that specifically investigates the relationship between *frontline employees' evaluations* of SO-HPWSs and service climate at a *unit level* of analysis is required. This is important because ultimately is it frontline employees' shared perceptions of the HPWSs they experience in their respective stores that affect their shared service climate perceptions and subsequently their collective service-oriented behaviours directed at customers (Schneider *et al.*, 2005).

Gap 4: The fourth gap addressed by this thesis relates to the fact that there are currently two *competing perspectives* in the literature on the relationship between work engagement and service climate.

One perspective views work engagement as an antecedent of service climate (Kopperud *et al.*, 2014; Salanova *et al.*, 2005), while the other takes the opposite view and regards service climate as an antecedent of work engagement (e.g., Abdelhadi and Drach-Zahavy, 2012; Barnes and Collier, 2013; Carrasco *et al.*, 2011; Kang and Busser, 2018; Perry *et al.*, 2013). No studies have compared these two rival perspectives, and only two of the aforementioned studies, each representing one of the competing perspectives, were conducted at a unit level of analysis (Carrasco *et al.*, 2011; Salanova *et al.*, 2005). It is unclear, therefore, whether collective work engagement should be modelled as an antecedent or as an outcome of service climate at a unit level of analysis. From a theoretical perspective, it is

important to clarify the exact pathways through which service climate and collective work engagement affect frontline employees' collective in-role and extra-role service performance in order to enhance future theorising in this regard. Clarity on the specific roles of collective work engagement and service climate as antecedents of frontline employees' collective service-oriented behaviours are also managerially important as it will inform managers on where to focus their HRM-related investments to stimulate these behaviours.

Gap 5: No studies have investigated the extent to which service climate *simultaneously* predicts frontline employees' collective in-role and extra-role service performance. This represents the fifth gap explored in this thesis.

Frontline employees must simultaneously excel in terms of both their in-role and extra-role service performance in order to ensure customer satisfaction and loyalty (Morrison, 1996; Somech and Drach-Zahavy, 2016). The service climate in a store motivates frontline employees to engage actively in both in-role and extra-role service performance by signalling to them that these behaviours are supported, expected, and rewarded (Hong *et al.*, 2013; Jiang *et al.*, 2016; Linuesa-Langreo *et al.*, 2017). While several unit level studies have reported positive relationships between service climate and in-role service performance (e.g., Chuang and Liao, 2010; Jiang *et al.*, 2015; Jiang *et al.*, 2016; Lin and Liu, 2016; Linuesa-Langreo *et al.*, 2017; Salanova *et al.*, 2005; Yavas *et al.*, 2010), the relationship between service climate and extra-role service performance at a unit level of analysis has received less research attention (e.g., Schneider *et al.*, 2005; Tang and Tang, 2012). Furthermore, as far as could be determined, no prior studies have investigated both relationships simultaneously. This is an important gap, given Bowen and Schneider's (2014) conceptual arguments that service climate will primarily influence customer satisfaction through frontline employees' extra-role service performance. These arguments have not yet been tested empirically. By addressing this gap, the thesis responded to the call by Yavas *et al.* (2010) to investigate simultaneously the extent to which service climate predicts frontline employees' collective in-role *and* extra-role service performance in a retail context. As such, the thesis also contributed to the limited research on the unit-level relationship between service climate and frontline employees' extra-role service performance in particular (e.g., Schneider *et al.*, 2005; Tang and Tang, 2012).

Gap 6: Only one previous study (i.e., Towler *et al.*, 2011) has simultaneously investigated the interrelationships between service climate, customer satisfaction, and customer loyalty at a unit level of analysis. This represents the sixth gap addressed in this thesis.

As was indicated in Section 1.2.8 (p. 29), to date only four studies have investigated the relationship between service climate and customer loyalty (i.e., Liao and Chuang, 2004; Salanova *et al.*, 2005; Towler *et al.*, 2011; Wang, 2015), while only one of these studies (i.e., Towler *et al.*, 2011) simultaneously investigated the interrelationships between service climate, customer satisfaction, and customer loyalty at a unit level of analysis. However, Towler *et al.* (2011) deviated from the usual conceptualization of service climate as a unidimensional construct by arguing that service climate consists of two distinct but related constructs: concern for employees and concern for customers. In their structural model, concern for employees is modelled as an independent antecedent of concern for customers, which, in turn, predicts customer satisfaction. The latter predicts customer retention, which then predicts store profitability.

Clearly, the direct and indirect interrelationships between service climate, customer satisfaction, and customer loyalty deserve additional research attention, especially in the context of a larger model of the antecedents and outcomes of service climate as a unit-level construct. Marketing theorists and practitioners need to understand how service climate contributes to customer satisfaction and customer loyalty. This is important because both customer satisfaction and loyalty are key customer-related performance metrics. Furthermore, customer loyalty is linked to several desirable financially-focused outcomes such as reduced customer acquisition costs, increased customer share of spending, and reduced customer price sensitivity (Zeithaml *et al.*, 2018).

Gap 7: The final gap addressed in this thesis relates to the fact that no previous studies have tested an expanded structural model of the antecedents and outcomes of service climate at a unit level of analysis in which SO-HWPSs and collective work engagement are modelled as direct antecedents of service climate; collective in-role service performance, collective extra-role service performance, and customer satisfaction are modelled as direct outcomes thereof; and store loyalty is modelled as an indirect outcome of service climate (see Figure 1, p. 202).

While several of the bivariate relationships in this structural model have been studied in isolation in previous research (e.g., Bettencourt and Brown, 1997; Chuang and Liao, 2010; Jiang *et al.*, 2015; Linuesa-Langreo *et al.*, 2017; Maxham *et al.*, 2008; Salanova *et al.*, 2005; Tang and Tang, 2012), no prior studies have investigated the interrelationships between these seven constructs simultaneously at the unit level of analysis. Furthermore, only Towler *et al.* (2011) tested a structural model in which service climate predicts customer satisfaction, which, in turn, predicts customer loyalty. By testing an expanded model involving all eight of the aforementioned constructs, this thesis provides a richer perspective on the antecedents and outcomes of service climate. As such, this thesis responded to Hong *et al.*'s (2013) call for further unit-level studies on the antecedents and outcomes of service climate.

Overall, this thesis contributed to existing theory on the antecedents and outcomes of service climate at both an individual and store level of analysis. At an individual level of analysis, this thesis was the first to investigate the extent to which several employee-rated SO-HPWPs simultaneously predict frontline employees' psychological service climate perceptions and work engagement. The study's finding in this regard should assist managers to determine where to focus their HRM-related investments in order to bolster these two important employee outcomes. At a store level of analysis, this thesis contributed by clarifying the important role of service climate (over work engagement) as the direct antecedent of frontline employees' collective in-role and extra-role service performance and of customer satisfaction. Furthermore, the thesis tested an expanded store-level structural model of the antecedents and outcomes of service climate that links service climate and its antecedents to customer satisfaction and store loyalty.

To summarize, this thesis focused on seven specific gaps in the current academic understanding of the antecedents and outcomes of service climate at both an individual and a unit level of analysis. These seven gaps are summarized in Table 3, and are also reflected in the study's primary and secondary research objectives, which are presented in the next section.

Table 3: **The seven knowledge gaps addressed in this thesis**

Gap	Description
Gap 1	No previous studies have investigated the extent to which frontline employees' perceptions of the individual SO-HPWPs they experience simultaneously predict both their work engagement and their psychological service climate perceptions at an individual level of analysis.
Gap 2	No previous studies have investigated the relationship between employee-perceived SO-HPWSs and collective work engagement at a unit level of analysis.
Gap 3	No previous studies have investigated the relationship between employee-perceived SO-HPWPs as a multi-dimensional construct and service climate at a unit level of analysis.
Gap 4	No previous studies have empirically compared two competing perspectives on the relationship between collective work engagement and service climate at a unit level of analysis.
Gap 5	No previous studies have investigated the extent to which service climate simultaneously predicts frontline employees' collective in-role and extra-role service performance at a unit level of analysis.
Gap 6	Only one previous study has simultaneously investigated the interrelationships between service climate, customer satisfaction, and customer loyalty at a unit level of analysis. However, this study deviated from the usual conceptualization of service climate as a unidimensional construct.
Gap 7	No previous study has tested an expanded model of the antecedents and outcomes of service climate at a unit level of analysis that included SO-HPWSs and collective work engagement as its antecedents and in-role service performance, extra-role service performance, customer satisfaction and customer loyalty as its outcomes.

1.4 RESEARCH OBJECTIVES

The primary and secondary research objectives that guided the current study are presented below.

1.4.1 Primary research objective

The primary objective of this study was to examine the antecedents and outcomes of service climate in a retail context.

1.4.2   Secondary research objectives

To support the above primary research objective, the study aimed to achieve the following specific secondary research objectives, namely to:

1.   Evaluate the reliability and validity of the scales used to measure the constructs investigated in this study in a retail context.

2.   Determine the extent to which frontline employees' perceptions of SO-HPWPs predict their psychological service climate perceptions in a retail context.

3.   Determine the extent to which frontline employees' perceptions of SO-HPWPs predict their work engagement in a retail context.

4.   Determine the extent to which frontline employees' perceptions of SO-HPWSs predict collective work engagement and service climate in a retail context.

5.   Evaluate two competing perspectives on the interrelationships between frontline employees' perceptions of SO-HPWSs, collective work engagement, and service climate as predictors of these employees' collective in-role and extra-role service performance in a retail context.

6.   Determine the extent to which service climate predicts frontline employees' collective in-role and extra-role service performance in a retail context.

7.   Determine the extent to which service climate, collective in-role service performance, and collective extra-role service performance predict overall customer satisfaction in a retail context.

8.   Examine the relationship between overall customer satisfaction and store loyalty in a retail context.

9.   Propose and test a model depicting the interrelationships between frontline employees' perceptions of SO-HPWSs, collective work engagement, and service climate; store managers' evaluations of employees' collective in-role and extra-role service performance; and customers' evaluations of overall customer satisfaction and store loyalty in a retail context.

1.5   RESEARCH CONTEXT

Data for the current study were collected during the first quarter of 2019 from frontline employees, store managers, and customers nested in 70 stores of a single, multi-store South African retailer of tiles, taps, sanitaryware, and related home improvement products. In the remainder of this thesis, this retailer is described as 'the participating retailer'. The major South African retailers of tiles, taps, sanitaryware, and related products that compete in this industry are Bathroom Bizarre, Builder's Warehouse, Italtile Ltd (with three retail brands: CTM, Italtile Retail, and Top T), iTile, Tile Africa, and Union Tiles.

This thesis specifically focused on a traditional bricks-and-mortar retailer with physical stores for three reasons. First, in 2019 when the data for this study were collected, online retailing's share of total retail sales in South Africa was below 2% (Research and Markets, 2020). This means that, in 2019, most South African consumers shopped in-store and not online. This trend is likely to continue (Business Insider SA, 2021). Second, to test the store-level structural models included in Chapters 3 and 4, data had to be collected across multiple retail stores in which frontline employees interact directly with customers. Third, in traditional bricks-and-mortar stores, the service-oriented behaviours of the frontline employees that customers directly interact with remain an important determinant of customer satisfaction. Since traditional physical retail stores will continue to dominate the retail landscape in South Africa for the foreseeable future, it remains important to understand how service climate influence the service-oriented behaviours of frontline employees as well as the outcomes of these behaviours in the form of customer satisfaction and store loyalty.

There is unfortunately very little information available in the public domain on the South African retail industry in general and on retailers of tiles, taps, sanitaryware, and related products in particular. As far as could be determined, Italtile Ltd is the only public company listed on the Johannesburg Stock Exchange that operates in this retail sub-industry. In its 2018/2019 annual report, Italtile's chairperson described the firm's external trading environment as "negative", "weak", and "testing". He also stated the following: "It is likely that the prevailing socio-economic challenges will persist for the foreseeable future and, in that light, we anticipate that consumer confidence and spend will remain weak" (Italtile Limited, 2019, p. 5). Italtile's 2018/2019 annual report also lists the following three industry

trends that reflect the challenging trading conditions that prevailed during the company's 2018-2019 financial year (Italtile Limited, 2019):

- Constrained disposable income continues to curtail discretionary consumer spending.

- The trading environment is highly competitive, with an increase in "opportunistic traders" owing to a global oversupply of tiles, which puts pressure on profit margins.

- Significantly reduced or deferred spending by premium-segment consumers.

The five sub-sections below provide a broader overview of the South African retail industry. Available information on customer satisfaction in the South African retail industry are presented first. Thereafter, the focus is placed on the economic conditions that prevailed in the first quarter (i.e., January to March) of 2019, when the current study's data were collected. The discussion covers the contribution of the 'trade' industry (which includes retailing) to South Africa's gross-domestic product (GDP); overall retail sales levels; employment in the South African retail trade industry; and business confidence among South African retailers.

1.5.1   <u>Customer satisfaction in the South African retail industry</u>

There are no industry-wide customer satisfaction data available for the South African retail industry as a whole. As a result, it is impossible to compare competing retailers on customer satisfaction or to make pronouncements on the service-orientation of South African retailers in general. The available comparable customer satisfaction data suggest that South African retailers perform on par with their counterparts in the United States of America (USA).

For example, the results of the South African Customer Satisfaction Index (SAcsi), which uses the same methodology as the American Customer Satisfaction Index (ACSI), showed an *industry* satisfaction score of 76.7 in 2018 for the five largest South African supermarket chains (i.e., Checkers, PnP, Shoprite, Spar, and Woolworths) compared to an ACSI industry satisfaction score of 78 for supermarkets in the USA in the same year (Consulta Research, 2019a). Similarly, the 2018 SAcsi industry satisfaction score for the seven largest South African clothing retailers was 77.9 compared to an ACSI industry satisfaction score of 78 for speciality retailers in the USA which include many clothing retailers (Consulta Research,

2019b). This again shows that South African clothing retailers are on par with their counterparts in the USA. Unfortunately, similar comparative customer satisfaction data are not available for other South African retailers.

1.5.2   The contribution of the retail industry to South Africa's GDP

GDP represents the total value of the goods and services that are produced within the geographic boundaries of a country in a specified period (Statistics South Africa, 2013). In the South African GDP figures provided quarterly by Statistics South Africa, the retail industry forms part of the larger 'trade' industry, which encompasses wholesale and retail trade, catering, and accommodation (Statistics South Africa, 2019b).

In the first quarter of 2019, the broader 'trade' industry contributed 15% of South Africa's nominal GDP (i.e., the GDP at current prices), which made it the third largest industry in the South African economy after finance and business services (20%) and government (19%) (Statistics South Africa, 2019a). In the same period, South Africa's real GDP decreased by 3.2% on a quarter-on-quarter basis, while the 'trade' industry's real GDP shrank by 3.6%.

Figure 1 shows the quarter-on-quarter growth rate in GDP for the South African economy as a whole (in blue) and for the 'trade' industry (in green) for 2018, 2019, and the first quarter of 2020. For five of the nine quarters shown, the 'trade' industry contracted more or grew slower than the overall economy. This highlights the difficult trading conditions retailers generally experienced in this period. Trading conditions in the 'trade' industry were particularly difficult in the first quarter of 2019, when the current study's data were collected, with a quarter-on-quarter decline of 3.6% in the industry's real GDP.

Figure 1: **Percentage quarter-on-quarter change in the total real GDP and the real GDP of the 'trade' industry at constant 2010 prices, seasonally adjusted and annualized**
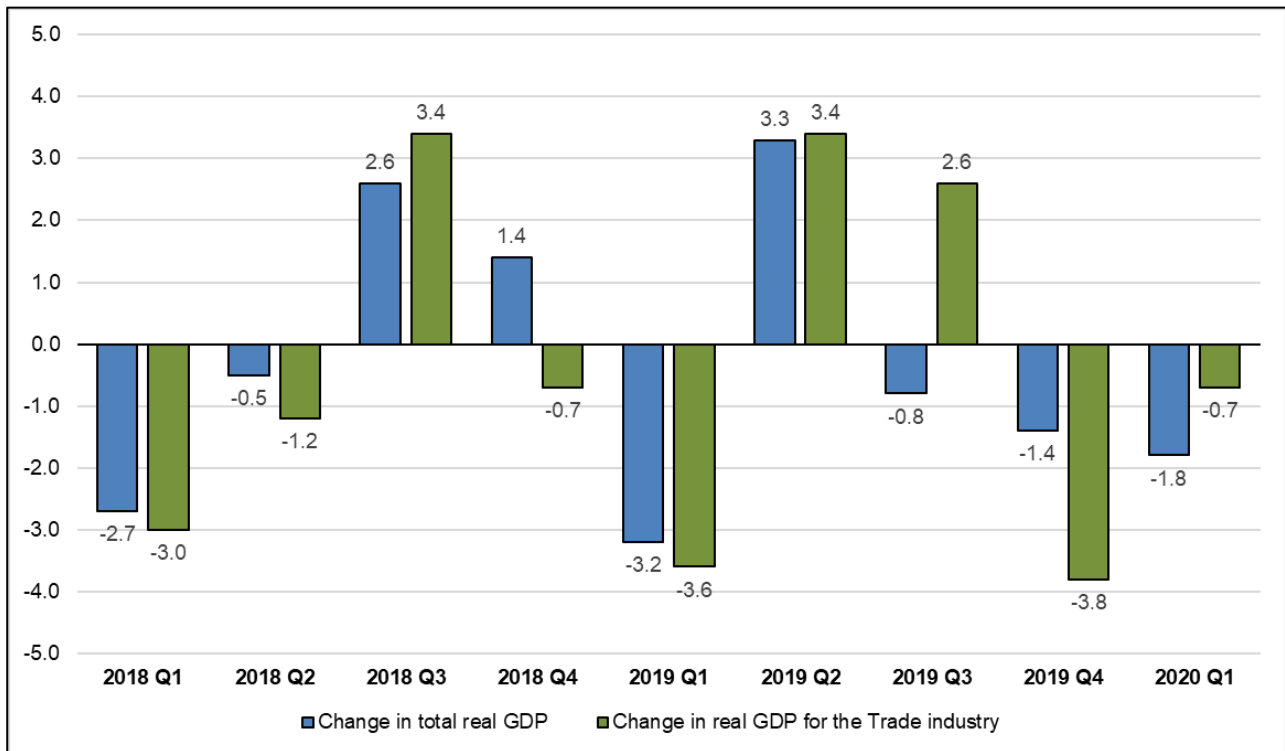
1.5.3   Overall retail sales levels in South Africa

Statistics South Africa conducts a monthly survey of the retail industry that covers, *inter alia*, retailers of hardware, paint, and glass (Statistics South Africa, 2020e). This retail category encompasses the products sold by the participating retailer. These survey results indicate that *total* retail trade sales in South Africa amounted to R220.037 billion in the first quarter of 2019 (at constant 2015 prices), which represents a 1.0% increase compared with the first quarter of 2018.

Figure 2 shows the total quarterly retail sales (at constant 2015 prices) for retailers of hardware, paint, and glass from the first quarter of 2018 to the first quarter of 2020. Sales by retailers of hardware, paint, and glass amounted to R17.381 billion (at constant 2015 prices) in the first quarter of 2019, or 7.83% of total retail sales (Statistics South Africa, 2019c). This was R263 million (or 1.49%) less than in the first quarter of 2018. Clearly, retailers in this product category have faced increasingly tough trading conditions since the

start of 2018, with quarterly retail trade sales slowly decreasing on a year-by-year basis over this period.

Figure 2: **Retail trade sales at constant 2015 prices for retailers of hardware, paint, and glass (R million)**
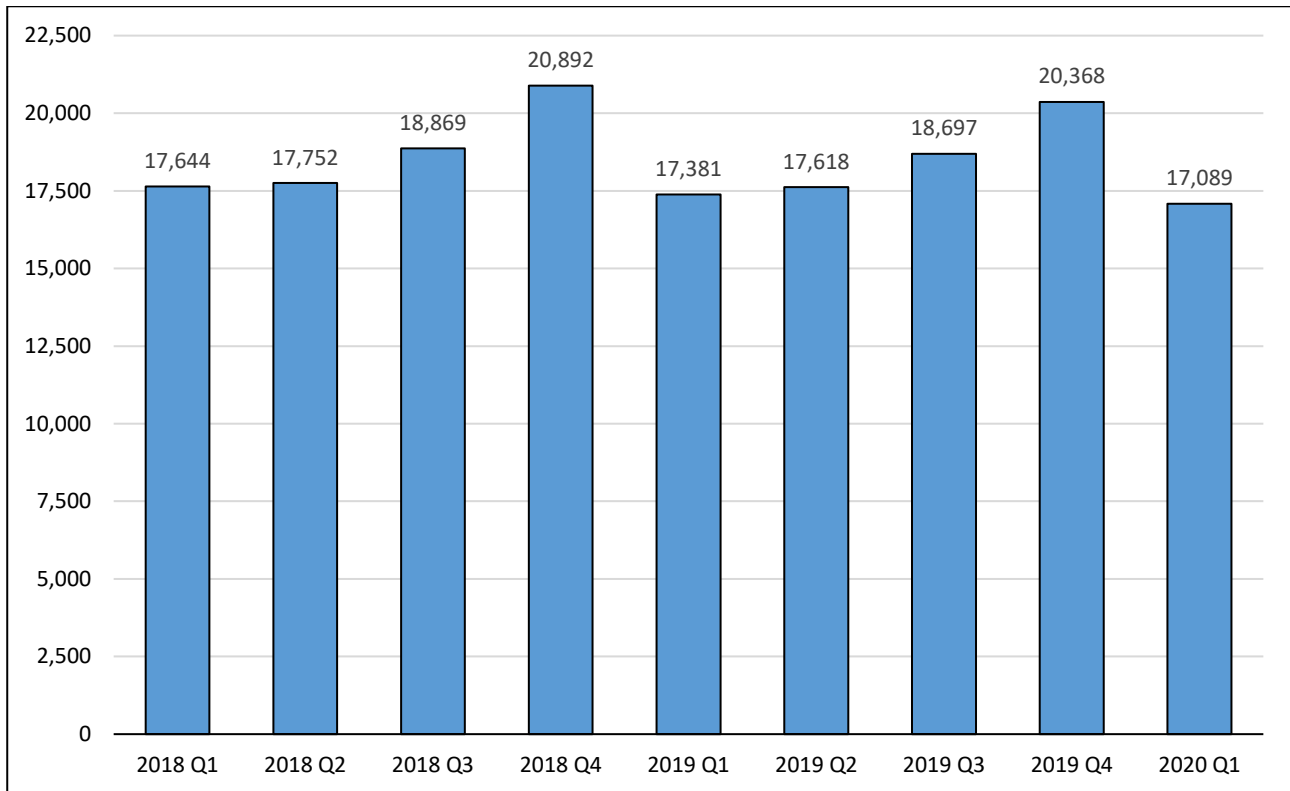
Source: Statistics South Africa (2020b)

1.5.4 Employment in the South African retail sector

There are two official sources of employment statistics in South Africa: the Quarterly Labour Force Survey and the Quarterly Employment Survey (QES). The former is a quarterly household-based survey, while the latter is a quarterly establishment-based survey of non-agricultural businesses and other organizations functioning in the formal sector of the South African economy (Statistics South Africa, 2020d). This section provides statistics on formal-sector employment in the retail trade industry, based on data obtained from the QES (Statistics South Africa, 2020c).

Figure 3 (p. 45) indicates the total number of employees employed in the retail trade industry per quarter from the first quarter of 2018 to the first quarter of 2020, based on data from the

QES (Statistics South Africa, 2020c). The retail trade industry employed an estimated 950 701 employees in the first quarter of 2019, compared with 915 759 in the first quarter of 2018. This represents a year-on-year growth in employment of 3.82%, compared with the first quarter of 2018. However, 16 865 job opportunities were lost in the retail trade industry in the first quarter of 2019, compared with the last quarter of 2018 – a trend that continued in the second and third quarters of 2019.

Figure 3: **Total number of employees in the retail trade industry from the first quarter of 2018 to the first quarter of 2020, based on data from the Quarterly Employment Survey**
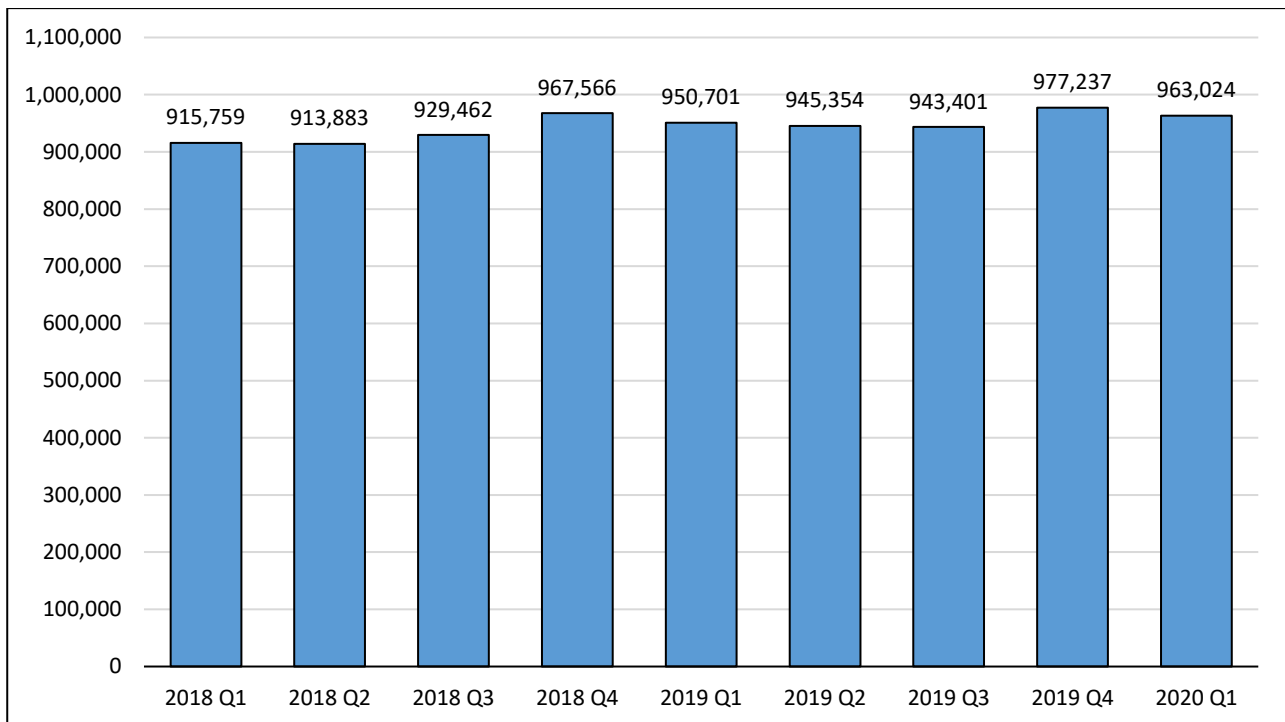
Source: Statistics South Africa (2020c)

1.5.5   Business confidence in the South African retail sector

The business confidence index (BCI) compiled by the Bureau for Economic Research (BER) at Stellenbosch University is a useful indicator of economic growth, and a very good lead indicator of the South African business cycle (Kershoff, 2000). The BCI is based on survey data that the BER collects each quarter from a panel of business executives. More specifically, the BCI indicates the percentage of respondents who provided an answer of 'satisfactory' to the following single survey question: "Do you find prevailing business conditions satisfactory or unsatisfactory?" (Kershoff, 2000). The BCI measures business

confidence on a scale of 0 to 100, with a value of 0 indicating an extreme lack of confidence, 50 indicating neutrality, and 100 indicating extreme confidence (Kershoff, 2000).

Figure 4 (p. 47) shows the quarterly values of the BCI for 2018, 2019, and the first quarter of 2020. The figure provides the BCI values for the whole retail sector in blue, and the corresponding values for retailers of durable goods in orange. Durable goods include, *inter alia*, hardware, paint, and glass, with hardware encompassing the types of product sold by the participating retailer (Bureau for Economic Research, 2019).

In the first quarter of 2019, the BCI for the whole retail sector was 24. This means that only 24% of the respondents from this sector rated the prevailing business conditions at that time as satisfactory, while the remaining 76% rated the business conditions as unsatisfactory (Kershoff, 2000). The BCI values in Figure 4 further indicate that business confidence was substantially lower at the time of the data collection during the first quarter of 2019 for retailers in general, and specifically for durable goods retailers, compared with the first quarter of 2018. Business confidence among retailers remained depressed for the remainder of 2019, and declined further in the first quarter of 2020.

Figure 4: Values of the business confidence index for the retail sector as compiled by the Bureau for Economic Research (BER) at Stellenbosch University
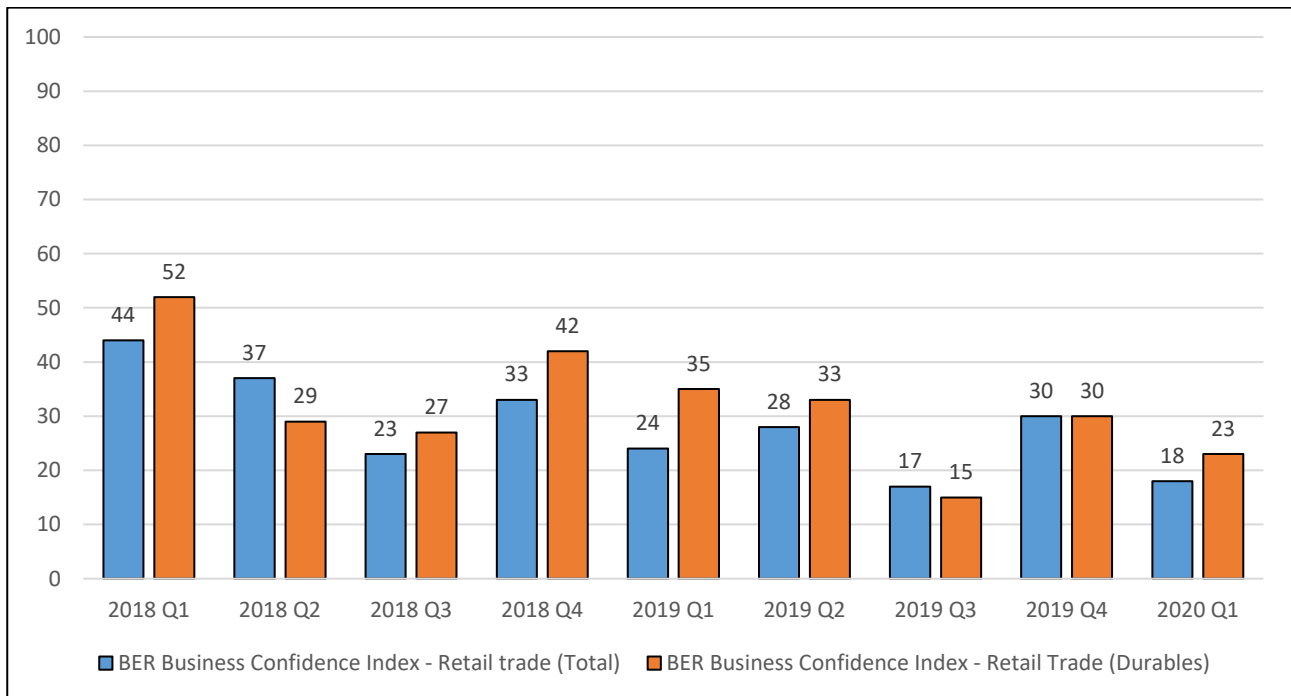
Source: Bureau for Economic Research (2020)

Overall, the statistics presented above show that South Africa's retail industry experienced an economic contraction, lower sales volumes, lower employment levels, and subdued business confidence in the first quarter of 2019 when the data for this thesis were collected.

The next section describes the overall research strategy, as well as the data collection and analysis methods used in this thesis.

1.6   METHODOLOGY

1.6.1   Research strategy

Saunders *et al.* (2019, p. 189) define the term 'research strategy' broadly as "a plan of how a researcher will go about answering her or his research question", and note that a study's research strategy is the methodological link between the researcher's philosophy and his/her subsequent choice of data collection and analysis methods. These authors identify several different research strategies, including surveys, experiments, case studies, ethnographies, grounded theory research, and narrative inquiries (Saunders *et al.*, 2019).

The current study used a cross-sectional *survey research strategy* in which large samples of respondents were selected to complete structured questionnaires containing closed-ended questions at one point in time in order to obtain quantitative data that were analysed statistically to examine the patterns of relationships between specific variables (Bryman and Bell, 2011).

1.6.2   Sampling

This study tested four structural models based on data collected from frontline employees, store managers, and customers. The first structural model was tested at an individual level of analysis, while the other three models were tested at a store level of analysis on data aggregated to this level. Because the study involved two types of structural models – i.e., individual-level and store-level models – it does not have a single overarching target population. Instead, the levels and units of analysis and the target populations differ between the two types of structural models. These issues are explained in the three sub-sections below. First, the units and levels of analysis associated with the two types of structural models are discussed. Next, the target populations related to the two types of structural model are delineated. Finally, the sampling methods used in the study are described.

1.6.2.1   *Units and levels of analysis*

Organizations are multilevel systems that comprise many interacting layers (Costa *et al.*, 2013; Klein and Kozlowski, 2000b). For example, in an organization, individual employees may be members of teams; multiple teams may be nested in departments, stores, branches, or other outlets; and multiple outlets may be nested in different business units or regions. Finally, multiple organizations may compete in the same market. Broadly speaking, organizational studies may focus on individual employees or on higher-level organizational units such as dyads, teams, departments, outlets, organizational functions, business units, or organizations as a whole (Klein and Kozlowski, 2000b). A researcher's decisions about the entities to be investigated in a study determine the study's units and level of analysis.

The *units of analysis* of a study are the persons or other entities being studied (Carr *et al.*, 2018; Vogt, 2005). These can be individual people or high-level organizational units such

as teams, stores, or departments. When a study's units of analysis are individual people, all statistical analyses are conducted at the individual level of analysis on data collected from individual respondents. When a study's units of analysis are higher-level organizational units, such as stores, data are typically collected from individual respondents and then aggregated to and analysed at the applicable higher level of analysis. Here the term 'level of analysis' refers to the organizational level to which data are aggregated and at which the data are analysed to test a study's hypotheses (Costa *et al.*, 2013).

For the first structural model tested in this thesis, the units of analysis were individual frontline employees. Data were collected through an online survey with the individual frontline employees as the respondents. All subsequent statistical analyses were conducted at an individual level of analysis without aggregating the data to higher-level organizational units. For this structural model, therefore, both the units and the levels of analysis were at the level of individual employees.

For the three store-level structural models, the units of analysis were the 70 participating retail stores. Data were collected through surveys of individual employees, store managers, and customers. Thereafter, the extent of agreement or consensus in employees' and customers' ratings of the focal constructs within the participating stores were evaluated with applicable aggregation statistics – namely, $r_{wg(j)}$, ICC(1), and ICC(2). Next, the individual-level employee and customer ratings were aggregated to the store level. Because store managers evaluated the *collective* in-role and extra-role service performance of all the frontline employees in their respective stores, these ratings were already at the store level, and did not require further aggregation. All subsequent statistical analyses were conducted on the aggregated store-level data. A similar approach was used in several previous studies conducted at the level of stores, branches, or other outlets (e.g., Chuang and Liao, 2010; Ehrhart *et al.*, 2011; Jiang *et al.*, 2015). In the store-level structural models, therefore, the units of analysis were the 70 participating retail stores.

In this thesis, the term 'individual level' is used to refer to studies conducted at an individual level of analysis on data collected from individual respondents, where the individual is the unit of analysis. The term 'store level' specifically refers to studies conducted on data aggregated to the store level, where different retail stores are the units of analysis (e.g.,

Chuang and Liao, 2010; Jiang *et al.*, 2015). Finally, the term 'unit level' refers more generically to previous studies conducted on data aggregated to any higher-level organizational entities (e.g., teams; departments; stores, branches, or other outlets; or business units), with these higher-level entities as the units of analysis.

As indicated earlier, the first structural model was tested at an individual level of analysis, while the remaining three structural models were tested at the store level of analysis on data aggregated to this level. When interpreting the findings related to these four structural models, one should consider that findings involving the same or similar variables do not generalize neatly and exactly across levels of analysis (Klein and Kozlowski, 2000a). Relationships that hold at one level of analysis may be stronger or weaker at another level of analysis, or may even be in the opposite direction (Klein and Kozlowski, 2000a). In short, just because a relationship holds at one level of analysis does not mean that it will also hold at another level of analysis (Klein and Kozlowski, 2000a). Two errors of inference can occur in this regard: the ecological fallacy and the atomistic fallacy.

The *ecological fallacy* occurs when researchers attempt to generalize findings based on aggregated or higher-level data back to the individual level (Chan, 2006; Diez Roux, 2002; Klein and Kozlowski, 2000a). This is because the correlations between aggregated variables at higher levels of analysis (also known as ecological correlations) are often much stronger than the corresponding individual-level correlations (Chan, 2006; Klein and Kozlowski, 2000a). For example, in the context of the current study, one should *not* use the store-level correlation between work engagement and service climate to reach conclusions about the corresponding individual-level relationship between these two constructs. Doing so would constitute an ecological fallacy.

The *atomistic fallacy* is simply the opposite of the ecological fallacy, and occurs when researchers generalize findings from individual-level studies to higher levels (Chan, 2006; Diez Roux, 2002; Klein and Kozlowski, 2000a). In the context of the current study, for example, this means that one should not generalize the individual-level correlation between frontline employees' perceptions of service-oriented training and psychological service climate perceptions investigated in the first structural model to the store-level of analysis. Doing so would constitute an atomistic fallacy.

This discussion has two important implications for the findings reported in this thesis. First, readers should bear in mind that the first structural model was tested at an individual level of analysis, and so its results should only be applied at this level. Similarly, the results of the three store-level structural models should only be applied to that level. To avoid an atomistic fallacy, the individual-level results should not be applied to the store level. Similarly, to avoid an ecological fallacy, the store-level results should not be applied to the individual level. Second, when interpreting the study's findings, readers should carefully consider the level (i.e., individual or store level) at which the analyses were conducted and to which the findings can consequently be applied.

1.6.2.2   *Target population*

According to Burns and Veeck (2020), the target population of a study represents the entire group of people or other elements (e.g., stores) about which the researcher wishes to make inferences based on the data obtained from a sample selected from the specified population.

Because this thesis involved two types of structural models – i.e., one individual level and three store-level models – it does not have a single overarching target population. Instead, it has two distinct target populations that coincide with the two types of structural models involved.

The first structural model aimed to determine the extent to which six SO-HPWPs predict individual employees' work engagement and psychological service climate perceptions at an individual level of analysis. To this end, data were collected from a sample of frontline employees selected from 70 of the participating retailer's stores. Since this individual-level structural model intended to make inferences from a sample of frontline employee respondents to all the participating retailer's frontline employees; these employees constitute the target population for the first model. In this study, 'frontline employees' refers to customer-facing employees who spend most of their time interacting directly with customers (Schepers and van der Borgh, 2020). These employees include salespeople, cashiers, warehouse assistants, and dispatch assistants.

The three store-level structural models focused on the store-level relationships between the variables investigated in this thesis. For these models, the data collected from frontline employees, store managers, and customers were aggregated *to the store level to represent attributes of the participating stores.* Since the intention was to investigate the relationships between the study variables at store level and to generalize the findings to all the participating retailer's stores, these stores constitute the target population for the three store-level structural models.

1.6.2.3   *Sampling methods and sample size*

The participating retailer provided a list of store managers and frontline employees per store for 70 of its stores located in South Africa. To ensure a sufficient number of stores and respondents per store for the store-level analyses, all the store managers and frontline employees on the retailer's list were invited to participate in the study. As such, the researchers attempted to conduct a census of store managers and frontline employees. Ultimately, a self-selected sample of 70 store managers and 781 frontline employees from 70 stores participated in the study. This constitutes 100% of the retailer's store managers and 82% of the frontline employees respectively. An average of 11.16 employees responded per store (SD = 4.47, range: 3-23). The average size of the employee sample per store is comparable to the sample sizes reported in several previous unit-level studies involving service climate (e.g., Chuang and Liao, 2010; Jiang *et al.*, 2016; Tang and Tang, 2012). The store-level sample size of 70 stores is also similar to the sample sizes reported in previous unit-level studies (e.g., Chi *et al.*, 2011; Greenslade and Jimmieson, 2011; Susskind *et al.*, 2018a).

Because no sampling frame of customers was available, store employees distributed self-completion paper-based questionnaires to customers during busy trading times after the completion of a sales transaction (also see Section 1.6.5, p. 56). This constitutes a non-probability convenience sampling approach (Zimmerman and Beneke, 2014). A target of a minimum of 10 completed customer questionnaires per store was achieved for 91% of the participating stores. In the remaining stores, a minimum of eight completed customer questionnaires was obtained. A total of 803 customers completed the customer questionnaire, while an average of 11.47 customers (SD = 4.30, range = 8-34) participated

per store. The average size of the customer sample per store is comparable to the sample sizes reported in prior studies (e.g., Gracia *et al.*, 2010; Salanova *et al.*, 2005; Yavas *et al.*, 2010).

1.6.3   Measurement

The three questionnaires used in the current study (see Appendix F, p. 341) were developed after an extensive review of relevant literature, and were all administered in English. The scales included in each questionnaire are described below, and the scale items used are listed in Table 1 in Appendix G (p. 351). None of the scale items had to be reverse-scored. Following the recommendations of Podsakoff *et al.* (2003), MacKenzie *et al.* (2012), Jordan and Troth (2019), and Cooper *et al.* (2020), the multiple item ratings scales used in this study had different scale point labels and, in the case of work engagement, also a different number of scale points to counteract common method variance.

1.6.3.1   *Employee questionnaire*

Frontline employees' perceptions of the service climate in their respective stores were measured with five items from the global service climate scale of Schneider *et al.* (1998). This is the most frequently used measure of service climate (Hong *et al.*, 2013). One of the original scale items (i.e., "How would you rate the effectiveness of your store's communication efforts to both employees and customers?") was split into two separate items because of concerns about its double-barrelled nature (cf. Ling *et al.*, 2016). Respondents rated the resulting six items on a five-point scale labelled as 1 = Very poor, 2 = Poor, 3 = Fair, 4 = Good, and 5 = Excellent. See Q1 in the employee questionnaire on p. 342.

To find an appropriate measure of frontline employees' perceptions of the SO-HPWSs in their respective stores, the existing scales of Chuang and Liao (2010), Hong *et al.* (2017), and Liao *et al.* (2009) were reviewed. At face value, these scales measured a mix of generic and SO-HPWPs. Consequently, a 26-item scale was compiled based on the aforementioned scales, but with a more specific focus on SO-HPWSs. This scale was pretested with three senior executives, a store manager, and four frontline employees. After the pretest, minor changes were made to clarify the wording of some of the scale items. All items were

measured on a five-point Likert scale ranging from 1 = Strongly disagree to 5 = Strongly agree. The 26 items measured service-oriented staffing (five items), training (four items), financial compensation (four items), non-financial rewards and recognition (five items), involvement (five items), and empowerment (three items). These six SO-HPWPs were included in several previous studies involving SO-HPWSs (e.g., Jiang *et al.*, 2015; Liao *et al.*, 2009; Luu, 2019) and were relevant to the participating retailer. See Q2 in the employee questionnaire on p. 343.

The nine-item version of the Utrecht Work Engagement Scale (UWES-9; Schaufeli *et al.*, 2016) was adapted to measure employees' work engagement. As in previous South African studies (e.g., Goliath-Yarde and Roodt, 2011; Naude and Rothmann, 2004; Storm and Rothmann, 2003), the pretest indicated that the employee respondents, who were all non-native English speakers, were uncertain about the meaning of several of the scale items that contained idiomatic expressions and unfamiliar words. As recommended by Storm and Rothmann (2003) and Naude and Rothmann (2004), six of the original nine items were reworded to simplify and clarify their meaning. Table 4 (p. 54) shows the original and the adapted scale item wording. Respondents answered the adapted UWES-9 scale on a seven-point response scale, with the scale points numbered and labelled as prescribed by Schaufeli and Bakker (2004). See Q3 in the employee questionnaire on p. 344.

Table 4: Original and adapted wording of the UWES-9 scale used in this study

Original items	Adapted items used in the current study
At my work, I feel bursting with energy.	I have a lot of energy when I am at work.
At my job, I feel strong and vigorous.	At my job, I feel strong and full of energy.
When I get up in the morning, I feel like going to work.	Original item used.
I am enthusiastic about my job.	I like my job very much.
My job inspires me.	Original item used.
I am proud of the work that I do.	Original item used.
I feel happy when I am working intensely.	I feel happy when I am working hard.
I am immersed in my work.	I give all my attention to my work.
I get carried away when I am working.	I am very excited when I am working.

1.6.3.2   *Store manager questionnaire*

Store managers were asked to evaluate the collective in-role and extra-role service performance of all the frontline employees in their respective stores with the scales developed by Bettencourt and Brown (1997). These scales measure in-role and extra-role service performance with five items each on a Likert scale ranging from 1 = Strongly disagree to 5 = Strongly agree, and have been used in several prior studies (e.g., Cheng and Chen, 2017; Karatepe, 2011; Luu, 2019; Tuan, 2018). As in previous research (Jiang *et al.*, 2015; Jiang *et al.*, 2016; Linuesa-Langreo *et al.*, 2017), store managers were asked to think of the typical behaviour of all the frontline employees in their store when answering the scale items. See Q1 and Q2 in the manager questionnaire on p. 347 and p. 348 respectively.

1.6.3.3   *Customer questionnaire*

The customer questionnaire contained scales to measure customers' overall satisfaction with their visit to the store and their store loyalty. Customers' overall satisfaction with their store visit on the day they were surveyed was measured with three items taken from Ferraro *et al.* (2017). These items were presented on a five-point Likert scale with scale points labelled as 1 = Strongly disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree, and 5 = Strongly agree. See Q1 in the customer questionnaire on p. 350.

Respondents' loyalty to the specific store where they were intercepted was measured with a four-item, five-point rating scale. Three of the items were taken from the loyalty sub-dimension of the behavioural intentions scale of Zeithaml *et al.* (1996), while the fourth item was taken from the repurchase intention scale of Dutta *et al.* (2007). The scale points were labelled as 1 = Very unlikely, 2 = Unlikely, 3 = Neither likely nor unlikely, 4 = Likely, and 5 = Very likely. See Q2 in the customer questionnaire on p. 350.

1.6.4   <u>Ethical clearance</u>

The Research Ethics Committee of the Faculty of Economic and Management Sciences at the University of Pretoria granted ethical clearance for the study on 16 October 2018

(Protocol number: EMS137/18). The University of Pretoria's Code of Ethics for Research (Rt 429/99) guided the execution of the research process in the current study.

1.6.5 <u>Data collection</u>

Data were collected concurrently from frontline employees, store managers, and customers during February and March 2019. Owing to operational and financial constraints, it was not possible to collect the employee, manager, and customer data at different points in time.

Frontline employees and store managers were invited to complete an online survey hosted on Qualtrics, an online survey platform. The participating retailer's chief operating officer informed frontline employees and store managers about the study via e-mail. Thereafter, personalized survey invitations were e-mailed to all respondents. These invitations contained background information on the study, assurances of confidentiality and anonymity, and a link to the online survey. After the initial e-mail invitation, three follow-up reminders were sent to non-responders over a four-week period.

In the customer survey, each store manager appointed one or more employees to distribute self-completion paper-based questionnaires to customers after the completion of a sales transaction. This constitutes a store intercept survey (Chang *et al.*, 2015). The employees who administered the customer questionnaires were instructed to approach customers waiting at the pay points, request their participation in the survey, and then hand the questionnaire over to the customer to complete. These employees were further instructed not to interact with the customers while they were completing the questionnaire unless a customer requested assistance. Because the stores were located across South Africa, this was the only feasible option for collecting data from customers. The participating retailer specifically asked that the customer questionnaire be kept as short as possible so as not to inconvenience its customers or to disrupt its operations.

1.6.6 <u>Procedural remedies to counteract common method bias</u>

Common method variance is frequently mentioned as a methodological concern associated with survey research (Malhotra *et al.*, 2016). For example, Hulland *et al.* (2018) identified

common method variance as an important concern in their recent review of survey research studies published in three top marketing journals. It refers to systematic error variance that is shared between the measures of different constructs because of the measurement method used (Podsakoff *et al.*, 2003), while the bias caused by common method variance is known as 'common method bias' or simply as 'method bias' (Malhotra *et al.*, 2016). Common method variance is problematic because it can bias estimates of construct reliability and validity as well as estimates of the relationships between constructs (Podsakoff *et al.*, 2012). While common method variance is a complex issue (for reviews, see Podsakoff *et al.*, 2003; Podsakoff *et al.*, 2012), methodologists agree that it is likely to occur in cross-sectional surveys in which data on the predictor and criterion variables are obtained from the same respondents (Hulland *et al.*, 2018; Malhotra *et al.*, 2016; Min *et al.*, 2016).

While it is impossible to eliminate all sources of common method variance, experts recommend that researchers take steps prior to survey administration to limit the potentially distorting effect of common method variance (Conway and Lance, 2010; Hulland *et al.*, 2018; MacKenzie and Podsakoff, 2012). These a priori steps are known as procedural remedies (MacKenzie and Podsakoff, 2012; Podsakoff *et al.*, 2003).

Based on the recommendations of Podsakoff *et al.* (2003), MacKenzie and Podsakoff (2012), Jordan and Troth (2019) and Cooper *et al.* (2020), six procedural remedies were implemented in the current study to counteract the potentially distorting effects of common method bias. First, data on the focal constructs were obtained from different respondent groups. More specifically, frontline employees provided ratings on SO-HPWSs, work engagement, and service climate; store managers evaluated the collective in-role and extra-role service performance of the frontline employees in their respective stores; while data on overall customer satisfaction and store loyalty were obtained directly from customers. Second, the employee and store manager questionnaires were carefully pretested to ensure that the questions were clear and, where necessary, contained firm-specific terminology with which the respondents were familiar. As indicated earlier, based on a pretest, the wording of six of the items in the UWES-9 scale that contained unfamiliar words and idiomatic expressions were changed to simplify and clarify their meaning. Third, the introduction to all three questionnaires indicated that participation in the study was voluntary and anonymous.

Frontline employees and store managers were also assured that no one in the participating retailer would see their individual answers. Respondents were further encouraged to answer the survey questions honestly, and were reminded that there were no correct answers to the survey questions. Fourth, the employee and customer questionnaires used varying numbers of scale points and different scale point labels to measure the focal constructs. Lastly, in the online employee survey, the sub-scales measuring the six SO-HPWPs were presented to respondents in random order. In both the employee and manager surveys, the order of presentation of the individual scale items was also randomized.

1.6.7   Data analysis

Table 5 (p. 59) summarizes the major statistical analyses that were conducted for each chapter on the quantitative data collected in this study. It also indicates the data sets used and the level of analysis involved. These analyses are described in more detail below.

Table 5: **Data sets analysed and major statistical analyses conducted per chapter**

	Chapter 2	Chapter 3	Chapter 4
Data sets used	Employee data	Employee and store manager data	Employee, store manager and customer data
Level of analysis	Individual level	Individual and store level	Individual and store level

Major statistical analyses conducted	On the individual-level employee data:
	• Confirmatory factor analysis (CFA)
	• Reliability assessment through:
	  ▪ Cronbach's alpha
	  ▪ Composite reliability
	• Validity assessment through:
	  ▪ Inspection of standardized factor loadings
	  ▪ Average variance extracted (AVE) ≥ 0.5
	  ▪ AVE > squared correlation between construct pairs
	• Evaluation of common method variance with one-factor CFA test
	• Test of structural model with structural equation modelling (SEM)
		On the individual-level employee data:
		• Used the results of the analyses conducted on the employee data for Chapter 2
		• Calculation of aggregation statistics: $r_{wg(j)}$, ICC(1), ICC(2)
		• Aggregation of data to store level & creation of store-level composite scores
		• Store-level reliability assessment with Cronbach's alpha
		• Merging of store-level employee and manager data into a single data set
		
		On the store manager data:
		• Confirmatory factor analysis (CFA)
		• Reliability assessment through:
		  ▪ Cronbach's alpha
		  ▪ Composite reliability
		• Validity assessment through:
		  ▪ Inspection of standardized factor loadings
		  ▪ Average variance extracted (AVE) ≥ 0.5
		  ▪ AVE > squared correlation between construct pairs
		• Evaluation of common method variance with one-factor CFA test
		
		On the aggregated and combined store-level employee and manager data:
		• Test of structural model with single-indicator path analysis approach
			On the store-level employee and manager data:
			• Used the results of the analyses conducted on the employee and manager data for Chapters 2 and 3
			• Used the aggregated and combined store-level employee and manager data set created for Chapter 2.
			On the individual-level customer data:
			• Confirmatory factor analysis (CFA)
			• Reliability assessment through:
			  ▪ Cronbach's alpha
			  ▪ Composite reliability
			• Validity assessment through:
			  ▪ Inspection of standardized factor loadings
			  ▪ Average variance extracted (AVE) ≥ 0.5
			  ▪ AVE > squared correlation between construct pairs
			• Evaluation of common method variance with one-factor CFA test
			• Calculation of aggregation statistics: $r_{wg(j)}$, ICC(1), ICC(2)
			• Aggregation of data to store level & creation of store-level composite scores
			• Store-level reliability assessment with Cronbach's alpha
			• Merging of store-level employee, manager and customer data into a single data set
			
			On the aggregated and combined store-level employee and manager data:
			• Test of structural model with single-indicator path analysis approach

Several software programs were used in the data analysis process, including Microsoft Excel 2016 (hereafter abbreviated as 'Excel'); IBM SPSS Statistics for Windows version 26 ('SPSS'); Mplus version 8.3 ('Mplus'); and version 2.6 of the *multilevel* package ('the R multilevel package') in version 3.6.3 of the R statistical language and environment for statistical computing. Excel was used to check the data for coding errors, while SPSS was used to calculate descriptive statistics and Cronbach's alpha. The study's measurement and structural models were tested in Mplus. This program was selected over rivals such as IBM SPSS AMOS or LISREL for two reasons. First, Mplus was the software program of choice for CFA and SEM analyses of one of my statistical advisors. Second, as is explained in more detail in Section 1.6.7.3, Mplus was used because several methodologists recommend the WLSMV estimator in Mplus as the best option with which to model responses to ordinal categorical scales when the data have an asymmetric distribution (Brown, 2015; Finney *et al.*, 2016; Kline, 2016; Li, 2016). Finally, the R multilevel package was used to calculate the required aggregation statistics.

1.6.7.1 *Data screening and univariate descriptive statistics*

Excel and SPSS were used to screen the study's data for coding errors and to calculate univariate descriptive statistics. More specifically, means and standard deviations as well as skewness and kurtosis coefficients were calculated for all the rating scale items. Frequency counts were also requested on all the rating scale items, and on the categorical demographic questions, to investigate the spread of responses obtained.

These analyses showed that most respondents selected either a 4 or a 5 on the five-point ratings scales use to measure most of the latent variables, or a 5 or 6 on the seven-point rating scale used to measure work engagement. Table 6 summarizes the extent to which respondents endorsed the two highest scale points for each scale used in the study's three questionnaires. The fact that the majority of respondents selected one of the two highest scale points for all the constructs measured in the study introduced a range restriction into the data, and therefore affected the choice of an appropriate estimation method for the confirmatory factor and structural equation modelling analyses.

Table 6: **Respondents' endorsement of the two highest scale points on rating scales**

Construct	Number of scale points used	Average percentage of respondents who selected one of the two highest scale points	Average skewness	Average kurtosis
Employee-rated				
Service climate	5	83.8% (Range: 72.1%-93.3%)	-0.84	0.81
Staffing	5	77.3% (Range: 73.8%-81.3%)	-0.97	0.99
Training	5	86.1% (Range: 82.0%-91.2%)	-1.23	1.81
Financial compensation	5	76.5% (Range: 68.0%-80.5%)	-1.08	0.78
Non-financial rewards and recognition	5	70.7% (Range: 50.3%-80.0%)	-0.85	0.38
Involvement	5	89.7% (Range: 85.4%-92.9%)	-1.36	2.90
Empowerment	5	88.3% (Range: 84.1%-93.0%)	-1.25	2.38
Work engagement	7	91.1% (Range: 86.7%-96.0%)	-2.88	9.99
Manager-rated				
In-role service performance	5	82.2% (Range: 71.4%-98.6%)	-0.42	0.94
Extra-role service performance	5	84.0% (Range: 80.0%-91.4%)	-0.72	1.34
Customer-rated				
Overall customer satisfaction	5	97.6% (Range: 97.1%-98.2%)	-2.41	9.22
Store loyalty	5	97.7% (Range: 97.1%-98.2%)	-2.34	9.70

1.6.7.2   *Handling of missing data*

As is the case in most survey studies, the respondents in the current study did not always answer all the rating scale statements contained in the three survey questionnaires. Table 7 summarizes the extent of missing responses in the three study questionnaires.

Table 7: **Extent of missing data in the three study questionnaires**

Questionnaire	No. of scale items in questionnaire	No. of rating scale items with missing responses	Average percentage of missing responses on individual scale items with missing responses
Employee	41	41	0.7% (Range: 0.0% - 1.2%)
Store manager	10	1	0.1% (Range: 0.0% - 1.4%)
Customer	7	7	0.6% (Range: 0.4% - 0.7%)

Given the overall low levels of missing data in all three surveys, missing responses were in all cases replaced by the *median* value of the specific variable in question. Median or mean substitution is appropriate if the level of missing data is very low (i.e., less than 5%), as is the case in the current study (Cook, 2021; Parent, 2012).

1.6.7.3   *Measurement model evaluation*

As indicated earlier, this study collected data from frontline employees, store managers, and customers. Three confirmatory factor analyses (CFAs) were used to evaluate the dimensionality of the responses obtained from each of these three respondent groups, with a separate CFA conducted on the data obtained from each group. The information obtained from these CFA analyses was subsequently used to evaluate the reliability and validity of the scales completed by each group of respondents. This section provides an overview of the analyses conducted to evaluate the three measurement models tested in this thesis.

➢   *Confirmatory factor analysis:*

Three measurement models were tested in this thesis: one on the responses obtained from each of the three respondent groups. In the three CFAs, the latent variables were scaled by setting the unstandardized factor loading of the first indicator of each latent variable to 1. Since Mardia's test of multivariate kurtosis indicated that the data violated the assumption of multivariate normality (Byrne, 2016), the three CFAs were conducted with robust diagonally weighted least squares estimation using the WLSMV estimator in Mplus (Finney *et al.*, 2016).

While maximum likelihood (ML) estimation is the default and most widely used estimation method in CFA analyses (Li, 2016), it requires that the observed variables included in an analysis be continuous and multivariate normally distributed in the population (Li, 2016). This assumption is typically violated when the observed variables have been measured on ordinal categorical scales such as Likert-type scales (Finney and DiStefano, 2013). While applied researchers often use the default ML estimation method on data obtained from Likert-scale measures (Finney and DiStefano, 2013), methodologists argue that the DWLS estimator – specifically, the WLSMV option in MPlus – is more appropriate, especially when the observed variables have an asymmetric distribution, as is the case in the current study (Brown, 2015; Finney *et al.*, 2016; Kline, 2016; Li, 2016).

Simulation studies indicate that the use of ML estimation when analysing ordered categorical data obtained from Likert-type scales may lead to inaccurate χ^2 values, parameter

estimates, and standard errors (Finney *et al.*, 2016). Importantly, these inaccuracies are magnified in asymmetrical (i.e., non-normal) data with five or fewer response categories (Finney and DiStefano, 2013; Finney *et al.*, 2016). More specifically, as the number of response categories decreases *or* the degree of asymmetry (i.e., non-normality) in the data increases, ML-based χ^2-values are inflated, and so fit indices indicate worse model fit than actually exists, which leads to the increased rejection of correctly specified models (Finney and DiStefano, 2013; Finney *et al.*, 2016). In addition, parameter estimates and standard errors are increasingly negatively biased as item-level non-normality increases and as fewer response categories are present (Finney and DiStefano, 2013; Finney *et al.*, 2016). If standard errors are underestimated, the p-values associated with tests of statistical significance for parameter estimates may be inflated, leading to an increased risk of Type I errors during the estimation process (Finney and DiStefano, 2013). Given these negative implications, Finney *et al.* (2016) indicate that the default unadjusted ML estimator "is not recommended when modeling ordered categorical variables with fewer than five categories and/or nonnormally distributed ordered categorical data". Finney and DiStefano (2013) recommend that diagonally weighted least squares estimation be used instead. In Mplus, this is implemented with the WLMV estimator (Wang and Wang, 2020).

Three fit indices were used to evaluate the overall fit of the three measurement models: the comparative fit index (CFI), the root mean square error of approximation (RMSEA) and its 90% confidence interval, and the standardized root mean square residual (SRMR). The measurement models were deemed to have acceptable fit if CFI $\geq$ 0.95, RMSEA < 0.08, and SRMR < 0.08 (Brown, 2015; Hu and Bentler, 1999; Keith, 2019).

➢ *Reliability assessment:*

Following the recommendations of Hair *et al.* (2019), two reliability coefficients – Cronbach's alpha (α, also known as 'coefficient alpha') and composite reliability (CR; also known as 'construct reliability') – were calculated to evaluate the internal consistency reliability of the scores obtained from the scales used in this study. Cronbach's alpha was calculated in SPSS, while CR was calculated in Excel. In both cases, values $\geq$ .70 indicate acceptable internal consistency reliability (Hair *et al.*, 2019; Malhotra *et al.*, 2017).

➢ *Validity assessment:*

The *convergent validity* of each scale was assessed by inspecting the factor loadings of the applicable scale items and by calculating the average variance extracted (AVE) for each scale. Methodologists recommend that standardized factor loadings be statistically significant, have an appropriate sign, fall within the -1.0 to 1.0 range, and have loadings of at least 0.5 but preferably 0.7 or larger (Hair *et al.*, 2019; Malhotra *et al.*, 2017). The standardized factor loadings produced by Mplus for each scale were checked against these criteria. In addition, AVE was calculated in Excel. An AVE of ≥ 0.5 indicates satisfactory convergent validity (Hair *et al.*, 2019; Malhotra *et al.*, 2017) and means that the latent construct, on average, accounts for 50% or more of the variance in the measured variables (Malhotra *et al.*, 2017).

The *discriminant validity* of each scale was evaluated by comparing the AVE values for each pair of constructs with the estimated correlation between the constructs. The scales measuring the two constructs have discriminant validity if the AVE values of both scales are larger than the square of the estimated correlation between the constructs (Hair *et al.*, 2019; Malhotra *et al.*, 2017). In the same way, discriminant validity is achieved if the square root of the AVE is larger than the estimated correlation between the constructs (Malhotra *et al.*, 2017).

➢ *Evaluation of common method variance:*

To evaluate the possible extent of common method variance in the data, a variant of Harman's one-factor test was used. This involves using a χ^2 difference test to compare the fit of the hypothesized multi-factor measurement model with a one-factor measurement CFA model in which all the manifest indicators load on a single latent factor (Cooper *et al.*, 2020). This approach was used in several previous studies involving service climate (e.g., Hoang *et al.*, 2018; Kang and Busser, 2018; Lin and Liu, 2016). When the WLSMV estimator in Mplus is used, a special χ^2 difference test is conducted with the DIFFTEST option included in the program (Brown, 2015).

1.6.7.4 *Structural model evaluation*

A total of four structural models were tested in this thesis using structural equation modelling (SEM) approaches. The first structural model was tested on individual level data collected from frontline employees, while the remaining three structural models were tested at a store level of analysis on aggregated data obtained from multiple respondent groups. Different modelling approaches were used to test the individual and store-level structural models. The testing of the three store-level structural models was preceded by additional analyses – namely, the calculation of aggregation statistics to justify data aggregation, the calculation of store-level aggregate and composite scores, and the calculation of Cronbach's alpha on the store-level aggregate scores. These analyses are described below.

➢ *Testing of the individual-level structural model:*

A SEM analysis was conducted with the WLSMV estimator in MPlus to test the first structural model on the *individual-level* data obtained from frontline employees (n = 781). In this model, the individual scale items measuring each construct were used as manifest indicators of their respective constructs. The structural model was deemed to have an acceptable fit if CFI $\geq$ 0.95, RMSEA < 0.08, and SRMR < 0.08 (Brown, 2015; Hu and Bentler, 1999; Keith, 2019).

➢ *Data aggregation:*

The three remaining structural models were tested on data aggregated to the store level of analysis. To justify statistically the aggregation of the data to the store level, three aggregation statistics – $r_{wg(j)}$, ICC(1) and ICC(2) – were first calculated with the multilevel package in R. These three aggregation statistics are widely used to justify the aggregation of individual-level ratings to higher levels of analysis (Biemann *et al.*, 2012; LeBreton and Senter, 2008) and have been reported in several previous unit-level studies involving service climate (e.g., Jiang *et al.*, 2015; Jiang *et al.*, 2016; Myer *et al.*, 2016).

The three aggregation statistics were calculated for each of the employee- and customer-rated constructs. Because the store managers evaluated the collective in-role and extra-role service performance of all the frontline employees in their respective stores, these ratings

were already at the store level of analysis. It was therefore not necessary to calculate aggregation statistics on the manager-rated data. The abovementioned three aggregation statistics are discussed below, starting with $r_{wg(j)}$.

Researchers often use $r_{wg(j)}$ to evaluate within-unit agreement in respondents' ratings across the items in a multiple-item rating scale (LeBreton and Senter, 2008). This statistic is calculated separately for each unit (e.g., each store) in a study (Bliese, 2000). In the current study, a separate $r_{wg(j)}$ value was calculated for each of the 70 stores on each of the employee- and customer-rated scales. Values of $r_{wg(j)}$ typically range from 0 to 1, with higher values indicating higher levels of within-unit agreement in respondents' scores (Woehr *et al.*, 2015). Traditionally, a cut-off of 0.70 has been used to distinguish adequate from inadequate within-unit agreement (Biemann *et al.*, 2012). Most researchers calculate the mean or median $r_{wg(j)}$ value for each construct across the units in their studies, and then compare this value with the cut-off of 0.70 (Biemann *et al.*, 2012). A value of 0.70 indicates that 70% of the variance in unit members' ratings of the focal construct is due to their agreement, while the remaining 30% is due to error variance in the form of random responding (Krasikova and LeBreton, 2019; LeBreton and Senter, 2008). More recently, LeBreton and Senter (2008) proposed the following cut-off values for different levels of agreement: 0.00-0.30 (lack of agreement); 0.31-0.50 (weak agreement); 0.51-0.70 (moderate agreement); 0.71-0.90 (strong agreement); and 0.91-1.00 (very strong agreement).

When calculating $r_{wg(j)}$, one has to specify a null distribution that indicates the variance in respondents' scores when there is a total lack of agreement (i.e., when respondents respond randomly) (LeBreton and Senter, 2008). Choosing an appropriate null distribution "is the single greatest factor complicating the use of r_{wg}-based indices" (LeBreton and Senter, 2008, p. 829). Most researchers use a uniform (i.e., rectangular) null distribution when calculating $r_{wg(j)}$, which assumes that each scale point has an equal probability of being selected when respondents answer randomly (Krasikova and LeBreton, 2019; LeBreton and Senter, 2008). Because the uniform distribution is associated with the largest estimate of error variance, it yields the largest values of $r_{wg(j)}$ (LeBreton and Senter, 2008) and, as such, should be regarded as providing an upper-bound estimate of within-unit agreement (Biemann *et al.*, 2012). However, forms of response bias such as social desirability, leniency, or central

tendency may result in non-uniform distributions, even when respondents answer randomly (Krasikova and LeBreton, 2019). Consequently, methodologists recommend that, in addition to the uniform distribution, researchers also consider alternative null distributions that more accurately reflect random responding in the context of their respective studies (Krasikova and LeBreton, 2019; LeBreton and Senter, 2008). The choice of these alternative null distributions should be based on the researcher's expectations of the applicable forms of response bias, and not on the distribution of ratings observed in a particular study (Biemann *et al.*, 2012). When calculating $r_{wg(j)}$, Biemann *et al.* (2012) suggest that researchers use the uniform distribution to obtain an upper-bound estimate of within-unit agreement, and one or more alternative, measure-specific null distributions to calculate the lower-bound estimates.

Based on these recommendations, and following Ehrhart *et al.* (2011), $r_{wg(j)}$ was calculated in this thesis with both a uniform and a slightly skewed null distribution. The latter null distribution is appropriate because frontline employees may exhibit a positive leniency when evaluating the service climate and SO-HPWS in their own store (Ehrhart *et al.*, 2011; Tuan, 2017). Several recent studies used a slightly skewed null distribution to calculate $r_{wg(j)}$ (e.g., Chen *et al.*, 2018a; Ehrhart *et al.*, 2011; Gardner *et al.*, 2011; Rego *et al.*, 2016; Tuan, 2017).

In addition to $r_{wg(j)}$, researchers also report the two interclass correlation coefficients – ICC(1) and ICC(2) – to justify data aggregation. In the current study, ICC(1) was calculated for each employee- and customer-rated construct across all the participating stores (Castro, 2002). ICC(1) indicates the proportion of variance in individual-level ratings explained by unit membership (Bliese, 2000). For example, an ICC(1) value of 0.15 indicates that 15% of the variance in individual-level ratings is explained by unit membership. A large ICC(1) value indicates a strong unit effect, with little individual variability within units (Bliese, 1998). ICC(1) can be interpreted as an effect size, with a value of 0.01 indicating a small effect, a value of 0.10 indicating a medium effect, and a value of 0.25 indicating a large effect (LeBreton and Senter, 2008). However, ICC(1) values as small as 0.05 "may provide prima facie evidence of a [unit] effect …" and should be followed by additional analyses to determine the viability of aggregating individual-level scores to the unit level (LeBreton and Senter, 2008, p. 838).

ICC(2) was also calculated for each employee- and customer-rated construct across all units in this study, and indicates how reliably unit-level mean scores (calculated across the ratings

provided by the respondents in each unit) distinguish between units (Krasikova and LeBreton, 2019; LeBreton and Senter, 2008). ICC(2) values are generally considered acceptable if they are ≥ 0.70 (Klein and Kozlowski, 2000b), but some authors (e.g., Hong *et al.*, 2017; Salanova *et al.*, 2005; Torrente *et al.*, 2012) use the lower benchmark of 0.60 recommended by Glick (1985). The value of ICC(2) is related to that of ICC(1) as a function of unit size. The more respondents per unit, the larger the value of ICC(2) for a given value of ICC(1) (Bliese, 2000; Ehrhart *et al.*, 2014). In this regard, Klein and Kozlowski (2000a) specifically indicate that the value of ICC(2) will exceed 0.70 only if the unit sizes in the sample are sufficiently large, or if the between-group variability of a measure is sufficiently large, or both. Because climate studies often involve small within-unit sample sizes and relatively small ICC(1) values, Ehrhart *et al.* (2014) note that ICC(2) values in climate studies are typically in the 0.40–0.60 range.

> ➤ *Calculation of store-level aggregate and composite scores:*

After considering the three aggregation statistics, store-level aggregate and composite scores were calculated for each of the employee- and customer-rated constructs. Table 8 (p. 69) illustrates how the store-level aggregate and composite scores for service climate were calculated. This illustration is based on the responses that seven respondents from one of the participating stores provided to the six scale items measuring service climate. The table shows that the store-level aggregate score for each scale item is an average of the employees' ratings on the specific item, while the store-level composite score is an average of the six item-specific aggregate scores. A similar approach was used to calculate store-level aggregate and composite scores for work engagement and for the two customer-rated constructs (i.e., overall customer satisfaction and store loyalty).

Table 8:   **Calculation of store-level aggregate and composite scores**

	B	C	D	E	F	G	H
2	**Respondent**	**Item 1**	**Item 2**	**Item 3**	**Item 4**	**Item 5**	**Item 6**
3	Respondent 1	4	3	3	4	3	2
4	Respondent 2	3	4	4	4	4	4
5	Respondent 3	4	2	5	4	5	2
6	Respondent 4	5	4	4	3	4	3
7	Respondent 5	4	3	5	4	5	2
8	Respondent 6	4	3	5	5	4	4
9	Respondent 7	2	2	3	4	3	3
10	**Aggregate scores:**	3.71	3.00	4.14	4.00	4.00	2.86
	Formula used:	=AVERAGE(C3:C9)	=AVERAGE(D3:D9)	=AVERAGE(E3:E9)	=AVERAGE(F3:F9)	=AVERAGE(G3:G9)	=AVERAGE(H3:H9)

Composite score: **3.62**
Formula used: =AVERAGE(C10:H10)

Although SO-HPWSs is a multi-dimensional construct with six sub-dimensions, it was represented by a single additive score in the subsequent store-level SEM analyses. This approach is widely used in studies on strategic HRM, and is aligned with one of the central premises of strategic HRM research, namely that the impact of HPWPs is best understood by investigating the HPWS in place rather than individual HPWPs (Chuang *et al.*, 2013; Liao *et al.*, 2009). It also ensures a favourable ratio of sample size to estimated parameters, given the overall small store-level sample size (n = 70) (Chuang and Liao, 2010). The additive score was created based on the sub-scale aggregation method used in several previous studies (e.g., Aryee *et al.*, 2012; Chuang *et al.*, 2013; Chuang and Liao, 2010; Jiang *et al.*, 2015; Liao *et al.*, 2009; Piening *et al.*, 2013). First, a sub-scale composite score was calculated for each of the six SO-HPWP sub-scales included in the current study, based on the method explained above. Thereafter, the single additive score was created by averaging the six SO-HPWP sub-scale scores.

As indicated earlier, the store managers' ratings of frontline employees' collective in-role and extra-role service performance was already at a store level of analysis. It was not necessary, therefore, to calculate aggregate scores for each of the items measuring these two constructs. Instead, two composite scores were calculated to represent collective in-role and extra-role service performance respectively. These two composite scores were calculated for each store as the average of each store manager's responses to the five scale items measuring each of these two constructs.

➢   *Calculation of Cronbach's alpha on store-level scores:*

Next, Cronbach's alpha was calculated on the store-level aggregate scores associated with each of the employee-, manager- and customer-rated constructs. Calculating Cronbach's alpha at the store level is advantageous because it aligns the reliability estimates with the level at which the study's hypotheses are tested (Chen *et al.*, 2004; Mathieu *et al.*, 2006). Several previous unit-level studies have reported unit-level Cronbach's alphas (e.g., Du *et al.*, 2015; Gracia *et al.*, 2010; Gracia *et al.*, 2013; Jiang *et al.*, 2016; Maynard *et al.*, 2019; Maynard *et al.*, 2012; Weller *et al.*, 2020), with values ≥ 0.70 indicating acceptable internal consistency reliability at the store level.

➢   *Testing of the store-level structural models:*

Because of the small store-level sample size (n = 70), the three store-level structural models were all tested with a single-indicator path analysis approach. Since Mardia's test of multivariate kurtosis did not indicate a problem with the multivariate normality of the store-level composite scores (Byrne, 2016), these three structural models were tested with ML estimation in Mplus.

In the store-level path analyses, each latent variable was measured by a single composite scale score. Measurement error was incorporated into the models by setting the path from each latent variable to its composite scale score to the square root of the specific measure's reliability. The random error variance of each single-item indicator was also set to 1 minus its reliability multiplied by the scale score's variance (i.e., [1 – reliability] x variance). Several previous unit-level studies (e.g., Chi *et al.*, 2011; Greenslade and Jimmieson, 2011; Jiang *et al.*, 2015; Lee *et al.*, 2011; Maltarich *et al.*, 2016; Mathieu *et al.*, 2009; Maynard *et al.*, 2019; Maynard *et al.*, 2012; Susskind *et al.*, 2018b) have used this modelling approach, which has two major advantages: first, it allows for the evaluation of structural models in cases where the sample size does not meet traditional sample size requirements; and second, it enables researchers to incorporate measurement error into their analyses (Greenslade and Jimmieson, 2011).

When using the above modelling approach, one has to select an indicator of scale reliability to include in the formulas. Previous studies have used individual-level Cronbach's alpha

values (e.g., Chi *et al.*, 2011; Greenslade and Jimmieson, 2011), unit-level Cronbach's alpha values (e.g., Maynard *et al.*, 2019; Maynard *et al.*, 2012), or ICC(2) values (e.g., Jiang *et al.*, 2015; Susskind *et al.*, 2018a) as reliability indicators. Following Maynard *et al.* (2012) and Maynard *et al.* (2019), store-level Cronbach's alpha values were used as indicators of reliability in the current study. This aligns the reliability indicators included in the path analysis model with the level of analysis at which the model is tested (Chen *et al.*, 2004; Mathieu *et al.*, 2006).

The CFI and SRMR were used to assess the overall fit of the three store-level structural models, with CFI $\geq$ 0.95 and SRMR < 0.08 indicating acceptable model fit (Brown, 2015; Hu and Bentler, 1999; Keith, 2019).

Because of the large sample size and degrees of freedom involved in the measurement models tested on the individual-level employee- and customer-rated data in Chapters 2 and 4, and on the individual-level structural model tested in Chapter 2, it was appropriate to use RMSEA to assess the fit of these models. However, RMSEA was not used to evaluate the fit of the store-level structural models tested in Chapters 3 and 4 because of the small store-level sample size and the models' small degrees of freedom. Kenny *et al.* (2015) recommend that the RMSEA not be used to evaluate the fit of models with small degrees of freedom in small samples. In this regard, they argue as follows:

> "Using the RMSEA to assess model fit in models with small *df* is problematic and potentially misleading unless the sample size is very large. We urge researchers, reviewers and editors not to dismiss models with large RMSEA values with small *df* without examining other information. In fact, we think that it is advisable for researchers to completely avoid computing the RMSEA when model *df* are small" (Kenny *et al.*, 2015, p. 503)

In addition, Curran *et al.* (2003) found that the sample-based estimates and confidence intervals of RMSEA are inaccurate for sample sizes smaller than 200. Furthermore, MacCallum *et al.* (1996) point out that the width of the confidence interval for RMSEA is influenced by both the sample size and the model's degrees of freedom. If both are small (as is the case in the current study), then the confidence internal of RMSEA will be wide.

Such a wide confidence interval has no diagnostic value. In this regard, MacCallum *et al.* (1996) argued that, if a model yields a low value of RMSEA but a wide confidence interval, researchers should recognize that there may be substantial imprecision in the sample-based estimate of RMSEA – in which case one cannot accurately evaluate the degree of model fit in the population based on the confidence interval. These authors further indicate that models with low degrees of freedom should not be evaluated using the confidence intervals of RMSEA unless the sample size is extremely large (MacCallum *et al.*, 1996).

Consequently, several studies that tested unit-level structural models with small degrees of freedom in small samples have not reported RMSEA, but have focused on CFI and SRMR instead (e.g., Chen *et al.*, 2018b; Tremblay and Simard, 2018; Walumbwa *et al.*, 2017).

In the SEM analysis, Mplus by default estimated the correlation between the disturbance terms of in-role and extra-role service performance. These terms, also known as 'residual' or 'error' terms, represent all other influences on in-role and extra-role service performance respectively that were not included as antecedents in the structural model (Keith, 2019). According to Keith (2019), correlated disturbance terms may indicate that an unmeasured common cause that is not included in the model affects both of these constructs. Alternatively, it may indicate that in-role and extra-role service performance are causally related, but that the direction of this causal relationship is unknown (Keith, 2019).

Two competing store-level structural models of the relationship between service climate and work engagement were compared in Chapter 3. These two competing models are based on the same variance-covariance matrix, involve the same number of estimated parameters and degrees of freedom, and are, therefore, not nested. Consequently, it was not possible to compare these two competing models with a chi-square difference test. Instead, the two non-nested competing models were compared based on their Akaike information criterion (AIC) and Bayes information criterion (BIC) values. The model with the smaller AIC and BIC values has a better fit, and is more likely to replicate (Kline, 2016; Wang and Wang, 2020).

1.7 CHAPTER OUTLINE

This section outlines the structure of the thesis with reference to its five chapters.

Chapter 1 introduces and contextualizes the study. The chapter first describes social information processing theory as the guiding theory that underpins this research effort. The seven constructs investigated in this thesis are also introduced. Next, the research problems addressed in this thesis are discussed. Thereafter, the study's primary and secondary research objectives are presented. The chapter also describes the context in which the study was conducted. This is followed by a detailed description of the methodology and methods used to collect and analyse the primary data collected in the study. The chapter concludes with an overview of the structure of the thesis.

Chapter 2 presents the first article included in this thesis, titled *Service-oriented high-performance work practices as predictors of retail employees' work engagement and service climate perceptions*. This article investigated the extent to which six SO-HPWPs – service-oriented staffing, training, financial compensation, non-financial rewards, involvement, and empowerment – predict frontline employees' psychological service climate perceptions and work engagement at an individual level of analysis (see Figure 1, p. 109). A shortened version of the article was submitted to the *Services Marketing Quarterly*, a B-rated journal according to the 2019 Australian Business Deans Council Journal Quality List (hereafter abbreviated as the ABDC list).

Chapter 3 presents the second article in this thesis, titled *Predicting retail employees' in-role and extra-role service performance: A store-level test of two competing models*. This article compared two competing models of the antecedents of frontline employees' collective in-role and extra-role service performance at a store level of analysis (see Figure 1, p. 145). In the first model, the *engagement-centric model*, SO-HPWSs and service climate are direct antecedents of collective work engagement, which, in turn, predicts employees' collective in-role and extra-role service performance. In the second model, the *climate-centric model*, SO-HPWSs and collective work engagement are direct predictors of service climate, which, in turn, predicts employees' collective in-role and extra-role service performance. This article was prepared according to the author guidelines of the *Journal of Service Theory and*

Practice, an A-rated journal according to the ABDC list. At the time of the submission of this thesis, Article 2 was being finalized for submission to the journal.

Chapter 4 presents the third and final article in this thesis, titled *The antecedents and outcomes of service climate in a retail setting*. This article tested an expansion of the climate-centric model introduced in Chapter 3. In this model (see Figure 1, p. 202), SO-HPWSs predict service climate and collective work engagement, while collective work engagement also predicts service climate. The latter, in turn, predicts employees' collective in-role and extra-role service performance. All three variables are direct antecedents of customer satisfaction, which, in turn, predicts store loyalty. This article was prepared according to the author guidelines of *Marketing Intelligence and Planning*, an A-rated journal according to the ABDC journal quality list. At the time of the submission of this thesis, Article 3 was being prepared for submission to the journal.

Chapter 5, the final chapter in this thesis, summarizes and discusses the study's overall findings, and elaborates on its theoretical and managerial implications. Next, the chapter describes the study's contributions. The chapter concludes by discussing the study's main limitations, and by offering related recommendations for future research.

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CHAPTER 2

SERVICE-ORIENTED HIGH-PERFORMANCE WORK PRACTICES AS PREDICTORS OF RETAIL EMPLOYEES' WORK ENGAGEMENT AND SERVICE CLIMATE PERCEPTIONS

Chapter 2 presents the first article in this thesis. The purpose of this article was to investigate the extent to which six SO-HPWPs – service-oriented staffing, training, financial compensation, non-financial rewards, involvement, and empowerment – predict frontline employees' psychological service climate perceptions and work engagement at an individual level of analysis.

A shortened version of this article was submitted to the *Services Marketing Quarterly*, a Taylor & Francis publication and B-rated journal according to the 2019 ABDC journal quality list. The editorial guidelines of this journal are included in Appendix B (p. 328). To ensure consistency throughout this thesis, the article was written in South African English, and its referencing was done in the same version of the Harvard referencing style used in Articles 2 and 3. In addition, the headings, table and figure captions, page margins, font type and font size used in this chapter have not been aligned with the aforementioned editorial guidelines, but have been kept consistent throughout the thesis. As explained in the 'Remarks' on p. i, I used the active voice, the first-person plural pronoun 'we', and the plural possessive determiner 'our' in this chapter to ensure direct, clear, and concise sentences.

Chapter 2 concludes with a summary of the main findings of this article that contribute to the primary research objective of this thesis. This summary is located on p. 135.

CHAPTER 2

SERVICE-ORIENTED HIGH-PERFORMANCE WORK PRACTICES AS PREDICTORS OF RETAIL EMPLOYEES' WORK ENGAGEMENT AND SERVICE CLIMATE PERCEPTIONS

ABSTRACT

Using survey data collected from 781 frontline employees of a South African retailer, this paper investigated the degree to which employees' perceptions of six service-oriented high-performance work practices (SO-HPWPs) – service-oriented staffing, training, financial compensation, non-financial rewards, involvement, and empowerment – predict their work engagement and service climate perceptions. It was found that employees' perceptions of involvement, training, and staffing predicted their service climate perceptions, while only training was a statistically significant predictor of employees' work engagement. The paper contributes to the limited research on the relationship between individual SO-HPWPs and these two crucial employee outcomes.

Keywords: Service-oriented high-performance work practices (SO-HPWPs), service climate, work engagement, retailing

2.1 INTRODUCTION

Frontline employees play a critical role in ensuring positive customer experiences and in enhancing customer satisfaction in most service contexts, including traditional brick-and-mortar retailing (Wirtz and Lovelock, 2016). In high-contact service settings, frontline employees personify the organization and represent 'the brand' in the minds of consumers (Zeithaml *et al.*, 2018). It is important, therefore, to understand the factors that affect these employees' motivation and service-related behaviours.

Previous studies indicate that high-performance work systems (HPWSs) have a positive impact on service employees' work engagement (e.g., Huertas-Valdivia *et al.*, 2018; Salanova *et al.*, 2005) and service climate perceptions (e.g., Jiang *et al.*, 2015; Tang and Tang, 2012). An HPWS is a system of internally coherent high-performance work practices

(HPWPs) aligned with organizational strategy that, as a system, influences employees' work-rated behaviours and, ultimately, also impacts organizational performance (Chuang and Liao, 2010; Jiang *et al.*, 2015).

Previous studies on the relationship between HPWSs and work engagement, and between HPWSs and service climate, have typically represented HPWSs as a single composite score (e.g., Huertas-Valdivia *et al.*, 2018; Karadas and Karatepe, 2019; Luu, 2019), as a second-order construct with reflective first-order dimensions representing each constituent HPWP (e.g., Hoang *et al.*, 2018; Karatepe, 2013; Karatepe and Olugbade, 2016), or as a reflective latent variable measured by composite scores representing each of the constituent HPWPs (e.g., Chuang and Liao, 2010).

These modelling approaches do not allow decision-makers to determine which *specific* HPWPs contained in an HPWS have the strongest impact on employees' work engagement or service climate perceptions (Hauff, 2019). This is an important gap, because managers should be able to identify the specific HPWPs that promote frontline employees' work engagement and service climate perceptions (Choo, 2016; Lux *et al.*, 1996). As Hauff (2019) explains: "HRM practitioners want to know more than just that HRM matters; they want to know which HRM practices are crucial and where to focus their investments…".

Most research on the relationship between HPWSs and work engagement or service climate have been conducted in developed economies (e.g., Huertas-Valdivia *et al.*, 2018; Jiang *et al.*, 2015; Salanova *et al.*, 2005). Only a handful of studies have investigated these relationships in emerging markets (e.g., Aktar and Pangil, 2018; Karadas and Karatepe, 2019; Karatepe and Olugbade, 2016). Many previous studies conducted in service contexts have also focused on generic instead of service-oriented HPWSs (SO-HPWSs) (e.g., Huertas-Valdivia *et al.*, 2018; Karatepe and Olugbade, 2016; Salanova *et al.*, 2005; Tang and Tang, 2012). While both generic and SO-HPWSs are positive predictors of work engagement and service climate, the meta-analysis of Hong *et al.* (2013) found that SO-HPWSs were a stronger predictor of service climate than were generic HPWSs. These authors called for additional primary studies on the relationship between SO-HPWSs and valued employee outcomes such as service climate and work engagement (Hong *et al.*, 2013).

This paper's purpose is to investigate the extent to which six specific SO-HPWPs – staffing, training, financial compensation, non-financial rewards, involvement, and empowerment – predict the work engagement and service climate perceptions of the frontline employees of a South African retailer. These SO-HPWPs were identified as key elements of the SO-HPWSs investigated in previous research (e.g., Karadas and Karatepe, 2019; Luu, 2019; Tang and Tang, 2012; Wang and Xu, 2017).

This paper makes three contributions. First, it adds to the few extant studies that have specifically investigated the relationships between *individual SO-HPWPs* and service climate or work engagement (Aktar and Pangil, 2018; Choo, 2016). Second, while previous studies have investigated the relationships between HPWSs and either work engagement or service climate, this paper focused simultaneously on the relationships between the six selected SO-HPWPs and work engagement and between those SO-HPWPs and service climate perceptions. Third, the paper adds to Karatepe and Olugbade (2016) by providing another African perspective on the aforementioned relationships.

2.2   CONCEPTUAL FRAMEWORK

Figure 1 (p. 109) shows this paper's conceptual framework. The three core constructs in the framework are introduced next, followed by a presentation of the conceptual and empirical support for the paper's hypotheses.

Figure 1:   **The conceptual framework and hypotheses tested in the current study**
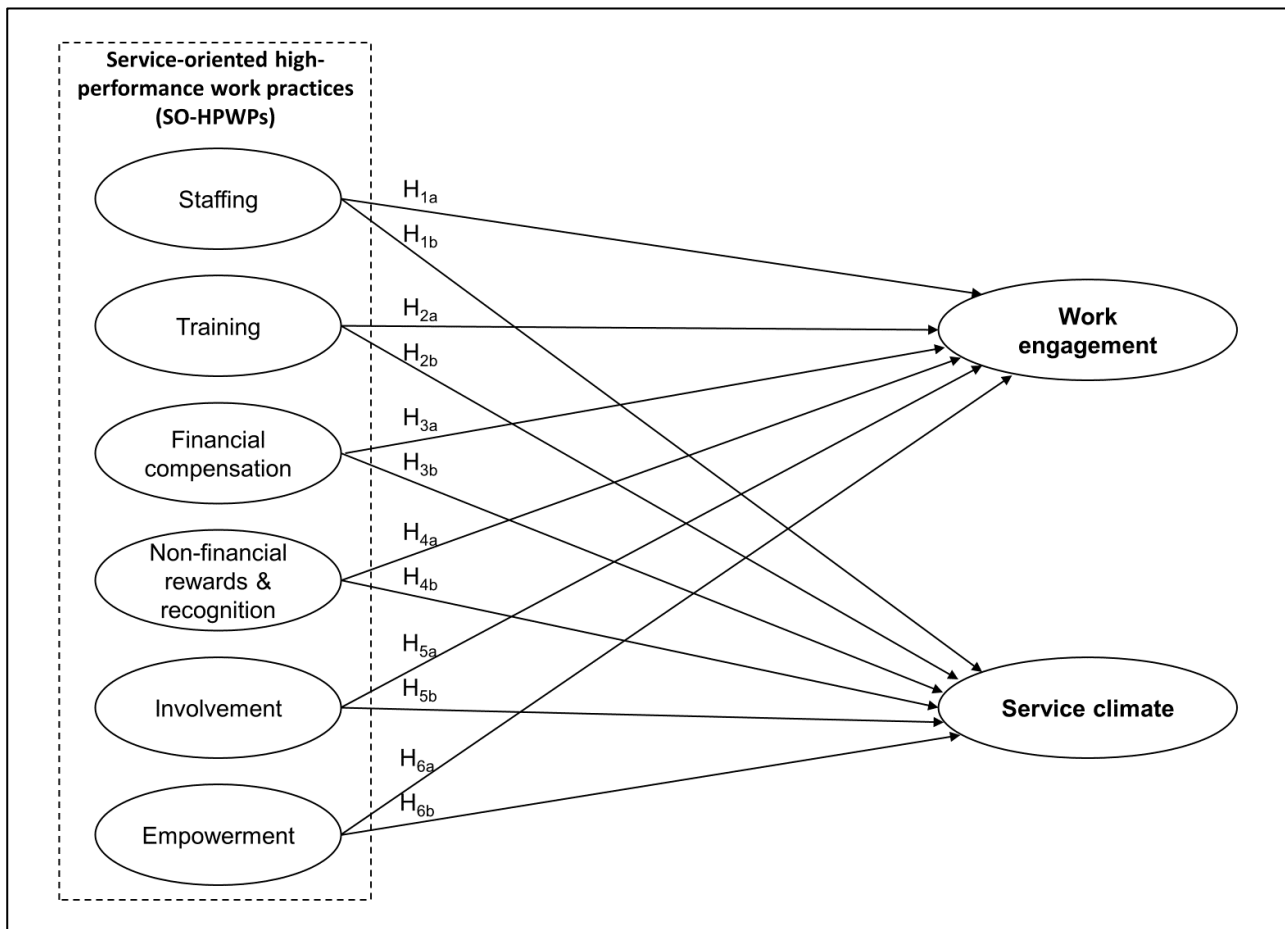
2.2.1   High-performance work systems (HPWSs) and service-oriented high-performance work practices (SO-HPWPs)

A high-performance work system (HPWS) is an integrated and coherent bundle of mutually reinforcing human resource management practices (Veld *et al.*, 2010). The human resource management practices that constitute an HPWS are known as high-performance work practices (HPWPs). Some authors distinguish between generic HPWSs and service-oriented HPWSs (Jiang *et al.*, 2015; Liao *et al.*, 2009). The former is a system of coordinated human resource management practices that aims to improve employees' general abilities, motivation, and empowerment to perform (Hong *et al.*, 2013, p. 239). Although generic HPWSs are not specifically oriented towards enhancing customer service, they relate to service climate by enhancing the organization's overall expectations of employee performance (Jiang *et al.*, 2015; Liao *et al.*, 2009). SO-HPWSs, on the other hand, are specifically targeted at improving service quality, and focus on "enhancing front-line service

employees' human capital, motivation, and empowerment in delivering high-quality service" (Hong *et al.,* 2013, p. 239). An SO-HPWS consists of several SO-HPWPs, including: "extensive service training, information sharing, self-management service teams and participation, compensation contingent on service quality, job design for quality work, service-quality-based performance appraisal, internal service, service discretion, selective hiring, employment security, and reduced status differentiation" (Liao *et al.*, 2009, p. 373). The meta-analysis of Hong *et al.* (2013) found that both generic and SO-HPWSs are positively related to service climate. More pertinently, the relationship between SO-HPWSs and service climate was found to be significantly stronger than that between service climate and generic HPWSs.

While a focus on the relationships between SO-HPWSs and service climate and between SO-HPWSs and work engagement is valuable, researchers and practitioners can gain valuable insights by considering the relationships specifically between *individual* SO-HPWPs and these two constructs. Employers are typically concerned about labour costs, and so have to weigh the benefits of investing in SO-HPWSs against the costs involved. Such decisions can be facilitated by an understanding of the different impacts of individual SO-HPWPs on service climate and work engagement respectively (Hauff, 2019; Hong *et al.*, 2017). However, studies relating individual SO-HPWPs directly to service climate (e.g., Chuang and Liao, 2010; Lux *et al.*, 1996) or work engagement (e.g., Aktar and Pangil, 2018; Babakus *et al.*, 2017; Choo, 2016) are scarce. Thus, we focused simultaneously on the relationship between six specific SO-HPWPs and service climate, and the relationship between those six practices and work engagement.

2.2.2   Service climate

'Service climate' refers to employees' perceptions of the practices, procedures, and behaviours that are expected, supported, and rewarded with regard to customer service and customer service quality (Schneider *et al.*, 1998). Service climate is important to service organizations for three reasons. First, it connects internal organizational policies and practices to customer experiences and, ultimately, to indicators of a work unit's or organization's financial performance (Bowen and Schneider, 2014; Hong *et al.*, 2013). Second, because of the intangibility, heterogeneity, perishability, and simultaneity of

services, supervisors are unable constantly to monitor and control frontline employees to ensure high quality service delivery (Yagil, 2014). A strong service climate functions as an "implicit form of control" that motivates and guides employees to provide high quality customer service (Yagil, 2014). Finally, changes in service climate are indicators of future changes in key customer and financial outcomes, including customer satisfaction (Schneider *et al.*, 1998) and Tobin's Q, an index of a firm's financial and market performance (Schneider *et al.*, 2009).

While many previous studies have investigated service climate as a collective construct at the work-unit or organizational level of analysis (e.g., Hong *et al.*, 2013), we focused on employees' psychological service climate perceptions at an *individual level* of analysis (e.g., Hoang *et al.*, 2018; Kang and Busser, 2018; Wang and Xu, 2017).

2.2.3   Work engagement

'Work engagement' refers to "a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption" (Schaufeli *et al.*, 2002, p. 74). In this definition, *vigour* indicates high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence even in the face of difficulties; *dedication* refers to a sense of significance derived from one's work, and feelings of enthusiasm, inspiration, pride, and challenge; and *absorption* is characterized as being fully concentrated on one's work so that time passes quickly and one finds it difficult to detach oneself from the work (Schaufeli *et al.*, 2002).

Work engagement is important to service organizations because engaged employees perform their jobs better than disengaged employees (Park *et al.*, 2019), display more positive emotions (Kang and Busser, 2018), and show heightened resourcefulness, proactive behaviour, and personal initiative in their work (Kopperud *et al.*, 2014). Moreover, engaged employees are willing to go beyond normal job expectations and to stimulate the performance of their colleagues, are more involved in their organization (Kang and Busser, 2018), have higher levels of job satisfaction, show greater organizational commitment (Kopperud *et al.*, 2014), and are less likely to leave the organization (Park *et al.*, 2019).

Work engagement is also linked to several desirable customer outcomes such as customer-perceived service performance (Menguc *et al.*, 2013) and functional and relational service quality (García-Buades *et al.*, 2016), employees' creative and service recovery performance (Karatepe and Olugbade, 2016), and employees' in-role and extra-role service performance (Karatepe, 2013).

2.3   HYPOTHESIS DEVELOPMENT

While several studies found positive relationships between SO-HPWSs and service climate (e.g., Hoang *et al.*, 2015; Jiang *et al.*, 2015; Wang and Xu, 2017), and between SO-HPWSs and work engagement (e.g., Huertas-Valdivia *et al.*, 2018; Karadas and Karatepe, 2019; Karatepe, 2013), the direct relationships between *individual* SO-HPWPs and service climate, and between *individual* SO-HPWPs and work engagement have received less attention. In this paper, we therefore simultaneously investigated the extent to which six individual SO-HPWPs serve as predictors of frontline employees' psychological service climate perceptions and their work engagement at an individual level of analysis.

As Table 1 (p. 113) shows, these six SO-HPWPs – service-oriented staffing, training, financial compensation, non-financial rewards and recognition, participation, and empowerment – were included in several previous studies on HPWSs and/or HPWPs conducted in service settings. These six SO-HPWPs were also relevant to the participating retailer. In the discussion below, we present conceptual and empirical support for our hypotheses about the relationships between each of these six SO-HPWPs and service climate as well as work engagement.

Table 1: Previous studies of HPWSs or HPWPs as antecedents of work engagement and service climate in service settings

Study	Context & level of analysis	Focus	Staffing	Training	Financial compensation	Non-financial rewards	Participation	Empowerment / autonomy	Other HPWPs included
HPWSs or HPWPs as antecedents of work engagement									
Salanova *et al.* (2005)	Hotels and restaurants, Spain Work-team level	Generic HPWPs		X				X	
Gracia *et al.* (2013)	Hotels and restaurants, Spain Work-team level	Generic HPWPs		X				X	
Karatepe (2013)	Hotels, Romania Individual level	Service-oriented HPWSs		X		X		X	
Barrick *et al.* (2015)	Credit unions, USA Organizational level	Generic HPWPs			X	X			Job security, performance appraisals, promotions
Choo (2016)	Luxury hotels, Malaysia Individual level	Service-oriented HPWPs		X		X		X	Performance appraisals
Karatepe and Olugbade (2016)	Luxury hotels, Nigeria Individual level	Generic HPWSs	X						Job security; teamwork; career opportunities
Babakus *et al.* (2017)	Luxury hotels, Cyprus Individual level	Service-oriented HPWPs		X		X		X	
Aktar and Pangil (2018)	Commercial banks, Bangladesh Individual level	Generic HPWPs		X		X	X		Career advancement, job security, performance appraisals
Huertas-Valdivia *et al.* (2018)	Hotels, Spain Individual level	Generic HPWSs	X	X		X	X		Internal mobility, job security, job design, performance appraisal
Cooke *et al.* (2019)	Commercial banks, China Individual level	Generic HPWSs		X	X			X	Performance appraisals

Study	Context & level of analysis	Focus	Staffing	Training	Financial compensation	Non-financial rewards	Participation	Empowerment / autonomy	Other HPWPs included
Karadas and Karatepe (2019)	Hotels, Romania Individual level	Generic HPWSs	X	X		X		X	Job security, career opportunities, teamwork
Luu (2019)	Public legal services, Vietnam Multi-level	Service-oriented HPWSs	X	X	X	X	X		Performance appraisal
HPWSs or HPWPs as antecedents of service climate									
Tang and Tang (2012)	Hotels, Taiwan Hotel level	Generic HPWSs	X	X	X		X	X	Performance appraisal
Jiang *et al.* (2015)	Retails stores, China Store level	Service-oriented HPWSs	X	X	X	X	X		Performance appraisal, caring
Lin and Liu (2016)	Food-service chain stores, China Individual level	Generic skills- and motivation-enhancing HPWP-bundles	X	X		X			Performance appraisal
Wang and Xu (2017)	Bank branches, China Multilevel	Service-oriented HPWSs	X	X	X	X	X		Caring
Hoang *et al.* (2018)	Local & foreign service firms, Vietnam Individual level	Service-oriented HPWSs	X	X	X	X		X	

Note: HPWSs = High-performance work systems; HPWPs = High-performance work practices

2.3.1   <u>Staffing</u>

'Staffing' refers to the recruitment and selection processes "… through which an organization ensures that it always has the proper number of employees with the appropriate skills in the right jobs, at the right time, to achieve organizational objectives (Mondy and Martocchio, 2016, p. 25). The right people are a service organization's most important assets, while "the wrong people are a liability that is often difficult to get rid of" (Wirtz and Jerger, 2016). In fact, the type of person who is appointed sends a strong message about a service organization's priorities (Ueno, 2012). Firms that are serious about customer service should 'hire for attitude' and select frontline employees with intrinsic qualities such as energy, charm, and a strong work ethic, which cannot be taught (Bowen and Pugh, 2009). It stands to reason that staffing is the starting point for the development of a service climate (Bowen and Pugh, 2009). Chuang and Liao (2010) reported a positive relationship between managers' perceptions of staffing and frontline employees' perceptions of the service climate in their stores. Regarding the relationship between staffing and work engagement, Karatepe and Olugbade (2016) found a positive relationship between frontline employees' perceptions of selective staffing and their work engagement. It is thus hypothesized that:

H_1: Frontline employees' perceptions of staffing are a positive predictor of their (a) work engagement and (b) service climate perceptions.

2.3.2   <u>Training</u>

'Training' refers to an organization's planned efforts to help employees acquire the necessary job-related knowledge, skills, abilities, and behaviours (Noe *et al.*, 2016). Excellent service organizations have a strong commitment to ongoing training (Wirtz and Jerger, 2016). Such training can be used to communicate the importance of service excellence to employees (Babakus *et al.*, 2017), thus strengthening the organization's service climate. Training also provides employees with opportunities to improve their service-related knowledge, skills, and abilities, and so boosts their work engagement (Babakus *et al.*, 2017; Babakus *et al.*, 2003; Choo, 2016; Wang and Xu, 2017). Lux *et al.* (1996) found a positive relationship between frontline employees' perceptions of training and service climate, while Chuang and Liao (2010) reported a positive relationship between

store managers' perceptions of training and employees' service climate perceptions. Concerning work engagement, several previous studies have also reported a positive relationship between frontline employees' perceptions of training and their work engagement (e.g., Aktar and Pangil, 2018; Babakus *et al.*, 2017; Choo, 2016; Karatepe, 2013). It is thus hypothesized that:

> H_2: Frontline employees' perceptions of training are a positive predictor of their (a) work engagement and (b) service climate perceptions.

2.3.3   Financial compensation

'Financial compensation' refers to the wages, salaries, bonuses, and commissions that employees receive in return for their labour (Mondy and Martocchio, 2016). An organization's compensation policies and practices can powerfully communicate organizational priorities, and can induce frontline employees to deliver high-quality service (Babakus *et al.*, 2003; Bowen and Pugh, 2009). However, the basic salary or wage that service employees earn tends to be a 'hygiene factor', not a sustained motivator (Wirtz and Lovelock, 2016). Instead, financial bonuses that are contingent on performance, and that have to be re-earned in each assessment period, tend to be more lasting motivators (Wirtz and Lovelock, 2016). Schneider and White (2004) argue that frontline employees will devote more time and effort to customer service if their performance evaluations are tied to their compensation. An organization's compensation policies and practices, therefore, can be designed to reward employees' service efforts and strengthen the organization's service climate (Schneider and White, 2004). Chuang and Liao (2010) found a positive store-level relationship between managers' perceptions of financial compensation and employees' service climate perceptions. Several studies reported a positive relationship between perceived financial compensation and work engagement (e.g., Gill *et al.*, 2014; Jung and Yoon, 2015; Kulikowski, 2018; Victor and Hoole, 2017). It is thus hypothesized that:

> H_3: Frontline employees' perceptions of financial compensation are a positive predictor of their (a) work engagement and (b) service climate perceptions.

2.3.4   Non-financial rewards

'Non-financial rewards' refers to non-monetary forms of recognition through which an organization tangibly indicates to employees its appreciation for their high-quality work (Yang, 2012). Since the need for recognition is a fundamental trigger of human behaviour, employees may exhibit greater effort when their work efforts are recognized (Yang, 2012). Therefore firms can enhance organizational performance through non-financial rewards, as these accentuate the valuable contributions that frontline employees make (Yang, 2012). These rewards also communicate the organization's priorities to employees by indicating which behaviours are expected and rewarded (Ueno, 2012). Although empirical support for the relationship between non-financial rewards and service climate and between non-financial rewards and work engagement is scarce, (Ueno, 2012) postulates that non-financial rewards can be used as a major mechanism for creating a strong service climate. Lux *et al.* (1996) found a positive individual-level relationship between employees' perceptions of rewards and service climate, while Chuang and Liao (2010) reported a positive store-level relationship between these constructs. Regarding work engagement, Aktar and Pangil (2018), Babakus *et al.* (2017), Choo (2016), and Karatepe (2013) all found positive relationships between employees' perceptions of service rewards and their work engagement. It is thus hypothesized that:

> H_4: Frontline employees' perceptions of non-financial rewards are a positive predictor of their (a) work engagement and (b) service climate perceptions.

2.3.5   Involvement

'Employee involvement' refers to information sharing, employee voice, participation in decision-making, and open, two-way communication in the workplace (Aktar and Pangil, 2018; Browning *et al.*, 2009). Firms can improve service delivery by involving frontline employees in decisions that affect their work, by encouraging them to share information about customers' requirements and service problems, and by involving them in service improvements and new service development efforts (Liao and Chuang, 2004). Such forms of involvement signal to employees that their inputs are valued (Tang and Tang, 2012) and that management trusts them and considers them important, thus increasing their work

engagement (Choo, 2016). It is also argued that effective two-way communication is essential for the development of a strong service climate (Browning *et al.*, 2009). Prior research has found positive relationships between employee voice and service climate (Lux *et al.*, 1996), and between managers' perceptions of employee involvement and employees' perceptions of service climate (Chuang and Liao, 2010). Both Aktar and Pangil (2018) and Choo (2016) reported positive relationships between information sharing and work engagement. It is thus hypothesized that:

H_5: Frontline employees' perceptions of involvement are a positive predictor of their (a) work engagement and (b) service climate perceptions.

2.3.6   Empowerment

'Empowerment' refers to the decision-making power and autonomy that frontline employees have to make on-the-spot decisions about customer service without involving management (Babakus *et al.*, 2017; Mendoza-Sierra *et al.*, 2014). Empowerment provides frontline employees with the authority and responsibility to act quickly for customers (Babakus *et al.*, 2003). Since frontline service employees often interact directly with customers (Ueno, 2012), it is important for these employees also to be self-directed and empowered to make appropriate decisions (Wirtz and Jerger, 2016). Empowerment signals to employees that they are viewed as strategic partners in the business (Babakus *et al.*, 2017). Consequently, empowerment not only meets frontline employees' basic psychological need for autonomy, but also boosts their work engagement (Babakus *et al.*, 2017). Previous studies found positive relationships between employees' perceptions of empowerment and service climate (Mendoza-Sierra *et al.*, 2014), and between perceived empowerment and work engagement (Babakus *et al.*, 2017; Karatepe, 2013). It is thus hypothesized that:

H_6: Frontline employees' perceptions of empowerment are a positive predictor of their (a) work engagement and (b) service climate perceptions.

2.4   METHODOLOGY

2.4.1   Sample and procedure

For this paper, we collected data from the frontline employees employed by a multi-store retailer of home improvement products in South Africa. The employees were invited to complete an online survey hosted on the online survey platform Qualtrics. Of the 953 frontline employees who received personalized e-mail invitations to the survey, 781 (81.95%) participated. Non-responders were encouraged to participate with three follow-up reminder emails set out over a period of four weeks. The respondents were predominantly male (68%), with an average length of employment in their current store of 4.52 years (SD = 4.21), and an average age of 33.95 years (SD 7.76). Most of the respondents (75%) were full-time employees. The remaining 25% were employed on fixed-term contracts.

2.4.2   Measures

We measured frontline employees' perceptions of the service climate in their respective stores with five items from Schneider *et al.*'s (1998) global service climate scale. Following the observation by Ling *et al.* (2016) that some of the items in this scale are double-barrelled, one item – "How would you rate the effectiveness of your store's communication efforts to both employees and customers?" – was split into two items that focused respectively on communication with employees and with customers. Respondents rated the final six items on a five-point scale labelled as follows: 1 = Very poor; 2 = Poor; 3 = Fair; 4 = Good; and 5 = Excellent. To find suitable measures for the SO-HPWPs, we evaluated the scales of Chuang and Liao (2010), Hong *et al.* (2017) and Liao *et al.* (2009). At face value, several of the items in these scales reflected a mix of generic and SO-HPWPs. We therefore compiled a 26-item scale from the aforementioned measures, with a specific focus on SO-HPWPs. Respondents rated the items on a five-point Likert scale ranging from 1 = Strongly disagree to 5 = Strongly agree. The scale was pretested with three senior executives, a store manager, and four frontline employees. Only minor changes were made to clarify the wording of some of the items, based on the feedback received. To measure employees' work engagement, we adapted the nine-item version of the Utrecht Work Engagement Scale (UWES-9; Schaufeli *et al.*, 2016). The pretest showed that several of the participants who

spoke English as a second or third language misunderstood the meaning of some of the scale items, especially when the items contained idiomatic expressions or unfamiliar words. As a result, we reworded six of the original items to clarify their meaning (Naude and Rothmann, 2004; Storm and Rothmann, 2003). Respondents completed the adapted UWES-9 scale using a seven-point response format. Following the instructions of Schaufeli and Bakker (2004), the scale points were labelled as 0 = Never; 1 = Almost never; 2 = Rarely; 3 = Sometimes; 4 = Often; 5 = Very often; and 6 = Always.

2.5 DATA ANALYSIS AND FINDINGS

2.5.1 Data analysis strategy

An initial screening of the data showed that ratings on the individual scale items were negatively skewed and clustered around the highest two scale points. Mardia's test of multivariate kurtosis further indicated that the data violated the assumption of multivariate normality (Byrne, 2016). Consequently, we used robust diagonally weighted least squares estimation (Finney *et al.*, 2016) as implemented in the WLSMV estimator in Mplus as the estimation method to test the measurement and structural models in this paper.

2.5.2 Reliability and validity assessment

We conducted a CFA to evaluate the dimensionality and psychometric properties of the employees' ratings of the six SO-HPWPs, work engagement, and service climate. The CFA results indicated that an eight-factor model fitted the data well: χ^2 (751) = 1380.58, $p < 0.001$; χ^2/df = 1.84; CFI = 0.98; RMSEA = 0.03 (90% CI = 0.03-0.04); SRMR = 0.03. The loadings of all the items on their respective factors were statistically significant, with completely standardized loadings ranging from 0.68 to 0.91. Table 2 (p. 121) lists the correlations between the study constructs, provides the construct reliability (CR) and Cronbach's alpha (α) values for each scale, and indicates the square root of the average variance extracted (AVE) in boldface on the diagonal. The scales all had α and CR values larger than 0.7, which indicated adequate internal consistency reliability (Hair *et al.*, 2019). The square root of the

AVE values were all larger than the correlations between the study constructs, thus confirming the discriminant validity of the scales used (Malhotra *et al.*, 2017).

Table 2: **Descriptive statistics, psychometric properties, and bivariate correlations among study variables**

	Mean	SD	CR	α	Correlations (n = 781)							
Variables					1	2	3	4	5	6	7	8
1. Staffing	3.948	0.767	0.934	0.902	**0.859**							
2. Training	4.181	0.737	0.939	0.899	0.662	**0.890**						
3. Financial compensation	3.960	0.917	0.934	0.892	0.560	0.516	**0.882**					
4. Non-financial rewards & recognition	3.817	0.849	0.915	0.878	0.762	0.680	0.618	**0.826**				
5. Involvement	4.253	0.636	0.929	0.878	0.705	0.735	0.512	0.793	**0.850**			
6. Empowerment	4.217	0.604	0.814	0.714	0.709	0.657	0.541	0.718	0.755	**0.770**		
7. Work engagement	5.546	0.699	0.947	0.894	0.428	0.452	0.323	0.441	0.442	0.407	**0.818**	
8. Service climate	4.199	0.532	0.871	0.816	0.644	0.679	0.492	0.676	0.728	0.617	0.460	**0.729**

Note: CR = Composite reliability; α = Cronbach's alpha; all correlations are statistically significant at the 0.01 level (two-tailed); square root of the average variance extracted (AVE) is shown on the diagonal.

2.5.3   Common method bias

Since all the constructs were perceptual in nature and were measured simultaneously using a self-report survey, we implemented five procedural remedies to counteract the potentially distorting effects of common method bias (MacKenzie and Podsakoff, 2012; Podsakoff *et al.*, 2003). First, the survey invitation, follow-up reminders, and survey landing page emphasized that participation was voluntary, anonymous, and confidential. Second, respondents were encouraged to answer all questions honestly. Third, we used different scale point labels to measure the three focal constructs. Fourth, by pretesting the questionnaire, we ensured that respondents would clearly understand each question. Fifth, to counteract order bias, we randomized both the sequence in which the six HPWP sub-scales were presented to respondents, and the order of presentation of the individual items measuring the different constructs and construct sub-dimensions.

To evaluate the potential impact of common method variance, we compared the fit of the hypothesized eight-factor measurement model with a one-factor model in which all items

loaded on a single latent factor. The one-factor model had a significantly poorer fit than the eight-factor model: χ^2 (779) = 10930.85, $p < 0.001$; χ^2/df = 14.03; CFI = 0.75; RMSEA = 0.13; SRMR = 0.13; $\Delta\chi^2$ = 2565.08, Δdf = 28, $p < 0.001$. This suggested that common method variance was not a major concern.

2.5.4 Structural model

Finally, we used SEM to test our hypotheses (see Figure 1, p. 109). The structural model achieved acceptable fit: χ^2 (751) = 1380.58, $p < 0.001$; χ^2/df = 1.84; CFI = 0.98; RMSEA = 0.03 (95% CI = 0.03-0.04); SRMR = 0.03. Collectively, the six service-oriented HPWPs explained 59.7% of the variance in service climate and 24.9% of the variance in work engagement. Table 3 summarizes the SEM results.

Table 3:   A summary of SEM results related to the study's hypotheses

Hypothesis	Path	β	*p*-value	Conclusion
HPWPs predicting work engagement:				
H_{1a}	Staffing → Work engagement	0.107	0.186	H_{1a} not supported
H_{2a}	Training → Work engagement	0.204	0.001	H_{2a} supported
H_{3a}	Financial compensation → Work engagement	0.024	0.641	H_{3a} not supported
H_{4a}	Non-financial rewards & recognition → Work engagement	0.105	0.272	H_{4a} not supported
H_{5a}	Involvement → Work engagement	0.090	0.344	H_{5a} not supported
H_{6a}	Empowerment → Work engagement	0.041	0.646	H_{6a} not supported
HPWPs predicting service climate:				
H_{1b}	Staffing → Service climate	0.130	0.017	H_{1b} supported
H_{2b}	Training → Service climate	0.236	< 0.001	H_{2b} supported
H_{3b}	Financial compensation → Service climate	0.052	0.141	H_{3b} not supported
H_{4b}	Non-financial rewards & recognition → Service climate	0.102	0.118	H_{4b} not supported
H_{5b}	Involvement → Service climate	0.356	< 0.001	H_{5b} supported
H_{6b}	Empowerment → Service climate	-0.001	0.986	H_{6b} not supported

Note: β = completely standardized path coefficient; *p*-value = the two-tailed *p*-value of the completely standardized path coefficients calculated by Mplus.

Of the six SO-HPWPs investigated, only training was a statistically significant predictor of work engagement. Thus, only Hypothesis H_{2a} was supported. In contrast, three of the six SO-HPWPs – i.e., staffing, training, and involvement – were significant predictors of service climate. Hypotheses H_{1b}, H_{2b} and H_{5b} were therefore supported. Based on the standardized

path coefficients, involvement (β = 0.36) had the strongest impact on service climate, followed by training (β = 0.24) and staffing (β = 0.13).

2.6   DISCUSSION

2.6.1   Conclusions and theoretical implications

Prior studies indicated that both generic and SO-HPWSs predict frontline employees' work engagement (e.g., Huertas-Valdivia *et al.*, 2018; Karadas and Karatepe, 2019; Karatepe, 2013; Karatepe and Olugbade, 2016) and service climate perceptions (e.g., Hoang *et al.*, 2018; Jiang *et al.*, 2015; Tang and Tang, 2012; Wang and Xu, 2017). However, these studies implicitly assumed that the individual HPWPs included in an HPWS all contributed equally to desired employee outcomes. This may be a questionable assumption (Hauff, 2019). The current study's aim was thus to determine the extent to which six specific SO-HPWPs (i.e., service-oriented staffing, training, financial compensation, non-financial rewards, involvement, and empowerment) predict the work engagement and psychological service climate perceptions of the frontline employees of a South African retailer at an individual level of analysis.

This paper's findings affirm the importance of staffing, training, and involvement as positive predictors of service climate (Chuang and Liao, 2010; Lux *et al.*, 1996), and of training as a positive predictor of service employees' work engagement (Aktar and Pangil, 2018; Choo, 2016; Karatepe, 2013). The findings also show that not all SO-HPWPs have an equal impact on enhancing employees' service climate perceptions and work engagement. Involvement had the strongest impact on service climate, followed by training, and then staffing.

These findings have important implications for researchers. First, different SO-HPWPs may serve as predictors of different outcomes (Hauff, 2019). In the current study, staffing, training, and involvement were significant predictors of service climate, while only training was a significant predictor of work engagement. Second, while many previous studies have focused on HPWSs and have represented these systems with a single additive score (e.g., Barrick *et al.*, 2015; Huertas-Valdivia *et al.*, 2018; Jiang *et al.*, 2015), this approach implicitly assumes that all the HPWPs included in its calculation are statistically significant predictors

of the relevant outcome, and that the HPWPs included in the score all have an equal effect on the outcome in question (Hauff, 2019). As the results of this study indicate, these assumptions are questionable, and may lead to misleading results (Hauff, 2019). Researchers should, therefore, supplement analyses that focus on overall HPWSs with additional analyses aimed at determining which specific HPWPs within the HPWSs have the strongest impact on a focal outcome. Third, because an HPWS typically consists of several distinct HPWPs, it may be best to represent it in a structural model either as a first-order latent variable with formative indicators, or as a second-order latent variable with formative first-order factors (Hauff, 2019; Jiang *et al.*, 2012). This allows researchers to determine the HPWS's overall effect on relevant outcomes, and also indicates how each of the constituent HPWPs contributes to the overall HPWS and to its outcomes (Hauff, 2019).

2.6.2   <u>Managerial implications</u>

The findings of this paper indicate that managers should invest in three specific SO-HPWPs – i.e., service-oriented staffing, training, and involvement – in order to enhance frontline employees' psychological service climate perceptions and their work engagement. More specifically, to enhance frontline employees' psychological service climate perceptions, managers should invest in all three the aforementioned SO-HPWPs. On the other hand, to enhance frontline employees' work engagement, managers should specifically focus on service-oriented training. Specific recommendations regarding each of these three SO-HPWPs appear below.

Staffing encompasses recruitment and selection. Service organizations can substantially improve the efficiency and effectiveness of their recruitment and selection efforts and reduce the associated costs by changing the traditional recruitment process (Bateson *et al.*, 2014). In this regard, Bateson *et al.* (2014) recommend that organizations use service-specific web-based psychometric tests to sift applicants at the start of the recruitment process, rather than at the end. Such tests can disqualify unsuitable candidates early in the recruitment process, thus leaving a smaller, better-qualified pool of applicants to undergo more costly personal interviews later in the process. The findings of this paper indicate that investments in service-oriented recruitment and selection will specifically contribute to the strengthening of frontline employees' psychological service climate perceptions.

While leading service organizations have a strong commitment to the *training* of frontline service employees (Wirtz and Jerger, 2016; Zeithaml *et al.*, 2018), managers are often confronted with the 'transfer problem' – i.e., employees' failure to apply newly learnt knowledge, skills, and behaviours in the workplace – when evaluating service-oriented training initiatives (Hughes *et al.*, 2018). Hughes *et al.* (2018) provide a practitioner-oriented checklist of factors to consider in the design, delivery, and evaluation of training initiatives to optimize training transfer, while Salas *et al.* (2012) discuss these factors in more detail. These resources can guide service managers in designing and implementing training initiatives to optimize the transfer of knowledge, skills, and desired behaviours from the 'classroom' to the 'customer interface'. The findings of this paper indicate that investments in service-oriented training will enhance frontline employees' psychological service climate perceptions as well as their work engagement.

Finally, the current study identified *involvement* as the strongest predictor of frontline employees' psychological service climate perceptions. In service contexts, employee involvement can take different forms, including empowering employees to influence what happens in their work environment; requesting their input before making decisions that affect them; involving employees in the development of new service processes or offerings; encouraging employees to suggest service improvements; sharing information on the organization's strategy, financial status, and operation performance, and on customer problems, complaints, and feedback with employees; and encouraging open, two-way communication between frontline employees and their supervisors (Aktar and Pangil, 2018; Browning *et al.*, 2009; Liao and Chuang, 2004; Tang and Tang, 2012). These forms of employee involvement reflect empowering leadership behaviours by frontline employees' supervisors and managers that positively impact both employees' organizational commitment and customers' satisfaction through employees' psychological empowerment and job satisfaction (Kim *et al.,* 2018; Konczak *et al.*, 2000). Given the many positive outcomes of empowering leadership, managers should consider ways in which to empower their frontline service employees.

2.6.3   Limitations and recommendations for future research

This paper was limited to a single retailer and country. Future studies could consider replicating this research among multiple firms in other service contexts (e.g., education, health care, professional services) and in other developing countries to examine the generalizability of the study's findings. More specifically, future research could determine whether the relative impact of specific SO-HPWPs on service climate and work engagement differs across organizations, industries, types of services (e.g., high-contact versus low-contact services), and countries.

For practical reasons, data on all three study variables were obtained from the same respondents at a single point in time. This increases the risk of common method bias (Malhotra *et al.*, 2016). In future studies, researchers should ideally measure the study variables at different times, separated by an appropriate time lag (e.g., Babakus *et al.*, 2017; Karatepe and Olugbade, 2016).

This paper focused on six specific service-oriented HPWPs that were frequently included in previous studies and that were relevant to the participating retailer. Future research could investigate the extent to which other SO-HPWPs (e.g., job security, job design, performance appraisal, caring, and opportunities for promotion) predict employees' work engagement and service climate perceptions. Researchers could also explore the extent to which the six SO-HPWPs investigated in this paper predict other important employee outcomes, such as employees' job satisfaction, organizational commitment, turnover intentions, and in-role as well as extra-role service performance.

Although this paper focused on employee perceptions of SO-HPWPs, service climate, and work engagement at an individual level of analysis, service climate is typically treated as a unit-level construct (Bowen and Schneider, 2014; Hong *et al.*, 2013). Future research should therefore investigate the relationships between the aforementioned constructs at the unit level of analysis.

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MAIN FINDINGS FROM CHAPTER 2 CONTRIBUTING TO THE OVERALL OBJECTIVES OF THIS THESIS

The main findings from Chapter 2 that contribute to the overall objectives of this thesis are listed below. These findings are numbered sequentially as MF C2.1 to MF C2.17, with 'MF' indicating 'main finding' and 'C2' indicating 'Chapter 2'.

Main findings regarding the reliability and validity of the measurement scales used:

MF C2.1: The scales measuring the six SO-HPWPs, with items adapted from Chuang and Liao (2010), Hong *et al.* (2017), and Liao *et al.* (2009), were reliable and valid among frontline employees of the participating retailer. These scales had six underlying latent dimensions that correspond to the six SO-HPWPs investigated in this thesis.

MF C2.2: The scale measuring frontline employees' work engagement, with items adapted from the nine-item version of the Utrecht Work Engagement Scale (Schaufeli *et al.*, 2016), was reliable and valid among the frontline employees of the participating retailer. This scale was unidimensional.

MF C2.3: The scale measuring frontline employees' psychological service climate perceptions, with items adapted from Schneider *et al.* (1998), was reliable and valid among frontline employees of the participating retailer. This scale was unidimensional.

Main findings regarding the frontline employees' perceptions of the six SO-HPWPs investigated in this chapter as predictors of their work engagement:

MF C2.4: Frontline employees' perceptions of service-oriented staffing were not a statistically significant positive predictor of their work engagement at an individual level of analysis.

MF C2.5: Frontline employees' perceptions of service-oriented training were a statistically significant positive predictor of their work engagement at an individual level of analysis.

MF C2.6: Frontline employees' perceptions of service-oriented financial compensation were not a statistically significant positive predictor of their work engagement at an individual level of analysis.

MF C2.7: Frontline employees' perceptions of service-oriented non-financial rewards and recognition were not a statistically significant positive predictor of their work engagement at an individual level of analysis.

MF C2.8: Frontline employees' perceptions of service-oriented involvement were not a statistically significant positive predictor of their work engagement at an individual level of analysis.

MF C2.9: Frontline employees' perceptions of service-oriented empowerment were not a statistically significant positive predictor of their work engagement at an individual level of analysis.

MF C2.10: Of the six SO-HPWPs investigated in this chapter, only one (i.e., service-oriented training) was a statistically significant positive predictor of frontline employees' work engagement at an individual level of analysis.

Main findings regarding the frontline employees' perceptions of the six SO-HPWPs investigated in this chapter as predictors of their psychological service climate perceptions:

MF C2.11: Frontline employees' perceptions of service-oriented staffing were a statistically significant positive predictor of their service climate perceptions at an individual level of analysis.

MF C2.12: Frontline employees' perceptions of service-oriented training were a statistically significant positive predictor of their service climate perceptions at an individual level of analysis.

MF C2.13: Frontline employees' perceptions of service-oriented financial compensation were not a statistically significant positive predictor of their service climate perceptions at an individual level of analysis.

MF C2.14: Frontline employees' perceptions of service-oriented non-financial rewards and recognition were not a statistically significant positive predictor of their service climate perceptions at an individual level of analysis.

MF C2.15: Frontline employees' perceptions of service-oriented involvement were a statistically significant positive predictor of their service climate perceptions at an individual level of analysis.

MF C2.16: Frontline employees' perceptions of service-oriented empowerment were not a statistically significant positive predictor of their service climate perceptions at an individual level of analysis.

MF C2.17: Of the six SO-HPWPs investigated in this chapter, three (i.e., service-oriented staffing, training, and involvement) were statistically significant positive predictors of frontline employees' service climate perceptions at an individual level of analysis. Involvement had the strongest impact on service climate, followed by training, and then staffing.

CHAPTER 3

PREDICTING RETAIL EMPLOYEES' IN-ROLE AND EXTRA-ROLE SERVICE PERFORMANCE: A STORE-LEVEL TEST OF TWO COMPETING MODELS

Chapter 3 presents the second article in this thesis. The purpose of this article was to test two competing structural models of the antecedents of frontline employees' in-role and extra-role service performance at a store-level of analysis. In the first model, the *engagement-centric model*, SO-HPWSs and service climate are direct antecedents of work engagement which, in turn, predicts employees' in-role and extra-role service performance. In the second model, the *climate-centric model*, SO-HPWSs and work engagement are direct predictors of service climate, which, in turn, predicts employees' in-role and extra-role service performance.

While Chapter 2 focused on the extent to which six specific high-performance work practices (SO-HPWPs) each predict frontline employees' work engagement and psychological service perceptions at an individual level of analysis, this chapter and Chapter 4 take a systems perspective by focusing on frontline employees' shared perceptions of the service-oriented high-performance work *system* (SO-HPWS) they experience in their respective stores. The SO-HPWS investigated in these two chapters consist of all six the SO-HPWPs investigated in Chapter 2 and is represented by a single store-level additive score. The systems focus in this chapter (and in Chapter 4) is aligned with the shared consensus in the field of strategic human resource management that the focus should be on human resource management (HRM) *systems*, rather than on individual HRM practices (Boon *et al.*, 2019). The underlying argument is that employees are simultaneously exposed to an interrelated set of HRM practices rather than to single practices in isolation and the effects of individual HRM practices are dependent on the other practices in the system. It is further argued that there are complementarities and synergies between the individual HRM practices in an HRM system (Boon *et al.*, 2019). This is supported by meta-analytic results indicating that HRM systems, such as HPWSs, are more strongly related to organizational performance measures than individual HRM practices (Combs *et al.*, 2006). In the majority of studies that focus on HRM systems, the system is represented by a *single additive index score*

calculated by averaging or summing the scores representing the individual HRM practices that constitute the system (Boon *et al.*, 2019). Several unit-level studies have also used this approach to represent both generic HPWSs and service-oriented HPWSs (e.g., Aryee *et al.*, 2012; Huertas-Valdivia *et al.*, 2018; Jiang *et al.*, 2015; Wang & Xu, 2017). Consequently, the SO-HPWS investigated in this chapter and in Chapter 4 was also represented by a *single additive index score.*

The article presented in this chapter was prepared in accordance with the author guidelines of the *Journal of Service Theory and Practice* (Emerald Publishing), an A-rated journal according to the ABDC journal list. The editorial guidelines of this journal are included in Appendix B (p. 328). At the time of the submission of this thesis, Article 2 was being finalized for submission to the journal.

To ensure consistency throughout this thesis, the article was written in South African English, and its referencing was done in accordance with the Harvard referencing style prescribed by Emerald Publishing. The same referencing style was used in Articles 1 and 3. In addition, the headings, table and figure captions, page margins, font type and font size used in this chapter are not aligned with the aforementioned editorial guidelines, but have been kept consistent throughout the thesis. As explained in the 'Remarks' on p. i, I used the active voice, the first-person plural pronoun 'we', and the plural possessive determiner 'our' in this chapter to ensure direct, clear, and concise sentences.

Chapter 3 concludes with a summary of the main findings from this article that contribute to the primary research objective of this thesis. This summary is located on p. 195.

CHAPTER 3

PREDICTING RETAIL EMPLOYEES' IN-ROLE AND EXTRA-ROLE SERVICE PERFORMANCE: A STORE-LEVEL TEST OF TWO COMPETING MODELS

ABSTRACT

Purpose – This paper compares two competing store-level models of the antecedents of frontline employees' in-role and extra-role service performance in a retail setting. In the first *climate-centric model,* service climate serves as a direct antecedent of in-role and extra-role service performance, while in the second *engagement-centric model,* work engagement directly predicts in-role and extra-role service performance.

Design/methodology/approach – Covariance-based structural equation modelling (SEM) was used to test and compare the two competing models at the store-level of analysis on cross-sectional data collected from 781 frontline service employees and 70 managers nested in 70 stores of the same retail chain.

Findings – The results indicate that the *climate-centric model* achieved the best fit to the data. In this model, service-oriented high-performance work systems (SO-HPWSs) and work engagement both predict service climate which, in turn, predicts employees' in-role and extra-role service performance.

Originality/value – This is the first unit-level study to test two competing models of the antecedents of frontline employees' in-role and extra-role service performance. The paper confirms the importance of service climate as a direct antecedent of employees' service performance, as well as the role of SO-HPWSs and work engagement as predictors of service climate.

Keywords – In-role and extra-role service performance, Work engagement, Service climate, Service-oriented high-performance work systems, Retailing

Paper type – Research paper

3.1 INTRODUCTION

Because traditional bricks-and-mortar retailers increasingly have to compete with online rivals, frontline employees such as salespeople and cashiers are becoming more important as differentiators and as creators of value for customers (Hughes *et al.*, 2019). In traditional retailing, frontline employees contribute to service excellence and customer value by promoting the organization's products and services, by delivering the organization's promises to customers, by creating a favourable brand image in customers' minds, by going beyond the call of duty to address customer requirements, and by providing better customer service than the retailer's competition (Bettencourt and Brown, 1997). Retail customers' purchase decisions, satisfaction, service quality judgements, and decisions to remain loyal or switch to competitors are directly influenced by the attitudes and behaviours of frontline employees (Bettencourt and Brown, 1997; Hughes *et al.*, 2019; Maxham *et al.*, 2008; Yap *et al.*, 2009). To achieve positive customer interactions, frontline employees must demonstrate exceptional levels of both in-role and extra-role service performance (Morrison, 1996; Somech and Drach-Zahavy, 2016). Consequently, traditional retailers must focus on ensuring that frontline employees engage in the desired in-role and extra-role service performance behaviours directed at customers (Bowen and Schneider, 2014; Lu *et al.*, 2016; Maxham *et al.*, 2008).

'In-role service performance' refers to behaviours that are expected of frontline employees when serving customers (Bettencourt and Brown, 1997; Lu *et al.*, 2016). These behaviours are typically explicitly stated in the employees' job descriptions (Maxham *et al.*, 2008; Yap *et al.*, 2009), and poor in-role service performance normally results in reprimands, negative financial implications, or dismissal (Yap *et al.*, 2009). 'Extra-role service performance' refers to the discretionary behaviours of frontline employees that go 'above and beyond' the employees' formally prescribed roles and responsibilities, and that often contribute to exceptional customer service (Bettencourt and Brown, 1997; Lu *et al.*, 2016). These behaviours are also known as service-oriented organizational citizenship behaviours (OCB) (Lu *et al.*, 2016).

Previous studies have shown that managers can enhance frontline employees' in-role and extra-role service performance through the retailer's service-oriented high-performance

work system (SO-HPWS; Chuang and Liao, 2010; Jiang *et al.*, 2015) as well as by strengthening the organization's service climate (Jiang *et al.*, 2016; Linuesa-Langreo *et al.*, 2017; Schneider *et al.*, 2005; Tang and Tang, 2012) and by bolstering employees' work engagement (Aryee *et al.*, 2016; Chen and Peng, 2021; Karadas and Karatepe, 2019; Karatepe, 2013; Luu, 2019).

However, while previous empirical studies (e.g., Chuang and Liao, 2010; Jiang *et al.*, 2015; Lin and Liu, 2016; Salanova *et al.*, 2005; Tang and Tang, 2012) and the conceptual review of Bowen and Schneider (2014) indicate that SO-HPWSs, service climate and work engagement are all important antecedents of employees' in-role and extra-role service performance, to our knowledge no empirical investigations have included all five of these variables simultaneously to explore their interrelationships at the unit level of analysis. In addition, there are currently two competing perspectives in the literature on the relationship between service climate and work engagement. While Salanova *et al.* (2005) and Kopperud *et al.* (2014) have modelled work engagement as an antecedent of service climate in predicting employee service performance, several other researchers have taken the opposite perspective, and have treated service climate as an antecedent of work engagement (e.g., Abdelhadi and Drach-Zahavy, 2012; Barnes and Collier, 2013; Carrasco *et al.*, 2011; Kang and Busser, 2018; Perry *et al.*, 2013). Furthermore, only two studies (i.e., Carrasco *et al.*, 2011; Salanova *et al.*, 2005) have investigated the relationship between service climate and work engagement with both constructs modelled at the unit level.

Against this background, the current study tested two competing models of the antecedents of frontline employees' in-role and extra-role service performance (see Figure 1, p. 145). In the *engagement-centric model*, SO-HPWSs and service climate are direct antecedents of work engagement, which, in turn, predicts employees' in-role and extra-role service performance. This model represents the majority view in the literature (e.g., Abdelhadi and Drach-Zahavy, 2012; Barnes and Collier, 2013; Carrasco *et al.*, 2011; Kang and Busser, 2018; Perry *et al.*, 2013). In the *climate-centric model*, SO-HPWSs and work engagement are direct predictors of service climate, which, in turn, directly predicts employees' in-role and extra-role service performance. This model represents the minority view in the literature (e.g., Kopperud *et al.*, 2014; Salanova *et al.*, 2005). In both models, SO-HPWSs consist of service-oriented staffing, training, financial compensation, non-financial rewards and

recognition, involvement, and empowerment. The two competing models were tested at a store level of analysis on data collected from 70 stores in the same retail chain.

This paper makes the following contributions. First, to our knowledge, this is the first study to test competing models of the interrelationships between SO-HPWSs, collective work engagement, service climate, and employees' in-role and extra-role service performance at the unit level of analysis. Second, this paper specifically focuses on SO-HPWSs, not generic HPWSs, as an antecedent of collective work engagement. Only two previous studies (i.e., Karatepe, 2013; Luu, 2019) have investigated this relationship, but both did so at an individual level of analysis. Additional unit-level research on the relationship between SO-HPWSs and work engagement is thus warranted. Third, the unit-level relationship between service climate and extra-role service performance has also received scant attention, having been investigated in only four studies (i.e., Chuang and Liao, 2010; Schneider *et al.*, 2005; Tang and Tang, 2012; Way *et al.*, 2010). Further research on this relationship as well as on the relationship between service climate and in-role service performance is justified, given the argument of Bowen and Schneider (2014) that service climate primarily affects customer experiences through extra-role service performance. Fourth, comparatively few studies (e.g., Barrick *et al.*, 2015; Eldor, 2020; Gracia *et al.*, 2013; Salanova *et al.*, 2005; Schneider *et al.*, 2018; Torrente *et al.*, 2012) have focused on work engagement as a collective construct at a unit level of analysis. This paper adds to this stream of research by investigating selected antecedents and outcomes of collective work engagement in a retail context. A focus on collective work engagement at a store level is practically relevant, as it matches the level at which senior managers evaluate and compare store performance through metrics such as customer satisfaction ratings, store sales, and return on investment (Eldor, 2020; Pugh and Dietz, 2008). Finally, as Hoang *et al.* (2018) observed, research on service climate in emerging market contexts is relatively scarce. This paper adds to that of Hoang *et al.* (2018) by investigating the correlates of service climate in South Africa, an emerging market context.

3.2 CONCEPTUAL FRAMEWORK AND HYPOTHESES

As mentioned, this paper tested two competing models of the direct antecedents of frontline employees' in-role and extra-role service performance (see Figure 1, p. 145). In the *climate-centric model* (Model 1), service climate is the direct antecedent of in-role and extra-role service performance, while work engagement partially mediates the relationship between SO-HPWSs and service climate. In the *engagement-centric model* (Model 2), work engagement is the direct antecedent of in-role and extra-role service performance, while service climate partially mediates the relationship between SO-HPWSs and work engagement. The relationships between SO-HPWSs and work engagement (i.e., H_1) and between SO-HPWSs and service climate (i.e., H_2) are shared by both models. These two relationships are discussed in Section 3.2.1 below as part of Model 1.

3.2.1 <u>Conceptual foundations of the climate-centric model (Model 1)</u>

This section describes the *climate-centric model*, in which service climate directly predicts employees' in-role and extra-role service performance (see Model 1 in Figure 1, p. 145).

3.2.1.1 *SO-HPWSs and work engagement*

A high-performance work system (HPWS) is a bundle of human resource management practices, also known as high-performance work practices (HPWPs), that aim to enhance employees' abilities, motivation, and opportunities to contribute to organizational effectiveness (Jiang *et al.*, 2015). By increasing employees' abilities, motivation, and opportunities to perform, an HPWS contributes to better employee performance and, ultimately, to improved organizational outcomes (Hong *et al.*, 2017). While there is no consensus in the literature on the specific HPWPs that constitute an HPWS (Posthuma *et al.*, 2013), it typically includes selective hiring, extensive training, developmental performance appraisal, performance-based compensation, flexible job design, employee participation, and information sharing (Jiang *et al.*, 2015; Luu, 2019). When these HPWPs are applied as a coordinated HPWS, they will synergistically complement and augment one another's effects on the desired employee and organizational outcomes (Hong *et al.*, 2017).

Figure 1:   Two competing models of the direct antecedents of frontline employees' in-role and extra-role service performance
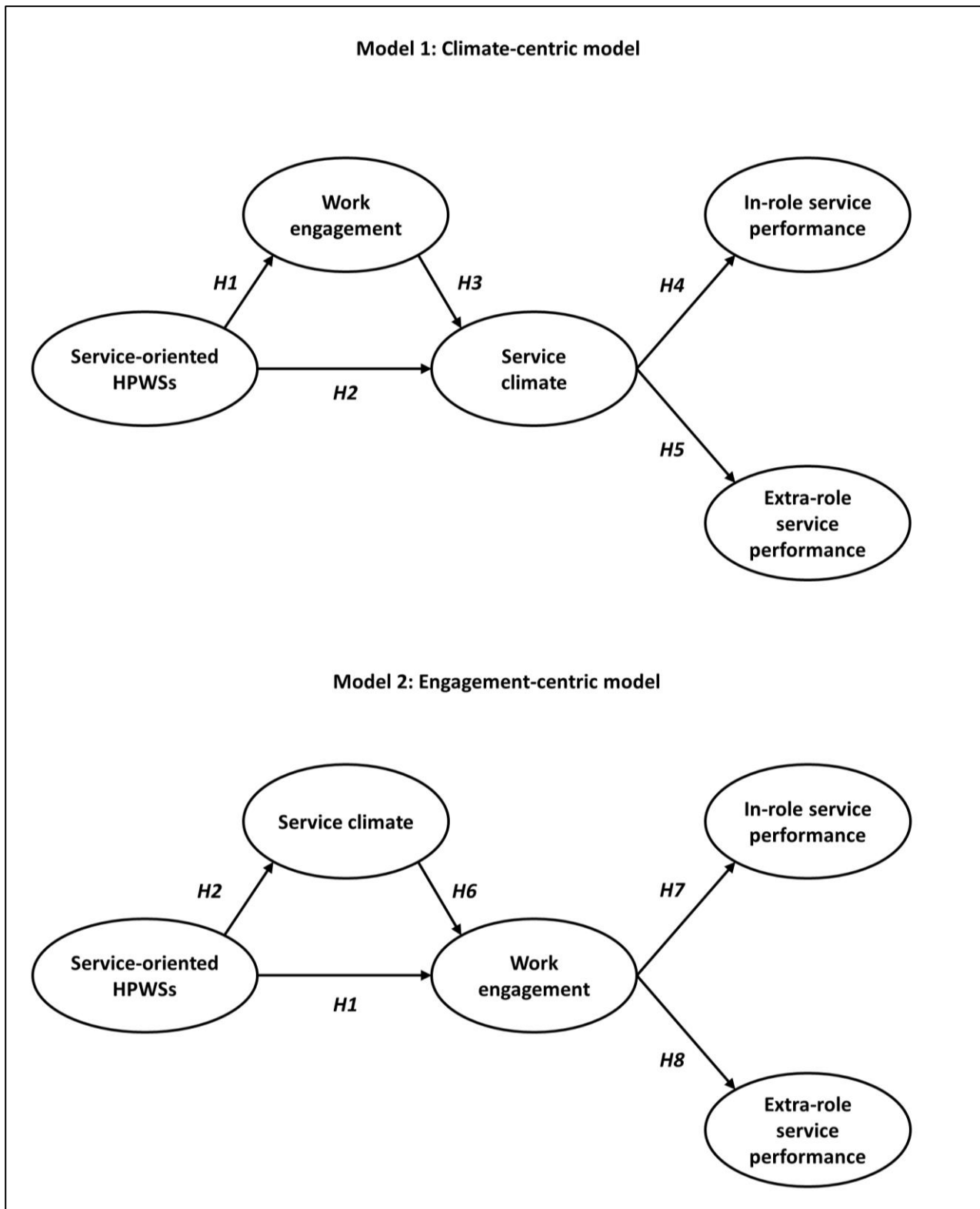
To link the content of HPWSs more closely to strategic organizational objectives, scholars have conceptualized HPWSs that are specifically directed at enhancing customer service in service contexts (Jiang *et al.*, 2015). These service-focused HPWSs are typically known as service-oriented HPWSs (SO-HPWSs) (Jiang *et al.*, 2015; Luu, 2019; Wang and Xu, 2017), and specifically seek to enhance frontline employees' human capital, motivation and empowerment to deliver high-quality customer service (Jiang *et al.*, 2015; Luu, 2019). An SO-HPWS includes service-oriented HPWPS (SO-HPWPs) such as selective recruitment based on service-related criteria, extensive service training, information sharing, self-managed service teams and participation, compensation based on service performance, job design for quality work, service quality-based performance appraisals, and service discretion (Liao *et al.*, 2009).

When investigating the relationship between HPWSs and employee-related outcomes, such as work engagement or service climate, it is important to focus on employees' perceptions of the HPWS they experience and not on managers' reports thereof (Alfes *et al.*, 2013). A focus on employee perceptions of HPWSs is important because, ultimately, it is frontline employees' perceptions of their unit's HPWS, not its actual HPWS or managers' ratings thereof, that determine their attitudes, behaviours, and performance (Jiang *et al.*, 2017). A number of studies (e.g., Den Hartog *et al.*, 2012; Liao *et al.*, 2009; Takeuchi *et al.*, 2007; Wang *et al.*, 2019; Xi *et al.*, 2019) have found weak to moderate correlations between employees' and managers' ratings of the HPWS in a store, branch, or organization, which suggests a disconnect between employees' and managers' perceptions in this regard. Several studies have also found that managers tend to give more positive ratings of the HPWS than do employees (e.g., Den Hartog *et al.*, 2012; Jiang *et al.*, 2017; Liao *et al.*, 2009). Given this, the current study specifically focused on frontline employees' perceptions of the SO-HPWS and the associated SO-HPWPs that they experienced in their respective stores.

Most previous studies on the relationship between employee-perceived HPWSs and work engagement were conducted at an individual level of analysis (e.g., Cooke *et al.*, 2019; Huang *et al.*, 2018; Huertas-Valdivia *et al.*, 2018; Karadas and Karatepe, 2019; Karatepe, 2013; Karatepe and Olugbade, 2016). However, the current study focuses on employees' *shared* perceptions of the HPWSs at the store level of analysis for the following reasons.

First, although employees' perceptions of the SO-HPWPs they experience as part of their store's SO-HPWS are formed at an individual level, it is important for such perceptions to be sufficiently shared among employees working in the same store to elicit the desired performance outcomes at the store level (Kehoe and Wright, 2013; Xi *et al.*, 2019). Second, the current study's focus on predicting store managers' evaluations of the *collective* in-role and extra-role service behaviours of the frontline staff members in their respective stores as a whole requires agreement (i.e., consistency) in employees' perceptions of and reactions to the HPWS they experience at a store level; otherwise aggregate store-level effects may fail to emerge (Kehoe and Wright, 2013; Piening *et al.*, 2013; Xi *et al.*, 2019).

Scholars have highlighted several mechanisms through which employees can develop shared perceptions about the HPWS in a store or other organizational unit. First, through communication and interaction, employees working together in the same store may engage in collective sense-making that, over time, leads to shared perceptions about the HPWS they collectively experience (Chuang and Liao, 2010; Piening *et al.*, 2013; Xi *et al.*, 2019). Second, social information processing theory argues that individuals use information from their direct social environment to interpret and make sense of organizational values, norms, and practices. Given that employees in the same store are exposed to similar SO-HPWPs, they may form shared perceptions of these practices as well as of the broader SO-HPWS of which these practices are part (Chuang and Liao, 2010; Piening *et al.*, 2013; Xi *et al.*, 2019). Finally, over time, attraction–selection–attrition processes can create a situation in which individuals with similar values, backgrounds, personalities, and interests are attracted by, selected for, and retained in the same store, resulting in a greater homogeneity in employees' perceptions of their work environment, including the store's SO-HPWS (Chuang and Liao, 2010; Piening *et al.*, 2013; Xi *et al.*, 2019).

Previous research has shown that HPWSs in general (Cooke *et al.*, 2019; Huertas-Valdivia *et al.*, 2018; Karatepe and Olugbade, 2016) and SO-HPWSs in particular (Karatepe, 2013; Luu, 2019) are important antecedents of frontline employees' work engagement in service contexts. Schaufeli *et al.* (2002, p. 74) define work engagement as "… a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption". In this definition, *vigour* indicates a willingness to invest high levels of energy in one's work as well as mental resilience while working. *Dedication* refers to a strong involvement in and

identification with one's work. Finally, *absorption* denotes being fully engrossed in and concentrated on one's work (Torrente *et al.*, 2012).

Work engagement is important to service organizations because it engenders valuable employee and customer outcomes. For example, studies indicate that engaged employees experience higher levels of job satisfaction (Kopperud *et al.*, 2014; Park *et al.*, 2019), perform their jobs better (Park *et al.*, 2019), and show higher levels of resourcefulness, proactive behaviour, and personal initiative than do disengaged employees (Kang and Busser, 2018; Kopperud *et al.*, 2014). Engaged employees are also more willing to go beyond the call of duty, stimulate their colleagues' work performance (Kang and Busser, 2018), have greater organizational commitment (Kopperud *et al.*, 2014), and are less likely to resign from the organization (Park *et al.*, 2019).

Work engagement is also associated with many advantageous customer outcomes, including customers' positive evaluations of functional and relational service quality (García-Buades *et al.*, 2016), customers' perceptions of service employee performance (Menguc *et al.*, 2013), customer satisfaction (Park *et al.*, 2019), frontline employees' in-role and extra-role service performance (Karatepe, 2013; Luu, 2019; Zheng *et al.*, 2020), and employees' creative and service recovery performance (Karatepe and Olugbade, 2016).

Studies on the relationship between HPWSs and work engagement (e.g., Cooke *et al.*, 2019; Huertas-Valdivia *et al.*, 2018; Karadas and Karatepe, 2019) and between service climate and work engagement (e.g., Barnes and Collier, 2013; Kang and Busser, 2018; Perry *et al.*, 2013) have mostly been conducted at the individual level of analysis. However, work engagement can also be studied at higher levels of analysis, such as at the level of work teams (Gracia *et al.*, 2013; Salanova *et al.*, 2005; Torrente *et al.*, 2012), stores in the same retail chain (Eldor, 2020), or even at organizational level (Barrick *et al.*, 2015; Schneider *et al.*, 2018). When work engagement is studied at levels of analysis higher than the individual level, it is referred to as collective work engagement (Eldor, 2020). The current study focuses on the relationship between frontline employees' perceptions of the SO-HPWS in their store and their collective work engagement at the store level of analysis across multiple stores in the same retail chain.

In this paper, 'collective work engagement' is defined as a positive, fulfilling, work-related motivational state that is *shared* by the frontline employees who work together as a team in the same retail store, and that is characterized by the collective vigour, dedication, and absorption that emerges from the interaction and shared experiences of these employees (Eldor, 2020; García-Buades *et al.*, 2016; Torrente *et al.*, 2012).

The current paper's focus on collective work engagement at the store level is appropriate because the quality of service a customer receives in a retail store is often the result of the service-related behaviours of several frontline employees collaborating as a team (Gracia *et al.*, 2013). For example, in this paper, a customer's service quality perceptions and satisfaction judgements during a single store visit may be affected by the behaviour of the store security official, salesperson, cashier, warehouse assistant, and/or dispatch assistant with whom the customer has interacted. Furthermore, a focus on collective work engagement at a store level is practically relevant because it matches the level at which senior managers evaluate and compare store performance through metrics such as customer satisfaction ratings, store sales, and return on investment (Eldor, 2020; Pugh and Dietz, 2008).

As indicated, most previous studies on the relationship between employee-perceived HPWSs and work engagement were conducted at an individual level of analysis. Several authors have reported a positive individual-level relationship between employee-perceived HPWSs and work engagement (Cooke *et al.*, 2019; Huang *et al.*, 2018; Huertas-Valdivia *et al.*, 2018; Karadas and Karatepe, 2019; Karatepe, 2013; Karatepe and Olugbade, 2016; Luu, 2019) as well as between employees' perceptions of individual human resource management (HRM) practices and work engagement (Aktar and Pangil, 2018; Babakus *et al.*, 2017; Choo, 2016) in different service contexts. However, only two of the aforementioned studies (i.e., Karatepe, 2013; Luu, 2019) specifically focused on the relationship between SO-HPWSs and work engagement. Both found a positive relationship.

To our knowledge, only four studies have focused on the relationship between HRM practices and *collective* work engagement to date. Barrick *et al.* (2015) reported a positive relationship between employee-perceived HPWSs and employees' collective work engagement at an organizational level of analysis. Schneider *et al.* (2018), similarly, found

a positive organizational-level relationship between organizational practices, which included several HRM practices, and employees' collective work engagement. Salanova *et al.* (2005) and Gracia *et al.* (2013) both reported a positive relationship between organizational resources, which included two HRM practices (i.e., training and autonomy), and collective work engagement at a work group level of analysis.

Flowing from this discussion, it is hypothesized that:

H$_1$:   Employees' shared perceptions of their store's SO-HPWS are a positive predictor of their collective work engagement at the store level.

3.2.1.2   *SO-HPWSs and service climate*

The construct 'service climate' reflects frontline employees' *shared* perceptions regarding the degree to which the workplace policies, procedures, and practices their experience and the behaviours they see as expected, supported, and rewarded emphasize high-quality service delivery to the organization's customers (Bowen and Schneider, 2014; Hong *et al.*, 2013; Jiang *et al.*, 2016; Schneider *et al.*, 1998). While service climate as a shared construct has its origin in the perceptions of individual employees, it is usually treated as a shared property of a team, department, or store, and is correlated with other constructs at a unit level of analysis (e.g., Auh *et al.*, 2016; Chuang and Liao, 2010; Jiang *et al.*, 2015; Linuesa-Langreo *et al.*, 2017; Tang and Tang, 2012). In short, service climate is a collective and shared phenomenon (Bowen and Schneider, 2014; Salanova *et al.*, 2005) that reflects employees' shared perceptions that customer service is important in their work unit or organization and that management actively supports their service quality efforts (Carrasco *et al.*, 2011). Consequently, the current study focused on service climate as a unit-level construct at the store level of analysis.

Frontline employees' perceptions of the HPWS they experience in their workplace is an important determinant of their service climate perceptions at both the individual (Hoang *et al.*, 2018; Wang and Xu, 2017) and the unit (Chuang and Liao, 2010; Jiang *et al.*, 2015; Tang and Tang, 2012) levels of analysis. A service organization's HPWS communicates the organization's strategic focus to employees, and indicates what is expected, supported, and rewarded in the organization (Chuang and Liao, 2010; Hong *et al.*, 2013; Tang and Tang,

2012; Wang and Xu, 2017). Thus, an organization's HPWS contributes to the formation and strengthening of the organization's service climate (Hoang *et al.*, 2018; Schneider and White, 2004; Tang and Tang, 2012; Wang and Xu, 2017).

In their meta-analysis, Hong *et al.* (2013) found that generic HPWSs and SO-HPWSs have positive relationships with service climate at a unit level of analysis. Importantly, the meta-analytic correlation between SO-HPWSs and service climate was significantly stronger than that between generic HPWSs and service climate. These positive relationships were confirmed more recently in three unit-level (Jiang *et al.*, 2015; Lin and Liu, 2016; Tang and Tang, 2012) and two individual-level studies (Hoang *et al.*, 2018; Wang and Xu, 2017).

Several prior studies on the relationship between HPWSs and service climate have focused on managers' evaluations of HPWSs (e.g., Chuang and Liao, 2010; Jiang *et al.*, 2015; Lin and Liu, 2016; Tang and Tang, 2012). However, as mentioned earlier, there is often a gap between employees' and managers' evaluations of the HPWS in a unit (e.g., Den Hartog *et al.*, 2012; Liao *et al.*, 2009). The current study therefore specifically focused on the relationship between frontline employees' perceptions of the SO-HPWS in their respective stores and their shared service climate perceptions at the store level of analysis.

Against this background, it is hypothesized that:

H$_2$: Employees' shared perceptions of their store's SO-HPWS are a positive predictor of their shared perceptions of the store's service climate.

3.2.1.3 *Work engagement and service climate*

As mentioned above, there are two competing perspectives about the relationship between work engagement and service climate in the literature. The first perspective regards work engagement as a direct antecedent of service climate (Kopperud *et al.*, 2014; Salanova *et al.*, 2005), whereas the second holds the opposite view, treating service climate as a direct antecedent of work engagement (Abdelhadi and Drach-Zahavy, 2012; Barnes and Collier, 2013; Carrasco *et al.*, 2011; Kang and Busser, 2018; Perry *et al.*, 2013). As far as could be determined, no previous studies have compared competing models representing these two rival perspectives. In the current study, the *climate-centric model* (Model 1 in Figure 1, p.

145) treats work engagement as an antecedent of service climate, while the *engagement-centric model* (Model 2) takes the opposite view and treats service climate as an antecedent of work engagement. In this section, we review two previous studies, aligned with the *climate-centric model*, that have modelled work engagement as an antecedent of service climate.

Salanova *et al.* (2005) conducted the first ever study on the relationship between work engagement and service climate, and modelled the former as a direct antecedent of the latter at a unit level of analysis. These authors argued that organizational resources in the form of training, autonomy, and technology predict employees' shared perceptions of the service climate in their unit through their collective work engagement. Service climate, in turn, predicts customers' evaluations of employees' service performance and, through the latter, also predicts customer loyalty (Salanova *et al.*, 2005). With regard to the relationship between organizational resources, work engagement, and service climate, Salanova *et al.* (2005, pp. 1223-1224) argued as follows:

> "… when employees in work units perceive that the availability of organizational resources (i.e., training, autonomy and technology) remove obstacles at work, they feel more engaged … which in turn is related to a better climate for service. Working in an organization that facilitates work for the customers exerts a powerful influence on collective engagement … This in turn has a very positive impact on shared service climate perceptions."

The aforementioned expectations were empirically confirmed in a unit-level study in which Salanova *et al.* (2005) reported positive work-unit level correlations between service climate and vigour, dedication, and absorption – the three dimensions of work engagement. They also found that work engagement completely mediates the relationship between organizational resources and service climate, and thus serves as a direct antecedent of the latter. Building on the aforementioned research, Kopperud *et al.* (2014) tested an individual-level model in which the relationship between transformational leadership and service climate was mediated by work engagement. In this model, work engagement was again positioned as a direct antecedent of service climate. In two separate individual-level samples, Kopperud *et al.* (2014) found that work engagement partially mediates the

relationship between transformational leadership and service climate, and therefore serves as a direct antecedent of the latter.

Conceptually, Bowen and Schneider (2014), Schneider *et al.* (2018), and Schneider (2020) describe work engagement as a foundation on which a service climate can be built. In this regard, Bowen and Schneider (2014, p. 9) indicated that "… a positive service climate exists when the foundation for it first exists in the engagement employees experience in their work and work world. Engaged employees are more willing to do the kinds of things that a service climate asks of them, and, similarly, a service climate is more easily built on a foundation of engaged employees". Like Salanova *et al.* (2005), these authors regard work engagement as an antecedent of service climate. It is therefore hypothesized that:

H_3:   Employees' collective work engagement is a positive predictor of their shared perceptions of service climate at the store level.

3.2.1.4 *Service climate and in-role and extra-role service performance*

Service climate by itself does not produce the desired customer outcomes. It is frontline employees' service-oriented behaviours in the form of their in-role and extra-role service performance that tangibly yield positive customer outcomes such as customer satisfaction and loyalty (Bowen and Schneider, 2014). Following Jiang *et al.* (2015) and Schneider *et al.* (2005), the current study specifically focused on the store-level relationship between service climate as rated by frontline employees and store managers' ratings of the collective in-role and extra-role service performance of all the frontline employees in their respective stores.

Several previous studies have distinguished between in-role and extra-role service performance (e.g., Bettencourt and Brown, 1997; Chen, 2016; Karatepe, 2013; Lu *et al.*, 2016; Luu, 2019). In the literature, in-role service performance is sometimes also known as role-prescribed customer service behaviours (Bettencourt and Brown, 1997), task performance (Way *et al.*, 2010), job performance (Karatepe, 2013), customer service performance (Linuesa-Langreo *et al.*, 2017), or simply as service performance (Chuang and Liao, 2010; Jiang *et al.*, 2015; Wang and Xu, 2017), while extra-role service performance is also known as customer- or service-oriented organizational citizenship behaviour (OCB)

(Dimitriades, 2007; Schneider *et al.*, 2005; Tang and Tang, 2012). In the current study, the terms 'in-role service performance' and 'extra-role service performance' will be used.

'In-role service performance' refers to the behaviours that frontline employees are expected to exhibit when serving customers (Bettencourt and Brown, 1997; Luu, 2019). More specifically, in-role service performance refers to normal behaviours that fulfil basic job requirements and that are expected, required, and evaluated as part of the fundamental job responsibilities of a frontline employee's work role and job description (Chaoluck, 2017). Expectations for these behaviours may be derived from implicit norms in the workplace, or may be explicitly specified in employees' job descriptions, performance evaluation criteria, organizational policies and procedures, or service scripts (Bettencourt and Brown, 1997).

'Extra-role service performance', in turn, refers to "… discretionary behaviors of contact employees in serving customers that extend beyond formal role requirements" (Bettencourt and Brown, 1997, p. 41). These behaviours are voluntary, fall outside the scope of employees' formal job prescriptions, are not directly and formally rewarded by the organization, do not carry negative sanctions if they are not performed, and imply that the employees who engage in these behaviours have 'gone the extra mile' while serving customers (Chaoluck, 2017). These extra-role service behaviours constitute service-oriented OCBs that are specifically directed at customers (Lu *et al.*, 2016; Luu, 2019; Somech and Drach-Zahavy, 2016). Because previous studies have essentially used the terms 'extra-role service performance' and 'service-oriented OCBs' as synonyms (e.g., Dimitriades, 2007; Lu *et al.*, 2016; Schneider *et al.*, 2005; Tang and Tang, 2012), these terms are also used interchangeably below.

To ensure customer satisfaction and loyalty, frontline employees must be enabled and motivated to excel in terms of both their in-role and their extra-role service (Morrison, 1996; Somech and Drach-Zahavy, 2016). A strong service climate encourages frontline employees to engage in both in-role and extra-role service performance since it signals to them that their organization expects, supports, and rewards these behaviours (Hong *et al.*, 2013; Jiang *et al.*, 2016; Linuesa-Langreo *et al.*, 2017; Wang and Xu, 2017). Thus, a strong service climate provides a "… motivational force for employees to deliver better service" (Liao and Chuang, 2007, p. 1009).

In their meta-analysis, Hong *et al.* (2013) reported a positive meta-analytic correlation unit-level service climate and in-role service performance across 34 primary studies. Three more recent studies – not included in the aforementioned meta-analysis – have confirmed the positive relationship between service climate and in-role service performance at a unit level of analysis (Jiang *et al.*, 2015; Jiang *et al.*, 2016; Linuesa-Langreo *et al.*, 2017). In all three studies, service climate scores were obtained from frontline employees, and in-role service performance was evaluated by the unit managers for the service unit as a whole. Against this background, it is hypothesized that:

H_4: Employees' shared perceptions of the service climate in their store is a positive predictor of their collective in-role service performance at the store level as rated by the store manager.

The unit-level relationship between service climate and extra-role service performance (also known as service-oriented OCB) has received little research attention. Hong *et al.* (2013) reported a positive meta-analytic correlation between unit-level service climate and OCB based on the results of only three primary studies. These studies focused on the unit-level relationship between service climate and both generic (Chuang and Liao, 2010; Way *et al.*, 2010) and service-oriented OCB (Schneider *et al.*, 2005). More recently, Tang and Tang (2012) also reported a positive unit-level relationship between employee-rated service climate and service-oriented OCB. Based on these findings, it is hypothesized that:

H_5: Employees' shared perceptions of the service climate in their store are a positive predictor of collective extra-role service performance at the store level as rated by the store manager.

The conceptual foundations of the second competing model are discussed next.

3.2.2 Conceptual foundations of the engagement-centric model (Model 2)

This section focuses on the *engagement-centric model*, in which work engagement directly predicts frontline employees' in-role and extra-role service performance (see Model 2 in Figure 1, p. 145). As mentioned, the relationships between SO-HPWSs and work engagement (i.e., H_1) as well as between SO-HPWSs and service climate (i.e., H_2) are

shared by both models, and thus also apply to Model 2. These two relationships were discussed earlier, in Section 3.2.1.1 (p. 144) and Section 3.2.1.2 (p. 150) respectively. The discussion below focuses on the remaining relationships that are unique to Model 2 – namely, the relationships between service climate and work engagement (i.e., H_6), between work engagement and in-role service performance (i.e., H_7), and between work engagement and extra-role service performance (i.e., H_8).

3.2.2.1   *Service climate and work engagement*

In the engagement-centric model (i.e., Model 2), service climate serves as a direct antecedent of work engagement (e.g., Abdelhadi and Drach-Zahavy, 2012; Barnes and Collier, 2013; Carrasco *et al.*, 2011; Kang and Busser, 2018; Perry *et al.*, 2013). The role of service climate as a predictor of work engagement at a unit level of analysis has received comparatively little research attention. To our knowledge, only one study (i.e., Carrasco *et al.*, 2011) has investigated service climate as an antecedent of work engagement, with both constructs modelled at the unit level. Drawing on conservation of resources (COR) theory, Carrasco *et al.* (2011) argued that service climate is an important resource for frontline employees, indicating to them that service quality is important to the organization and that it is expected, supported, and rewarded. When employees feel that their efforts devoted to customer service are indeed supported, recognized, and rewarded, they will feel more engaged; in other words, a strong service climate strengthens frontline employees' work engagement (Carrasco *et al.*, 2011). The hypothesized positive relationship between service climate and work engagement was empirically confirmed at both individual and unit levels of analysis (Carrasco *et al.*, 2011).

Abdelhadi and Drach-Zahavy (2012) also investigated the relationship between service climate and work engagement in a multi-level study, and found that service climate at a unit level positively predicts work engagement at an individual level. Finally, three individual-level studies (i.e., Barnes and Collier, 2013; Kang and Busser, 2018; Perry *et al.*, 2013) found that employees' psychological service climate perceptions positively predict their work engagement at an individual level of analysis.

All of the aforementioned studies have found positive relationships between service climate and work engagement at the unit, mixed, and individual levels of analysis. Given this, it is hypothesized that:

H$_6$: Employees' shared perceptions of service climate are a positive predictor of their collective work engagement at the store level.

3.2.2.2   *Work engagement and in-role as well as extra-role service performance*

Two streams of research shed light on the relationship between work engagement and employees' in-role and extra-role service performance. The first stream focuses on the relationship between work engagement and employees' in-role and extra-role *task* performance in general, while the second stream more specifically focuses on the relationship between employees' work engagement and their in-role and extra-role *service* performance. This section reviews both research streams.

➢   *Work engagement and employees' general in-role and extra-role task performance:*

It is widely accepted that work engagement enhances employees' in-role and extra-role task performance in general at both individual and unit levels of analysis (see Bailey *et al.*, 2017 for a review). At the individual level, engaged employees approach the tasks associated with their jobs with a sense of self-investment, energy, and passion that results in higher levels of both in-role and extra-role performance. These employees are also vigilant and focused on their work, which leads to higher levels of in-role performance (Christian *et al.*, 2011). Engaged employees who invest their personal serves in their work are also likely to have a broader conception of their work roles and are, therefore, likely to step outside of the formal boundaries of their jobs by enthusiastically engaging in extra-role performance (Christian *et al.*, 2011). In this regard, Menguc *et al.* (2013, p. 2165) argue that as "… employees become more engaged, they find their work more meaningful, self-fulfilling and inspirational and, accordingly, become more dedicated, concentrated and engrossed in their jobs…" and thus offer better in-role and extra-role performances.

At the unit level, teams of engaged employees (e.g., employees working together in the same store) should also deliver high levels of in-role and extra-role performance for the

reasons given above. Team-level work engagement should also further boost team performance because of better planning and goal-setting by the team, team members' greater alignment with common goals, increased synergies among team members, and better inter-team coordination and interaction that improve the quality of the team's outputs (Costa *et al.*, 2014; García-Buades *et al.*, 2016). Costa *et al.* (2014) further noted that engaged teams collectively display more positive emotions, and that members of engaged teams invest more in regulating their emotions, in conflict management, and in confidence-building, all of which positively affects the team's performance.

➤ *Work engagement and employees' in-role and extra-role service performance:*

Several recent studies from a diverse range of service settings have confirmed the positive relationship between employees' work engagement and managers' or supervisors' ratings of employees' in-role and/or extra-role service performance at the individual level of analysis (e.g., Aryee *et al.*, 2016; Chen and Peng, 2021; Karadas and Karatepe, 2019; Karatepe, 2011, 2013; Karatepe *et al.*, 2019; Luu, 2019; Menguc *et al.*, 2017; Tuan, 2018; Zheng *et al.*, 2020). In addition, Karatepe and Olugbade (2016) reported positive individual-level relationships between work engagement and managers' ratings of two specialized forms of frontline employee behaviour – namely, creative performance and service recovery performance (Karatepe and Olugbade, 2016).

While most research on work engagement has been conducted at the individual level of analysis, researchers have also started to investigate the outcomes of collective work engagement at the unit and organizational levels in service contexts (Eldor, 2020; García-Buades *et al.*, 2016; Torrente *et al.*, 2012). These studies have reported direct positive relationships between (a) team work engagement and supervisor-rated in-role and extra-role team performance (Torrente *et al.*, 2012); (b) team work engagement and team-leader-rated team service recovery performance (Tuan, 2018); (c) collective work engagement and both mystery shopper- and customer-rated service quality (Eldor, 2020; García-Buades *et al.*, 2016); and (d) collective work engagement and customer satisfaction (Eldor, 2020). In addition, Gracia *et al.* (2013) found that collective work engagement at a unit level indirectly affects customer-rated service quality via unit-level employee relational service competence. Salanova *et al.* (2005), in turn, found that team work engagement has an indirect positive effect on customer-rated employee performance through unit-level service

climate. Taken together, those unit-level studies indicate that collective work engagement has a positive direct and indirect impact on several crucial service-related outcomes, including frontline employees' in-role and extra-role service performance as evaluated by managers. Against this background, the following two hypotheses are stated:

H_7: Employees' collective work engagement is a positive predictor of managers' evaluations of their in-role service performance at the store level.

H_8: Employees' collective work engagement is a positive predictor of managers' evaluations of their extra-role service performance at the store level.

3.3   METHOD

3.3.1   Sample and data collection procedure

We collected data from the frontline employees (n = 781) and store managers (n = 70) nested in 70 of the stores of a major South African retailer of home improvement products. Respondents received personalized e-mail invitations to complete an online questionnaire hosted on the Qualtrics survey platform. Of the 953 frontline employees invited, 781 (81.95%) completed the employee survey after an initial invitation and three follow-up reminders sent out over a four-week period. Approximately 11 employee respondents participated per store (Mean = 11.16, SD = 4.47, Mode = 11, range: 3-23). All 70 of the store managers responded to a store manager survey administered in the same period.

On average, the employee respondents were 33.95 years (SD = 7.76) old, 68% were male, and the average length of employment in their current store was 4.52 years (SD = 4.21). Most frontline employees (75%) had full-time appointments, while the remaining 25% were employed on fixed-term contracts. The majority of store managers (88.6%) were male with an average length of employment in their current store of 5.81 years (SD = 6.34), and an average age of 42.21 years (SD = 7.39). All the store managers were employed on a full-time basis.

3.3.2   Measures

The employee questionnaire contained scales measuring employees' perceptions of their respective stores' SO-HPWS, as well as measures of service climate and work engagement; while the store manager questionnaire contained scales measuring managers' perceptions of the collective service-oriented in-role and extra-role performance of all the frontline employees in their respective stores. These scales are described below.

3.3.2.1   *SO-HPWSs*

We measured frontline employees' perceptions of the SO-HPWSs in their respective stores with a 26-item scale adapted from scales of Chuang and Liao (2010), Hong *et al.* (2017), and Liao *et al.* (2009). Since the original scales measured a mix of generic and service-oriented HRM practices, we reworded some of the original items to ensure a clearer focus on SO-HPWSs. We pretested the adapted scale with three senior executives, a store manager, and four frontline employees. After the pretest, we made minor changes to simplify and clarify the wording of some of the scale items, and to ensure that the item wording was appropriate for the research context. All items were measured on a five-point Likert scale ranging from 1 = Strongly disagree to 5 = Strongly agree. The 26 items measured six SO-HPWPs: service-oriented staffing (five items), training (four items), financial compensation (four items), non-financial rewards and recognition (five items), involvement (five items), and empowerment (three items).

3.3.2.2   *Service climate*

We measured frontline employees' perceptions of the service climate in their respective stores with five items taken from Schneider *et al.*'s (1998) global service climate scale. According to Hong *et al.* (2013), this is the most frequently used measure of service climate. One item (i.e., "How would you rate the effectiveness of your store's communication efforts to both employees and customers") was split into two separate items because of its double-barrelled nature (Ding, 2018; Ling *et al.*, 2016). Frontline employees responded to the final

six items on a five-point rating scale with the scale points labelled as 1 = Very poor, 2 = Poor, 3 = Fair, 4 = Good, and 5 = Excellent.

3.3.2.3   *Work engagement*

We adapted the nine-item version of the Utrecht Work Engagement Scale (UWES-9; Schaufeli *et al.*, 2016) to measure employees' work engagement. As in previous South African studies (e.g., Goliath-Yarde and Roodt, 2011; Naude and Rothmann, 2004; Storm and Rothmann, 2003), the pretest indicated that the participants, who were all non-native English speakers, were uncertain about the meaning of several of the scale items that contained idiomatic expressions and unfamiliar words. Following the recommendations of prior studies (i.e., Naude and Rothmann, 2004; Storm and Rothmann, 2003), we reworded six of the original nine items to simplify and clarify their meaning. Respondents answered the adapted UWES-9 scale on a seven-point response scale that was numbered and labelled as prescribed in the UWES-9 test manual (Schaufeli and Bakker, 2004).

3.3.2.4   *In-role and extra-role service performance*

Store managers were asked to rate the collective in-role and extra-role service performance of all the frontline employees in their respective stores with the scales of Bettencourt and Brown (1997), which have been used in several prior studies (e.g., Cheng and Chen, 2017; Karatepe, 2011; Luu, 2019; Tuan, 2018). These scales measure in-role and extra-role service performance with five items each on a Likert scale ranging from 1 = Strongly disagree to 5 = Strongly agree. Following Jiang *et al.* (2015), Jiang *et al.* (2016) and Linuesa-Langreo *et al.* (2017), managers were instructed to think of the typical behaviour of all the frontline employees in their store when answering the scale items.

3.4   RESULTS
3.4.1   <u>Validity and reliability assessment</u>

We conducted an individual-level confirmatory factor analysis (CFA; n = 781) to evaluate the latent structure and psychometric properties of the employee-rated scales. An initial

screening of the data showed that frontline employees' responses to most of the scale items were negatively skewed and clustered around the highest two scale points. Because Mardia's test of multivariate kurtosis indicated a violation of the assumption of multivariate normality (Byrne, 2016), we followed the recommendations of Finney *et al.* (2016) and conducted the CFA with robust diagonally weighted least squares estimation as implemented by the WLSMV estimator in Mplus. In this analysis, the six SO-HPWS dimensions, work engagement, and service climate were modelled as first-order latent variables. This eight-factor measurement model fitted the data well: χ^2 (751) = 1380.58, $p <$ 0.001; χ^2/df = 1.84; CFI = 0.98; RMSEA = 0.03 (90% CI = 0.03-0.04); SRMR = 0.03. The loadings of all the items on their respective factors were statistically significant with completely standardized loadings ranging from 0.68 to 0.91 (see Table 1 in Appendix G, p. 351).

Table 1 (p. 163) lists the construct reliability (CR), individual-level Cronbach's alpha (α) value, and average variance extracted (AVE) for the employee-rated scales. These scales all had CR and α values larger than 0.7, which indicates adequate internal consistency reliability (Hair *et al.*, 2019). The square roots of the AVE values were all larger than the correlations between the study constructs. This indicates that the scales in question have discriminant validity (Malhotra *et al.*, 2017).

To evaluate the reliability and validity of the manager-rated measures, we next conducted a two-factor CFA on the manager-rated data (n = 70), again using the WLSMV estimator in MPlus. The two factors represented in-role and extra-role service performance respectively. The two-factor measurement model fitted the data well: χ^2 (34) = 34.92, $p <$ 0.001; χ^2/df = 1.03; CFI = 0.99; RMSEA = 0.02 (90% CI = 0.00-0.09); SRMR = 0.05. The loadings of all the items on their respective factors were statistically significant, with completely standardized loadings ranging from 0.70 to 0.94 (see Table 1 in Appendix G, p. 351). The CR and α values of the two manager-rated scales shown in Table 1 (p. 163) are larger than 0.7, which indicates adequate internal consistency reliability (Hair *et al.*, 2019). The square root of the AVE values for these two scales were also larger than the correlation between the two latent variables, indicating discriminant validity (Malhotra *et al.*, 2017).

Table 1: **Descriptive statistics, psychometric properties, and bivariate correlations among the individual-level employee- and manager-rated variables**

Variables	Mean	SD	CR	α	Correlations							
					1	2	3	4	5	6	7	8
Employee-rated variables (n = 781)												
1. Staffing	3.948	0.767	0.934	0.902	**0.859**							
2. Training	4.181	0.737	0.939	0.899	0.557	**0.890**						
3. Financial compensation	3.960	0.917	0.934	0.892	.0468	0.414	**0.882**					
4. Non-financial rewards & recognition	3.817	0.849	0.915	0.878	0.657	0.557	0.529	**0.826**				
5. Involvement	4.253	0.636	0.929	0.878	0.604	0.620	0.416	0.670	**0.850**			
6. Empowerment	4.217	0.604	0.814	0.714	0.546	0.499	0.380	0.538	0.561	**0.770**		
7. Work engagement	5.546	0.699	0.947	0.894	0.330	0.328	0.232	0.331	0.321	0.287	**0.818**	
8. Service climate	4.199	0.532	0.871	0.816	0.528	0.554	0.393	0.549	0.597	0.448	0.319	**0.729**
Manager-rated variables (n = 70)												
1. In-role service performance	3.969	0.531	0.910	0.809	**0.820**							
2. Extra-role service performance	4.109	0.578	0.920	0.851	0.589	**0.835**						

Note: SD = Standard deviation; CR = Composite reliability; α = individual-level Cronbach's alpha. All correlations are statistically significant at the 0.01 level (two-tailed). The square root of the average variance extracted (AVE) appears in bold on the diagonal.

3.4.2   Common method bias

Following MacKenzie and Podsakoff (2012), we implemented six procedural remedies to counteract common method bias. First, we obtained data on the antecedents (i.e., SO-HPWSs, service climate, and work engagement) from frontline employees and data on the two outcome variables (i.e., in-role and extra-role service performance) from store managers. Second, the survey invitations, follow-up reminders, and survey landing pages of both the employee and the manager surveys emphasized that participation was voluntary, anonymous, and confidential. Third, respondents were encouraged to answer all the questions honestly. Fourth, in the employee questionnaire we used different scale point labels to measure the three focal constructs. Fifth, by pretesting the employee questionnaire, we ensured that respondents clearly understood the questions. Finally, to counteract order bias, we randomized the sequence in which the six SO-HPWP sub-scales were presented

to respondents in the employee questionnaire, as well as the order of presentation of the individual scale items measuring the different constructs in both questionnaires.

To evaluate the potential impact of common method variance among the individual-level employee-rated variables, we compared the fit of the hypothesized eight-factor measurement model with a one-factor model in which all items loaded on a single latent factor. The one-factor model had a significantly poorer fit than the eight-factor model: χ^2 (779) = 10930.85, $p < 0.001$; χ^2/df = 14.03; CFI = 0.75; RMSEA = 0.13; SRMR = 0.13; $\Delta\chi^2$ = 2565.08, Δdf = 28, p < 0.001. Similarly, we compared the fit of the hypothesized two-factor model with that of a one-factor model on the manager-rated data. The one-factor model had a significantly poorer fit than the two-factor model: χ^2 (35) = 91.56, $p < 0.001$; χ^2/df = 2.62; CFI = 0.95; RMSEA = 0.15 (90% CI = 0.11-0.19); SRMR = 0.10; $\Delta\chi^2$ = 19.46, Δdf = 1, p < 0.001. These results indicated that common method variance was not a major concern in the data.

3.4.3   Data aggregation

Although data on SO-HPWSs, work engagement, and service climate were collected from individual frontline employees nested in 70 stores, this paper's conceptual model and hypotheses were tested at the store-level of analysis. To statistically justify the aggregation of the individual-level employee responses to the store level, we calculated three aggregation statistics – ICC(1), ICC(2), and $r_{wg(j)}$. These statistics are widely used in unit-level studies to justify data aggregation (e.g., Jiang *et al.*, 2015; Jiang *et al.*, 2016; Myer *et al.*, 2016).

ICC(1), which was calculated for each employee-rated construct across all 70 the stores in this study (Castro, 2002), indicates the proportion of variance in individual-level ratings that are explained by unit membership (Bliese, 2000). A large ICC(1) value indicates a strong unit effect with little individual variability in respondents' ratings within units (Bliese, 1998). According to LeBreton and Senter (2008), ICC(1) can be interpreted as an effect size with a value of 0.01 indicating a small unit effect, a value of 0.10 indicating a medium unit effect, and a value of 0.25 indicating large unit effect.

Next, we also calculated ICC(2) for each employee-rated construct across all 70 the units in this study. According to Krasikova and LeBreton (2019), ICC(2) indicates how reliably unit-level mean scores (calculated across the ratings provided by the respondents in each unit) differentiate between units. ICC(2) values ≥ 0.70 are generally considered acceptable (Klein and Kozlowski, 2000), although some authors (e.g., Hong *et al.*, 2017; Salanova *et al.*, 2005; Torrente *et al.*, 2012) use a lower benchmark of 0.60 proposed by Glick (1985).

In addition to ICC(1) and ICC(2), researchers frequently use r_{wg} (for single-item measures) or $r_{wg(j)}$ (for multiple item measures) to evaluate within-unit agreement in the units included in a study (LeBreton and Senter, 2008). These two aggregation statistics are calculated separately for each unit in a study (Bliese, 2000). Because we used multiple-item ratings scales for all employee-rated constructs, we employed $r_{wg(j)}$ to evaluate within-unit agreement for each employee-rated construct in each of the 70 stores included in this study.

The values of $r_{wg(j)}$ typically range between 0 and 1 with higher values indicating higher levels of within-unit agreement (Woehr *et al.*, 2015). For $r_{wg(j)}$, a cut-off value of 0.70 is typically used to distinguish adequate from inadequate within-unit agreement (Biemann *et al.*, 2012). Most researchers calculate the mean or median $r_{wg(j)}$ value across the units in their studies, and then compare this value with the cut-off of 0.70 (Biemann *et al.*, 2012). A value of 0.70 indicates that 70% of the variance in team members' ratings of the focal construct is due to their agreement, while the remaining 30% is due to error variance in the form of random responding (Krasikova and LeBreton, 2019). As an alternative, LeBreton and Senter (2008) proposed the following cut-off values indicating different levels of within-unit agreement: 0.00-0.30 (lack of agreement); 0.31-0.50 (weak agreement); 0.51-0.70 (moderate agreement); 0.71-0.90 (strong agreement); and 0.91-1.00 (very strong agreement).

When calculating $r_{wg(j)}$, one has to specify a null distribution. This distribution answers the following question: If respondents responded randomly, what would the form of the distribution of their scores be? (LeBreton and Senter, 2008). Choosing an appropriate null distribution "… is the single greatest factor complicating the use of r_{wg}-based indices" (LeBreton and Senter, 2008, p. 829).

Most researchers use a uniform null distribution when calculating $r_{wg(j)}$. This distribution, also known as a rectangular distribution, assumes that each scale point has an equal probability of being selected when respondents answer randomly. For example, in the case of a five-point scale, a uniform distribution assumes that there is a 20% probability that a respondent will select any specific scale point when responding randomly (LeBreton and Senter, 2008). The uniform distibution yields the largest values of $r_{wg(j)}$ and thus provides an upper-bound estimate of within-unit agreement (Biemann *et al.*, 2012; LeBreton and Senter, 2008). Forms of response bias (e.g., leniency bias, social desirability bias, or central tendency) can result in non-uniform distributions of scores even when respondents provide random answers to ratings scale items. As a result, researchers are urged to consider null distributions other than the uniform distribution that better reflect random responding in their studies (Biemann *et al.*, 2012; Krasikova and LeBreton, 2019). Researchers should base the choice of an appropriate null distribution on their prior expectations regarding the forms of response bias that will most likely occur in their research and not on the actual distribution of the ratings observed in a specific study (Biemann *et al.*, 2012). According to Biemann *et al.* (2012), researchers should use the uniform distribution to calculate an upper-bound estimate of $r_{wg(j)}$. In addition, they should use one or more alternative null-distributions to obtain lower-bound estimates of $r_{wg(j)}$.

Given these recommendations, we followed Ehrhart *et al.* (2011) and calculated $r_{wg(j)}$ using a uniform and slightly skewed null distribution. The use of a slightly skewed null distribution is justified because respondents may exhibit a positive leniency when they evaluate the SO-HPWS and service climate in their respective stores (Ehrhart *et al.*, 2011; Tuan, 2017).

Table 2 (p. 167) provides the ICC(1) and ICC(2) values for the three employee-rated constructs as well as the F statistics and p-values of the one-way random effects ANOVAs on which these interclass correlations are based. The mean $r_{wg(j)}$ values calculated using the uniform and slightly skewed null distributions are also provided.

Table 2:   Aggregation statistics

Variable	ICC(1)	ICC(2)	One-way ANOVA	Mean / median $r_{wg(j)}$ based on a uniform distribution	Mean / median $r_{wg(j)}$ based on a slightly skewed distribution
SO-HPWSs	0.296	0.825	$F(69,711) = 5.274$, $p < .001$	0.962 / 0.979	0.920 / 0.967
Service climate	0.238	0.777	$F(69,711) = 4.395$, $p < .001$	0.947 / 0.951	0.904 / 0.917
Work engagement	0.113	0.586	$F(69,711) = 2.446$, $p < .001$	0.958 / 0.978	0.920 / 0.967

The ICC(1) values indicate that 29.6% of the variance in employees' individual-level ratings of SO-HPWSs is explained by unit membership. This is a large effect according to LeBreton and Senter's (2008) interpretational guidelines. For service climate, the ICC(1) value indicates that 23.8% of the variance in individual-level ratings is owing to unit membership, which constitutes a medium-to-large effect (LeBreton and Senter, 2008). Finally, the ICC(1) value for work engagement indicates that 11.3% of the variance in individual-level ratings is due to unit membership, which constitutes a medium effect (LeBreton and Senter, 2008).

The ICC(2) values for SO-HPWPS and service climate both exceed the traditional cut-off of 0.70, and indicate 'strong agreement' according to the guidelines of LeBreton and Senter (2008). The ICC(2) value of 0.59 for work engagement is lower than the traditional cut-off of 0.70, and indicates 'moderate agreement' according to LeBreton and Senter (2008). However, this value is still larger than the corresponding ICC(2) values reported in prior unit-level studies (Barrick *et al.*, 2015; Eldor, 2020; García-Buades *et al.*, 2016). Low ICC(2) values should not prevent data aggregation if it is justified by theory and supported by acceptable $r_{wg(j)}$ values and significant between-group variances – as is the case in the current study (Eldor, 2020; Liao and Chuang, 2007).

The mean $r_{wg(j)}$ values based on both the uniform and the slightly skewed null distributions are larger than the traditional cut-off of 0.70 for all three employee-rated constructs, and indicate strong agreement (LeBreton and Senter, 2008). Furthermore, the results of the one-way ANOVAs on which the ICC(1) and ICC(2) values are based indicate statistically significant between-store differences for all three employee-rated variables. We therefore proceeded by aggregating the individual-level employee ratings to the store level.

We then calculated Cronbach's alpha at a store level (see Table 3, p. 169). This is appropriate as it aligns the reliability estimates with the level of analysis at which the paper's hypotheses are tested (Mathieu *et al.*, 2006). Several prior studies (e.g., Du *et al.*, 2015; Gracia *et al.*, 2013; Jiang *et al.*, 2016; Maynard *et al.*, 2019; Weller *et al.*, 2020) have reported Cronbach's alpha at a unit level of analysis. The store-level Cronbach's alpha values of all three the employee-rated variables were larger than 0.70, which indicates that the measures used have acceptable internal consistency reliability at a store level of analysis.

Given the favourable values of ICC(1), ICC(2), and $r_{wg(j)}$ as well as the favourable unit-level Cronbach's alpha values, we proceeded to aggregate the individual-level employee ratings to the store level. Thereafter, we calculated composite scores to represent each of the employee-rated constructs at the store level of analysis. For service climate and work engagement, we calculated store-level composite scores by averaging across the aggregated store-level ratings of the individual items in the applicable multiple item scales. For SO-HPWSs, we created a single additive score with the subscale aggregation method used in several previous studies (e.g., Aryee *et al.*, 2012; Chuang *et al.*, 2013; Jiang *et al.*, 2015). We first calculated a subscale score for each of the six HRM practice subscales by averaging the aggregated employee responses to the items in each subscale. This was justified by the acceptable store-level Cronbach's alpha values of all six subscales (average $\alpha = 0.945$, ranging from 0.885 to 0.968). Thereafter, we created the single additive score by averaging the six subscale scores. This was again justified by the high Cronbach's alpha value calculated across the six subscale scores ($\alpha = 0.936$). Since the store managers evaluated the collective in-role and extra-role service performance of all the employees in their respective stores, these ratings were already at store level. No further aggregation of the store managers' ratings was therefore necessary. We created composite scores representing collective in-role and extra-role service performance by averaging each store manager's responses to the items in the corresponding scales.

3.4.4 Descriptive statistics for the store-level composite scores

Table 3 shows the means, standard deviations, store-level Cronbach's alpha values, and correlations among the store-level composite scores representing the study variables.

Table 3: Means, standard deviations, store-level Cronbach's alpha values, and correlations among the store-level composite scores

	Mean	Standard deviation	Store-level Cronbach's alpha	Correlations			
				1	2	3	4
1. SO-HPWSs	4.026	0.377	0.979				
2. Service climate	4.173	0.304	0.921	0.831**			
3. Work engagement	5.531	0.327	0.925	0.555**	0.630**		
4. In-role service performance	3.969	0.531	0.809	0.371**	0.399**	0.318**	
5. Extra-role service performance	4.109	0.578	0.851	0.395**	0.489**	0.159	0.589**

Note: n = 70; ** $p < .01$ (2-tailed).

3.4.5 Hypothesis testing

3.4.5.1 *Analytical approach*

Because of the small store-level sample size (n = 70), we used a single-indicator path analysis approach and maximum likelihood (ML) estimation to test the two competing structural models shown in Figure 1 (p. 145) with Mplus. ML estimation was appropriate because Mardia's test of multivariate kurtosis did not indicate a problem with multivariate kurtosis (Byrne, 2016).

Each latent variable in the path analysis was measured by a single composite scale score. To incorporate measurement error into the model, we set the path from each latent variable to its corresponding latent scale score to the square root of the reliability of the applicable measure (i.e., $\sqrt{Reliability}$). Next, we set the random error variance of each single-item indicator to 1 minus its reliability, multiplied by the scale score's variance (i.e., [1 – reliability] x variance). Several previous unit-level studies have used this approach (e.g., Chi *et al.*, 2011; Greenslade and Jimmieson, 2011; Jiang *et al.*, 2015; Lee *et al.*, 2011; Maltarich *et al.*,

2016; Mathieu *et al.*, 2009; Maynard *et al.*, 2019; Maynard *et al.*, 2012; Susskind *et al.*, 2018b).

When using the single-indicator path analysis approach described above, one has to choose an estimate of scale reliability to use in the formulas. Previous studies have used different reliability estimates, including ICC(2) values (e.g., Jiang *et al.*, 2015; Susskind *et al.*, 2018a), individual-level Cronbach's alpha values (e.g., Chi *et al.*, 2011; Greenslade and Jimmieson, 2011), and unit-level Cronbach's alpha values (e.g., Maynard *et al.*, 2019; Maynard *et al.*, 2012). Like Maynard *et al.* (2012) and Maynard *et al.* (2019), we used the store-level Cronbach's alpha values shown in Table 3 (p. 169) as reliability estimates to align the reliability information included in the path analysis model with the level of analysis at which the model is tested (Chen *et al.*, 2004).

The overall fit of the two competing structural models was evaluated using the chi-square goodness-of-fit statistic (χ^2), the comparative fit index (CFI), and the standardized root mean square residual (SRMR). More specifically, we adopted the following thresholds for acceptable model fit: CFI $\geq$ 0.95 and SRMS < 0.08 (Hu and Bentler, 1999). Because of the small store-level sample size and the two rival models' small degrees of freedom, the root mean square error of approximation (RMSEA) is not reported in this article. Kenny *et al.* (2015) argued that the RMSEA should not be used to evaluate the fit of models with small degrees of freedom in small samples.

In the SEM analyses, we allowed the disturbance terms of two of the latent endogenous variables, in-role and extra-role service performance, to correlate – as is done by default in MPlus. The disturbance terms represent all *other* influences on these two latent endogenous variables that are not included as antecedents in the model (Keith, 2019). Correlated disturbance terms may indicate that two latent variables are causally related, but that the direction of this relationship is unknown. Alternatively, correlated disturbances may indicate that there is some other variable (i.e., an unmeasured common cause), not included in the model, that affects both the latent variables (Keith, 2019).

3.4.5.2 *Structural equation modelling (SEM) results*

The SEM results summarized in Table 4 indicate that Model 1, the *climate-centric model*, fits the data better than Model 2, the *engagement-centric model*. Model 1 achieved acceptable fit (χ^2 (4) = 9.108, p = 0.058; χ^2/df = 2.277; CFI = 0.969; SRMR = 0.038), while the fit of Model 2 was not acceptable (χ^2 (4) = 20.646, p < 0.001; χ^2/df = 5.162; CFI = 0.900; SRMR = 0.114). The CFI and SRMR values of Model 2 were lower than the cut-off values of 0.95 and 0.08 indicated above.

Table 4:   Model comparison results

Model	χ^2 (df)	p-value	CFI	SRMR	AIC	BIC	R^2 for in-role service performance	R^2 for extra-role service performance
Model 1	9.108 (4)	0.0584	0.969	0.038	229.208	265.184	0.219	0.278
Model 2	20.646 (4)	0.0004	0.900	0.114	240.746	276.722	0.150	0.047

Since Models 1 and 2 were not nested, they could not be compared with a chi-square difference test. Instead, we compared the two non-nested models on the basis of their Akaike Information Criterion (AIC) and Bayes Information Criterion (BIC) values. The model with the smallest AIC and BIC values has a better fit, and is more likely to replicate (Kline, 2016; Wang and Wang, 2020). In the current study, Model 1 has smaller AIC and BIC values (AIC = 229.208; BIC = 265.184) than Model 2 (AIC = 240.746; BIC = 276.722) and is, therefore, the preferred model.

Model 1 also has better explanatory power than Model 2. As the R^2 values in Table 4 indicate, Model 1 explains 21.9% of the variance in in-role service performance, compared with 15.0% of the variance explained by Model 2. Similarly, Model 1 explains 27.8% of the variance in extra-role performance, compared with the 4.7% explained by Model 2.

The unacceptable fit and the poorer explanatory power of Model 2 indicate that this model is inconsistent with the current study's data and with the associated conceptual model in Figure 1 (p. 145). Given the poor fit of Model 2, it is not possible to reach conclusions about Hypotheses 6, 7, and 8 that are unique to Model 2. Consequently, only Model 1 and its

associated hypotheses are discussed below. Table 5 lists the standardized and unstandardized path coefficients for Model 1.

Table 5:   Standardized and unstandardized path coefficients for Model 1

Hypothesized relationship	Standardized path coefficients	Unstandardized path coefficients	Hypothesis supported
H1: SO-HPWSs $\rightarrow$ Work engagement	0.584	0.498***	Supported
H2: SO-HPWSs $\rightarrow$ Service climate	0.727	0.577***	Supported
H3: Work engagement $\rightarrow$ Service climate	0.253	0.235**	Supported
H4: Service climate $\rightarrow$ In-role service performance	0.468	0.818***	Supported
H5: Service climate $\rightarrow$ Extra-role service performance	0.527	1.000***	Supported

Note: *** $p < .001$, ** $p < .01$.

The path coefficients in Table 5 provide support for Hypotheses 1 to 5. All the path coefficients were statistically significant at $p < .01$. More specifically, SO-HPWSs positively predicted work engagement ($\beta = 0.584$) and service climate ($\beta = 0.727$), thus supporting H_1 and H_2. Work engagement also positively predicted service climate ($\beta = 0.254$), thus supporting H_3. Service climate, in turn, positively predicted both in-role service performance ($\beta = 0.468$) and extra-role service performance ($\beta = 0.527$), thus supporting H_4 and H_5.

The squared multiple correlations (R^2) indicated that SO-HPWSs accounted for 34.1% of the variance in work engagement, while SO-HPWSs and work engagement accounted for 80.8% of the variance in service climate. Together, the three antecedents – SO-HPWPs, work engagement, and service climate – accounted for 21.9% of the variance in in-role service performance and 27.8% of the variance in extra-role service performance.

As previously mentioned, the disturbance terms of the two outcome variables, in-role and extra-role service performance, were allowed to covary. This covariance was statistically significant with a standardized estimate (i.e., a correlation) of 0.620.

3.5   DISCUSSION

3.5.1   <u>Theoretical implications</u>

This paper set out to test two competing models of the interrelationships between SO-HPWSs, work engagement, and service climate as antecedents of frontline employees' in-role and extra-role service performance at the store level of analysis. In the *climate-centric model* (Model 1 in Figure 1), service climate served as the direct predictor of in-role and extra-role service performance, while work engagement and SO-HPWSs, in turn, predicted service climate. In the *engagement-centric model* (Model 2 in Figure 1), work engagement served as the direct predictor of in-role and extra-role service performance, while service climate and SO-HPWSs, in turn, predicted work engagement. The results indicate that the *climate-centric model* achieved an acceptable fit to the data, while the fit of the *engagement-centric model* was not acceptable. Given this, we conclude that SO-HPWSs and work engagement are both important antecedents of service climate, which, in turn, predicts frontline employees' in-role and extra-role service performance at a store level of analysis.

The finding that store-level SO-HPWSs predict service climate is in line with the meta-analytic results reported by Hong *et al.* (2013), and also confirms the results of three subsequent primary studies (Jiang *et al.*, 2015; Lin and Liu, 2016; Tang and Tang, 2012). While most previous studies have investigated the relationship between managers' ratings of SO-HPWSs and service climate, this paper made a contribution by focusing on frontline employees' ratings of both constructs. When these findings are taken together, this line of inquiry clearly shows that SO-HPWSs and their associated service-oriented HRM practices contribute to the strengthening of the service climate at a unit level.

We also found that SO-HPWSs positively predict work engagement. This finding contributes to the limited literature on the relationship between HPWSs and work engagement at a unit level of analysis (e.g., Barrick *et al.*, 2015; Schneider *et al.*, 2018). More specifically, from the perspective of the Job Demands-Resources (JD-R) model, the finding confirms that an SO-HPWS is indeed an important organizational resource that stimulates employees' collective work engagement in service contexts (Barrick *et al.*, 2015).

This paper's finding that collective work engagement is a positive predictor of service climate at the unit level confirms the empirical results reported by Salanova *et al.* (2005) and Kopperud *et al.* (2014). This finding suggests that the extent to which frontline employees feel motivated and engaged is important for the creation and strengthening of a store's service climate (Salanova *et al.*, 2005). It therefore confirms the conceptual arguments of Schneider and his associates (Bowen and Schneider, 2014; Schneider, 2020; Schneider *et al.*, 2018) that work engagement serves as a foundation on which a service climate can be built. Consequently, managers should find ways to enhance frontline employees' collective work engagement in order to strengthen the store's service climate and, through that, stimulate the employees' collective in-role and extra-role service performance (Salanova *et al.*, 2005).

The paper's finding that service climate predicts frontline employees' in-role service performance at the store level confirms previous unit-level research that found that the service climate in units facilitates and encourages frontline employees' in-role service performance (e.g., Abdelhadi and Drach-Zahavy, 2012; Jiang *et al.*, 2015; Jiang *et al.*, 2016).

Finally, to our knowledge, only four previous studies have investigated the unit-level relationship between service climate and extra-role service performance (Chuang and Liao, 2010; Schneider *et al.*, 2005; Tang and Tang, 2012; Way *et al.*, 2010). This paper adds to this body of knowledge, and confirms that service climate serves as a positive predictor of extra-role service performance at the store level of analysis.

Overall, the results indicate that SO-HPWSs predict service climate both directly and indirectly through work engagement. In other words, work engagement partially mediates the relationship between SO-HPWSs and service climate. Service climate, in turn, predicts frontline employees' collective in-role and extra-role service performance as rated by their store managers.

3.5.2   Managerial implications

The network of relationships in the *climate-centric model* (Model 1 in Figure 1, p. 145) guides managers on where to focus their attention in order ultimately to stimulate frontline employees' in-role and extra-role service performance. This model indicates that managers could use a three-pronged approach by implementing interventions (a) to strengthen employees' perceptions of the SO-HPWS in their store, (b) to enhance frontline employees' work engagement, and (c) to bolster the store-level service climate.

The findings of this paper indicate that employees' perceptions of the SO-HPWS in their respective stores can be strengthened by implementing and strengthening a coordinated system of SO-HPWPs. These practices could include service-oriented staffing, service-focused training, service-based financial compensation, service-oriented reward and recognition programmes, the involvement of frontline employees in service-related decisions, and the empowerment of frontline employees (Chuang and Liao, 2010; Jiang *et al.*, 2015; Liao *et al.*, 2009; Tang and Tang, 2012). To be most effective, the aforementioned individual service-oriented HRM practices must be aligned with, and complement, each other to form a coordinated SO-HPWS (Tang and Tang, 2012). Managers will therefore have to invest in strengthening, integrating, and coordinating all six the SO-HPWPs mentioned above so that the practices support and reinforce one another. Furthermore, managers should ensure that these practices are designed and implemented to communicate a clear and distinctive focus on 'service excellence'. In addition, all frontline employees should be exposed to these practices to facilitate the development of shared perceptions about the intent and focus of the practices. For example, all the frontline employees working in a store should periodically undergo service-focused training to enhance their interpersonal and technical skills. Store managers should make an effort to give recognition to frontline employees who perform exceptionally in terms of both their in-role and extra-role service behaviours. The bonuses and other financial incentives paid to frontline employees should be tied to the achievement of clearly specified service-related performance criteria, such as improvements in a store's customer satisfaction scores. Mechanisms should be created to involve frontline employees in important decisions about service improvements, service innovations, and other aspects that affect their service delivery to customers. Frontline employees should also be trained, empowered, and rewarded to deal effectively with

customer problems without necessarily having to involve a frontline supervisor or manager. Several sources (e.g., Boella and Goss-Turner, 2020; Cappelli and Tavis, 2018; Hayes and Ninemeier, 2016; Levy *et al.*, 2019; Wirtz and Lovelock, 2016) provide further practical guidance to managers on how the SO-HPWPs mentioned above should be designed, implemented, coordinated, and evaluated in retail and other service settings.

As the *climate-centric model* shows, HRM-related investments aimed at strengthening the SO-HPWS at the store level will simultaneously enhance frontline employees' shared service climate perceptions and their collective work engagement. However, managers can also directly enhance frontline employees' work engagement through focused work engagement interventions. Such interventions should be tailored to a specific organizational context, but could include initiatives aimed at: (a) ensuring that the job-related feedback employees receive from their supervisors and managers focus on their strengths; (b) matching employees' jobs with their abilities and talents through careful job design; (c) providing frontline employees with the necessary job resources, including supervisor support, positive appreciation, and the creation of an organizational climate emphasising co-worker collaboration; (d) improving frontline employees' working conditions by addressing problematic job tasks or technical operations, providing ergonomic equipment, adding more flexibility to work schedules, improving employees' role clarity, providing frontline employees with decision-making authority, and fostering positive social relationships in the workplace; and (e) training store managers to exhibit supportive leadership styles (Attridge, 2009).

Finally, the *climate-centric model* indicates that managers should bolster frontline employees' perceptions of the service climate in their respective stores in order to enhance their in-role and extra-role service performance. While investments in coordinated SO-HPWPs and in work engagement interventions will strengthen frontline employees' shared perceptions of the service climate in their respective stores, managers can further bolster these perceptions by tracking customers' service quality perceptions and by sharing the results with employees; by empowering and requiring store managers to engage in service-oriented leadership behaviours; by providing employees with the necessary tools, technology, and resources to enable them to provide high quality service; and by improving the quality of the internal service that frontline employees receive from back-office support

functions (Bowen and Schneider, 2014; Schneider *et al.*, 2005; Schneider and White, 2004; Schneider *et al.*, 1998).

3.5.3   <u>Limitations, and directions for future research</u>

As with all research, this paper has a number of limitations that should be considered when interpreting its findings. First, the cross-sectional nature of the study precludes definite statements about the causal directions of the relationships included in the two study models (Abdelhadi and Drach-Zahavy, 2012; Barrick *et al.*, 2015; Perry *et al.*, 2013). Claims about the direction of causality can be strengthened through future longitudinal studies (Abdelhadi and Drach-Zahavy, 2012; Barrick *et al.*, 2015).

Second, the store-level sample size of 70 is small, but it is nevertheless comparable with the sample sizes in previous unit- and team-level studies that have used the same single-indicator path analysis to test structural models of comparable complexity (e.g., Chi *et al.*, 2011; Mathieu *et al.*, 2009; Maynard *et al.*, 2019; Susskind *et al.*, 2018a). Future studies should test the two competing models on samples involving a larger number of stores or other service units.

Third, the study was conducted in a single context – namely, across the stores of a single retailer. A similar approach has been used in previous unit-level studies (e.g., Eldor, 2020; Jiang *et al.*, 2015; Lin and Liu, 2016). While the use of one organization as a data source may limit the generalizability of the paper's findings, Jiang *et al.* (2015) argue that the use of a single organization may lead to range restriction in the variables involved, and thus provide conservative estimates of the relationships under investigation that are likely to generalize to other service units. Future research should seek to replicate the study across multiple stores or other service units from multiple independent service organizations.

Fourth, while this paper confirms the importance of store-level SO-HPWSs and of collective work engagement as direct antecedents of service climate, researchers have identified several other factors that managers could use to enhance a unit's service climate. These include service-oriented leadership (Jiang *et al.*, 2015; Schneider *et al.*, 2005), servant leadership (Linuesa-Langreo *et al.*, 2017), transformational leadership (Kopperud *et al.*,

2014), and internal service quality (Ehrhart *et al.*, 2011; Schneider *et al.*, 1998). Future research should explore the relative importance of these constructs as predictors of service climate, as well as the interrelationships and interactions between them.

Fifth, since the climate-centric model tested in this paper achieved acceptable model fit, future studies could consider expanding this model by adding relevant customer outcomes, such as customer satisfaction and customer loyalty, or indicators of store financial performance (e.g., Jiang *et al.*, 2015).

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MAIN FINDINGS FROM CHAPTER 3 CONTRIBUTING TO THE OVERALL OBJECTIVES OF THIS THESIS

The main findings from Chapter 3 that contribute to the overall objectives of this thesis are listed below. These findings are numbered sequentially as MF C3.1 to MF C3.11, with 'MF' indicating 'main finding' and 'C3' indicating 'Chapter 3'.

Main findings regarding the reliability and validity of the measurement scales and store-level composite scores used in this chapter:

MF C3.1: The store-level composite score representing frontline employees' *shared* perceptions of the SO-HPWS they experience in their respective stores was reliable and valid.

MF C3.2: The store-level composite score representing frontline employees' *shared* perceptions of the service climate in their respective stores was reliable and valid.

MF C3.3: The store-level composite score representing frontline employees' collective work engagement was reliable and valid.

MF C3.4: The scale measuring store managers' perceptions of the collective in-role service performance of the frontline employees in their respective stores, with items adapted from Bettencourt and Brown (1997), was reliable and valid among the store managers of the participating retailer. This scale was unidimensional. Similarly, the store-level composite score representing this construct was also reliable and valid.

MF C3.5: The scale measuring store managers' perceptions of the collective extra-role service performance of the frontline employees in their respective stores, with items adapted from Bettencourt and Brown (1997), was reliable and valid among the store managers of the participating retailer. This scale was unidimensional. Similarly, the store-level composite score representing this construct was also reliable and valid.

Main findings related to the two competing structural models tested in this chapter:

MF C3.6: The climate-centric model achieved an acceptable fit to the data, while the fit of the engagement-centric model was not acceptable.

Main findings related to the specific hypotheses tested in the _climate-centric_ structural model:

MF C3.7: Frontline employees' shared perceptions of their store's SO-HPWS were a statistically significant positive predictor of their collective work engagement at the store level.

MF C3.8: Frontline employees' shared perceptions of their store's SO-HPWS were a statistically significant positive predictor of their shared perceptions of the store's service climate.

MF C3.9: Frontline employees' collective work engagement was a statistically significant positive predictor of their shared perceptions of service climate at the store level.

MF C3.10: Frontline employees' shared perceptions of the service climate in their store were a statistically significant positive predictor of their collective in-role service performance at the store level as rated by the store manager.

MF C3.11: Frontline employees' shared perceptions of the service climate in their store were a statistically significant positive predictor of their collective extra-role service performance at the store level as rated by the store manager.

CHAPTER 4

THE ANTECEDENTS AND OUTCOMES OF SERVICE CLIMATE IN A RETAIL SETTING

Chapter 4 presents the third and final article in this thesis. The purpose of this article was to test an expansion of the *climate-centric model* introduced earlier in Chapter 3 at the store level of analysis. The final article specifically focused on an expansion of the climate-centric model because, as was indicated in Chapter 3, this model achieved an acceptable fit to the data, while the fit of the rival engagement-centric model was not acceptable. In the expanded climate-centric model, SO-HPWSs predict service climate and work engagement, while work engagement also predicts service climate. The latter, in turn, predicts employees' in-role and extra-role service performance. All three of these variables serve as antecedents of customer satisfaction which, in turn, predicts store loyalty.

This article was prepared in accordance with the author guidelines of *Marketing Intelligence & Planning* (Emerald Publishing), an A-rated journal according to the ABDC journal list. The editorial guidelines of this journal are included in Appendix B (p. 328). At the time of the submission of this thesis, Article 3 was being finalized for submission to the journal.

To ensure consistency throughout this thesis, the article was written in South African English, and its referencing was done in accordance with the Harvard referencing style prescribed by Emerald Publishing. The same referencing style was used in Articles 1 and 2. In addition, the headings, table and figure captions, page margins, font type and font size used in this chapter are not aligned with the aforementioned editorial guidelines, but have been kept consistent throughout the thesis. As explained in the 'Remarks' on p. i, I used the active voice, the first-person plural pronoun 'we', and the plural possessive determiner 'our' in this chapter to ensure direct, clear, and concise sentences.

Chapter 4 concludes with a summary of the main findings from this article that contribute to the primary research objective of this thesis. This summary is located on p. 253.

CHAPTER 4

THE ANTECEDENTS AND OUTCOMES OF SERVICE CLIMATE IN A RETAIL SETTING

ABSTRACT

Purpose – This paper tests a store-level structural model of selected antecedents and outcomes of service climate in a retail setting. Service-oriented high-performance work systems (SO-HPWSs) and work engagement are modelled as antecedents of service climate, while in-role and extra-role service performance, customer satisfaction, and store loyalty are modelled as the direct and indirect outcomes thereof.

Design/methodology/approach – Structural equation modelling (SEM) was used to test the store-level model on cross-sectional data collected from 781 frontline service employees, 70 managers, and 803 customers from 70 retail stores in the same retail chain.

Findings – The results indicate that the structural model achieved acceptable fit to the data. In this model, SO-HPWSs are a positive predictor of work engagement and service climate, while work engagement also positively predicts service climate. The latter, in turn, positively predicts in-role and extra-role service performance and customer satisfaction. Contrary to prior research findings, in-role and extra-role service performance are not statistically significant predictors of customer satisfaction, while the latter positively predicts store loyalty.

Originality/value – To our knowledge, this paper is the first to investigate jointly the relationships between service climate, in-role service performance, extra-role service performance, and customer satisfaction at the store level of analysis.

Keywords – Service-oriented high-performance work systems, Work engagement, Service climate, In-role and extra-role service performance, Customer satisfaction, Store loyalty, Retailing

Paper type – Research Paper

4.1 INTRODUCTION

In 2009, at the height of the global economic crisis, renowned services marketing scholar, Leonard Berry, wrote the following: "A perfect economic storm is a perfect time for companies to recommit to the service excellence journey. Service creates value for customers, and superior value – the best way to compete at any time – is also the *only* way to compete in a recession or depression" (Berry, 2009, p. 310). This observation still rings true today, more than a decade later.

In high-contact services such as traditional bricks-and-mortar retailing, frontline employees are the key to service excellence. These employees are the face of the organization to customers and, through their actions and inactions, directly create the service that customers experience (Berry, 2009; Zeithaml *et al.*, 2018). So it is important to understand the factors that affect frontline employees' motivation and service-related behaviours, and the impact of these behaviours on customers' satisfaction and store loyalty.

Previous studies have shown that three factors – service-oriented high-performance work systems (SO-HPWSs), work engagement, and service climate – shape frontline employees' in-role and extra-role service performance (e.g., Chuang and Liao, 2010; Jiang *et al.*, 2015a; Linuesa-Langreo *et al.*, 2017; Salanova *et al.*, 2005; Tang and Tang, 2012). Frontline employees' service climate perceptions, as well as their in-role and extra-role service behaviours, in turn affect customers' satisfaction and store loyalty (e.g., Bettencourt and Brown, 1997; Maxham *et al.*, 2008; Salanova *et al.*, 2005; Schneider *et al.*, 2005). However, to our knowledge, no previous studies have simultaneously included all seven of these variables to explore their interrelationships at the unit level of analysis.

In this article, the term 'unit level' is used generically to refer to studies in which individual-level responses were aggregated to high-level organizational collectives (e.g., to teams, departments, or branches) and the statistical analyses were conducted on the aggregated data at this higher level. The term 'store level' refers more specifically to current and other studies in which individual-level responses were aggregated to the level of retail stores, and the analyses were conducted at this level across multiple retail stores.

The aim of the current study is to test the conceptual model shown in Figure 1 (p. 202) at a store level of analysis. In this model, SO-HPWSs predict work engagement as well as service climate. Work engagement also predicts service climate, while the latter predicts frontline employees' in-role and extra-role service performance. Furthermore, service climate, in-role service performance, and extra-role service performance together predict customer satisfaction, which in turn predicts store loyalty.

To test this model, we collected data on SO-HPWSs, work engagement, and service climate from frontline employees across 70 stores from the same retail chain. Store managers rated the collective in-role and extra-role service performance of the frontline employees in their respective stores, while customers provided data on their overall satisfaction and store loyalty. The individual-level employee and customer responses were aggregated to the store level, and all the relationships in the model were tested at this level across the 70 participating stores.

The paper makes six contributions. First, this paper specifically focused on frontline employees' perceptions of the SO-HPWSs they experience in their respective stores, and the relationship between employee-rated SO-HPWSs and service climate. It is important to understand employees' perceptions of the SO-HPWSs they experience, because previous research indicated that there is often a gap between the perceptions of frontline employees and store managers in this regard (Den Hartog *et al.*, 2012; Jiang *et al.*, 2017; Liao *et al.*, 2009). As far as we could determine, no previous research has investigated the relationship between employee-rated SO-HPWSs and service climate at a unit level of analysis. Second, the paper specifically focused on SO-HPWSs, instead of generic HPWSs, as a direct antecedent of collective work engagement at the store level of analysis. To our knowledge, only two previous studies (i.e., Karatepe, 2013; Luu, 2019) have investigated this relationship, but at an individual level of analysis. Third, this paper adds to the limited available research on work engagement as an antecedent of service climate. To our knowledge, only two previous studies (i.e., Kopperud *et al.*, 2014; Salanova *et al.*, 2005) have specifically modelled work engagement as a direct antecedent of service climate, while only Salanova *et al.* (2005) focused on this relationship at a unit level of analysis. Fourth, this paper responded to the call by Yavas *et al.* (2010) to investigate simultaneously both in-role and extra-role service performance as outcomes of service climate and as direct

antecedents of customer satisfaction. To our knowledge, only one previous unit-level study (i.e., Maxham *et al.*, 2008) has simultaneously investigated both in-role and extra-role service performance as antecedents of customer evaluations, a broad construct that included overall customer satisfaction, but this study did not include service climate. Fifth, the paper adds to the limited available literature (i.e., Schneider *et al.*, 2005; Tang and Tang, 2012) on the unit-level relationship between service climate and extra-role service performance in particular. Finally, this paper also makes a contribution by investigating the unit-level relationship between overall customer satisfaction and store loyalty. We could only find two prior studies (i.e., Susskind *et al.*, 2018b; Towler *et al.*, 2011) that have investigated this relationship in a retailing context. However, unlike the current study, these two studies did not include service climate as a direct antecedent of customer satisfaction.

The article is structured as follows. The next section presents the conceptual model tested in this paper, and reviews the literature supporting the model. Thereafter we describe the methodology and methods used to collect and analyse the data used to test the model. Next, the paper's findings are presented, followed by a discussion of their theoretical and managerial implications. The article concludes with an overview of the current study's limitations, and with suggestions for future research.

4.2 CONCEPTUAL MODEL AND HYPOTHESES

Figure 1 (p. 202) shows the conceptual model tested in the current study. The nine hypotheses included in the model are discussed below.

Figure 1:   **The conceptual model tested in the current study**
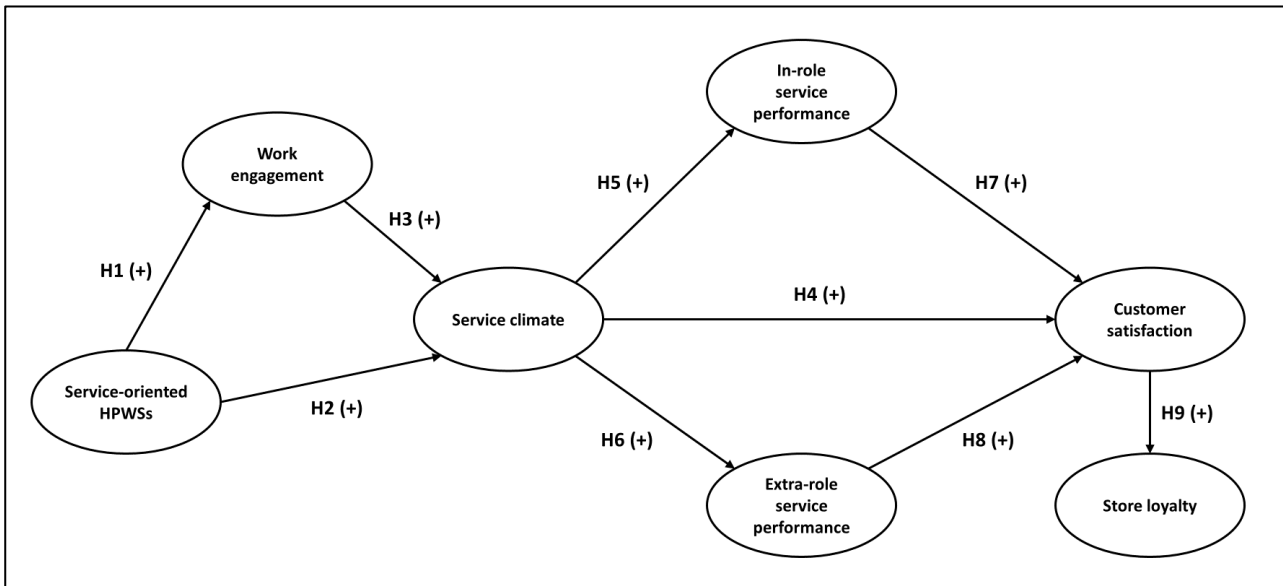
4.2.1   <u>SO-HPWSs and work engagement</u>

Researchers distinguish between generic and service-oriented high-performance work systems. A generic high-performance work system (HPWS) is a system of coordinated human resource management practices that aims to enhance frontline employees' general abilities, motivation, and opportunity to perform (Hong *et al.*, 2013). A service-oriented high-performance work system (SO-HPWS), on the other hand, is specifically targeted at improving customer service (Hong *et al.*, 2013; Wang and Xu, 2017). It focuses on enhancing frontline employees' abilities, motivation, and opportunity to deliver high-quality service to customers (Jiang *et al.*, 2015a; Liao *et al.*, 2009; Luu, 2019).

The current study specifically focused on frontline employees' perceptions of the SO-HPWS in their respective stores. The SO-HPWS in the current study consisted of the following six service-oriented human resource management (HRM) practices: selective staffing based on service-related criteria, service-focused training, financial compensation based on service performance, service-focused non-financial rewards and recognition, employee involvement in service-related decisions, and employee empowerment. These six service-oriented HRM practices, which are also known as service-oriented high-performance work practices (SO-HPWPs), were included in several previous studies involving SO-HPWSs (e.g., Jiang *et al.*,

2015a; Liao *et al.*, 2009; Luu, 2019), and were relevant to the participating retailer in the current study.

The current study specifically investigated frontline employees' perceptions of the SO-HPWSs they experience in their store, and not to store managers' perspectives thereof. Such a focus is appropriate because it is frontline employees' perceptions of the SO-HPWS and related practices in their respective stores, not the actual practices or store managers' ratings thereof, that ultimately affect their attitudes and behaviours towards customers (Jiang *et al.*, 2017; Liao *et al.*, 2009).

Previous research has shown that frontline employees' perceptions of the SO-HPWS in their workplace are an important antecedent of their work engagement (Karatepe, 2013; Luu, 2019). 'Work engagement' refers to "… a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption" (Schaufeli *et al.*, 2002, p. 74). In this definition, 'vigour' refers to having high levels of energy for and a willingness to invest effort in one's work. 'Dedication' means experiencing a sense of meaning, inspiration, significance, pride, and challenge at work, while 'absorption' denotes feelings of happiness, concentration, and being deeply engrossed in one's work (Schaufeli *et al.*, 2002; Zheng *et al.*, 2020).

Most studies on the relationship between both generic and service-oriented HPWSs and work engagement in service settings have been conducted at the individual level of analysis (e.g., Cooke *et al.*, 2019; Huertas-Valdivia *et al.*, 2018; Karadas and Karatepe, 2019; Karatepe, 2013; Luu, 2019). However, the relationships between work engagement and other constructs can also be examined at higher levels. Following Eldor (2020), this paper specifically focused on the relationship between frontline employees' shared perceptions of the SO-HPWSs in their respective stores and their *collective* work engagement at the store level across multiple stores in the same retail chain. Such a store-level focus is appropriate because the quality of service that customers experience in a retail store, and their subsequent satisfaction and store loyalty, are often the result of the in-role and extra-role service performance of frontline service employees working collaboratively as a team (Gracia *et al.*, 2013). A store-level focus is also practically relevant, as it matches the level at which senior managers evaluate store performance (Eldor, 2020; Pugh and Dietz, 2008).

Researchers typically draw on the Job Demands-Resources (JD-R) model when investigating the relationships between work engagement, its antecedents, and its outcomes (for recent reviews, see Bailey *et al.*, 2017; Borst *et al.*, 2019). In the JD-R model, an organization's HPWS and its constituent HPWPs are examples of organizational job resources that serve as antecedents of employees' work engagement (Albrecht *et al.*, 2018; Choo, 2016; Cooke *et al.*, 2019; Luu, 2019). According to Cooke *et al.* (2019), an organization's HPWS contributes to employees' work engagement in several ways. First, the HPWPs in an organization's HPWS enhance the commitment and dedication that employees have towards their work and employer. Second, the HPWS is also designed to energize employees and give them a sense of significance and purpose so that they will become more engaged in their work, and so engage more readily in discretionary extra-role effort. Finally, HPWSs support the development of a range of individual-level psychological job resources that ultimately influence employees' work engagement at an individual level. Several researchers have found a positive relationship between employee-perceived HPWSs and work engagement at the individual level of analysis in different service contexts (Cooke *et al.*, 2019; Huang *et al.*, 2018; Huertas-Valdivia *et al.*, 2018; Karatepe, 2013; Karatepe and Olugbade, 2016; Luu, 2019). However, only two of these studies (i.e., Karatepe, 2013; Luu, 2019) have specifically focused on SO-HPWS. Both reported a positive relationship between SO-HPWS and work engagement.

The relationship between employee-perceived HPWS and work engagement has received comparatively little attention at higher levels of analysis. At an organizational level of analysis, Barrick *et al.* (2015) found a positive relationship between generic HPWSs and employees' collective work engagement, while Schneider *et al.* (2018) reported a positive association between organizational practices, which included several HRM practices, and employees' collective work engagement. At a unit level, Gracia *et al.* (2013) and Salanova *et al.* (2005) found a positive relationship between organizational resources, which included two HRM practices (i.e., training and autonomy), and collective work engagement. Based on the preceding discussion, it is therefore hypothesized that:

H$_1$: Frontline employees' shared perceptions of their store's SO-HPWS are a positive predictor of their collective work engagement at the store level.

4.2.2 SO-HPWSs and service climate

'Service climate' refers to employees' *shared* perceptions of the extent to which policies, practices, and procedures they experience in the workplace and the behaviours they observe as being expected, supported, and rewarded emphasize the delivery of high-quality service to customers (Bowen and Schneider, 2014; Hong *et al.*, 2013; Jiang *et al.*, 2016; Liao and Chuang, 2007; Salanova *et al.*, 2005; Schneider *et al.*, 1998). Although service climate is rooted in individual employees' perceptions, it is typically treated as a unit-level characteristic of a team, store, or branch, and is correlated with other constructs at a unit level of analysis (e.g., Auh *et al.*, 2016; Chuang and Liao, 2010; Jiang *et al.*, 2015a; Linuesa-Langreo *et al.*, 2017; Tang and Tang, 2012).

Previous research indicated that frontline employees' perceptions of the HPWS in their workplace predict their service climate perceptions at both the individual (Hoang *et al.*, 2018; Wang and Xu, 2017) and unit (Chuang and Liao, 2010; Jiang *et al.*, 2015a; Tang and Tang, 2012) levels of analysis. This is because the organization's HPWS communicates its strategic intent regarding service excellence to employees, and indicates what the organization expects, supports, and rewards in this regard (Chuang and Liao, 2010; Hong *et al.*, 2013; Tang and Tang, 2012; Wang and Xu, 2017) Consequently, an organization's HPWS enhances its service climate (Hoang *et al.*, 2018; Schneider and White, 2004; Tang and Tang, 2012; Wang and Xu, 2017).

In their meta-analysis of the antecedents and outcomes of service climate, Hong *et al.* (2013) reported that both generic and SO-HPWSs are positively related to service climate at the unit level of analysis. More importantly, the relationship between SO-HPWSs and service climate was significantly stronger than that between generic HPWSs and service climate. The fact that SO-HPWS predicts service climate positively was subsequently confirmed in three other unit-level studies (i.e., Jiang *et al.*, 2015a; Lin and Liu, 2016; Tang and Tang, 2012). It is consequently hypothesized that:

H$_2$: Frontline employees' shared perceptions of their store's SO-HPWS are a positive predictor of their shared perceptions of the store's service climate.

4.2.3 Work engagement and service climate

According to Bowen and Schneider (2014) and Schneider *et al.* (2018), work engagement serves as a foundation on which a strong, positive service climate can be built. For example, Bowen and Schneider (2014, p. 9) argue as follows: "… a positive service climate exists when the foundation for it first exists in the engagement employees experience in their work and work world. Engaged employees are more willing to do the kinds of things that a service climate asks of them, and, similarly, a service climate is more easily built on a foundation of engaged employees".

However, to our knowledge, only two studies (i.e., Kopperud *et al.*, 2014; Salanova *et al.*, 2005) have empirically modelled work engagement as a direct antecedent of service climate. In the first study, Salanova *et al.* (2005) argued that organizational resources in the form of training, autonomy, and technology would affect employees' shared perceptions of the service climate in their unit indirectly through their collective work engagement. Service climate, in turn, would affect customers' evaluations of employees' service performance and, through the latter, also customer loyalty (Salanova *et al.*, 2005). These authors found that unit-level work engagement completely mediates the relationship between organizational resources and service climate, and thus serves as a direct antecedent of the latter (Salanova *et al.*, 2005).

Building on the research of Salanova *et al.* (2005), Kopperud *et al.* (2014) tested an individual-level model in which work engagement mediates the relationship between transformational leadership and service climate. These researchers found that work engagement partially mediates the relationship between transformational leadership and service climate in two separate cross-sectional samples. This confirms that work engagement functions as a direct antecedent of service climate. It is consequently hypothesized that:

H$_3$: Frontline employees' collective work engagement is a positive predictor of their shared perceptions of service climate at the store level.

4.2.4   Service climate and customer satisfaction

Service climate is an important construct which links internal HRM and leadership policies and practices to the service outcomes experienced by customers (Hong *et al.*, 2013). In this regard, Schneider *et al.* (1998) as well as Ehrhart *et al.* (2011) argue that a positive service climate will elicit desired service behaviours in frontline employees that, in turn, will result in positive service quality evaluations and satisfaction judgements by customers. According to Martínez-Tur *et al.* (2011), "[m]ore than 20 years of research on service climate has repeatedly demonstrated the existence of significant links from employee perceptions of service climate to customer satisfaction …"

In their meta-analysis, Hong *et al.* (2013) reported a positive meta-analytic correlation between employees' service climate perceptions and customer satisfaction at a unit level of analysis based on the results of 27 primary studies. Subsequently, Graham *et al.* (2020) also reported a direct positive unit-level relationship between service climate and customer satisfaction. It is therefore hypothesized that:

H_4:   Frontline employees' shared perceptions of the service climate in their store
is a positive predictor of customer satisfaction at the store level.

4.2.5   Service climate and frontline employees' in-role as well as extra-role service performance

Although several prior studies (e.g., Auh *et al.*, 2011; Graham *et al.*, 2020; Martínez-Tur *et al.*, 2011) have found a direct positive relationship between service climate and customer satisfaction, Schneider *et al.* (2005) as well as Bowen and Schneider (2014) have argued that service climate by itself does not lead to customer satisfaction. Instead, it is frontline employees' in-role and extra-role service performance that result in customer satisfaction (Schneider *et al.*, 2005).

'In-role service performance' refers to the basic activities associated with a frontline employee's job description and work role. These activities are expected and evaluated as part of the employees' fundamental job responsibilities (Bettencourt and Brown, 1997;

Chaoluck, 2017; Luu, 2019; Schepers and van der Borgh, 2020). Expectations regarding in-role service performance are often explicitly specified in organizational policies, procedures and service scripts as well as in frontline employees' formal job descriptions and performance evaluation criteria (Bettencourt and Brown, 1997).

'Extra-role service performance', in turn, refers to the, "… discretionary behaviors of contact employees in serving customers that extend beyond formal role requirements" (Bettencourt and Brown, 1997, p. 41). Extra-role service performance, therefore, implies voluntary behaviours that fall outside the scope of employees' formal job requirements. These forms of service performance are not directly and formally rewarded by the organization, do not have negative consequences if they are not performed, and refer to instances where employees have gone 'beyond the call of duty' in serving customers (Chaoluck, 2017; Schepers and van der Borgh, 2020). In the literature, the terms extra-role service performance and service-oriented organizational citizenship behaviours (OCBs) are often used as synonyms (e.g., Dimitriades, 2007; Lu *et al.*, 2016; Schneider *et al.*, 2005; Tang and Tang, 2012).

To ensure high quality customer service outcomes, frontline employees must perform exceptionally in terms of both in-role and extra-role service performance (Morrison, 1996; Somech and Drach-Zahavy, 2016). A positive and strong service climate in a store signals to frontline employees that high-quality customer service is expected, supported and rewarded. As such, it motivates employees to engage in high-quality in-role and extra-role service performance (Chuang and Liao, 2010; Hong *et al.*, 2013; Jiang *et al.*, 2016; Liao and Chuang, 2007; Linuesa-Langreo *et al.*, 2017; Tang and Tang, 2012; Wang and Xu, 2017). Consequently, a positive relationship is expected between service climate and both in-role and extra-role service performance at the store level of analysis.

In their meta-analysis, Hong *et al.* (2013) reported a positive meta-analytic correlation between service climate and employees' in-role service performance at a unit-level of analysis. This positive unit-level relationship was also confirmed in three more recent primary studies (i.e., Jiang *et al.*, 2015a; Jiang *et al.*, 2016; Linuesa-Langreo *et al.*, 2017). It is, therefore, hypothesized that:

H5: Frontline employees' shared perceptions of the service climate in their store is a positive predictor of their collective in-role service performance at the store level as rated by the store manager.

Researchers have not given much attention to the unit-level relationship between service climate and extra-role service performance (i.e., service-oriented OCB). In their meta-analysis, Hong *et al.* (2013) reported a positive meta-analytic correlation between unit-level service climate and organizational citizenship behaviours based on the findings of three primary studies (i.e., Chuang and Liao, 2010; Schneider *et al.*, 2005; Way *et al.*, 2010). However, of these studies, only Schneider *et al.* (2005) specifically focused on service-oriented OCB and found a positive unit-level relationship between it and service climate. More recently, Tang and Tang (2012) also reported a positive unit-level correlation between employee-rated service climate and service-oriented OCB. Based on these limited empirical findings, it is hypothesized that:

H6: Frontline employees' shared perceptions of the service climate in their store is a positive predictor of their collective extra-role service performance at the store level as rated by the store manager.

4.2.6 <u>The relationships between in-role and extra-role service performance and customer satisfaction</u>

Frontline employees' behaviour towards customers, including their in-role and extra-role service performance behaviours, directly create positive service experiences for customers and consequently affect customers' satisfaction judgements (Hong *et al.*, 2013). As far as we could determine, only two unit-level studies (i.e., Bettencourt and Brown, 1997; Liao and Chuang, 2004) have investigated and found positive relationships between perceptual measures of frontline employees' *in-role service performance* and customer satisfaction. In addition, Yavas *et al.* (2010) reported a positive unit-level relationship between an objective measure of frontline employees' in-role service performance and customer satisfaction in a study conducted across the branches of a retail bank.

Similarly, four unit-level studies have investigated and reported positive relationships between frontline employees' *extra-role service performance* and customer satisfaction (i.e., Bettencourt and Brown, 1997; Schneider *et al.*, 2005; Simons and Roberson, 2003; Tremblay *et al.*, 2018). In addition, Maxham *et al.* (2008) reported positive store-level relationships between manager ratings of frontline employees' in-role and extra-role service performance and "customer evaluations", a broader construct encompassing customer satisfaction, amongst others.

The following two hypotheses are stated against this background:

H7: Managers' perceptions of frontline employees' in-role service performance is a positive predictor of customers' overall satisfaction judgements at the store level.

H8: Managers' perceptions of frontline employees' extra-role service performance is a positive predictor of customers' overall satisfaction judgements at the store level.

4.2.7   Customer satisfaction and store loyalty

Customer loyalty is an organization's most enduring asset. By creating and maintaining customer loyalty, an organization develops a long-term, mutually beneficial relationship with its customers (Kandampully *et al.*, 2015; Pan *et al.*, 2012). A loyal customer base is important because it reduces a firm's customer acquisition costs. Furthermore, loyal customers tend to buy more from the focal firm than from its competitors (i.e., they have a larger 'share of wallet'), are less price sensitive and thus more willing to pay premium prices, and engage more actively in positive word-of-mouth communication about the firm (Evanschitzky *et al.*, 2012; Kandampully *et al.*, 2015).

Customer loyalty can be defined as "… the strength of a customer's dispositional attachment to a brand (or a service provider) and his/her intent to rebuy the brand (or repatronize the service provider) consistently in future" (Pan *et al.*, 2012, p. 151). The current study specifically focused on store loyalty, which Bloemer and De Ruyter (1998, p. 500) defined as: "The biased (i.e. non-random) behavioural response (i.e. revisit), expressed over time,

by some decision-making unit with respect to one store out of a set of stores, which is a function of psychological (decision making and evaluative) processes resulting in brand commitment". In essence, 'store loyalty' refers to a consumer's deeply held commitment to and intention to revisit a particular store (Koo and Kim, 2013; Rabbanee *et al.*, 2012).

The fact that customer satisfaction is positively related to customer loyalty in general, and to customers' store loyalty in particular, is well-established in the marketing literature. For example, based on an extensive literature review, Kumar *et al.* (2013, p. 258) stated the following empirical generalization about the customer satisfaction–loyalty relationship: "Overall, there is a positive relationship between customer satisfaction and loyalty". Four meta-analyses also support this conclusion (Hogreve *et al.*, 2017; Pan *et al.*, 2012; Szymanski and Henard, 2001; Watson *et al.*, 2015).

While the aforementioned meta-analyses were based on data analysed at the individual level, a positive relationship between customer satisfaction and customer loyalty was also reported in two primary studies conducted at the unit level of analysis (i.e., Susskind *et al.*, 2018b; Towler *et al.*, 2011). It is therefore hypothesized that:

H$_9$: Customers' overall satisfaction is a positive predictor of their store loyalty at the store level of analysis.

4.3 METHOD

4.3.1 Sample and data collection procedure

Data were collected from frontline employees (n = 781), store managers (n = 70), and customers (n = 803) selected from 70 stores of a South African retailer of home improvement products. The frontline employees and store managers were invited to participate in online surveys hosted on Qualtrics, a web-based survey platform. Of the 953 frontline employees who were invited, 781 (81.95%) completed the employee survey after an initial e-mail invitation and three follow-up reminders had been sent to non-responders over a four-week period. This resulted in approximately 11 employee respondents per store (Mean = 11.16, SD = 4.47, Mode = 11, range: 3-23). The size of the employee sample per store was comparable to the sample sizes reported in several previous unit-level studies involving

service climate (e.g., Chuang and Liao, 2010; Jiang *et al.*, 2016; Tang and Tang, 2012). All 70 store managers responded to a store manager survey conducted in the same period. The store-level sample size was comparable to the sample sizes reported in previous unit-level studies (e.g., Chi *et al.*, 2011; Greenslade and Jimmieson, 2011; Susskind *et al.*, 2018a).

For the customer survey, which was conducted concurrently with the employee and store manager surveys, store employees distributed self-completion paper-based questionnaires to customers after they had completed a sales transaction. A target of 10 completed customer questionnaires was set for each store. This target was achieved by 91% of the participating stores. In the remaining stores, a minimum of eight completed customer questionnaires was obtained. On average, 11.47 customers (SD = 4.30, range = 8-34) participated in the customer survey per store. The average size of the employee sample per store was also comparable with the sample sizes reported in previous studies (e.g., Gracia *et al.*, 2010; Salanova *et al.*, 2005; Yavas *et al.*, 2010).

Of the employee respondents, 68% were male. The employee respondents had an average age of 33.95 years (SD = 7.76) and average length of employment in their current store of 4.52 years (SD = 4.21). Most employee respondents (75%) were employed on a full-time basis, while the remaining 25% were employed on fixed-term contracts. The store managers were mostly male (88.6%) with an average age of 42.21 years (SD = 7.39) and an average length of employment in their current store of 5.81 years (SD = 6.34). All the store managers were full-time appointees. The customers were predominantly male (56.2%), with an average age of 45.33 years (SD = 12.37).

4.3.2 Measures

The study involved three separate questionnaires: for frontline employees, store managers, and customers respectively. The questionnaires were developed after an extensive review of the relevant literature, and all were administered in English. The scales included in each questionnaire are described below.

4.3.2.1   *Employee questionnaire*

The employee questionnaire contained scales measuring employees' perceptions of the SO-HPWS in their store, their store's service climate, and their own work engagement.

SO-HPWSs: We measured frontline employees' perceptions of the SO-HPWSs in their respective stores with 26 items adapted from the scales reported by Chuang and Liao (2010), Hong *et al.* (2017), and Liao *et al.* (2009). These 26 items measured service-oriented staffing (five items), training (four items), financial compensation (four items), non-financial rewards and recognition (five items), involvement (five items), and empowerment (three items). Where necessary, the original scale items were reworded to focus specifically on SO-HPWSs. Next, we pretested the scale with four frontline employees, a store manager, and three senior executives and subsequently reworded some scale items to clarify their meaning. The items were all presented on a five-point Likert scale with scale point labels ranging from 1 = Strongly disagree to 5 = Strongly agree.

Service climate: Frontline employees' perceptions of the service climate in their respective stores were measured with five items from the global service climate scale of Schneider *et al.* (1998), which is the most frequently used service climate measure (Hong *et al.*, 2013). One of the original scale items (i.e., "How would you rate the effectiveness of your store's communication efforts to both employees and customers") was split into two separate items because of concerns about its double-barrelled nature (Ding, 2018; Ling *et al.*, 2016). Respondents rated the resulting six items on a five-point scale labelled as 1 = Very poor, 2 = Poor, 3 = Fair, 4 = Good, and 5 = Excellent.

Work engagement: To measure frontline employees' work engagement, we used the shortened, nine-item version of the Utrecht Work Engagement Scale (UWES-9; Schaufeli *et al.*, 2016). A pretest of this scale among four employee respondents indicated that these respondents were uncertain about the meaning of several of the scale items, especially those containing unfamiliar words and idiomatic expressions. This problem was highlighted in several other South African studies involving non-native English speakers (e.g., Goliath-Yarde and Roodt, 2011; Naude and Rothmann, 2004; Storm and Rothmann, 2003). Following the recommendations of Storm and Rothmann (2003) and Naude and Rothmann

(2004), we subsequently reworded six of the original nine items to simplify and clarify their meaning. Respondents were asked to indicate their answers on a seven-point response format. The scale points were numbered from zero (0) to six (6) and the scale points were labelled as follows: 0 = Never, 1 = Almost never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Very often, and 6 = Always.

4.3.2.2   *Store manager questionnaire*

Store managers used the scales of Bettencourt and Brown (1997) to evaluate the *collective* in-role and extra-role service performance of the frontline employees working in their respective stores. These two five-point Likert scales, which measure in-role and extra-role service performance with five items each, have been used in several previous studies (e.g., Cheng and Chen, 2017; Luu, 2019; Tuan, 2018). Store managers were specifically instructed to consider the typical behaviour of all the frontline employees working in their respective stores when responding to the scale items (Jiang *et al.*, 2015a; Jiang *et al.*, 2016; Linuesa-Langreo *et al.*, 2017).

4.3.2.3   *Customer questionnaire*

The participating retailer requested that the customer questionnaire be kept as short as possible so as not to inconvenience their clientele. The customer questionnaire measured two constructs: (1) customers' overall satisfaction with their visit to the specific store, and (2) customers' store loyalty.

We measured customers' overall satisfaction with their store visit on a three-item, five-point Likert scale. The three scale items were taken from Ferraro *et al.* (2017) and the five scale points were labelled as 1 = Strongly disagree, 2 = Disagree, 3 = Neither agree nor disagree, 4 = Agree, and 5 = Strongly agree.

Customers' store loyalty was measured with a four-item, five-point rating scale. Three of the scale items were from the loyalty sub-dimension of Zeithaml *et al.*'s (1996) behavioural intentions scale, while the fourth item was taken from Dutta *et al.*'s (2007) repurchase

intention scale. The five scale points were labelled as 1 = Very unlikely, 2 = Unlikely, 3 = Neither likely nor unlikely, 4 = Likely, and 5 = Very likely.

4.3.3   Results

4.3.3.1   *Common method bias*

To counteract common method bias, we implemented several procedural remedies recommended by MacKenzie and Podsakoff (2012). First, data on the focal constructs were obtained from different sources. Frontline employees provided data on SO-HPWSs, work engagement, and service climate; store managers rated frontline employees' in-role and extra-role service performance; and customers rated overall customer satisfaction and store loyalty. Second, all three questionnaires indicated that participation in the study was voluntary and anonymous. Respondents were also encouraged to answer the survey questions honestly. Third, the employee questionnaire used different scale point labels to measure the three focal constructs. Fourth, the employee and manager questionnaires were carefully pretested to check that respondents understood the survey questions correctly. Last, in the online employee survey we randomized the order in which the scales measuring the six SO-HPWPs were presented to respondents. We also randomized the order in which the individual scale items were presented to respondents in both the employee and the manager surveys.

To evaluate the potential impact of common method bias on the individual-level responses provided by frontline employees, store managers, and customers respectively, we compared the fit of the hypothesized multi-factor measurement model with a one-factor CFA model in which all the manifest indicators loaded on a single latent factor used a χ^2 difference test (Cooper *et al.*, 2020). Several previous studies involving service climate have used this approach (e.g., Hoang *et al.,* 2018; Kang and Busser, 2018; Lin and Liu, 2016). Since we employed the WLSMV estimator to compare the two measurement models, we had to conduct a special χ^2 difference test with the DIFFTEST option in Mplus (Brown, 2015). On the employee data, we compared the fit of the hypothesized eight-factor measurement model with a one-factor model in which all items loaded on a single latent factor. For both the manager- and employee-rated scales, we compared the fit of the hypothesized two-

factor measurement model with that of a one-factor model. In all three cases, the one-factor measurement models exhibited a significantly poorer fit to the data than did the hypothesized models (see Table 1). This suggests that common method bias is not a major concern in the current study's data.

Table 1: **Results of the CFA variant of Harman's single-factor tests**

		χ^2(df), p	χ^2/df	CFI	RMSEA	SRMR	$\Delta\chi^2$	df	p
Employee-rated scales	Hypothesized eight-factor model	1380.58 (751), $p < 0.001$	1.84	0.98	0.03	0.03			
	One-factor model	10930.85 (799), $p < 0.001$	14.03	0.75	0.13	0.13	2565.08	28	< 0.001
Manager-rated scales	Hypothesized two-factor model	34.92 (34), $p < 0.001$	1.03	0.99	0.02	0.05			
	One-factor model	91.58 (35), p < 0.001	2.62	0.95	0.15	0.10	19.46	1	< 0.001
Customer-rated scales	Hypothesized two-factor model	60.20 (13), p < 0.001	4.63	0.99	0.05	0.01			
	One-factor model	482.23 (14), p < 0.001	34.45	0.97	0.15	0.04	170.89	1	< 0.001

4.3.3.2 *Validity and reliability assessment*

We evaluated the dimensionality and psychometric properties of the employee-, manager- and customer-rated scales separately.

➢ *Assessment of employee-rated scales:*

We conducted a confirmatory factor analysis (CFA; n = 781) on the individual employee ratings of the six SO-HPWPs, work engagement, and service climate to evaluate the psychometric properties and underlying dimensionality of these scales. Initial data screening indicated that the employee ratings were negatively skewed and clustered around the highest two scale points. Since Mardia's test of multivariate kurtosis indicated a violation of the assumption of multivariate normality for the individual-level employee data (Byrne,

2016), we decided to conduct the CFA with robust diagonally weighted least squares estimation using the WLSMV estimator in Mplus (Finney *et al.*, 2016). In this analysis, service climate, work engagement, and the six dimensions of SO-HPWSs were modelled as first-order latent variables. The CFA results indicated that an eight-factor measurement model fitted the data well: χ^2 (751) = 1380.58, *p* < 0.001; χ^2/df = 1.84; CFI = 0.98; RMSEA = 0.03 (90% CI = 0.03-0.04); SRMR = 0.03. The loadings of all the items on their respective factors were statistically significant, with completely standardized loadings ranging from 0.68 to 0.91 (see Table 1 in Appendix G, p. 351).

Table 2 (p. 219) provides the construct reliability (CR), individual-level Cronbach's alpha (α), and average variance extracted (AVE) for each employee-rated scale. The employee-rated scales all had CR and α values larger than 0.70, indicating adequate internal consistency reliability (Hair *et al.*, 2019). The square roots of the AVE values were all larger than the correlations between the study constructs, which indicates that these scales have discriminant validity (Malhotra *et al.*, 2017).

➢ *Assessment of manager-rated scales:*

To evaluate the reliability and validity of the manager-rated measures of in-role and extra-role service performance, we next conducted a two-factor CFA on the manager-rated data (n = 70), again using the WLSMV estimator in Mplus. We selected this estimator because Mardia's test for multivariate kurtosis indicated a violation of the assumption of multivariate normality in the data (Byrne, 2016). The two factors represented in-role and extra-role service performance respectively. The two-factor measurement model fitted the data well: χ^2 (34) = 34.92, *p* < 0.001; χ^2/df = 1.03; CFI = 0.99; RMSEA = 0.02 (90% CI = 0.00-0.09); SRMR = 0.05. The loadings of all the items on their respective factors were statistically significant, with completely standardized loadings ranging from 0.70 to 0.94 (see Table 1 in Appendix G, p. 351). As shown in Table 2 (p. 219), the CR and α values of the two manager-rated scales are larger than 0.70, indicating adequate internal consistency reliability (Hair *et al.*, 2019). Furthermore, the square roots of the AVE values for these scales were larger than the correlation between the two latent variables, thus indicating these scales' discriminant validity (Malhotra *et al.*, 2017).

➢ *Assessment of customer-rated scales:*

We evaluated the reliability and validity of the customer-rated measures of customer satisfaction and store loyalty with a two-factor CFA (n = 803) using the WLSMV estimator in Mplus. We selected this estimator because Mardia's test for multivariate kurtosis indicated a violation of the assumption of multivariate normality in the data (Byrne, 2016). In this model, the two factors represented customer satisfaction and store loyalty respectively. The two-factor CFA model had an acceptable fit to the data: χ^2 (13) = 60.20, $p < 0.001$; χ^2/df = 4.63; CFI = 0.99; RMSEA = 0.05 (90% CI = 0.04-0.06); SRMR = 0.01. The loadings of the items on their respective factors were all statistically significant, with completely standardized loadings ranging from 0.88 to 0.92 indicating convergent validity (see Table 1 in Appendix G, p. 351). Table 2 (p. 219) indicates that the CR and α values of the two manager-rated scales were both larger than 0.70, which indicated adequate internal consistency (Hair *et al.*, 2019). The discriminant validity of these two scales was also supported because the square roots of the AVE values of the two scales were larger than the correlation between the two latent variables (Malhotra *et al.*, 2017).

Table 2: **Descriptive statistics, psychometric properties, and bivariate Pearson's correlations among the individual-level employee-, manager- and customer-rated variables**

Variables	Mean	SD	CR	α	Correlations							
					1	2	3	4	5	6	7	8
Employee-rated variables (n = 781)												
9. Staffing	3.95	0.77	0.93	0.90	**0.86**							
10. Training	4.18	0.74	0.94	0.90	0.56	**0.89**						
11. Financial compensation	3.96	0.92	0.94	0.89	0.47	0.41	**0.88**					
12. Non-financial rewards & recognition	3.82	0.85	0.92	0.88	0.66	0.56	0.53	**0.83**				
13. Involvement	4.25	0.64	0.93	0.88	0.60	0.62	0.42	0.67	**0.85**			
14. Empowerment	4.22	0.60	0.81	0.71	0.55	050	0.38	0.54	0.56	**0.77**		
15. Work engagement	5.55	0.70	0.95	0.89	0.33	0.33	0.23	0.33	0.32	0.29	**0.82**	
16. Service climate	4.20	0.53	0.87	0.82	0.53	0.55	0.39	0.55	0.60	0.45	0.32	**0.73**
Manager-rated variables (n = 70)												
3. In-role service performance	3.97	0.53	0.91	0.81	**0.82**							
4. Extra-role service performance	4.11	0.58	0.92	0.85	0.59	**0.84**						
Customer-rated variables (n = 803)												
1. Customer satisfaction	4.67	0.53	0.92	0.89	**0.90**							
2. Store loyalty	4.70	0.48	0.94	0.89	0.69	**0.89**						

Note: SD = Standard deviation; CR = Composite reliability; α = individual-level Cronbach's alpha. All correlations are statistically significant at the 0.01 level (two-tailed). The square roots of the average variance extracted (AVE) appear in bold on the diagonal.

4.3.3.3 *Data aggregation*

Since the current study's hypotheses were tested at a store level of analysis, the individual-level employee and customer ratings had to be aggregated to the store level. Because the store managers evaluated the *collective* in-role and extra-role service performance of all the employees in their respective stores, these ratings were already at the store level. To justify the aggregation of the employee and customer ratings to the store level, we calculated $r_{wg(j)}$, ICC(1), and ICC(2). These three aggregation statistics are typically reported in unit-level studies using multiple-item measures (e.g., Jiang *et al.*, 2015a; Jiang *et al.*, 2016; Myer *et al.*, 2016). Below we first describe each of these aggregation statistics, and then we present and interpret the values of these statistics as calculated in the current study.

The level of agreement in respondents' ratings on multiple-item rating scales is typically evaluated with $r_{wg(j)}$ (Biemann *et al.*, 2012; LeBreton and Senter, 2008). This aggregation statistic is calculated separately for each unit in a study, and ranges from 0 to 1, with higher values indicating higher levels of within-unit agreement (Bliese, 2000; LeBreton and Senter, 2008; Woehr *et al.*, 2015). $R_{wg(j)}$ indicates the proportion of variance in individual-level ratings that can be attributed to within-unit agreement among the respondents. For example, an $r_{wg(j)}$ value of 0.70 for a specific construct in a unit indicates that 70% of the variance in respondents' individual-level ratings is due to within-unit agreement in these ratings, while the remaining 30% is error variance (Krasikova and LeBreton, 2019). When interpreting $r_{wg(j)}$ values, a cut-off of .70 is often used to distinguish adequate from inadequate within-unit agreement (Biemann *et al.*, 2012; LeBreton and Senter, 2008). Most researchers calculate the mean or median $r_{wg(j)}$ value across the units in a study, and compare this value with the cut-off of .70 (Biemann *et al.*, 2012). As an alternative, LeBreton and Senter (2008) proposed the following cut-off values for $r_{wg(j)}$, which reflect different levels of agreement: 0.00-0.30 (lack of agreement); 0.31-0.50 (weak agreement); 0.51-0.70 (moderate agreement); 0.71-0.90 (strong agreement); and 0.91-1.00 (very strong agreement).

To calculate $r_{wg(j)}$, one has to specify a null distribution, which indicates the variance in respondents' scores when there is a total lack of agreement in their ratings (i.e., when they respond randomly) (LeBreton and Senter, 2008). According to LeBreton and Senter (2008, p. 829), choosing an appropriate null distribution "… is the single greatest factor complicating the use of r_{wg}-based indices". When calculating $r_{wg(j)}$, most researchers use a uniform null distribution, which assumes that each scale point has an equal probability of being selected when respondents answer randomly (LeBreton and Senter, 2008). The uniform null distribution yields the largest values of $r_{wg(j)}$ and should, therefore, be regarded as providing an upper bound indication of within-unit agreement (Biemann *et al.*, 2012; LeBreton and Senter, 2008).

Since response biases such as social desirability, leniency, or central tendency bias may result in non-uniform distributions, even when respondents answer randomly, methodologists recommend that researchers consider alternative null distributions that more accurately reflect random responding in the context of their respective studies (Biemann *et al.*, 2012; Krasikova and LeBreton, 2019; LeBreton and Senter, 2008). In this regard,

Biemann *et al.* (2012) recommend that researchers use the uniform distribution to obtain an upper bound estimate of $r_{wg(j)}$ and one or more alternative, measure-specific null distributions to calculate the lower-bound estimates of $r_{wg(j)}$. Following this recommendation, we calculated $r_{wg(j)}$ with both a uniform and a slightly skewed null distribution. The latter was appropriate because employees may have exhibited a positive leniency when evaluating the service climate and SO-HPWPs in their own store (Ehrhart *et al.*, 2011; Tuan, 2017). The slightly skewed distribution was used as an alternative null distribution to calculate $r_{wg(j)}$ in several recent unit-level studies (e.g., Chen *et al.*, 2018a; Ehrhart *et al.*, 2011; Gardner *et al.*, 2011; Rego *et al.*, 2016; Tuan, 2017).

Next, we calculated ICC(1) for each employee- and customer-rated construct across all the stores in the current study (Castro, 2002). ICC(1) can be interpreted as an effect size that indicates the proportion of the total variance in respondents' individual-level ratings that are explained by unit membership (Bliese, 2000; LeBreton and Senter, 2008). According to LeBreton and Senter (2008), ICC(1) values of 0.01, 0.10, and 0.25 should be regarded as small, medium, and large effects respectively. These authors further indicate that an ICC(1) value as small as 0.05 provides prima facie evidence of a unit-level effect that deserves further investigation (LeBreton and Senter, 2008).

Finally, we calculated ICC(2) as an indicator of the reliability of unit-level mean scores. It estimates the extent to which the unit-level mean scores calculated on aggregated data reliably distinguish between units (Krasikova and LeBreton, 2019; LeBreton and Senter, 2008). In the current study, ICC(2) was calculated for each employee- and customer-rated construct across all the stores in the study (Krasikova and LeBreton, 2019; LeBreton and Senter, 2008). ICC(2) values ≥ 0.70 are generally considered acceptable (LeBreton and Senter, 2008), although some authors (e.g., Hong *et al.*, 2017; Torrente *et al.*, 2012) use a lower benchmark of 0.60 recommended by Glick (1985). The values of ICC(2) and ICC(1) are related as a function of the size of the units involved in a study. The more respondents there are per unit, the larger the value of ICC(2) will be for a given value of ICC(1) (Ehrhart *et al.*, 2014). Importantly, Klein and Kozlowski (2000a) point out that the value of ICC(2) in a study will only exceed 0.70 if the unit sizes in the sample are sufficiently large, if the between-group variability of a measure is sufficiently large, or both. In addition, Ehrhart *et*

al. (2014) indicate that ICC(2) values in climate studies are typically modest and in a range of 0.40 to 0.60.

Table 3 provides the mean and median values of $r_{wg(j)}$ for each of the employee- and customer-rated constructs in the current study, based on both a uniform and a slightly skewed null distribution. The table also provides the associated ICC(1) and ICC(2) values as well as the results of the one-way ANOVAs on which these values are based.

Table 3:   **Aggregation statistics**

Variable	Mean / median $r_{wg(j)}$ based on a uniform distribution	Mean / median $r_{wg(j)}$ based on a slightly skewed distribution	ICC(1)	ICC(2)	One-way ANOVA
Employee-rated constructs					
SO-HPWSs	0.96 / 0.98	0.92 / 0.97	0.28	0.81	$F(69,711) = 5.27, p < .001$
Service climate	0.95 / 0.95	0.90 / 0.92	0.23	0.77	$F(69,711) = 4.40, p < .001$
Work engagement	0.96 / 0.98	0.92 / 0.97	0.12	0.59	$F(69,711) = 2.45, p < .001$
Customer-rated constructs					
Customer satisfaction	0.94 / 0.96	0.89 / 0.93	0.09	0.54	$F(69,733) = 2.16, p < .001$
Store loyalty	0.96 / 0.97	0.92 /0.95	0.10	0.57	$F(69,733) = 2.31, p < .001$

The mean and median $r_{wg(j)}$ values reported in Table 3 are all larger than 0.70, indicating strong to very strong within-store agreement in the respondents' ratings of the study constructs, based on LeBreton and Senter's (2008) interpretational guidelines. Overall, this indicates that there was sufficient within-store agreement in the individual-level ratings of all the study constructs to justify the aggregation of these ratings to the store level.

The ICC(1) values of the three employee-rated constructs (i.e., SO-HPWSs, service climate, and work engagement) are 0.28, 0.23, and 0.12 respectively. This indicates that 28% of the employees' individual-level ratings of SO-HPWSs is explained by their store membership. Similarly, 23% and 12% of the individual-level service climate and work engagement ratings are explained by respondents' store membership respectively. These three ICC(1) values constitute large, medium-to-large, and medium effect sizes respectively (LeBreton and Senter, 2008).

The ICC(1) values of the two customer-rated constructs (i.e., customer satisfaction and store loyalty) are 0.09 and 0.10 respectively (see Table 3, p. 222). These values indicate that 9% and 10% of customers' individual level ratings of customer satisfaction and store loyalty are explained by the store they visited, and represent small-to-medium effects (LeBreton and Senter, 2008). Although these ICC(1) values seem small, they are comparable with the values reported for customer satisfaction in previous studies (Conway and Briner, 2014; Piening *et al.*, 2013; Weller *et al.*, 2020) and with the ICC(1) value for customer loyalty reported by Homburg *et al.* (2009). Both ICC(1) values provide prima facie evidence for a store-level effect in the customer satisfaction and store loyalty ratings (LeBreton and Senter, 2008).

Table 3 (p. 222) also provides the ICC(2) values for the employee- and customer-rated constructs. The ICC(2) values for SO-HPWSs and service climate both exceed the traditional cut-off of .70. While the ICC(2) value of .59 for work engagement is lower than the traditional cut-off of .70, it is still larger than the corresponding ICC(2) values reported in previous unit-level studies (e.g., Barrick *et al.*, 2015; Eldor, 2020; García-Buades *et al.*, 2016). In addition, this value is only slightly smaller than the alternative benchmark of .60 recommended by Glick (1985). Collectively, these ICC(2) values support the aggregation of the individual-level ratings of SO-HPWSs, service climate, and work engagement to the store level.

The ICC(2) values for customer satisfaction and store loyalty of 0.54 and 0.57 respectively are lower than .70, but are comparable with the value reported by Greenslade and Jimmieson (2011) for customer satisfaction, and larger than the value reported by Homburg *et al.* (2009) for customer loyalty. This may be due to the relatively small average within-store customer sample size of 11.47 achieved in the current study. Several authors note that low ICC(2) values should not prevent data aggregation if it is justified by theory and supported by satisfactory values for $r_{wg(j)}$ and ICC(1) and there is a statistically significant between-unit difference in the focal variables (Eldor, 2020; Jiang *et al.*, 2015b; Liao and Chuang, 2007; Liao *et al.*, 2009; Tremblay and Simard, 2018). We consequently proceeded to aggregate all the employee- and customer-rated variables to the store level.

4.3.3.4 *Creation of store-level composite scores*

We next aggregated the individual-level employee and customer ratings to the store level. To do this, we created an average score for each store on the ratings obtained from the respondents in that store on each of the rating scale items included in the employee and customer questionnaires. Thereafter we calculated a composite score to represent each of the employee- and customer-rated variables at the store level. For service climate, work engagement, customer satisfaction, and store loyalty, we calculated the store-level composite scores by averaging the aggregated ratings of the individual items in the applicable multiple item scales per store.

For the SO-HPWSs, we created a single additive score instead of calculating a separate composite score for each of the six SO-HPWPs. This widely-used approach is aligned with a central premise of strategic HRM research, namely that the impact of HPWPs is best understood by investigating the overall HPWS in place rather than its constituent HPWPs in isolation (Chuang *et al.*, 2013; Liao *et al.*, 2009). Given the small store-level sample size (n = 70), the use of a single additive score also ensures a favourable ratio of sample size to free parameters (Chuang and Liao, 2010). To create the single additive score, we used the subscale aggregation approach applied in several previous studies (e.g., Aryee *et al.*, 2012; Chuang *et al.*, 2013; Chuang and Liao, 2010; Jiang *et al.*, 2015a; Liao *et al.*, 2009; Piening *et al.*, 2013). First, we calculated a subscale score for each of the six SO-HPWPs measured in this paper. We did so by averaging frontline employees' aggregated responses to the items in each subscale. This was justified by the high store-level Cronbach's alpha values obtained for all six subscales (average α = .95, ranging from .89 to .97). Next, we created the single additive score by averaging the six subscale scores calculated in the previous step. This step was again justified by the high store-level Cronbach's alpha value calculated across the six subscale scores (α = .94).

Since the store managers were asked to evaluate the collective in-role and extra-role service performance of all the frontline employees in their respective stores, their ratings were already at the store level, and no aggregation of the managers' ratings was required. We created store-level composite scores for in-role and extra-role service performance by averaging each store manager's ratings on the applicable scale items.

4.3.3.5 *Store-level Cronbach's alpha and descriptive statistics*

We calculated Cronbach's alpha at both the individual and the store levels of analysis. The individual-level Cronbach's alpha values, means, standard deviations, and correlations for the study variables are provided in Table 2 (p. 219), and the corresponding store-level values are listed in Table 4 below. The calculation of store-level Cronbach's alpha values is recommended because it aligns the reliability estimates with the level of analysis at which a study's hypotheses are tested (Chen *et al.*, 2004; Mathieu *et al.*, 2006). Several previous unit-level studies have reported unit-level Cronbach's alphas (e.g., Du *et al.*, 2015; Gracia *et al.*, 2010; Gracia *et al.*, 2013; Jiang *et al.*, 2016; Maynard *et al.*, 2019; Maynard *et al.*, 2012; Weller *et al.*, 2020). The store-level Cronbach's alpha values reported in Table 4 were larger than 0.70 for all the employee-, manager-, and customer-rated variables, indicating acceptable internal consistency reliability at a store level.

Table 4: **Means, standard deviations, and Pearson's correlations among the store-level composite scores representing the study variables**

	Mean	SD	Cronbach's alpha	Correlations					
				1	2	3	4	5	6
1. SO-HPWSs	4.01	0.38	0.98	-					
2. Work engagement	5.53	0.33	0.93	0.56**					
3. Service climate	4.17	0.30	0.92	0.83**	0.63**				
4. In-role service performance	3.97	0.53	0.81[a]	0.37**	0.32**	0.40**			
5. Extra-role service performance	4.11	0.58	0.85[a]	0.39**	0.16	0.49**	0.59**		
6. Customer satisfaction	4.68	0.21	0.93	0.39**	0.23	0.42**	0.14	0.20	
7. Customer loyalty	4.71	0.20	0.95	0.33**	0.18	0.36**	0.19	0.23	0.81**

Note: n = 70, SD = Standard deviation, ** $p < .05$ (2-tailed). [a] For each store, the store manager evaluated the collective in-role and extra-role service performance of all the employees in the store. These ratings were at the store level of analysis, and the associated Cronbach's alpha values were therefore also at the store level.

4.4 HYPOTHESIS TESTING

4.4.1 <u>Analytical approach</u>

Because of the small store-level sample size (n = 70), we used a single-indicator path analysis approach to test the structural model shown in Figure 1 (p. 202) at the store level of analysis. Since Mardia's test of multivariate kurtosis did not indicate a problem with multivariate normality (Byrne, 2016), the model was tested with maximum likelihood (ML) estimation in Mplus.

In the path analysis, each latent variable was measured by a single composite scale score. We incorporated measurement error into the model by setting the path from each latent variable to its composite scale score to the square root of the specific measure's reliability. We also set the random error variance of each single-item indicator to 1 minus its reliability multiplied by the scale score's variance (i.e., [1 – reliability] x variance). Several prior unit-level studies have used this modelling approach (e.g., Chi *et al.*, 2011; Greenslade and Jimmieson, 2011; Jiang *et al.*, 2015a; Lee *et al.*, 2011; Maltarich *et al.*, 2016; Mathieu *et al.*, 2009; Maynard *et al.*, 2019; Maynard *et al.*, 2012; Susskind *et al.*, 2018b). It has two major advantages. First, it allows for the evaluation of structural models when the unit-level sample size does not meet traditional sample size requirements. Second, it enables researchers to incorporate measurement error into their analyses (Greenslade and Jimmieson, 2011).

When using the abovementioned modelling approach, one has to select an indicator of scale reliability to include in the formulas. Previous studies have used individual-level Cronbach's alpha (e.g., Chi *et al.*, 2011; Greenslade and Jimmieson, 2011), unit-level Cronbach's alpha (e.g., Maynard *et al.*, 2019; Maynard *et al.*, 2012), or ICC(2) (e.g., Jiang *et al.*, 2015a; Susskind *et al.*, 2018a) as reliability indicators. We used the store-level Cronbach's alpha values reported in Table 4 (p. 225) as reliability indicators (e.g., Maynard *et al.*, 2019; Maynard *et al.*, 2012) to align these indicators with the level of analysis at which the model was tested (Chen *et al.*, 2004; Mathieu *et al.*, 2006).

We used the chi-square goodness-of-fit statistic (χ^2), the comparative fit index (CFI), and the standardized root mean square residual (SRMR) to assess the overall fit of the structural

model, and adopted CFI $\geq$ 0.95 and SRMR < 0.08 as thresholds for acceptable model fit (Hu and Bentler, 1999). Because of the study's small unit-level sample size and the structural model's small degrees of freedom, the root mean square error of approximation (RMSEA) is not reported. Kenny *et al.* (2015) specifically recommend that the RMSEA not be used to evaluate the fit of models with small degrees of freedom in small samples. In addition, Curran *et al.* (2003) indicated that the sample-based estimates and confidence intervals of RMSEA are inaccurate for a sample size smaller than 200. Furthermore, MacCallum *et al.* (1996) point out that the width of the confidence interval for RMSEA is influenced by both the sample size and the model's degrees of freedom. If both the sample size and the degrees of freedom are small (as is the case in the current study), then the confidence interval of RMSEA will be wide. Such a wide confidence interval has no diagnostic value. Consequently, a number of studies that tested team- or unit-level structural models with small degrees of freedom in small samples have not reported RMSEA, but have used CFI and SRMR instead (e.g., Chen *et al.*, 2018b; Tremblay and Simard, 2018; Walumbwa *et al.*, 2017). We followed suit.

In the SEM analysis, we estimated the correlation between the disturbance terms (also known as the residual terms or error terms) of in-role and extra-role service performance. These terms represent all other influences on in-role and extra-role service performance respectively that were not included as antecedents in the structural model (Keith, 2019).

4.4.2   Structural equation modelling (SEM) results

The results of the SEM analysis indicate that the structural model achieved acceptable fit: χ^2 (11) = 11.184, *p* = 0.428; χ^2/df = 1.017; CFI = 0.999; SRMR = 0.034. Table 5 (p. 228) provides the standardized and unstandardized path coefficients obtained for the structural model.

Table 5: **Standardized and unstandardized path coefficients for the structural model**

Hypothesized relationship	Standardized path coefficients	Unstandardized path coefficients	Hypothesis supported
H1: SO-HPWSs → Work engagement	0.58***	0.50***	Supported
H2: SO-HPWSs → Service climate	0.73***	0.58***	Supported
H3: Work engagement → Service climate	0.25**	0.23**	Supported
H4: Service climate → Customer satisfaction	0.46***	0.32**	Supported
H5: Service climate → In-role service performance	0.47***	0.82***	Supported
H6: Service climate → Extra-role service performance	0.53***	1.00***	Supported
H7: In-role service performance → Customer satisfaction	-0.07	-0.03	Not supported
H8: Extra-role service performance → Customer satisfaction	0.04	0.02	Not supported
H9: Customer satisfaction → Store loyalty	0.86***	0.81***	Supported

Note: *** $p < .001$, ** $p < .01$.

The path coefficients in Table 5 provide support for seven of the paper's nine hypotheses. The statistically significant path coefficients all had p-values < 0.01. More specifically, the results indicate that SO-HPWSs positively predicts both collective work engagement ($\beta = 0.58$) and service climate ($\beta = 0.73$), thus supporting H1 and H2. Work engagement also positively predicts service climate ($\beta = 0.25$), lending support to H3. Furthermore, service climate is a statistically significant positive predictor of customer satisfaction ($\beta = 0.46$), in-role service performance ($\beta = 0.47$) and extra-role service performance ($\beta = 0.53$). These results support hypotheses H4, H5, and H6. Furthermore, customer satisfaction is a statistically significant positive predictor of store loyalty ($\beta = 0.86$), thus supporting H9. Two of the hypotheses, namely H7 and H8, were not supported. As Table 5 indicates, in-role and extra-role service performance were not statistically significant predictors of customer satisfaction. The results further show that the model explained 75% of the variance in store loyalty ($R^2 = 0.75$), 21% of the variance in customer satisfaction ($R^2 = 0.21$), 81% of the variance in service climate ($R^2 = 0.81$), 22% of the variance in in-role service performance ($R^2 = 0.22$), 28% of the variance in extra-role service performance ($R^2 = 0.28$), and 34% of the variance in collective work engagement ($R^2 = 0.34$). Finally, the covariance between the disturbance terms of in-role and extra-role service performance was statistically significant

with a standardized estimate (i.e., a correlation) of 0.62 (p < 0.001). Figure 2 summarizes these results.

Figure 2: **Structural equation modelling (SEM) results**
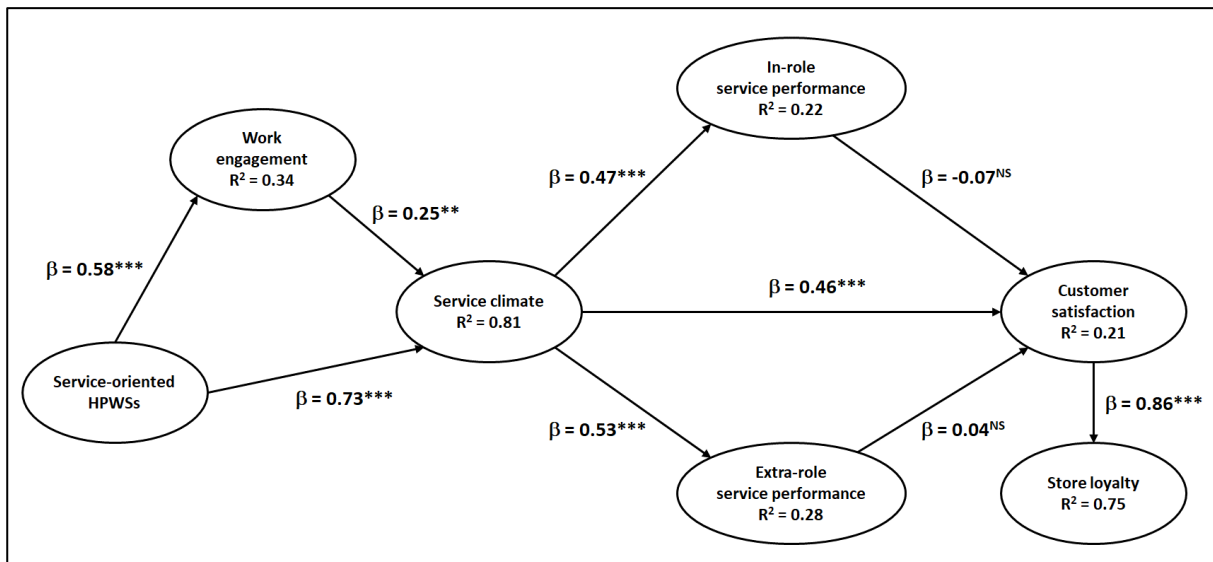
Note: β = standardized path coefficient; *** p < .001, ** p < .01, NS = Not statistically significant.

4.5 DISCUSSION

4.5.1 <u>Theoretical implications</u>

This paper set out to test a conceptual model of selected antecedents and outcomes of service climate at the store level across 70 stores from the same retail chain (see Figure 1, p. 202). In this model, SO-HPWSs predict store-level service climate and collective work engagement, while collective work engagement also predicts service climate. In turn, service climate predicts frontline employees' collective in-role and extra-role service performance as rated by store managers. Finally, the last three constructs serve as predictors of customers' overall satisfaction judgements, while overall satisfaction predicts customers' store loyalty. To our knowledge, this is the first study to investigate simultaneously the relationships between these seven constructs at the store level of analysis. The findings empirically supported seven of the paper's nine hypotheses.

The finding that frontline employees' shared perceptions of the SO-HPWS in their store positively predict their collective work engagement is important for two reasons. First, this

finding contributes to the limited literature on the relationship between HPWSs and employees' *collective* work engagement (Barrick *et al.*, 2015; Schneider *et al.*, 2018). Second, to our knowledge, this is the first study that has specifically investigated the relationship between SO-HPWSs and work engagement with both constructs modelled at a unit level. To our knowledge, only two previous studies have investigated this relationship (i.e., Karatepe, 2013; Luu, 2019) – but both did so at an individual level of analysis. This finding specifically indicates that a store's SO-HPWS is a crucial organizational resource that stimulates frontline employees' collective work engagement (Barrick *et al.*, 2015).

The finding that store-level SO-HPWSs predict service climate confirms the meta-analytic results of Hong *et al.* (2013) as well as the results of three subsequent primary studies (i.e., Jiang *et al.*, 2015a; Lin and Liu, 2016; Tang and Tang, 2012). However, while most previous studies have focused on managers' evaluations of SO-HPWSs, this paper specifically measured frontline employees' perceptions thereof. This is important, because there is often a gap between frontline employees' evaluation of the SO-HPWSs they experience and that of their managers (Den Hartog *et al.*, 2012; Jiang *et al.*, 2017; Liao *et al.*, 2009). Employees' perceptions of the SO-HPWS in their store are an important determinant of the store's service, because the SO-HPWS in a store communicates the organization's strategic focus on providing high quality customer service to employees, and so strengthens the store's service climate (Hoang *et al.*, 2018; Wang and Xu, 2017).

To our knowledge, only one previous unit-level study – that by Salanova *et al.* (2005) – has modelled collective work engagement as an antecedent of service climate. The current study's finding that collective work engagement predicts service climate at the store level confirms the findings reported by Salanova *et al.* (2005) at the unit level, as well as the individual-level findings of Kopperud *et al.* (2014). Thus, the current study adds to the limited research on collective work engagement as an antecedent of service climate. This finding also lends support to the conceptual arguments of Bowen and Schneider (2014) and of Schneider *et al.* (2018), who hypothesized that work engagement serves as a foundation on which a positive service climate can be built.

The fact that service climate positively predicts customer satisfaction at a unit-level of analysis is well-established in the literature. The current study's finding in this regard

confirms the meta-analytical results reported by Hong *et al.* (2013), as well as the findings of a more recent primary study (Graham *et al.*, 2020). This finding also to lends credence to the argument of Schneider *et al.* (2005) that the service climate experienced by frontline employees in their workplace is correlated with the service experiences they provide to their customers, and ultimately translates into customer satisfaction.

The current study further found that service climate is positively related both to frontline employees' collective in-role *and* to their extra-role service performance as rated by the store managers. To our knowledge, this paper is the first to investigate simultaneously the relationships between service climate and both in-role and extra-role service performance. Our finding that service climate positively predicts collective in-role service performance supports the meta-analytical results of Hong *et al.* (2013), as well as the results of three recent primary studies (i.e., Jiang *et al.*, 2015a; Jiang *et al.*, 2016; Linuesa-Langreo *et al.*, 2017). Similarly, the finding that service climate positively predicts extra-role service performance is also aligned with the meta-analytic results of Hong *et al.* (2013) and with the more recent unit-level study of Tang and Tang (2012).

Surprisingly, we found that frontline employees' collective in-role and extra-role service performances, as rated by the store managers, were *not* statistically significant predictors of customer satisfaction. These findings are counterintuitive. Previous unit-level studies have found that both perceptual (Bettencourt and Brown, 1997; Liao and Chuang, 2004) and objective (Yavas *et al.*, 2010) measures of frontline employees' *in-role service performance* positively predict customer satisfaction. However, of these three studies, only Yavas *et al.* (2010) included service climate as a construct. These authors found that an objective measure of employees' in-role service performance completely mediated the relationship between service climate and customer satisfaction at the unit level of analysis (Yavas *et al.*, 2010). Similarly, previous unit-level research has reported a direct positive relationship between frontline employees' *extra-role service performance* and customer satisfaction (Bettencourt and Brown, 1997; Schneider *et al.*, 2005; Simons and Roberson, 2003; Tremblay *et al.*, 2018). However, only Schneider *et al.* (2005) included service climate as a construct, and found that extra-role service performance completely mediates the relationship between service climate and customer satisfaction.

We can only speculate why the relationship between service climate and customer satisfaction was sizable and statistically significant, while the relationships between collective in-role service performance and customer satisfaction and between collective extra-role service performance and customer satisfaction were both weak and not statistically significant.

One possible explanation is that range restriction in these variables, especially in the store-level composite customer satisfaction scores, may have attenuated the correlations between the variables. The store-level customer satisfaction scores were clustered around the highest scale point with a mean of 4.68, a median of 4.71, and a standard deviation of 0.21. All 70 participating stores had composite customer satisfaction scores of 4.10 or larger on the five-point ratings scale used, while 94.28% of the stores had composite scores of 4.50 or larger. This indicates a restriction in the range of the store-level composite customer satisfaction scores. McCoach (2003, p. 49) explains that range restriction in the scores of one or more study variables can have a deleterious effect in a SEM analysis: "Because SEM is essentially a correlational technique, anything that affects the magnitudes of the covariances among the variables in the model will impact the SEM analysis. For example, restriction of range in one variable will attenuate the covariance between that variable and any other variables in the model. This will result in small path coefficients leading to and from that variable".

Finally, our findings support the well-established fact that customer satisfaction is positively related to store loyalty (e.g., Hogreve *et al.*, 2017; Kumar *et al.*, 2013; Szymanski and Henard, 2001; Watson *et al.*, 2015).

Overall, this paper makes a unique contribution by simultaneously investigating the relationships between the seven focal constructs in a single store-level structural model. As such, the paper has responded to the call of Hong *et al.* (2013) for further primary studies on the antecedents and outcomes of service climate that can be added to future meta-analyses.

4.5.2   Managerial implications

This paper's findings clearly show that service climate is an important mediating variable that links frontline employees' shared perceptions of the SO-HPWS in their store and their collective work engagement to their in-role and extra-role service performance and, more importantly, to customer satisfaction and store loyalty. Retail managers should thus strive to create a positive and strong service climate in their respective stores. A service climate is positive if the mean of all employees' service climate ratings is close to the highest scale point on the service climate rating scale used. A service climate is strong if the employees who work together in the same store agree about the service climate in their workplace – in other words, if there is little variance in these employees' service climate ratings (Bowen and Schneider, 2014).

Our conceptual model indicates that investments in SO-HPWSs will directly enhance frontline employees' shared perceptions of the service climate in their store, and indirectly enhance them by bolstering their work engagement. Frontline employees' perceptions of the SO-HPWS in their store can be strengthened by building a coordinated system of service-focused HRM practices. These practices could include service-oriented recruitment and selection, service-focused training, developmental performance feedback focused on employees' in-role and extra-role service behaviours, compensation based on service performance, service-oriented recognition programmes, involving employees in service-related decisions, and the empowerment of frontline employees to deal independently with service-related problems (Zeithaml *et al.*, 2018). A well-designed SO-HPWS will signal to employees that the provision of high-quality customer service is expected, supported, and rewarded (Chuang and Liao, 2010; Jiang *et al.*, 2015a; Liao *et al.*, 2009; Tang and Tang, 2012) and should, therefore, have a positive impact on both their in-role and their extra-role service performances.

This paper's findings also accentuate the importance of overall customer satisfaction as a predictor of customers' store loyalty at the store level of analysis. While customer satisfaction is widely regarded as an important predictor of customer loyalty at an individual level of analysis (Hogreve *et al.*, 2017; Pan *et al.*, 2012; Szymanski and Henard, 2001; Watson *et al.*, 2015), few studies (e.g., Susskind *et al.*, 2018b; Towler *et al.*, 2011) have

investigated the relationship between customer satisfaction and customer loyalty at a unit level of analysis in retail settings. This paper's findings indicate that store managers can enhance the store loyalty of their customers by ensuring that the customers are satisfied with their store visits. The findings further show that store managers can specifically bolster customers' overall satisfaction with a store visit by strengthening the service climate in their respective stores. To strengthen the service climate in their respective stores, store managers should track customers' service quality and satisfaction perceptions and share the results with frontline employees; provide frontline employees with the necessary tools, technology, and resources to enable them to provide high-quality service; and improve the quality of the internal service that frontline employees receive from back-office support functions (Bowen and Schneider, 2014; Schneider *et al.*, 2005; Schneider and White, 2004; Schneider *et al.*, 1998).

4.5.3   Limitations, and directions for future research

The small store-level sample size (n = 70) may be regarded as a first limitation of this paper. While the ratio of estimated parameters to sample size in this paper compares favourably to that reported in previous research (e.g., Chi *et al.*, 2011; Greenslade and Jimmieson, 2011; Susskind *et al.*, 2018a), the small sample size precluded the use of RMSEA as an index of model fit. It may also have affected the power of the SEM analysis to detect individual path coefficients as statistically significant. The structural model tested in this paper should therefore be replicated in future research using larger unit-level samples.

The customer data used in this paper were collected by store employees who distributed paper-based self-completion questionnaires to customers who had completed a sales transaction. Although the employees were specifically instructed not to interact with or influence the customers while they were completing the questionnaires, they may have handed the questionnaires only to customers perceived to be friendly, approachable, or satisfied. This could have contributed to the positive skewness observed in the customer satisfaction ratings. Future studies should therefore consider other survey methods for collecting the required customer data.

Following previous research (e.g., Jiang *et al.*, 2015a; Schneider *et al.*, 2005; Sowinski *et al.*, 2008), the current study was conducted across multiple stores of a single retailer. This may limit the generalizability of the paper's results to other service contexts. To confirm the generalizability of this paper's findings, future research should test the study's structural model in a more diverse sample of independently functioning retailers or other service organizations.

The variability in the store-level customer satisfaction scores across the participating stores was small suggesting range restriction in these scores. This may have led to an underestimation of the correlations between in-role service performance and customer satisfaction as well as between extra-role service performance and customer satisfaction at the unit level (Klein and Kozlowski, 2000). In addition, the small between-store variability in customer satisfaction scores may also have attenuated the corresponding ICC(1) and ICC(2) values. To address these problems in future unit-level studies, researchers could use seven or more scale points in their customer satisfaction measures (Anderson and Fornell, 2000) or employ a disconfirmation of expectations scale (Danaher and Haddrell, 1996).

The current study was cross-sectional in nature, with the employee, store manager, and customer data collected concurrently. The cross-sectional research design prevents strong causal statements about the relationships that are investigated (cf. Gracia *et al.*, 2010; Linuesa-Langreo *et al.*, 2017). Future studies should test the conceptual model presented in this paper on longitudinal data, or use an appropriate time-lagged design (e.g., Eldor, 2020; Jiang *et al.*, 2015a).

The paper only focused on two antecedents of service climate. However, prior research has shown that service climate is also positively affected by the service-focused leadership behaviours exhibited by store managers (Jiang *et al.*, 2015a; Salvaggio *et al.*, 2007; Schneider *et al.*, 2005). Future studies could include service leadership as an additional antecedent of service climate. Finally, the store-level structural model tested in this paper can be expanded by including additional customer outcomes such as perceived service quality and perceived value. To our knowledge, only one previous study investigated the relationship between service climate and customers' perceptions of service value, but at an individual level of analysis (Mokhtaran *et al.*, 2015).

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MAIN FINDINGS FROM CHAPTER 4 CONTRIBUTING TO THE OVERALL OBJECTIVES OF THIS THESIS

The main findings from Chapter 4 that contribute to the overall objectives of this thesis are listed below. These findings are numbered sequentially as MF C4.1 to MF C4.11, with MF indicating 'main finding' and C4 indicating 'Chapter 4'.

Main findings regarding the reliability and validity of the measurement scales and store-level composite scores used in this chapter:

The store-level structural model tested in Chapter 4 share several employee- and manager-rated constructs with the climate-centric model tested earlier in Chapter 3. The main findings regarding the reliability and validity of these shared employee- and manager-rated constructs were presented earlier on p. 195. The first two main findings below focus on the two customer-rated constructs – i.e., overall customer satisfaction and store loyalty – that are unique to the store-level structural model tested in Chapter 4.

MF C4.1: The scale measuring customers' overall satisfaction with their visit to the store, with items taken from Ferraro *et al.* (2017), was reliable and valid among the customers of the participating retailer. This scale was unidimensional. Similarly, the store-level composite score representing this construct was also reliable and valid.

MF C4.2: The scale measuring customers' store loyalty, with items taken from Zeithaml *et al.* (1996) and Dutta *et al.* (2007), was reliable and valid among the customers of the participating retailer. This scale was unidimensional. Similarly, the store-level composite score representing this construct was also reliable and valid.

Main findings related to the specific hypotheses embedded in the store-level structural model tested in Chapter 4:

MF C4.3: Frontline employees' shared perceptions of their store's SO-HPWS were a statistically significant positive predictor of their collective work engagement at the store level of analysis.

MF C4.4: Frontline employees' shared perceptions of their store's SO-HPWS were a statistically significant positive predictor of their shared perceptions of the store's service climate.

MF C4.5: Frontline employees' collective work engagement was a statistically significant positive predictor of their shared perceptions of service climate at the store level of analysis.

MF C4.6: Frontline employees' shared perceptions of the service climate in their store were a statistically significant positive predictor of customer satisfaction at the store level of analysis.

MF C4.7: Frontline employees' shared perceptions of the service climate in their store were a statistically significant positive predictor of their collective in-role service performance at the store level of analysis as rated by the store manager.

MF C4.8: Frontline employees' shared perceptions of the service climate in their store were a statistically significant positive predictor of their collective extra-role service performance at the store level of analysis as rated by the store manager.

MF C4.9: Managers' perceptions of frontline employees' in-role service performance were not a statistically significant positive predictor of customers' overall satisfaction judgements at the store level of analysis.

MF C4.10: Managers' perceptions of frontline employees' extra-role service performance were not a statistically significant positive predictor of customers' overall satisfaction judgements at the store level of analysis.

MF C4.11: Customers' overall satisfaction was a statistically significant positive predictor of their store loyalty at the store level of analysis.

CHAPTER 5
SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1   INTRODUCTION

This chapter summarizes the research conducted for this thesis. The chapter starts by providing a short overview of the study. In this overview, the main purpose of the study is explicated, the methodology used is briefly described, and the focuses of the three articles contained in Chapters 2 to 4 of the thesis are presented. Thereafter, the conclusions drawn from the study's main findings are presented with reference to each of the study's secondary research objectives. This discussion also provides recommendations related to each secondary research objective and its associated conclusions. Next, the study's main contributions are presented. The chapter ends with a discussion of the study's limitations and with corresponding recommendations for future research.

5.2   OVERVIEW OF THE STUDY

The overall purpose of this study was to investigate selected antecedents and outcomes of service climate in a retail setting. The study was conducted among the frontline employees, store managers, and customers of a multi-store South African retailer of tiles, taps, sanitaryware, and related home improvement products.

The study employed a cross-sectional survey research design; it used an online survey to collect data from frontline employees and store managers, and a store-intercept survey involving a self-completion questionnaire to collect data from customers. The frontline employees and store managers were sampled from a contact list provided by the participating retailer, and were invited via e-mail to complete the online survey hosted on Qualtrics. Convenience sampling was used to select customers who visited the retailer's stores. In total, 781 frontline employees, 70 store managers, and 803 customers from 70 of the participating retailer's stores were involved in the study. The study's data were analysed with MS Excel, IBM SPSS Statistics 26, Mplus 8.3, and the multilevel package in R. The

results of these analyses are presented in the three articles contained in Chapters 2 to 4 of this thesis. Each article's focus is summarized below.

Previous unit-level studies have shown that high-performance work systems (HPWSs) have a positive impact on frontline service employees' work engagement (Barrick *et al.*, 2015; Huertas-Valdivia *et al.*, 2018; Karadas and Karatepe, 2019) and service climate perceptions (Jiang *et al.*, 2015; Tang and Tang, 2012). In these studies, HPWSs are typically represented by a single additive index score. This is based on the argument that the individual high-performance work practices (HPWPs) contained in an HPWS complement each other, and that the HPWS, as a system, has a stronger effect on desired outcomes than the individual HPWPs contained therein in isolation (Chuang *et al.*, 2013; Huertas-Valdivia *et al.*, 2018). However, this approach does not allow managers to determine which specific HPWPs in an HPWS have the strongest impact on service climate or work engagement. This is an important gap, since managers need to know which individual HPWPs most affect frontline employees' work engagement and psychological service climate perceptions in order to optimize investments in human resource management (HRM) initiatives (Choo, 2016; Hauff, 2019; Lux *et al.*, 1996). Furthermore, as far as could be determined, no previous research has focused specifically on individual service-oriented high-performance work practices (SO-HPWPs) and on their relationships with service climate and work engagement simultaneously. To address this gap, the first article (presented in Chapter 2) examined the extent to which frontline employees' perceptions of specific SO-HPWPs – i.e., service-oriented staffing, training, financial compensation, non-financial rewards and recognition, involvement, and empowerment – simultaneously predict their work engagement and psychological service climate perceptions at an individual level of analysis.

The second article (presented in Chapter 3) shifted the focus from the individual to the store level of analysis by comparing two rival store-level models of the antecedents of frontline employees' collective in-role and extra-role service performance. In the *climate-centric* model, service climate served as the direct antecedent of collective in-role and extra-role service performance, while in the *engagement-centric* model, collective work engagement directly predicted collective in-role and extra-role service performance. These two models reflect two competing perspectives in the literature on the relationship between service

climate and work engagement. While Salanova *et al.* (2005) and Kopperud *et al.* (2014) modelled work engagement as a direct antecedent of service climate in predicting employee service performance, several other researchers took the opposite view and treated service climate as a direct antecedent of work engagement (e.g., Abdelhadi and Drach-Zahavy, 2012; Barnes and Collier, 2013; Carrasco *et al.*, 2011; Kang and Busser, 2018; Perry *et al.*, 2013). Furthermore, only two studies (i.e., Carrasco *et al.*, 2011; Salanova *et al.*, 2005) have investigated the relationship between service climate and collective work engagement at the unit level of analysis. These two studies each represent one of the two competing perspectives. As far as could be determined, this thesis is the first study to compare these two rival perspectives and also the first to examine simultaneously the interrelationships between the five focal constructs – i.e., SO-HPWSs, collective work engagement, service climate, collective in-role service performance, and collective extra-role service performance – at the store level of analysis.

The final article (presented in Chapter 4) tested an expansion of the climate-centric model introduced in Chapter 3. In this expanded store-level model, SO-HPWSs and collective work engagement were modelled as antecedents of service climate, while collective in-role and extra-role service performance, overall customer satisfaction, and store loyalty were modelled as the direct and indirect outcomes thereof. While previous studies have investigated most of the bivariate relationships contained in this model in isolation (e.g., Bettencourt and Brown, 1997; Chuang and Liao, 2010; Jiang *et al.*, 2015; Linuesa-Langreo *et al.*, 2017; Maxham *et al.*, 2008; Salanova *et al.*, 2005; Tang and Tang, 2012), no previous studies have simultaneously examined the interrelationships between all seven constructs at the unit level of analysis. As such, this article responded to the call by Hong *et al.* (2013) for further primary studies on the antecedents and outcomes of service climate at a unit level of analysis that can be added to future meta-analyses.

5.3   CONCLUSIONS AND RECOMMENDATIONS

This section discusses the conclusions derived from the study's findings with reference to the secondary research objectives that guided this research effort. The section also presents recommendations related to each secondary research objective.

5.3.1 Secondary research objective 1: Evaluate the reliability and validity of the scales used to measure the constructs investigated in this study in a retail context

Three questionnaires were used in this study to collect data from frontline employees, store managers, and customers respectively. The scales included in these questionnaires were adapted from established measures used in prior research. The scale measuring the SO-HPWPs was compiled from scale items used in previous studies conducted in service settings (i.e., Chuang and Liao, 2010; Hong *et al.*, 2017; Liao *et al.*, 2009). The wording of these items was adapted to focus specifically on SO-HPWPs and to reflect the terminology used by the participating retailer. The nine-item version of the Utrecht Work Engagement Scale (Schaufeli *et al.*, 2016) was used to measure frontline employees' work engagement. The wording of six items in this scale had to be changed because a pretest indicated that several of the participants, who were non-native English speakers, did not understand the original item wording that contained unfamiliar terms and idiomatic expressions. Six items from the global service climate scale developed by Schneider *et al.* (1998) were used to measure service climate. One of the original items in this scale was split into two items because of its double-barrelled nature. The scales measuring collective in-role and extra-role service performance were taken from Bettencourt and Brown (1997) and were used without further changes. Customers' overall satisfaction was measured with three items taken from Ferraro *et al.* (2017). Finally, customers' store loyalty was measured with three items from the loyalty sub-dimension of the behavioural intentions scale of Zeithaml *et al.* (1996), and a fourth item from the repurchase intention scale of Dutta *et al.* (2007).

Since it is crucial that researchers demonstrate the validity and reliability of the measures used in a study (Fornell and Larcker, 1981; Hair *et al.*, 2019), the first secondary research objective of this study was to evaluate the reliability and validity of the scales used to measure the constructs investigated in this study in a retail context.

The reliability and validity of the aforementioned scales were assessed separately, based on the results of a series of confirmatory factor analyses and related statistics. The results of these analyses are reported in Chapter 2 for the employee-rated scales, in Chapter 3 for the manager-rated scales, and in Chapter 4 for the customer-rated scales. The same

analyses and interpretational guidelines were used to evaluate the reliability and validity of all the scales included in the study's three questionnaires.

A separate confirmatory factor analysis (CFA) was used to evaluate the dimensionality of the scales answered by each respondent group (i.e., frontline employees, store managers, and customers). In these analyses, an eight-factor measurement model was fitted to the employee data, while two-factor measurement models were fitted to the store manager and customer data respectively. The results of these CFAs were also used to evaluate the convergent validity, discriminant validity, and reliability of the applicable scales.

The *convergent validity* of each multiple-item rating scale used in this thesis was evaluated based on the factor loadings of the associated scale items as well as on the corresponding value of the average variance extracted (AVE). The standardized factor loadings produced by MPlus for each scale were checked for statistical significance, an appropriate sign, a value in the range of -1.0 to 1.0, and a loading of at least 0.5 but preferably 0.7 or larger (Hair *et al.*, 2019; Malhotra *et al.*, 2017). In addition, the AVE value for each scale was calculated. An AVE of ≥ 0.5 indicates satisfactory convergent validity (Hair *et al.*, 2019) and means that the latent construct, on average, accounts for 50% or more of the variance in its measured indicators (Malhotra *et al.*, 2017).

To evaluate the *discriminant validity* of the multiple-item ratings scales used in this thesis, the AVE values for each pair of constructs were compared with the correlation between the two latent constructs as estimated by MPlus. The scales measuring two constructs exhibit discriminant validity when both AVE values are larger than the square of the estimated correlation between the two constructs (Hair *et al.*, 2019). Alternatively, two scales have discriminant validity if the square root of the two AVE vales are larger than the estimated correlation between the constructs (Malhotra *et al.*, 2017).

Finally, the *reliability* of the scales included in the three questionnaires was evaluated with Cronbach's alpha (α; also known as 'coefficient alpha') and composite reliability (CR; also known as 'construct reliability') (Hair *et al.*, 2019). These statistics were calculated on the individual-level data before aggregation to the store level. In both cases, values ≥ 0.70 indicate acceptable internal consistency reliability (Hair *et al.*, 2019; Malhotra *et al.*, 2017).

In the store-level structural models tested in Chapters 3 and 4, each construct was represented by a single composite scale score. The reliability of these store-level composite scale scores were evaluated by calculating Cronbach's alpha on the aggregated store-level scores associated with the individual items in each scale. A store-level Cronbach's alpha value $\geq$ 0.70 was again used as the cut-off for acceptable internal consistency reliability.

The results of these analyses confirmed the reliability, convergent validity, and discriminant validity of the employee-rated scales measuring the six SO-HPWPs, work engagement, and service climate (**MF C2.1; MF C2.2; MF C2.3**); the manager-rated scales measuring collective in-role and extra-role service performance (**MF C3.4; MF 3.5**); and the customer-rated scales measuring overall customer satisfaction and store loyalty (**MF C4.1; MF C4.2**). The store-level Cronbach's alpha values also confirmed the reliability of the store-level composite scale scores used to represent these construct in the store-level structural models tested in Chapters 3 and 4 (**MF C3.1; MF C3.2; MF C3.3; MF C3.4; MF C3.5; MF C4.1; MF C4.2**).

It is **concluded**, therefore, that the measurement scales and store-level composite scores used in the current study were reliable and valid among the frontline employees, store managers, and customers of the participating retailer. It is **recommended** that other researchers, the participating retailer, and other retailers in the home improvement industry use the measures presented in this study to evaluate the perceptions that frontline employees have of the SO-HPWPs and service climate in their respective stores and their work engagement. Similarly, researchers and retailers in the home improvement industry may use the two manager-rated scales employed in the current study to evaluate store managers' perceptions of the collective in-role and extra-role service performance of the frontline employees in their stores. Finally, the two customer-rated scales may be used to measure customers' overall satisfaction with a specific store visit and their store loyalty.

5.3.2 Secondary research objective 2: Determine the extent to which frontline employees' perceptions of SO-HPWPs predict their psychological service climate perceptions in a retail context

Previous research has shown that both generic HPWSs and service-oriented HPWSs positively predict frontline employees' service climate perceptions at both an individual and a unit level of analysis (e.g., Chuang and Liao, 2010; Graham *et al.*, 2020; Jiang *et al.*, 2015; Wang and Xu, 2017). However, studies on the relationship between *specific* SO-HPWPs and frontline employees' psychological service climate perceptions *at an individual level of analysis* are scarce. The few available individual-level studies (i.e., Lux *et al.*, 1996; Simon, 2020; Steinke, 2008) have all focused on generic HPWPs, not on SO-HPWPs. Consequently, Chapter 2 focused on secondary research objective 2, and examined the extent to which frontline employees' perceptions of six specific SO-HPWPs (i.e., service-oriented staffing, training, financial compensation, non-financial rewards and recognition, involvement, and empowerment) predict the employees' psychological service climate perceptions at an individual level of analysis.

Chapter 2 found that frontline employees' perceptions of three of the six SO-HPWPs (i.e., staffing, training, and involvement) were statistically significant positive predictors of the psychological service climate perceptions at an individual level of analysis (**MF C2.11; MF C2.12; MF C2.15**), while the remaining three SO-HPWPs (i.e., financial compensation, non-financial rewards and recognition, and empowerment) were not (**MF C2.13; MF C2.14; MF C2.16**). The results further indicate that involvement had the strongest impact on frontline employees' psychological service climate perceptions, followed by training and then staffing (**MF C2.17**).

Based on these findings, it can be **concluded** that service-oriented staffing, training, and involvement are important determinants of frontline employees' psychological service climate perceptions at an individual level of analysis for the participating retailer and for other similar retailers. It is consequently **recommended** that these three SO-HPWPs form part of these retailers' SO-HPWSs, and that the retailers prioritize investments in these practices in order to enhance frontline employees' individual-level psychological service climate perceptions (Hauff, 2019).

Retailers in the home improvement industry can enhance their frontline employees' perceptions of service-oriented staffing, training, and involvement in several ways.

With regard to *service-oriented staffing*, these retailers should ensure that the customer-orientation and service-related experience, knowledge, skills, and abilities of new hires are accentuated in their recruitment and selection practices (Bateson *et al.*, 2014; Wirtz and Jerger, 2016; Wirtz and Lovelock, 2018). Frontline employees' perceptions of these retailers' service-oriented staffing efforts can be further enhanced by actively involving these employees in the retailers' recruitment and selection processes where appropriate. For example, frontline employees could be encouraged to recommend possible job applicants whom they know have the required experience, knowledge, skills, abilities, and service-orientation to fit in with their employer's service ethos. Experienced frontline employees could form part of interview panels, could take applicants or new appointees on a tour of the retailer's operations, and could participate in the induction training of new appointees. This will enhance the frontline employees' perceptions that the retailer's staffing initiatives have a strong service focus.

The participating retailer and other retailers in the home improvement industry should also expand their *service-oriented training* efforts. Several experts agree that excellent service organizations have a strong commitment to ongoing service-focused training that is aimed at enhancing frontline employees' interpersonal skills, product knowledge, and technical skills (Wirtz and Jerger, 2016; Wirtz and Lovelock, 2018; Zeithaml *et al.*, 2018). Interpersonal skills training could focus on aspects such as making eye contact with and listening actively to customers, understanding customers' body language and facial expressions, effectively determining customer needs, and dealing appropriately with customer complaints or problems (Wirtz and Lovelock, 2018). Frontline employees should also be knowledgeable about the tiles, taps, sanitaryware, and other products the firm sells, and about how these products should be installed, used, and maintained. Training aimed at enhancing frontline employees' product knowledge should, therefore, focus on basic product features, and on related installation and maintenance requirements. For example, since the participating retailer *inter alia* sells tiles to the do-it-yourself (DIY) segment, frontline employees should be able to help these customers determine the number of tiles and the amount of tile cement and grout required to tile an area of a specific size. In addition, all frontline employees' should

be able to answer the typical questions that DIY customers have about tiles and tiling and related DIY activities. Technical skills training focuses on the retailer's policies, procedures, rules, processes, and systems, and could include, *inter alia*, training on handling point-of-sales systems, product returns, and refunds (Wirtz and Lovelock, 2018). All frontline employees should be knowledgeable about these technical aspects to ensure fast and efficient customer service. Such service-oriented training efforts will communicate the retailer's service focus to the frontline employees and consequently enhance their service climate perceptions (Schneider & White, 2004).

Finally, retailers in the home improvement industry could enhance frontline employees' perceptions of *involvement* by creating open, two-way communication channels in the workplace; by encouraging frontline employees to share information about customers' requirements and service problems; by involving them in service improvements and new service development efforts; and, importantly, by involving them in decisions that directly affect their work (Liao and Chuang, 2004). Such initiatives will signal to employees that their inputs are valued and will enhance their service climate perceptions (Tang & Tang, 2012).

The fact that three of the six SO-HPWPs investigated in this study (i.e., financial compensation, non-financial rewards and recognition, and empowerment) were not statistically significant predictors of frontline employees' psychological service climate perceptions does not necessarily mean that these SO-HPWPs are unimportant and can be ignored. Research on strategic human resource management (HRM) emphasizes that the HPWPs that constitute an HPWS do not function in isolation, but have interactive or synergistic effects that go beyond the effects of single HPWPs (Boon *et al.*, 2019; Hauff, 2019; Jiang *et al.*, 2012). Academic researchers and managers in the home improvement retail sector should, therefore, consider the possible interactions between the six SO-HPWPs in predicting frontline employees' service climate perceptions in order to gain further insights into the roles played by all six SO-HPWPs included in the current study (Hauff, 2019).

Furthermore, as far as could be determined, this is the first study to investigate the relationships between *specific SO-HPWPs* and frontline employees' psychological service climate perceptions. The other available studies (i.e., Lux *et al.*, 1996; Simon, 2020; Steinke,

2008) have all focused on the relationship between generic HPWPs and service climate, and have each included a different set of HPWPs. As such, the results of these studies are not directly comparable. Future research should, therefore, examine the same set of SO-HPWPs measured with the same scales to answer the following important question: Is there a universal set of SO-HPWPs that best predict frontline employees' psychological service climate perceptions across multiple service firms or are the relationships between individual SO-HPWPs and service climate firm-specific? Such insights will assist managers to determine where they should focus their HRM-related investments to strengthen frontline employees' psychological service climate perceptions.

5.3.3 <u>Secondary research objective 3: Determine the extent to which frontline employees' perceptions of SO-HPWPs predict their work engagement in a retail context</u>

Prior research has found that both generic HPWSs (Huertas-Valdivia *et al.*, 2018; Karadas and Karatepe, 2019; Karatepe, 2013; Karatepe and Olugbade, 2016) and service-oriented HPWSs (Luu, 2019) positively predict frontline employees' work engagement at an individual level of analysis. However, as far as could be determined, only four studies (i.e., Aktar and Pangil, 2018; Babakus *et al.*, 2017; Choo, 2016; Goyal and Patwardhan, 2020) have specifically investigated the relationships between multiple individual HPWPs and frontline employees' work engagement in service settings. These studies indicate that different HPWPs may impact frontline employees' work engagement to varying degrees. With the exception of Choo (2016), the aforementioned studies all focused on generic HPWPs – not on SO-HPWPs. Consequently, little is known about the relationships between individual SO-HPWPs and frontline employees' work engagement. The third secondary research objective of this thesis thus aimed to determine the extent to which frontline employees' perceptions of specific SO-HPWPs predict their work engagement at an individual level of analysis in a retail context.

As reported in Chapter 2, this study found that only one of the six SO-HPWPs included in this study (i.e., service-oriented training) was a statistically significant predictor of frontline employees' work engagement at an individual level of analysis (**MF C2.5; MF C2.10**). The other five SO-HPWPs investigated in this thesis (i.e., service-oriented staffing, financial

compensation, non-financial rewards and recognition, involvement, and empowerment) were not statistically significant predictors of frontline employees' work engagement at an individual level of analysis (**MF C2.4; MF C2.6; MF C2.7; MF C2.8; MF C2.9**). The fact that service-oriented training is a statistically significant predictor of frontline employees' work engagement confirms a similar result reported by Choo (2016).

It can be **concluded**, therefore, that service-oriented training is an important determinant of frontline employees' work engagement at an individual level of analysis for retailers in the home improvement industry. It is consequently **recommended** that service-oriented training form part of these retailers' SO-HPWSs, especially if these systems aim to enhance frontline employees' work engagement.

The results of the individual-level structural model tested in Chapter 2 (see Figure 1, p. 109) indicate that service-oriented training is very important to retailers in the home improvement industry because it simultaneously predicts both frontline employees' work engagement and their psychological service climate perceptions. Retailers' investments in enhancing their service-oriented training initiatives will, therefore, deliver dual benefits. Specific managerial recommendations on how to enhance retailers' service-oriented training efforts were provided earlier, in Section 5.3.2 (p. 262). These managerial recommendations apply in cases where retailers wish to enhance frontline employees' psychological service climate perceptions, their work engagement, or both.

This study's finding that only service-oriented training is a statistically significant predictor of frontline employees' work engagement, while service-oriented staffing, training, and involvement are statistically significant predictors of frontline employees' psychological service climate perceptions, supports two important observations made by Hauff (2019). First, it highlights the fact that different HPWPs may be relevant in predicting different outcomes (Hauff, 2019). Second, it supports Hauff's (2019) observation that the relationships between different HPWPs and a specific outcome, such as work engagement, may be heterogeneous, in that the relationships between the individual HPWPs and the focal outcome may differ in their magnitude and direction. This implies that the frequently used practice of combining different HPWPs into a single additive index to represent an overall HPWS may be misleading, as it assumes that each constituent HPWP has an equal

effect on the outcome in question (Boon *et al.*, 2019; Hauff, 2019; Jiang and Messersmith, 2017). To overcome this problem, Hauff (2019) and Jiang *et al.* (2012) recommended that HPWSs (including SO-HPWSs) be modelled as formative constructs. This would allow researchers to determine the overall impact of the HPWS on the relevant outcomes, and provide information on the extent to which each constituent HPWP relates to the HPWS and to the focal outcome. Researchers should consider these recommendations in future studies on the relationships between SO-HPWSs and service climate as well as work engagement.

As far as could be determined, this thesis and the study of Choo (2016) are the only two studies that have investigated the relationships between specific SO-HPWPs and work engagement at an individual level of analysis in service settings to date. The six SO-HPWPs investigated in this thesis only partially overlap with the four measured by Choo (2016). Future research should therefore examine the same set of SO-HPWPs measured with the same scales to determine whether a universal set of SO-HPWPs exists that best predict frontline employees' work engagement across multiple service firms. Such insights will assist managers to determine where they should focus their HRM-related investments to bolster frontline employees' work engagement.

5.3.4 Secondary research objective 4: Determine the extent to which frontline employees' perceptions of SO-HPWSs predict collective work engagement and service climate in a retail context

Chapters 3 and 4 in this thesis made a unique contribution by investigating the extent to which frontline employees' *shared* perceptions of the SO-HPWSs in their respective stores *simultaneously* predict both their collective work engagement and their shared service climate perceptions *at a store level of analysis*. This is reflected in the fourth secondary research objective that guided this thesis.

This section first summarizes the findings on the store-level relationship between frontline employees shared perceptions of SO-HPWSs and their collective work engagement. This is followed by a discussion of the findings about the store-level relationship between SO-HPWSs and service climate. The section concludes with a discussion of recommendations regarding these two relationships.

➢ *Frontline employees' shared perceptions of SO-HPWSs as a predictor of their collective work engagement at a store level of analysis*

Most previous studies on the relationship between frontline employee-perceived HPWSs and work engagement in service contexts were conducted at an individual level of analysis (Cooke *et al.*, 2019; Huang *et al.*, 2018; Huertas-Valdivia *et al.*, 2018; Karadas and Karatepe, 2019; Karatepe, 2013; Karatepe and Olugbade, 2016; Luu, 2019). Only two of these studies (i.e., Karatepe, 2013; Luu, 2019) specifically focused on SO-HPWSs, while the others focused on generic HPWSs. Furthermore, as far as could be determined, no previous research has investigated the relationships between *employee-perceived* SO-HPWSs in particular and collective work engagement at a *unit level of analysis*.

At an organizational level, Barrick *et al.* (2015) reported a positive relationship between employee-perceived generic HPWSs and employees' collective work engagement, while Schneider *et al.* (2018) found a positive relationship between organizational practices (which included several generic HRM practices) and employees' collective work engagement. Finally, Salanova *et al.* (2005) and Gracia *et al.* (2013) reported a positive relationship between organizational resources (which included two generic HRM practices – i.e., training and autonomy) and collective work engagement at a unit level of analysis. However, none of these unit-level studies specifically focused on *employee-perceived SO-HPWSs* as an antecedent of collective work engagement.

Chapters 3 and 4 found that frontline employees' shared perceptions of the SO-HPWSs in their respective stores were a direct positive predictor of their collective work engagement at the store level of analysis (**MF C3.7; MF C4.3**). Based on these findings, it is **concluded** that SO-HPWS is indeed an important antecedent of collective work engagement at a store level of analysis. This confirms prior individual-level findings (Karatepe, 2013; Luu, 2019) and adds to the scant research on the antecedents of collective work engagement at a unit level of analysis (Barrick *et al.*, 2015; Gracia *et al.*, 2013; Salanova *et al.*, 2005; Schneider *et al.*, 2018).

➢ *Frontline employees' shared perceptions of SO-HPWSs as a predictor of their shared service climate perceptions at a store level of analysis*

The fourth secondary research objective of this thesis also focused on the relationship between frontline employees' shared perceptions of SO-HPWSs in their respective stores and their shared service climate perceptions at the store level of analysis. The meta-analysis of Hong *et al.* (2013) found that both generic HRM practices and service-oriented HRM practices are positive predictors of service climate at a unit level of analysis. Importantly, the meta-analytic correlation between service-oriented HRM practices and service climate was significantly stronger than that between generic HRM practices and service climate. This meta-analysis contained nine unit-level studies that specifically focused on the relationship between *service-oriented* HRM practices and service climate (Hong *et al.*, 2013). However, an analysis of these nine studies indicates that only Chuang and Liao (2010) used a multi-dimensional conceptualization of SO-HPWSs involving multiple SO-HPWPs. The other eight studies each included only two or three specific SO-HPWPs, not a comprehensive SO-HPWS.

Subsequently, Jiang *et al.* (2015) reported a positive relationship between manager-rated SO-HPWSs and service climate at a unit level of analysis, while Wang and Xu (2017) and Hoang *et al.* (2018) found positive relationships between employee-rated SO-HPWSs and service climate at an individual level of analysis. Overall, only two prior studies (i.e., Chuang and Liao, 2010; Jiang *et al.*, 2015) have focused on the unit-level relationship between multidimensional conceptualizations of SO-HPWSs and service climate. In both cases, the SO-HPWSs were rated by managers, not but by frontline employees. Given that managers' perceptions of HPWSs often differ from those of frontline employees (Den Hartog *et al.*, 2012; Jiang *et al.*, 2017; Liao *et al.*, 2009), the fifth secondary research objective of this thesis specifically focused on determining the extent to which *employee-perceived* SO-HPWSs predict service climate at the store level of analysis in a retail context.

Chapters 3 and 4 found that frontline employees' shared perceptions of the SO-HPWSs in their respective stores were a direct positive predictor of their shared service climate perceptions at the store level of analysis (**MF C3.8; MF C4.4**). These findings confirm the results reported by Chuang and Liao (2010) and Jiang *et al.* (2015), but specifically from the

perspective of frontline employees. Based on these findings, it is **concluded** that frontline employees' shared perceptions of the SO-HPWSs in their respective stores are a direct positive predictor of their shared service climate perceptions at a store level of analysis. As such, SO-HPWSs directly contribute to the creation and strengthening of the service climate in retail stores (Jiang *et al.*, 2015).

➢ *Recommendations regarding frontline employees' shared perceptions of SO-HPWSs as a predictor of both their collective work engagement and shared service climate perceptions at a store level of analysis*

This study's finding that frontline employees' *shared* perceptions of the SO-HPWSs in their respective stores *simultaneously* predict both their collective work engagement and their shared service climate perceptions at a store level of analysis have important implications for future academic research and for retailers in the home improvement industry.

Given that this is the first study to simultaneously investigate the relationships between employee-perceived SO-HPWSs and collective work engagement as well as between employee-perceived SO-HPWSs and service climate at a store level of analysis, it is **recommended** that academic researchers explore these relationships further in future research conducted in other service settings. There is currently no consensus in the literature on which specific SO-HPWPs should be included in an SO-HPWS. There is also no agreement on how an SO-HPWS should be measured (Boon *et al.*, 2019; Posthuma *et al.*, 2013). This hampers the comparability of findings across studies. Future researchers should preferably include a core set of widely adopted SO-HPWPs as constituent elements when measuring an SO-HPWS (Boon *et al.*, 2019) and measure the SO-HPWS with the same scale to facilitate the comparability of research findings across studies. Based on an extensive review of research on HPWSs, Boon *et al.* (2019) recommended that future studies should at least include the following six HPWPs as constituent elements when conceptualising an HPWS: selection, training, incentive-based financial compensation, involvement (i.e., participation/autonomy), performance evaluation, and job design. According to Boon *et al.* (2019), these six core HPWPs can be supplemented by additional HPWPs that are relevant in a specific context. It is therefore recommended that future studies on SO-HPWSs also include the same set of core SO-HPWPs.

From a managerial perspective, the findings imply that retailers in the home improvement industry could simultaneously enhance both frontline employees' collective work engagement and their shared service climate perceptions by creating and strengthening an SO-HPWS at store level. To enhance frontline employees' shared perceptions of the SO-HPWS in their respective stores, retailers in the home improvement industry should invest in developing all six the SO-HPWPs investigated in this thesis, as these practices collectively constitute the SO-HWPS that frontline employees experience in their stores. Importantly, to be most effective, the six SO-HPWPs investigated in this thesis must be aligned with, and complement, each other to form a coordinated SO-HPWS (Liao *et al.*, 2009; Tang and Tang, 2012).

Recommendations on how to strengthen three of the SO-HPWPs – service-oriented staffing, training, and involvement – were presented earlier, in Section 5.3.2 (p. 262). In addition, retailers can take several steps to enhance frontline employees' perceptions of the remaining three SO-HPWPs (i.e., service-oriented financial compensation, non-financial rewards and recognition, and empowerment). Recommendations in this regard are presented below.

Financial compensation and non-financial rewards and recognition are the two major components of an organization's 'total rewards strategy' (Thibault Landry *et al.*, 2018). However, developing an effective total rewards strategy that motivates employees and enhances their performance is a complex endeavour (Thibault Landry *et al.*, 2018). In a recent review of research on workplace rewards and recognition, Thibault Landry *et al.* (2018) highlighted a number of key points that managers in the home improvement retail industry should consider when thinking about their organizations' compensation and reward programmes. First, Thibault Landry *et al.* (2018) indicated that financial incentives on their own are no longer sufficient to motivate workers, and therefore must be used in combination with other non-financial reward types, such as greater autonomy, involvement in decision-making, opportunities for flexible work, verbal or written recognition, and training and development opportunities. In this regard, Thibault Landry *et al.* (2018) emphasized that employees are increasingly seeking meaning, purpose, and social contribution in their work, and that an organization's compensation and rewards practices should reflect this. Second, prior research shows that tangible non-cash rewards (e.g., gift cards, merchandise, and

paid-for travel or leisure opportunities) may deliver equal or greater returns for organizations than an equivalent cash reward. Third, Thibault Landry *et al.* (2018) emphasized that how rewards are presented – and the affective reactions the rewards elicit in employees – are key to their success. In this regard, they pointed out that research shows that any type of reward is most effective when the recipient perceives it as "heartfelt, genuine and authentic" (Thibault Landry *et al.*, 2018, p. 235). Consequently, all rewards should be used to reinforce the primary message of recognition and appreciation. Fourth, managers and frontline supervisors play a crucial role in fostering recognition in the workplace. Managers and frontline supervisors should, therefore, be trained how to provide effective recognition and appropriately to show appreciation to employees as an important part of their day-to-day work (Thibault Landry *et al.*, 2018).

To enhance frontline employees' perceptions of service-oriented *financial compensation*, retailers in the home improvement industry could consider a financial reward scheme that is closely related to frontline employees' individual and/or collective service performance. Such a scheme could, for example, entail the payment of performance bonuses or other tangible non-cash rewards (e.g., gift cards, merchandise, or paid-for travel or leisure opportunities) that are partly based on improvements in the individual employee's or store's customer satisfaction scores. However, Wirtz and Lovelock (2018) caution that financial incentives on their own may only have short-term motivating effects. In their view, frontline employees are more strongly motivated by their job content and goal accomplishment, and by the non-financial recognition and feedback they receive from customers, their peers, and their supervisors (Wirtz and Lovelock, 2018).

To enhance frontline employees' perceptions of service-oriented *non-financial rewards and recognition,* retailers in the home improvement industry could work with frontline employee representatives to develop an appropriate non-financial rewards and recognition programme. This could be as simple as sensitizing store managers to the importance of praising employees in an appropriate manner for a job well done (Thibault Landry *et al.*, 2018). In some service organizations, frontline employees are encouraged to recognize each other by giving a 'peer award' to a colleague they feel excelled in providing exemplary customer service. Non-financial rewards could also include celebrating when a team achieves predefined goals related to customer satisfaction or customer retention (Zeithaml

et al., 2018). To reward and motivate their frontline employees optimally, retailers may have to conduct research specifically to understand the types of tangible and intangible rewards and recognition that their frontline employees are looking for at work (Thibault Landry *et al.*, 2018).

Empowerment is the last of the six SO-HPWPs investigated in this study. It refers to the decision-making power and autonomy that frontline employees have to make on-the-spot decisions about customer service without involving management (Babakus *et al.*, 2017; Mendoza-Sierra *et al.*, 2014). Retailers in the home improvement industry can enhance frontline employees' perceptions of empowerment by training them how to use good judgement, and then giving them the discretion to deal with exceptional customer service requests or customer problems appropriately on their own without involving a manager (Wirtz and Lovelock, 2018). However, high levels of employee empowerment may not be appropriate in all cases. Retail managers should, therefore, carefully consider the advantages, disadvantages, and requirements associated with empowerment to ensure that their empowerment initiatives are appropriately designed, implemented, and monitored (Wirtz and Lovelock, 2016; Zeithaml *et al.*, 2018).

Ultimately, all the elements of a retailer's SO-HPWS should be carefully designed to ensure both horizontal and vertical fit. Horizontal fit refers to ensuring alignment, internal consistency, and complementarity among the individual SO-HPWPs that constitute an SO-HPWS, while vertical fit refers to the alignment of the whole system with the organization's business strategy (Liao *et al.*, 2009).

5.3.5 <u>Secondary research objective 5: Evaluate two competing perspectives on the interrelationships between frontline employees' perceptions of SO-HPWSs, collective work engagement, and service climate as predictors of these employees' collective in-role and extra-role service performance in a retail context</u>

The conceptual review of Bowen and Schneider (2014) and previous empirical research (e.g., Chuang and Liao, 2010; Jiang *et al.*, 2015; Lin and Liu, 2016; Salanova *et al.*, 2005; Tang and Tang, 2012) has shown that SO-HPWSs, work engagement, and service climate

are all important antecedents of employees' in-role and extra-role service performance. However, as far as could be determined, no previous empirical investigations have simultaneously included all five these constructs to explore their interrelationships at the unit level of analysis.

In addition, there are two competing perspectives in the literature on the relationship between service climate and work engagement as predictors of in-role and extra-role service performance. While Salanova *et al.* (2005) and Kopperud *et al.* (2014) have modelled work engagement as a direct antecedent of service climate in predicting frontline employees' in-role and extra-role service performance, several other researchers have taken the opposite view, treating service climate as a direct antecedent of work engagement (e.g., Abdelhadi and Drach-Zahavy, 2012; Barnes and Collier, 2013; Carrasco *et al.*, 2011; Kang and Busser, 2018; Perry *et al.*, 2013). Finally, only two studies (i.e., Carrasco *et al.*, 2011; Salanova *et al.*, 2005), each representing one of the two competing perspectives mentioned above, have investigated the relationship between service climate and work engagement with both constructs modelled at a unit level of analysis.

Chapter 3, therefore, focused on the fifth secondary research objective of this thesis by evaluating two competing *store-level* structural models of the interrelationships between frontline employees' perceptions of SO-HPWSs, collective work engagement, and service climate as predictors of their collective in-role and extra-role service performance in a retail context (see Figure 1, p. 145).

Chapter 3 found that the *climate-centric model* achieved an acceptable fit to the data, while the fit of the rival *engagement-centric model* was not acceptable (**MF C3.6**). In the climate-centric model (see Figure 1, p. 145), frontline employees' shared perceptions of the SO-HPWS in their stores directly predicted their collective work engagement (**MF C3.7**) and shared service climate perceptions (**MF C3.8**), while collective work engagement also directly predicted service climate (**MF C3.9**). Service climate, in turn, served as a direct antecedent of frontline employees' collective in-role and extra-role service performance as evaluated by the store managers (**MF C3.10; MF C3.11**). Overall, the climate-centric model indicates that service climate, not work engagement, is the direct antecedent of frontline employees' collective in-role and extra-role service performance at the store level of

analysis. This model also shows that SO-HPWSs predict service climate directly as well as indirectly through collective work engagement.

Based on these findings, it is **concluded** that the *climate-centric model* provides the best account of the data and thus of the interrelationships between the five constructs included in this model. These findings also support the conceptual arguments of Schneider (2020), Schneider *et al.* (2018), and Bowen and Schneider (2014) that work engagement serves as a foundation on which a positive and strong service climate can be built, and that frontline employees' shared perceptions of the service climate they experience, in turn, directly affect their in-role and extra-role service-oriented behaviours directed at customers.

The findings and conclusions summarized above have implications for future academic research and for retailers in the home improvement industry. As far as could be determined, this is the first study to investigate two competing perspectives about the interrelationships between frontline employees' perceptions of SO-HPWSs, collective work engagement, and service climate as predictors of their collective in-role and extra-role service performance at a unit level of analysis. It is thus **recommended** that future academic studies test the same two rival store-level structural models in different service settings and in larger samples to examine the generalizability of this study's findings. In addition, future studies should ideally measure the variables at different points in time separated by an appropriate time lag (e.g., Babakus *et al.*, 2017; Eldor, 2020; Jiang *et al.*, 2015). This is necessary to further address the potential distorting impact of common method variance and to allow for stronger statements about the causal direction of the relationships in the model by ruling out the posibility of reverse causality (Kloutsiniotis and Mihail, 2020).

The climate-centric model also has implications for retailers in the home improvement industry. The network of relationships in the climate-centric model suggests that these retailers could improve frontline employees' collective in-role and extra-role service performance directly and indirectly through a three-pronged strategy:

- First, retailers could implement actions to directly strengthen the service climate frontline employees collectively experience in their respective stores. This should have

a direct positive impact on frontline employees' collective in-role and extra-role service performance.

- Second, retailers could implement targeted initiatives aimed at enhancing frontline employees' collective work engagement. This should have an indirect positive impact on their in-role and extra-role service performance by enhancing their shared perceptions of the service climate in their respective stores.

- Third, retailers should invest in strengthening the SO-HPWS that frontline employees collectively experience in their respective stores. This should bolster their collective in-role and extra-role service performance indirectly (a) by strengthening their shared service climate perceptions, and (b) by enhancing their collective work engagement which, in turn, will positively impact their shared service climate perceptions.

Retailers in the home improvement industry can implement several steps to directly enhance frontline employees' *shared service climate perceptions*. For example, managers can bolster these perceptions by developing and communicating specific standards for service delivery; by working with frontline employees to prevent service failures; by creating mechanisms to actively solicit customer feedback and by sharing this feedback with frontline employees; by tracking customers' service quality and satisfaction perceptions and by sharing the results with employees; by empowering and requiring store managers to engage in service-oriented leadership behaviours; by providing employees with the necessary tools, technology, and resources to enable them to provide high-quality service; and by improving the quality of the internal service that frontline employees receive from back-office support functions (Bowen and Schneider, 2014; Schneider *et al.*, 2005; Schneider and White, 2004; Schneider *et al.*, 1998). These interventions should ultimately have a direct positive impact on frontline employees' collective in-role and extra-role service performance behaviours by signalling to them that these behaviours are expected, supported, and rewarded (Hong *et al.*, 2013; Linuesa-Langreo *et al.*, 2017; Wang and Xu, 2017).

The network of relationships in the climate-centric model also indicates that frontline employees *collective work engagement* has a direct positive effect on their shared service climate perceptions that, in turn, has a direct positive impact on their collective in-role and extra-role service performance. This implies that retailers in the home improvement industry

can indirectly influence frontline employees' collective in-role and extra-role service performance through targeted interventions aimed at improving their collective work engagement. The more engaged, energized, and enthusiastic employees are at work, the more motivated they will be to collectively engage in the types of in-role and extra-role service performance behaviours that are required to deliver excellent customer service (Salanova *et al.*, 2005).

The Job Demands-Resources (JD-R) model is the dominant theoretical framework used to explain employees' work engagement (Bailey *et al.*, 2017; Park *et al.*, 2019). In this model, employees' work engagement is affected by the demands and resources associated with their jobs. Job demands refer to physical, psychological, social, or organizational aspects of a job that require sustained physical, mental, and/or psychological effort from an employee that can result in physiological and/or psychological costs. Examples of job demands include role ambiguity, role stress, work overload, emotionally demanding interaction with customers, computer problems, interpersonal conflict, job insecurity, and time pressure. Job resources, in turn, refer to the physical, psychological, social, or organizational aspects of a job that enable employees to achieve their work goals. Examples of job resources include supervisor and peer support, positive performance feedback, task variety, task significance, autonomy, opportunities for professional development, team cohesion, and the availability of appropriate supporting technologies (Park *et al.*, 2019). Previous studies (e.g., Luu, 2019; Siddiqi, 2015) indicate that investments in appropriate HRM practices (including SO-HPWSs) will enhance frontline employees' work engagement by serving as job resources or by reducing job demands. In this regard, Siddiqi (2015), for example, argue that non-financial rewards and recognition is an important job resource that motivates employees and enhances their work engagement. Clear communication reduces frontline employees' role ambiguity (i.e., an important job demand) so that they have a clear understanding of what is expected of them. Training also increases frontline employees' job resources by providing them with the knowledge, skills, and abilities to perform their jobs effectively and to respond to customers appropriately.

Consequently, to enhance frontline employees' collective work engagement directly, retail managers could work with organizational psychologists, organizational development practitioners, and frontline employees to identify specific problematic job demands in the

workplace (e.g., interpersonal conflict, role ambiguity) and to develop tailored interventions to reduce these demands and enhance the associated job resources in order to bolster frontline employees' collective work engagement (Park *et al.*, 2019; Schaufeli, 2017). This may be especially valuable in underperforming stores. In a practitioner-oriented article, Schaufeli (2017), one of the originators of the JD-R model, describes a survey tool and process model that managers can use to identify specific job demands and resources that should be addressed and to develop, implement, and evaluate tailored interventions aimed at increasing employees' work engagement. He also describes a case study where this process model was successfully applied in a hotel chain.

Finally, the climate-centric model highlights the importance of investments aimed at strengthening the *SO-HPWS* frontline employees collectively experience in their respective stores. The model indicates that such investments will have a direct positive impact on frontline employees' shared service climate perceptions as well as an indirect positive impact via their collective work engagement. Ultimately, through its direct and indirect impact on service climate, investments in the SO-HPWS frontline employees experience will positively affect their collective in-role and extra-role service performance. As was explained earlier in Section 5.3.4 (p. 269), retailers in the home improvement industry should invest in developing all six the SO-HPWPs investigated in this thesis, as these six practices collectively constitute the SO-HWPS that frontline employees experience. Specific managerial recommendations on how to strengthen service-oriented staffing, training, and involvement were presented earlier in Section 5.3.2 (p. 262), while specific recommendations regarding the strengthening service-oriented financial compensation, non-financial rewards and recognition, and empowerment were presented in Section 5.3.4 (p. 270). These recommendations also apply to the current discussion.

5.3.6   Secondary research objective 6: Determine the extent to which service climate predicts frontline employees' collective in-role and extra-role service performance in a retail context

The service climate in a retail store does not produce desired customer evaluations such as customer satisfaction or store loyalty by itself. It is frontline employees' service-oriented behaviours in the form of their collective in-role and extra-role service performance that yield

these desired outcomes (Bowen and Schneider, 2014; Schneider *et al.*, 2005). To ensure customer satisfaction and loyalty, frontline employees must be motivated to perform exceptionally in terms of both in-role and extra-role service performance (Morrison, 1996; Somech and Drach-Zahavy, 2016). A strong service climate motivates frontline employees to engage in both in-role and extra-role service performance because it clearly signals to them that these behaviours are expected, supported, and rewarded (Hong *et al.*, 2013; Jiang *et al.*, 2016; Linuesa-Langreo *et al.*, 2017; Wang and Xu, 2017). While a number of unit-level studies have found positive relationships between service climate and in-role service performance (e.g., Jiang *et al.*, 2015; Jiang *et al.*, 2016; Linuesa-Langreo *et al.*, 2017) and between service climate and extra-role service performance (e.g., Schneider *et al.*, 2005; Tang and Tang, 2012), no studies have *simultaneously* investigated both of these relationships. The sixth secondary research objective of this thesis, therefore, responded to the call by Yavas *et al.* (2010) to simultaneously investigate the extent to which service climate at a unit level predicts frontline employees' collective in-role and extra-role service performance in a retail context. It is theoretically and practically important to understand the relative impact of service climate on frontline employees' collective in-role and extra-role service performance behaviours. Such insights could inform future theorising and may also guide interventions aimed at strengthening these collective behaviours as possible predictors of customer satisfaction.

Chapters 3 and 4 found that the service climate in retail stores served as a direct positive predictor of frontline employees' collective in-role *and* extra-role service performance as evaluated by the store managers at the store level of analysis (**MF C3.10; MF C3.11; MF C4.7; MF C4.8**). Interestingly, in both the climate-centric model tested in Chapters 3 and the expanded model tested in Chapter 4, the standardized coefficient of the path linking service climate to collective extra-role service performance was only slightly larger than the corresponding coefficient of the path linking service climate to collective in-role service performance. This suggests that service climate essentially has an equal impact on both forms of collective service performance at the store level.

Based on these findings, it is **concluded** that frontline employees' shared perceptions of the service climate in their respective stores indeed serve as a "motivational force" (Liao and Chuang, 2007) that simultaneously guides these employees' collective in-role *and* extra-role

service performance behaviours directed at customers (Bowen and Schneider, 2014; Yagil, 2014).

As far as could be determined, this is the first study to have investigated the extent to which service climate simultaneously predicts frontline employees' collective in-role and extra-role service performance at a unit level of analysis. It is, therefore, **recommended** that future research explore these relationships further in other service settings to determine the generalizability of this study's findings and to further investigate possible differences in the relative impact of frontline employees' shared service climate perceptions on their collective in-role and extra-role service performance respectively at a unit level of analysis.

These findings also indicate that retailers in the home improvement industry could bolster frontline employees' collective in-role and extra-role service performance simultaneously and directly by strengthening the service climate these employees experience in their respective stores. Specific recommendations on how managers could directly enhance frontline employees' shared service climate perceptions were presented earlier in Section 5.3.5 on p. 275. These recommendations also apply to the discussion in this section.

5.3.7 <u>Secondary research objective 7: Determine the extent to which service climate and collective in-role and extra-role service performance predict overall customer satisfaction in a retail context</u>

Several prior unit-level studies have reported a direct positive relationship between service climate and customer satisfaction (e.g., Auh *et al.*, 2011; Dietz *et al.*, 2004; Graham *et al.*, 2020; Martínez-Tur *et al.*, 2011; Schneider *et al.*, 2009). However, despite these empirical findings, Schneider *et al.* (2005) and Bowen and Schneider (2014) have argued that service climate by itself does not lead to customer satisfaction. According to these authors, it is frontline employees' in-role and extra-role service performance behaviours that determine customer satisfaction. This implies that the relationship between service climate and customer satisfaction may be partially or completely mediated by frontline employees' in-role and extra-role service performance (Schneider *et al.*, 2005). In fact, both Schneider *et al.* (2005) and Bowen and Schneider (2014) hypothesized that service climate would primarily affect customer satisfaction through employees' extra-role service performance.

However, as far as could be determined, no previous studies have investigated the extent to which service climate, collective in-role service performance, and collective extra-role service performance together predict overall customer satisfaction at the unit level of analysis. The seventh secondary research objective of this thesis, therefore, simultaneously explored these relationships at the store level of analysis in a retail context.

Chapter 4 found that the service climate in retail stores served as a direct positive predictor of overall customer satisfaction at a store level of analysis (**MF C4.6**), while the store-level relationships between both collective in-role and extra-role service performance and overall customer satisfaction were weak and not statistically significant (**MF C4.9; MF C4.10**).

Based on these findings, it is **concluded** that service climate is indeed an important direct antecedent of overall customer satisfaction at a store level of analysis. This confirms the results of several previous studies (e.g., Auh *et al.*, 2011; Dietz *et al.*, 2004; Graham *et al.*, 2020; Martínez-Tur *et al.*, 2011; Schneider *et al.*, 2009). The results also indicate that both collective in-role and extra-role service performance (as rated by store managers) are not statistically significant predictors of overall customer satisfaction. This finding is surprising, because previous unit-level studies have shown that both in-role service performance and extra-role service performance directly predict customer satisfaction (Bettencourt and Brown, 1997; Liao and Chuang, 2004; Schneider *et al.*, 2005; Simons and Roberson, 2003; Tremblay *et al.*, 2018; Yavas *et al.*, 2010). However, of these studies, only Yavas *et al.* (2010) and Schneider *et al.* (2005) included service climate as a construct. These two studies focused on the relationship between collective in-role service performance and customer satisfaction (Yavas *et al.*, 2010) and between collective extra-role service performance and customer satisfaction (Schneider *et al.*, 2005) respectively without simultaneously considering both relationships.

The weak and statistically non-significant relationships between collective in-role service performance and overall customer satisfaction, and between collective extra-role service performance and overall customer satisfaction reported in Chapter 4, may be the result of range restriction in these variables, which may have attenuated the correlations between the variables.

The following **recommendations** flow from the discussion above:

First, researchers should further explore the extent to which both collective in-role and extra-role service performance *simultaneously* predict overall customer satisfaction in future unit-level studies, along with the extent to which these two constructs jointly mediate the impact of service climate on overall customer satisfaction. As mentioned, the current study's findings in this regard are surprising and counterintuitive, and may be the result of range restriction in the scores representing these constructs. As such, the current study's findings on the relative and joint impact of service climate, collective in-role service performance, and collective extra-role service performance as predictors of overall customer satisfaction are inconclusive.

Second, to avoid problems with range restriction in future studies, researchers could use more scale points when measuring these constructs. Customer satisfaction ratings are typically negatively skewed (Anderson and Fornell, 2000; Danaher and Haddrell, 1996). Researchers should therefore consider using seven or more scale points in their customer satisfaction measures (Anderson and Fornell, 2000) or measuring customer satisfaction with a disconfirmation of expectations scale (Danaher and Haddrell, 1996). The range of managers' ratings of the collective in-role and extra-role service performance of the frontline employees in their respective stores may also have been restricted as a result of social desirability bias. Although managers were given the assurance that no one in the participating retailer would see their individual ratings, they may have had a vested interest in reporting a positive impression of the frontline employees in their stores, thus leading to inflated ratings of these employees' collective in-role and extra-role service performance. The store managers' generally high (i.e., positive) ratings of their frontline employees' collective in-role and extra-role service performance may also have been exacerbated by the measurement approach used. As indicated, store managers were asked to evaluate the in-role and extra-role service performance of all the frontline employees' in their respective stores *collectively*. While this measurement approach has been used in several previous studies (e.g., Cheng and Chen, 2017; Karatepe, 2011; Luu, 2019; Tuan, 2018), it lacks a single, clear 'target' for store managers to evaluate, especially when individual frontline employees' service performance differs markedly. Thus, it could lead to inflated ratings if store managers focus on the top-performing frontline employees in their respective stores

when providing these ratings. Future researchers could use alternative measurement approaches, such as asking higher-level managers (e.g., regional managers) to provide these ratings for each store (e.g., Linuesa-Langreo *et al.*, 2017) or requiring store managers to evaluate the in-role and extra-role service performance of each of the frontline employees in their stores individually (e.g., Gürlek and Uygur, 2020; Jo *et al.*, 2020; Walumbwa *et al.*, 2018) and then aggregating these individual ratings to the store level.

Third, one could also argue that customers are the ultimate judges of employees' in-role and extra-role service performance behaviours and that store managers' evaluations of these behaviours should be replaced by appropriate customer evaluations. For example, instead of focusing of managers' evaluations of frontline employees' in-role and extra-role service performance, some prior unit-level studies (e.g., Ehrhart *et al.*, 2011; Gracia *et al.*, 2010; Salanova *et al.*, 2005) have opted to investigate the relationship between service climate and customers' *service quality* perceptions. This links service climate more directly with the customer outcomes it should engender. Following the network of relationships proposed in the service-profit chain model (Hogreve *et al.*, 2017), future research could investigate a store-level structural model in which service climate predicts external service quality (as evaluated by customers) that, in turn, predicts customer satisfaction and, through customer satisfaction, ultimately customer loyalty.

Fourth, previous longitudinal research has shown that employees' current service climate ratings are correlated with future customer satisfaction ratings at a unit level of analysis (Schneider *et al.*, 1998; Schneider *et al.*, 2009). This suggests that changes in a unit's service climate scores from one period to the next could serve as a *lead indicator* or predictor of future changes in the unit's customer satisfaction ratings. Because service climate data is obtained internally from frontline employees, organizations may find it easier and more cost-effective to collect this data at frequent intervals (e.g., quarterly) than to conduct expensive customer satisfaction surveys with the same frequency. Future longitudinal research should evaluate the extent to which changes in service climate scores predict future changes in customer satisfaction ratings at the store level of analysis, in order to advise retail managers on the feasibility of using changes in service climate scores as a predictive metric to forecast future changes in customer satisfaction ratings.

Fifth, the results of Chapter 4 indicate that the service climate in a retailer's stores directly predict customers' overall satisfaction with their store visits at the store level of analysis. From a managerial perspective, this implies that managers in the home improvement industry can enhance their respective stores' overall customer satisfaction scores directly by strengthening the shared service climate that frontline employees experience in their stores. Specific recommendations on how managers can bolster frontline employees shared service climate perceptions were presented earlier on p. 275. These recommendations also apply to the current discussion.

Furthermore, it is important to note the five antecedents of customer satisfaction included in the structural model tested in Chapter 4 collectively only account for 21% of the variance in customers' overall customer satisfaction scores at the store level of analysis (see Figure 2, p. 229). This implies that there are other factors, not included in the model, that account for most of the variance in these scores. Future studies should therefore expand the model tested in Chapter 4 to determine the impact of additional determinants of overall customer satisfaction relative to service climate. For example, Grosso *et al.* (2018) tested a structural model in which customers' perceptions of five store attributes – salespeople's competence, salespeople's trustworthiness, physical store environment, price promotions, and product assortment – predicted customers' value perceptions, overall customer satisfaction, and loyalty intentions. Terblanche (2018), in turn, tested a structural model in which shoppers' perceptions of five store attributes – merchandize value, the physical store environment, staff interactions, merchandize variety, interactions with other customers, and in-store emotions – predict customer satisfaction and patronage intentions. Based on the findings of these and other similar studies (e.g., Biscaia, *et al.*, 2017; Goić *et al.*, 2021; Theodoridis and Chatzipanagiotou, 2009), the structural model tested in Chapter 4 can be expanded by adding relevant store attributes, customer perceived service quality, and perceived value as additional predictors of overall customer satisfaction alongside service climate. This will provide academic researchers and retail managers with more detailed insights on the extent to which service climate drives customers' overall satisfaction compared to other important store attributes in a retail context. Additional managerial recommendations in this regard appear in the next section (see p. 285).

5.3.8   Secondary research objective 8: Examine the relationship between overall customer satisfaction and store loyalty in a retail context

The fact that customer satisfaction is positively related to customer loyalty in general and to customers' store loyalty in particular is well-established in the marketing literature (Kumar *et al.*, 2013) and has been confirmed in three meta-analyses (Hogreve *et al.*, 2017; Pan *et al.*, 2012; Szymanski and Henard, 2001). According to Nesset *et al.* (2011), customer satisfaction is usually the main driver of store loyalty and repurchase intentions in retail studies. Hunneman *et al.* (2015), similarly, indicate that it is widely assumed in retailing that satisfied customers are more loyal, although the relationship between customer satisfaction and loyalty may be non-linear. Several studies conducted in retail settings have reported direct positive relationships between customer satisfaction and store loyalty at an individual level of analysis (e.g., Biscaia *et al.*, 2017; Hult *et al.*, 2019; Moliner-Velázquez *et al.*, 2019; Nesset *et al.*, 2011; Terblanche, 2018).

However, as far as could be determined, the relationship between customer satisfaction and loyalty *at a store level of analysis* have received little research attention. Loveman (1998) found positive unit-level relationships between customer satisfaction and three objective indicators of customer loyalty in a study conducted across multiple branches of the same retail bank. Towler *et al.* (2011) reported a positive unit-level relationship between customer satisfaction and customer retention (operationalized as actual customer revisits over a one-year period) in a study conducted across multiple service outlets. Similarly, Susskind *et al.* (2018b) reported a positive unit-level relationship between customers' overall satisfaction and their intention to return in a study conducted across multiple outlets in the same restaurant chain. These studies indicate that customer satisfaction is also a direct positive predictor of customer loyalty at the store level of analysis.

The eighth secondary research objective of this thesis focused on further examining the *unit-level* relationship between overall customer satisfaction and store loyalty in a retail context. The structural model tested in Chapter 4 confirmed that overall customer satisfaction positively predicts customers' store loyalty at a store level of analysis (**MF C4.11**).

Based on these findings, it is **concluded** that overall customer satisfaction is indeed a direct positive antecedent of customers' store loyalty *at the store level of analysis.* Thus, this study's findings support the conclusions of Loveman (1998), Towler *et al.* (2011), and Susskind *et al.* (2018b). The following **recommendations** flow from the preceding discussion:

First, since the *unit-level* relationship customer satisfaction and customer loyalty has apparently received scant research attention to date, future academic research should explore this relationship further in other retail or service settings. In fact, as far as could be determined, this is the first study to test a store-level structural model simultaneously involving service climate, customer satisfaction, and customer loyalty. Salanova *et al.* (2005) tested a unit-level structural model that included service climate and customer loyalty, but their model focused on the service climate → service quality → customer loyalty path and did not include customer satisfaction. Future research could, therefore, replicate and expand the store-level structural model tested in Chapter 4 by including service quality as a possible mediator between service climate and customer satisfaction to determine how these three constructs interact to predict customer loyalty.

Second, from a managerial perspective, the results confirm that retailers could improve their customers' store loyalty directly by ensuring that customers are satisfied with their store visits (Grosso *et al.*, 2018). More specifically, this study's results confirm that stores with higher aggregated overall customer satisfaction ratings also have higher aggregated store loyalty ratings. However, to ensure customer satisfaction, retail managers in the home improvement industry need to understand the specific 'drivers' (i.e., antecedents) of their customers' overall satisfaction with a store visit as well as how they perform on these 'drivers' relative to their competitors (Martínez-Ruiz *et al.*, 2017). The store-level structural model tested in this thesis only included three direct 'drivers' of customers' overall satisfaction at a store level, namely service climate as well as frontline employees' collective in-role and extra-role service performance. Of these three satisfaction 'drivers', only service climate was a statistically significant predictor of overall customer satisfaction.

Previous individual-level studies have identified a wide range of other store attributes that could potentially predict customer satisfaction. For example, Burlison and Oe (2018)

identified eight store attribute dimensions with 32 sub-dimensions that could potentially relate to customer satisfaction, while Blut *et al.* (2018) related 24 retail marketing mix elements grouped into seven categories to customer satisfaction. These store attributes include aspects related to (Blut *et al.*, 2018; Johnson *et al.*, 2014; Levy *et al.*, 2019; Martínez-Ruiz *et al.*, 2017; Terblanche, 2018):

- The quality of the service offered by frontline employees (e.g., staff friendliness, competence, product knowledge);

- Merchandising (e.g., product variety and assortment, product quality, product exclusivity, product availability);

- Pricing (e.g., general price level compared with that of competitors, price promotions, availability of store credit);

- Store location, design, layout, and atmospherics (e.g., location of store relative to major access routes; visual attractiveness of the store as a whole and of product displays; ease of movement within the store; temperature, noise levels, and aroma in the store; store cleanliness; availability of parking; safety in and outside the store);

- Store policies (e.g., operating hours, returns policy); and

- The availability of additional services (e.g., in-store cafés).

Given the wide range of factors that could potentially affect shoppers' overall satisfaction with a visit to a retail store, retailers in the home improvement industry should conduct additional research to:

- identify the specific store attributes that serve as 'drivers' of overall customer satisfaction for their target customers;

- evaluate the relative importance of these 'drivers' compared to service climate as predictors of customers' overall satisfaction;

- determine the target customers' perceptions of their performance on the identified key satisfaction 'drivers' relative to their competitors; and

- implement corrective actions to address any shortcomings identified.

The insights gained from such research will guide retail managers on where to focus investments aimed at enhancing customer satisfaction and ultimately customer loyalty.

While the current study did not test the relative importance of service climate compared to other key 'drivers' of customer satisfaction and store loyalty, the meta-analysis of Pan and Zinkhan (2006) found that *service quality* is the second most important determinant of the likelihood that shoppers will patronize a retailer and of their shopping frequency (i.e., the number of times a hopper patronizes a retailer in s specific period of time). Furthermore, previous studies have shown that service climate is a direct positive predictor of consumers' service quality perceptions at the store or work unit level of analysis (e.g., Gracia *et al.*, 2010; Salanova *et al.*, 2005; Schneider *et al.*, 1998). Any investments in strengthening the service climate that frontline employees experience in their respective stores should, therefore, have a positive impact on customers' service quality perceptions and consequently also on their overall satisfaction and ultimately on their store loyalty (Hogreve *et al.*, 2017; Salanova *et al.*, 2005).

5.3.9 **Secondary research objective 9: Propose and test a model depicting the interrelationships between frontline employees' perceptions of SO-HPWSs, collective work engagement, and service climate; store managers' evaluations of employees' collective in-role and extra-role service performance; and customers' evaluations of overall customer satisfaction and store loyalty in a retail context**

Secondary research objective 9 reflects the complete network of relationships contained in the store-level structural model tested in Chapter 4 (see Figure 1, p. 202). In this model, frontline employees' shared perceptions of the SO-HPWSs in their respective stores predicted their shared service climate perceptions and their collective work engagement directly. Collective work engagement also predicted service climate directly, while the latter predicted frontline employees' collective in-role and extra-role service performance (as rated by the store managers) directly. The model further hypothesized that collective in-role service performance, collective extra-role service performance, and service climate all predict overall customer satisfaction directly. Finally, overall customer satisfaction was modelled as a direct antecedent of store loyalty.

The results reported in Chapter 4 indicate that:

- SO-HPWSs positively predict collective work engagement (**MF C4.3**);

- SO-HPWSs positively predict service climate (**MF C4.4**);

- Collective work engagement positively predicts service climate (**MF C4.5**);

- Service climate positively predicts overall customer satisfaction (**MF C4.6**);

- Service climate positively predicts collective in-role service performance (**MF C4.7**);

- Service climate positively predicts collective extra-role service performance (**MF C4.8**);

- Collective in-role service performance is *not* a statistically significant predictor of overall customer satisfaction (**MF C4.9**);

- Collective extra-role service performance is *not* a statistically significant predictor of overall customer satisfaction (**MF C4.10**); and

- Overall customer satisfaction positively predicts customers' store loyalty (**MF C4.11**).

Overall, the results reported in Chapter 4 supported seven of the nine hypothesized relationships contained in the structural model.

Based on these findings, it is **concluded** that service climate is an important variable that links internal organizational factors in the form of employee-perceived SO-HPWSs and collective work engagement to external outcomes in the form of customer satisfaction and store loyalty. Thus, service climate can indeed be viewed as an important link in the "service-profit chain" (Hong *et al.*, 2013), especially in terms of its impact on overall customer satisfaction and, ultimately, on store loyalty.

A number of **recommendations** flow from the results associated with the structural model tested in Chapter 4.

First, future research should test the model in a more diverse sample of service units to explore specifically the relationships between collective in-role service performance, collective extra-role service performance, and customer satisfaction. Previous studies have reported a positive relationship between collective in-role service performance and customer satisfaction (e.g., Jiang *et al.*, 2015; Jiang *et al.*, 2016; Linuesa-Langreo *et al.*, 2017) as well

as between collective extra-role service performance and customer satisfaction (e.g., Schneider *et al.*, 2005; Tang and Tang, 2012). Surprisingly, the current study's findings in this regard are counterintuitive and inconclusive.

Second, the structural model tested in Chapter 4 did not include financial indicators of store performance because such data could not be obtained from the participating retailer due to confidentiality concerns. Following Schneider *et al.* (2005), Jiang *et al.* (2015) and Jiang *et al.* (2016), the model tested in Chapter 4 could be expanded to include relevant financial metrics. This would allow researchers and store managers to quantify the bottom-line impact of the relationships embedded in the model. Alternatively, the model could also be expanded by including the ratings of store managers' perceptions of the performance of their respective stores (e.g., Ali *et al.*, 2019; Aryee *et al.*, 2012; Chao and Shih, 2018).

Third, the results of Chapter 4 show that retailers in the home improvement industry could enhance customers' overall satisfaction and store loyalty by strengthening the service climate frontline employees experience in their respective stores. More specifically, the structural model tested in Chapter 4 indicate that store managers could:

- enhance customers' store loyalty directly by ensuring that shoppers experience overall satisfaction with their store visits;

- bolster customers' overall satisfaction directly by strengthening frontline employees' shared perceptions of the service climate they experience in their respective stores;

- strengthen frontline employees' shared service climate perceptions directly by enhancing frontline employees' collective work engagement as well as by bolstering these employees perceptions of the SO-HPWS in their respective stores; and

- further enhance frontline employees' collective work engagement directly by strengthening the SO-HPWSs these employees experience in their respective stores.

Specific managerial recommendations regarding each of these aspects were offered in the preceding sections. These recommendations are summarized in Table 1 below.

Table 1: **Managerial recommendations about the constructs included in the structural model tested in Chapter 4**

Construct	Recommendations	Section where recommendations are discussed
SO-HPWSs	Managers can strengthen frontline employees' shared perceptions of the SO-HPWS they experience in their respective stores by strengthening all six the constituent SO-HPWPs investigated in this thesis in such a way that the SO-HPWPs are aligned with and complement each other to form a coordinated SO-HPWS. Specific recommendations on how to strengthen service-oriented staffing, training, and involvement were offered in Section 5.3.2 (p. 262), while specific recommendations regarding financial compensation, non-financial rewards and recognition, and empowerment were offered in Section 5.3.4 (p. 270). These investments should have a direct positive impact on frontline employees' shared service climate perceptions as well as an indirect impact through their collective work engagement.	Section 5.3.4 (p. 269)
Collective work engagement	Investments aimed at strengthening the SO-HPWS that frontline employees experience will have a direct positive effect on their collective work engagement. In addition, managers could develop tailored interventions aimed at identifying and reducing specific job demands (e.g., interpersonal conflict) or increasing specific job resources (e.g., social support) present in particular stores to enhance frontline employees' collective work engagement further.	Section 5.3.5 (p. 275)
Service climate	Initiatives aimed at strengthening the SO-HPWS frontline employees experience and investments aimed at enhancing their collective work engagement will both have a direct positive impact on their shared service climate perceptions. In addition, managers can take steps to strengthen frontline employees' shared service climate perceptions directly. Recommendations in this regard were offered in Section 5.3.5 (p. 275).	Section 5.3.5 (p. 275)
Collective in-role and extra-role service performance	Manager's efforts to strengthen frontline employees' shared service climate perceptions will have a direct positive effect on their collective in-role and extra-role service performance. In addition, investments in strengthening the SO-HPWS frontline employees experience as well as tailored interventions aimed at enhancing their collective work engagement will have an indirect positive effect on their collective in-role and extra-role service performance by bolstering their shared service climate perceptions. This thesis did not consider additional targeted interventions aimed at enhancing employees' collective in-role and extra-role service performance directly.	Section 5.3.6 (p. 279)
Overall customer satisfaction	All efforts aimed at strengthening frontline employees' shared service climate perceptions should have a direct positive impact on overall customer satisfaction. Managers can further enhance overall customer satisfaction directly by identifying relevant store attributes (in addition to service climate) that serve as 'drivers' of overall customer satisfaction, determining target	Section 5.3.8 (p. 285)

Construct	Recommendations	Section where recommendations are discussed
	customers' perceptions of the retailer's performance on these attributes relative to its competitors, and then implementing targeted interventions to improve the retailer's performance on key satisfaction 'drivers' where necessary. Since the meta-analysis of Pan and Zinkhan (2006) identified service quality as the second most important determinant of shoppers' store patronage, all the aforementioned efforts aimed at strengthening the frontline employees' shared service climate perceptions should affect overall customer satisfaction positively to the extent that these initiatives lead to improvements in the quality of service frontline employees provide to customers.	
Store loyalty	Managerial efforts aimed at enhancing overall customer satisfaction should have a direct positive impact on customers' store loyalty. This thesis did not consider additional targeted interventions aimed at enhancing customers' store loyalty directly.	Section 5.3.8 (p. 285)

5.3.10   Summary of secondary research objectives and main findings

Table 2 lists the study's secondary research objectives, the related knowledge gaps the study sought to address, the chapter in the thesis where each secondary research objective was addressed, the hypotheses and main findings related to these objectives, and the associated questions in the applicable questionnaire.

Table 2:   Summary of secondary research objectives, hypotheses, and main findings of this study

Secondary research objective	Knowledge gap	Chapter in thesis	Hypotheses	Main findings	Applicable questionnaire and questions
1. Evaluate the reliability and validity of the scales used to measure the constructs investigated in this study in a retail context.	Not applicable	Chapters 2, 3 and 4	-	MF C2.1, MF C2.2, MF C2.3, MF C3.1, MF C3.2, MF C3.3, MF C3.4, MF C3.5, MF C4.1, MFC4.2	Employee questionnaire, Q1 to Q3 Manager questionnaire, Q1 and Q2 Customer questionnaire, Q1 and Q2
2. Determine the extent to which frontline employees' perceptions of SO-HPWPs predict their psychological service climate perceptions in a retail context.	Gap 1	Chapter 2	H1b, H2b, H3b, H4b, H5b and H6b	MF C2.11, MF C2.12, MF C2.13, MF C2.14, MF C2.15, MF C2.16, MF C2.17	Employee questionnaire, Q1 and Q2

Secondary research objective	Knowledge gap	Chapter in thesis	Hypotheses	Main findings	Applicable questionnaire and questions
3. Determine the extent to which frontline employees' perceptions of SO-HPWPs predict their work engagement in a retail context.	Gap 1	Chapter 2	H1a, H2a, H3a, H4a, H5a and H6a	MF C2.4, MF C2.5, MF C2.6, MF C2.7, MF C2.8, MF C2.9. MF C2.10	Employee questionnaire, Q2 and Q3
4. Determine the extent to which frontline employees' perceptions of SO-HPWSs predict collective work engagement and service climate in a retail context.	Gaps 2 & 3	Chapters 3 and 4	Chapter 3: H1, H2 Chapter 4: H1, H2	MF C3.7, MF C3.8 MF C4.3, MF C4.4	Employee questionnaire, Q1 to Q3
5. Evaluate two competing perspectives on the interrelationships between frontline employees' perceptions of SO-HPWSs, collective work engagement, and service climate as predictors of these employees' collective in-role and extra-role service performance in a retail context.	Gap 4	Chapter 3	H1 to H8	MF C3.6, MF C3.7, MF C3.8, MF C3.9, MF C3.10, MF C 3.11	Employee questionnaire, Q1 to Q3
6. Determine the extent to which service climate predicts frontline employees' collective in-role and extra-role service performance in a retail context.	Gap 5	Chapters 3 and 4	Chapter 3: H4, H5 Chapter 4: H5, H6	MF C3.10, MF C3.11 MF C4.7, MF C4.8	Employee questionnaire, Q1 Manager questionnaire, Q1 and Q2
7. Determine the extent to which service climate, collective in-role service performance, and collective extra-role service performance predict overall customer satisfaction in a retail context.	Gap 6	Chapter 4	H4, H7 and H8	MF C4.6, MF C4.9, MF C4.10	Employee questionnaire, Q1 Manager questionnaire, Q1 and Q2 Customer questionnaire, Q1
8. Examine the relationship between overall customer satisfaction and store loyalty in a retail context.	Gap 6	Chapter 4	H9	MF C4.11	Customer questionnaire, Q1 and Q2
9. Propose and test a model depicting the interrelationships between frontline employees' perceptions of SO-HPWSs, collective work engagement, and service climate; store managers' evaluations of employees' collective in-role and extra-role service performance; and	Gap 7	Chapter 4	H1 to H9	MF C4.3, MF C4.4, MF C4.5, MF C4.6, MF C4.7, MF C4.8, MF C4.9, MF C4.10. MF C4.11	Employee questionnaire, Q1 to Q3 Manager questionnaire, Q1 and Q2 Customer questionnaire, Q1 and Q2

Secondary research objective	Knowledge gap	Chapter in thesis	Hypotheses	Main findings	Applicable questionnaire and questions
customers' evaluations of overall customer satisfaction and store loyalty in a retail context.					

From Table 1 it can be deduced that all the secondary research objectives of the study were met. Consequently, **the primary research objective of this thesis – namely, to examine the antecedents and outcomes of service climate in a retail context – was achieved.**

5.4   CONTRIBUTIONS OF THE STUDY

The main contributions of this thesis are discussed below.

5.4.1   Contribution 1: The value of investigating the relationship between frontline employees' perceptions of individual SO-HPWPs and work engagement at an individual level of analysis

Previous studies have found that both generic HPWSs (Huertas-Valdivia *et al.*, 2018; Karadas and Karatepe, 2019; Karatepe, 2013; Karatepe and Olugbade, 2016) and service-oriented HPWSs (Luu, 2019) positively predict frontline employees' work engagement at an individual level of analysis. However, as far as could be determined, only four studies (i.e., Aktar and Pangil, 2018; Babakus *et al.*, 2017; Choo, 2016; Goyal and Patwardhan, 2020) have investigated the relationships between *individual* HPWPs and frontline employees' work engagement in service settings. These studies indicate that different HPWPs have varying impacts on frontline employees' work engagement. Furthermore, with the exception of Choo (2016), the aforementioned studies all focused on generic HPWPs. As a result, little is known about the relationships between individual SO-HPWPs and frontline employees' work engagement.

Chapter 2 in this thesis made a **theoretical contribution** by investigating the extent to which six specific SO-HPWPs predict frontline employees' work engagement at an individual level of analysis. The results indicated that only one SO-HPWP – service-oriented training – was

a statistically significant predictor of work engagement. This confirms Hauff's (2019) observation that different HPWPs may have varying impacts on a desired outcome such as work engagement. This implies that academic researchers should consider modelling approaches that take the varying impact of different HPWPs on a specific outcome into account when modelling HPWSs comprised of multiple HPWPs (Hauff, 2019; Jiang *et al.*, 2012).

From a **managerial perspective**, knowledge about the relative impact of different SO-HPWPs on work engagement also has practical value, in that it guides managers on where to focus HRM-related investments in order to enhance frontline employees' work engagement (Hauff, 2019). This study's findings specifically indicate that retailers in the home improvement industry should invest in service-oriented training to enhance frontline employees' work engagement at an individual level of analysis. Specific managerial recommendations on how to enhance retailers' service-oriented training efforts were provided earlier, in Section 5.3.2 (p. 262).

5.4.2 <u>Contribution 2: The value of investigating the relationship between frontline employees' perceptions of individual SO-HPWPs and their psychological service climate perceptions at an individual level of analysis</u>

Studies relating individual SO-HPWPs directly to psychological service climate at an individual level of analysis in service settings are relatively scarce. Lux *et al.* (1996) found that four generic HPWPs (i.e., reward/recognition, employee voice, training, and work design) positively predict psychological service climate at an individual level of analysis. Steinke (2008) reported statistically significant positive bivariate correlations between the employee ratings of three generic HPWPs (i.e., training, job design, and employee empowerment) and psychological service climate at an individual level of analysis, but in her study's main structural model, only employee empowerment directly predicted service climate. Finally, Simon (2020) reported statistically significant bivariate correlations between nine generic HRM practice dimensions (i.e., employee selection, training and performance evaluation, communication, compensation, rewards and recognition, job content, teamwork, career planning, and empowerment) and psychological service climate. However, in this study's regression model, these HRM practices were combined into a single composite

score that predicted frontline employees' commitment to service quality, with psychological service climate modelled as a moderator of this relationship. As a result, little is known about the relationships between individual SO-HPWPs and frontline employees' psychological service climate perceptions at an individual level of analysis.

Chapter 2 in this thesis made a **theoretical contribution** by investigating the extent to which six SO-HPWPs predict frontline employees' psychological service climate perceptions at an individual level of analysis. The results indicated that three of the six SO-HPWPs (i.e., service-oriented staffing, training, and involvement) were statistically significant positive predictors of frontline employees' psychological service climate perceptions at an individual level of analysis. This confirms Hauff's (2019) observations that (a) different HPWPs may have varying impacts on different outcomes such as work engagement and service climate, and (b) that different HPWPs do not necessarily affect a specific outcome such as service climate to the same extent.

From a **managerial perspective**, the findings imply that retailers in the home improvement industry should primarily invest in service-oriented staffing, training, and involvement to enhance frontline employees' psychological service climate perceptions. Specific managerial recommendations on how to enhance frontline employees' perceptions of these three SO-HPWPs were provided earlier, in Section 5.3.2 (p. 262).

As indicated above, previous research indicates that SO-HPWPs predict both work engagement and frontline employees' psychological service climate perceptions at an individual level of analysis. However, as far as could be determined, no previous studies have investigated the extent to which individual SO-HPWPs simultaneously predict both of these constructs. Chapter 2, therefore, made a **theoretical contribution** by exploring the extent to which six SO-HPWPs simultaneously predict frontline employees' work engagement and their psychological service climate perceptions. The findings indicate that service-oriented training was a statistically significant positive predictor of both constructs, while service-oriented staffing and involvement were additional statistically significant positive predictors of psychological service climate perceptions only. As mentioned, this implies that academic researchers should consider modelling approaches that take the

varying impacts of different HPWPs on a specific outcome into account when modelling HPWSs comprised of multiple HPWPs (Hauff, 2019; Jiang *et al.*, 2012).

From a **managerial perspective**, these findings also emphasize that managers may have to focus on different SO-HPWPs to ensure different HRM-related outcomes. More specifically, these findings show that retailers in the home improvement industry should focus on service-oriented staffing, training, and involvement to enhance frontline employees' psychological service climate perceptions, and on service-oriented training to enhance frontline employees' work engagement at an individual level of analysis. Specific managerial recommendations on how to enhance frontline employees' perceptions of these three SO-HPWPs were provided earlier, in Section 5.3.2 (p. 262).

5.4.3 Contribution 3: The value of investigating the relationship between frontline employees' shared perceptions of SO-HPWSs and collective work engagement at a store level of analysis

Previous studies regarding the relationship between frontline service employees' perceptions of HPWSs and work engagement were mostly conducted at an individual level of analysis (Cooke *et al.*, 2019; Huang *et al.*, 2018; Huertas-Valdivia *et al.*, 2018; Karadas and Karatepe, 2019; Karatepe, 2013; Karatepe and Olugbade, 2016; Luu, 2019). Only two of these studies specifically focused on SO-HPWSs (i.e., Karatepe, 2013; Luu, 2019), while the others investigated generic HPWSs. As far as could be determined, no previous studies have investigated the relationship between employee-perceived SO-HPWSs in particular and collective work engagement at a unit level of analysis.

Chapters 3 and 4, therefore, made a **theoretical contribution** by investigating the extent to which frontline employees' shared perceptions of the SO-HPWSs in their respective stores predict their collective work engagement at a store level of analysis. More specifically, these two chapters contributed (a) by focusing on SO-HWPSs, not generic HPWSs; (b) by focusing on collective work engagement as a shared store-level construct; and (c) by testing the relationship between these two constructs at the store level of analysis.

In both chapters, it was found that frontline employees' shared perceptions of the SO-HPWSs in their respective stores predict their collective work engagement at a store level of analysis. This confirms prior individual-level findings (Karatepe, 2013; Luu, 2019) and also contributes to the limited available research on the antecedents of collective work engagement at a unit level of analysis (i.e., Barrick *et al.*, 2015; Gracia *et al.*, 2013; Salanova *et al.*, 2005; Schneider *et al.*, 2018). As far as could be determined, this thesis is the first unit-level study to show empirically that employee-rated SO-HPWSs predict frontline employees' collective work engagement.

From a **managerial perspective**, these findings imply that retailers in the home improvement industry could enhance frontline employees' collective work engagement by improving the perceptions these employees have of the SO-HPWSs to which they are exposed in their respective stores. To enhance frontline employees' perceptions of the SO-HPWSs that they experience, retailers will have to strengthen all six constituent SO-HPWPs investigated in this thesis. Specific managerial recommendations in this regard were presented earlier, in Section 5.3.2 (p. 262) and in Section 5.3.5 (p. 270).

5.4.4 Contribution 4: The value of investigating the relationship between frontline employees' shared perceptions of a multi-dimensional conceptualization of SO-HPWSs and service climate at a store level of analysis

In their meta-analysis, Hong *et al.* (2013) reported that both generic and service-oriented HRM practices are positive predictors of service climate at a unit level of analysis. Furthermore, they found that the meta-analytic correlation between service-oriented HRM practices and service climate was significantly stronger than that between generic HRM practices and service climate. This meta-analysis contained nine unit-level studies that specifically focused on the relationship between *service-oriented* HRM practices and service climate (Hong *et al.*, 2013). However, an analysis of these nine studies indicates that only Chuang and Liao (2010) used a multi-dimensional conceptualization of SO-HPWSs involving multiple SO-HPWPs. The other eight studies each included only two or three specific SO-HPWPs, not a comprehensive SO-HPWS. To date, only two studies (i.e., Chuang and Liao, 2010; Jiang *et al.*, 2015) have focused on the unit-level relationship between multidimensional conceptualizations of SO-HPWSs and service climate. In both of

these studies, the SO-HPWSs were rated by managers, not by frontline employees. Since managers' perceptions of HPWSs often differ from those of frontline employees (Den Hartog *et al.*, 2012; Jiang *et al.*, 2017; Liao *et al.*, 2009), this study made a **theoretical contribution** by examining the extent to which frontline employees' shared perceptions of a multidimensional conceptualization of SO-HPWSs in their respective stores predict service climate at the store level of analysis. The SO-HPWS evaluated in this study consisted of six SO-HPWPs: service-oriented staffing, training, financial compensation, non-financial rewards, involvement, and empowerment.

Chapters 3 and 4 both found that frontline employees' shared perceptions of the SO-HPWS in their respective stores predict their shared service climate perceptions at the store level of analysis. These findings confirm the unit-level results reported by Chuang and Liao (2010) and Jiang *et al.* (2015), and add to the limited available research on the relationship between *employee-rated* SO-HPWS and service climate at a unit level of analysis.

From a **managerial perspective**, these findings indicate that frontline employees' shared perceptions of the SO-HPWS they experience in their respective stores matter as a predictor of service climate at the store level of analysis. This implies that retailers in the home improvement industry could strengthen service climate at the store level by enhancing frontline employees' shared perceptions of the SO-HPWSs in their respective stores. Specific managerial recommendations in this regard were presented earlier, in Section 5.3.2 (p. 262) and in Section 5.3.5 (p. 270).

5.4.5 <u>Contribution 5: The value of comparing two rival models of the relationship between service climate and collective work engagement at a unit level of analysis</u>

The conceptual review of Bowen and Schneider (2014) and previous empirical research (e.g., Chuang and Liao, 2010; Jiang *et al.*, 2015; Lin and Liu, 2016; Salanova *et al.*, 2005; Tang and Tang, 2012) have indicated that SO-HPWSs, service climate, and collective work engagement are all important antecedents of frontline employees' in-role and extra-role service performance. However, as far as could be determined, no previous empirical

investigations have simultaneously included all five of these constructs to explore their interrelationships at a unit level of analysis.

Furthermore, as noted earlier, there are currently two competing perspectives in the literature on the relationship between service climate and work engagement. While Salanova *et al.* (2005) and Kopperud *et al.* (2014) have modelled work engagement as a direct antecedent of service climate, other researchers have taken the opposite view by treating service climate as a direct antecedent of work engagement (e.g., Abdelhadi and Drach-Zahavy, 2012; Barnes and Collier, 2013; Carrasco *et al.*, 2011; Kang and Busser, 2018; Perry *et al.*, 2013). Finally, only two prior studies (i.e., Carrasco *et al.*, 2011; Salanova *et al.*, 2005), each representing one of the two competing perspectives mentioned above, have investigated the relationship between service climate and collective work engagement, with both constructs modelled at the unit level.

Chapter 3 made a **theoretical contribution** by comparing two rival store-level models of the interrelationships between frontline employees' perceptions of SO-HPWSs, collective work engagement, and service climate as predictors of collective in-role and extra-role service performance at the store level of analysis in a retail context (see Figure 1, p. 145).

In Chapter 3, it was found that the climate-centric model achieved an acceptable fit to the data, while the fit of the rival engagement-centric model was not acceptable. In the climate-centric model, employees' shared perceptions of the SO-HPWSs in their respective stores predict service climate and collective work engagement. Collective work engagement, in turn, also predicts service climate, while service climate serves as the direct antecedent of frontline employees' collective in-role and extra-role service performance as evaluated by their store managers. These findings confirm that collective work engagement is best regarded as an antecedent of service climate, as reported by Kopperud *et al.* (2014) at an individual level of analysis and Salanova *et al.* (2005) at a unit level of analysis. Thus, these findings support the conceptual arguments of Schneider (2020), Schneider *et al.* (2018), and Bowen and Schneider (2014) that work engagement serves as a foundation on which a positive and strong service climate can be built. The findings also indicate that service climate directly predicts store managers' evaluations of frontline employees' collective in-role and extra-role service performance.

From a **managerial perspective**, these findings imply that retailers in the home improvement industry could enhance the service climate in their stores through investments aimed at enhancing the SO-HPWSs that frontline employees experience *and* through interventions aimed at directly improving these employees' collective work engagement. Specific managerial recommendations in this regard were presented earlier, in Section 5.3.4 (p. 269) and in Section 5.3.5 (p. 275).

5.4.6   Contribution 6: The value of investigating the extent to which service climate simultaneously predicts frontline employees' collective in-role and extra-roles service performance at a store level of analysis

To ensure customer satisfaction and loyalty, frontline employees must excel in both their in-role and their extra-role service performance (Morrison, 1996; Somech and Drach-Zahavy, 2016). A strong service climate motivates frontline employees to engage in both in-role and extra-role service performance because it signals to employees that these behaviours are expected, supported, and rewarded (Hong *et al.*, 2013; Jiang *et al.*, 2016; Linuesa-Langreo *et al.*, 2017; Wang and Xu, 2017). Several unit-level studies have found positive relationships between service climate and in-role service performance (e.g., Chuang and Liao, 2010; Jiang *et al.*, 2015; Jiang *et al.*, 2016; Lin and Liu, 2016; Linuesa-Langreo *et al.*, 2017; Salanova *et al.*, 2005; Yavas *et al.*, 2010). However, the unit-level relationship between service climate and extra-role service performance has received less research attention (e.g., Schneider *et al.*, 2005; Tang and Tang, 2012). In addition, as far as could be determined, no prior studies have investigated both of these relationships simultaneously.

Chapters 3 and 4 made a **theoretical contribution** by responding to the call by Yavas *et al.* (2010) to investigate the extent to which service climate predicts both frontline employees' collective in-role and extra-role service performance simultaneously in a retail context. Both chapters found that the service climate in retail stores served as a direct positive predictor of frontline employees' collective in-role and extra-role service performance as evaluated by the store managers. Furthermore, this thesis adds to the limited available literature (i.e., Schneider *et al.*, 2005; Tang and Tang, 2012) on the unit-level relationship between service climate and extra-role service performance in particular.

From a **managerial perspective**, the study's findings clearly show that service climate at a store level of analysis is indeed an important "motivational force" (Liao and Chuang, 2007) that guides frontline employees' collective in-role and extra-role service performance behaviours directed at customers (Bowen and Schneider, 2014; Yagil, 2014). This implies that retailers in the home improvement industry should take steps to strengthen the service climate that frontline employees' collectively perceive in their respective stores. This could be done directly through service climate-focused interventions or indirectly by enhancing the SO-HPWSs that these employees' experience, and by bolstering their collective work engagement. Specific managerial recommendations in this regard were presented earlier, in Section 5.3.4 (p. 269) and in Section 5.3.5 (p. 275).

5.4.7   Contribution 7: The value of investigating the expanded climate-centric model

Chapter 4 tested an expansion of the climate-centric model introduced in Chapter 3 at a store level of analysis (see Figure 1, p. 202). Compared to the climate-centric model tested in Chapter 3, the expanded model in Chapter 4 included two additional customer-rated constructs: overall customer satisfaction and store loyalty. It also included four additional relationships: between service climate and overall customer satisfaction; between in-role service performance and overall customer satisfaction; between extra-role service performance and overall customer satisfaction; and between overall customer satisfaction and store loyalty.

While most of the bivariate relationships embedded in the expanded model have been tested in isolation in prior studies, the whole network of relationships has, as far as could be determined, not yet been tested in a single structural model. Furthermore, only one prior unit-level study (i.e., Towler *et al.*, 2011) has tested a structural model that contained service climate, customer satisfaction, and customer loyalty as focal constructs. Chapter 4, therefore, made a unique **theoretical contribution** by testing the network of relationships between the seven focal constructs shown in Figure 1 (p. 202). As such, the thesis adds to the limited number of studies that have considered the relationship between service climate and customer loyalty at a unit level of analysis (i.e., Salanova *et al.*, 2005; Towler *et al.*, 2011). It is important to understand how service climate contributes customer loyalty through customer satisfaction, as a loyal customer base reduces a retailer's customer acquisition

costs. In addition, loyal customers buy more from a retailer than from its competitors, are less price sensitive, and engage in positive word-of-mouth communication about the retailer (Evanschitzky *et al*., 2012; Kandampully *et al*., 2015).

From a **managerial perspective**, the expanded climate-centric model tested in Chapter 4 offers three important managerial insights:

- First, it demonstrates that the frontline employees' shared perceptions of the service climate in their respective stores is indeed an important variable that links internal HRM practices and frontline employees' collective work engagement to customers' satisfaction judgements and, ultimately, to their store loyalty. The more frontline employees experience that the provision of excellent customer service is emphasized as a priority in their workplace – a priority that is expected, supported, and rewarded – the more they will engage in the types of service-focused in-role and extra-role behaviours that ultimately in customer satisfaction and ultimately in store loyalty.

- Second, since service climate at the store level is a direct predictor of overall customer satisfaction, it represents an important performance indicator for retail stores. Thus, it should be measured periodically (e.g., quarterly, biannually, or annually) as part of a retailer's employee surveys.

- Third, as indicated in Section 5.3.5 (p. 272), managers could implement focused interventions to enhance service climate directly as well as indirectly through investments in SO-HPWSs and/or interventions aimed at enhancing frontline employees' collective work engagements. This confirms that managers could act as 'climate engineers' (Ostroff *et al*., 2013) to enhance frontline employees' climate perceptions and to elicit the positive outcomes of these perceptions in the form of improved in-role and extra-role service performance, customer satisfaction and, ultimately, customer loyalty.

5.4.8   <u>Contribution 8: The value of conducting a study on the antecedents and outcomes of service climate in South Africa</u>

Most research on the antecedents and outcomes of service climate has been conducted in developed economies (e.g., Huertas-Valdivia *et al*., 2018; Linuesa-Langreo *et al*., 2017;

Salanova *et al.*, 2005; Shepherd *et al.*, 2020) or in China (e.g., Jiang *et al.*, 2015; Jiang *et al.*, 2016). Only a handful of studies have investigated these relationships in emerging markets (e.g., Aktar and Pangil, 2018; Karadas and Karatepe, 2019; Karatepe and Olugbade, 2016). Hoang *et al.* (2018) consequently observed that research on service climate in emerging market contexts is relatively scarce. The current study made a **contextual contribution** by investigating the correlates of service climate in the South African retail industry. As such, the thesis adds to the scant research on service climate in Africa (Walumbwa *et al.*, 2010) in general and in South Africa (Govender, 1999, 2000) in particular.

5.5   LIMITATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

As with all research, this thesis has a number of limitations that should be considered when interpreting its findings.

First, the relatively small store-level sample size (n = 70) is a limitation of the current study. Although the ratio of estimated parameters to sample size in the current study compares favourably with that reported in prior studies in which the same single-indicator path analysis approach was used (e.g., Chi *et al.*, 2011; Greenslade and Jimmieson, 2011; Susskind *et al.*, 2018a), the small store-level sample size may have affected the power of the SEM analysis to detect individual path coefficients as statistically significant. It also precluded the use of RMSEA to evaluate the fit of the store-level structural models. Future studies should attempt to test the store-level models presented in this thesis in larger unit-level samples.

Second, the study was conducted in a single service context across the stores of a single South African retailer. A similar approach was used in several previous unit-level studies (e.g., Ehrhart *et al.*, 2011; Eldor, 2020; Jiang *et al.*, 2015; Jiang *et al.*, 2016; Lin and Liu, 2016; Mayer *et al.*, 2009; Schneider *et al.*, 2005; Schneider *et al.*, 1998; Sowinski *et al.*, 2008). While the use of one organization as a data source may limit the generalizability of the study's findings, Jiang *et al.* (2015) argue that it can lead to range restriction in the variables involved, and thus provide conservative estimates of the relationships under investigation, which are likely to generalize to other service units. Future research should

thus attempt to test the models evaluated in this thesis in a more diverse sample of independently functioning retailers or other service organizations (e.g., Chuang and Liao, 2010). Future studies could also determine whether the strength of the relationships in these models differs across types of services (e.g., high-contact versus low-contact services), industries, or countries.

Third, the current study was cross-sectional in nature, with the employee, store manager, and customer data having been collected concurrently. The cross-sectional research design prevents definitive causal statements about the relationships investigated in this thesis (Barrick *et al.*, 2015; Gracia *et al.*, 2010; Linuesa-Langreo *et al.*, 2017; Perry *et al.*, 2013). Future studies should attempt to test this study's structural models on longitudinal data, or measure the study variables at different points in time separated by an appropriate time lag (e.g., Babakus *et al.*, 2017; Eldor, 2020; Jiang *et al.*, 2015).

Fourth, this thesis only focused on six SO-HPWPs that were relevant to the participating retailer and were included in previous research (e.g., Karadas and Karatepe, 2019; Luu, 2019; Tang and Tang, 2012; Wang and Xu, 2017). Future research could investigate the extent to which additional SO-HPWPs (e.g., job security, job design, performance appraisal, caring, teamwork, and opportunities for promotion) or an SO-HPWS containing these additional SO-HPWPs predict frontline employees' work engagement and service climate perceptions (Chuang and Liao, 2010; Hong *et al.*, 2017; Liao *et al.*, 2009). In addition, the store-level structural model tested in Chapter 4 can be expanded by including employee satisfaction as an important employee-related outcome. While employee satisfaction plays a crucial role as a direct and indirect antecedent of customer satisfaction in the well-known service-profit chain model (Hogreve *et al.*, 2017), Bowen and Schneider (2014) argued that service climate should be a stronger and more direct predictor or customer outcomes. As far as could be determined, this claim has not yet been tested empirically.

Fifth, because of the small unit-level sample size of 70 stores, SO-HPWSs were represented by a single additive index score in the store-level structural models tested in this thesis. This is a commonly used analytical strategy for representing both generic and service-oriented HPWSs in structural models (Boon *et al.*, 2019; Hauff, 2019) – a strategy that was used in several previous unit-level studies involving SO-HPWSs (e.g., Jiang *et al.*, 2015; Jo *et al.*,

2020; Liao *et al.*, 2009). However, combining different HPWPs into a single additive score to represent an overall HPWS may be misleading, as it assumes that each constituent HPWP has an equal effect on the specific outcome (such as service climate) being examined (Boon *et al.*, 2019; Hauff, 2019; Jiang and Messersmith, 2017). Future studies conducted in larger unit-level samples should consider modelling SO-HPWS as a second-order formative construct (Hauff, 2019; Jiang *et al.*, 2012). This will allow researchers to determine the overall impact of the HPWS on the relevant outcomes (e.g., service climate and collective work engagement) while also providing information on the extent to which each constituent HPWP relates to the overall HPWS and to the focal outcome (Hauff, 2019).

Sixth, while this study confirms the importance of SO-HPWSs and collective work engagement as direct antecedents of service climate at a unit level of analysis, researchers have identified several other factors that could enhance a unit's service climate. These include service-oriented leadership (Jiang *et al.*, 2015; Salvaggio *et al.*, 2007; Schneider *et al.*, 2005), servant leadership (Linuesa-Langreo *et al.*, 2017), transformational leadership (Kopperud *et al.*, 2014), and internal service quality (Ehrhart *et al.*, 2011; Schneider *et al.*, 1998). Future research should explore the relative importance of these constructs as additional predictors of service climate, and the interrelationships and interactions between them.

Seventh, the between-store variability of the store-level composite customer satisfaction scores in Chapter 4 was small, indicating a restriction in the range of these scores. This range restriction may have attenuated the unit-level correlations between in-role service performance, extra-role service performance, and customer satisfaction reported in this chapter (Klein and Kozlowski, 2000). The small between-store variability may also have attenuated the ICC(1) and ICC(2) values of customer satisfaction and store loyalty (Bliese, 1998; Burke *et al.*, 2018; LeBreton *et al.*, 2003). To prevent similar problems in future studies, researchers should bear in mind that customer satisfaction ratings are typically negatively skewed (Anderson and Fornell, 2000; Danaher and Haddrell, 1996) and should consider using seven or more scale points in their customer satisfaction measures (Anderson and Fornell, 2000) or measuring customer satisfaction with a disconfirmation of expectations scale (Danaher and Haddrell, 1996). The skewness in the customer satisfaction ratings obtained in this study may have been exacerbated by the fact that only

shoppers who made a purchase were surveyed. Future studies could consider surveying a broader range of shoppers, including those who visited a store and interacted with frontline employees but did not make a purchase. Furthermore, to inform sample size decisions in future studies, researchers could use the current study's ICC(1) values and the formula provided by Bliese (1998) to calculate the average within-unit sample size required to achieve a target value of 0.7 for ICC(2).

Finally, like most studies on service climate, this thesis focused on service climate in isolation without considering other focused climates. Since multiple focused climates co-exist simultaneously in a unit or organization (Ostroff *et al.*, 2013; Schneider *et al.*, 2013; Schulte *et al.*, 2006; Zohar and Hofmann, 2012), future studies should investigate service climate along with other supporting or contradictory focused climates (Ehrhart *et al.*, 2014; Kuenzi and Schminke, 2009; Ostroff *et al.*, 2013), such as climate for ethics (Jiang *et al.*, 2016) or climate for cross-selling (Yu *et al.*, 2018).

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APPENDIX A

EDITORIAL GUIDELINES FOR AUTHORS OF THE
SERVICES MARKETING QUARTERLY

EDITORIAL GUIDELINES FOR AUTHORS OF THE
SERVICES MARKETING QUARTERLY

Aims and scope: *Services Marketing Quarterly*

Services Marketing Quarterly is directed at academicians and practitioners who are involved in the development and application of services marketing concepts to the wide spectrum of industries that constitute the service sector of economies. The journal presents both theoretical and empirical articles including experimental and pilot studies addressing various issues faced by service marketers to enhance the development of the marketing literature in the application of marketing concepts to services.

Areas of emphasis include:

- Service characteristics changes
- Servicescape impacts
- Service delivery impacts
- Services impact on organizational image
- Digital service environments and impacts
- Evolution of services over time and by industry

Contributions are encouraged which include analysis of existing practice, methods and programs; application of new ideas and methods; and research on various aspects of services marketing. Each manuscript should include the marketing implications of the impact of the findings on services marketing theory and/or practice. **Services Marketing Quarterly** also welcome proposals for special issues.

Preparing Your Paper:

Structure: Your paper should be compiled in the following order: title page; abstract; keywords; main text introduction, materials and methods, results, discussion; acknowledgments; declaration of interest statement; references; appendices (as appropriate); table(s) with caption(s) (on individual pages); figures; figure captions (as a list).

Word Limits: Please include a word count for your paper. A typical paper for this journal should be no more than 25 double line spaced pages.

Format-Free Submission: Authors may submit their paper in any scholarly format or layout. Manuscripts may be supplied as single or multiple files. These can be Word, rich text format (rtf), open document format (odt), or PDF files. Figures and tables can be placed within the text or submitted as separate documents. Figures should be of sufficient resolution to enable refereeing.

- There are no strict formatting requirements, but all manuscripts must contain the essential elements needed to evaluate a manuscript: abstract, author affiliation, figures, tables, funder information, and references. Further details may be requested upon acceptance.

- References can be in any style or format, so long as a consistent scholarly citation format is applied. Author name(s), journal or book title, article or chapter title, year of publication, volume and issue (where appropriate) and page numbers are essential. All bibliographic entries must

contain a corresponding in-text citation. The addition of DOI (Digital Object Identifier) numbers is recommended but not essential.

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- Spelling can be US or UK English so long as usage is consistent.

Note that, regardless of the file format of the original submission, an editable version of the article must be supplied at the revision stage.

Checklist - What to Include:

1. **Author details.** All authors of a manuscript should include their full name and affiliation on the cover page of the manuscript. Where available, please also include ORCiDs and social media handles (Facebook, Twitter or LinkedIn). One author will need to be identified as the corresponding author, with their email address normally displayed in the article PDF (depending on the journal) and the online article. Authors' affiliations are the affiliations where the research was conducted. If any of the named co-authors moves affiliation during the peer-review process, the new affiliation can be given as a footnote. Please note that no changes to affiliation can be made after your paper is accepted. Read more on authorship.

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5. **Funding details.** Please supply all details required by your funding and grant-awarding bodies as follows:

    For single agency grants

    This work was supported by the [Funding Agency] under Grant [number xxxx].

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6. **Disclosure statement.** This is to acknowledge any financial interest or benefit that has arisen from the direct applications of your research. Further guidance on what is a conflict of interest and how to disclose it.

7. **Data availability statement.** If there is a data set associated with the paper, please provide information about where the data supporting the results or analyses presented in the paper can be found. Where applicable, this should include the hyperlink, DOI or other persistent identifier associated with the data set(s). Templates are also available to support authors.

8. **Data deposition.** If you choose to share or make the data underlying the study open, please deposit your data in a recognized data repository prior to or at the time of submission. You will be asked to provide the DOI, pre-reserved DOI, or other persistent identifier for the data set.

9. **Supplemental online material.** Supplemental material can be a video, dataset, fileset, sound file or anything which supports (and is pertinent to) your paper. We publish supplemental material online via Figshare. Find out more about supplemental material and how to submit it with your article.

10. **Figures.** Figures should be high quality (1200 dpi for line art, 600 dpi for grayscale and 300 dpi for color, at the correct size). Figures should be supplied in one of our preferred file formats: EPS, PDF, PS, JPEG, TIFF, or Microsoft Word (DOC or DOCX) files are acceptable for figures that have been drawn in Word. For information relating to other file types, please consult our Submission of electronic artwork document.

11. **Tables.** Tables should present new information rather than duplicating what is in the text. Readers should be able to interpret the table without reference to the text. Please supply editable files.

12. **Equations.** If you are submitting your manuscript as a Word document, please ensure that equations are editable. More information about mathematical symbols and equations.

13. **Units.** Please use SI units (non-italicized).

APPENDIX B

EDITORIAL GUIDELINES FOR AUTHORS OF EMERALD PUBLISHING

EDITORIAL GUIDELINES FOR AUTHORS OF EMERALD PUBLISHING

Aims and Scope: *Journal of Service Theory and Practice (JSTP)*

Recognizing the importance of the service sector across the globe, the journal encourages submissions from and/or studying issues from around the world. *JSTP* gives prominence to research based on real world data, be it quantitative or qualitative. The journal also encourages the submission of strong conceptual and theoretical papers that make a substantive contribution to the scholarly literature in service management. *JSTP* publishes double-blind peer reviewed papers and encourages submissions from both academics and practitioners.

Aims and Scope: *Marketing Intelligence & Planning (MIP)*

At a time when some journals are losing their relevance to industry and practical requirements, MIP successfully offers a bridge between academic and practitioner thinking, while retaining a high level of scientific rigour.

By analysing the relationship between the planning and implementation stages, the journal offers practical advantages to marketers aiming to sharpen their skills and give new impetus to marketing campaigns. Both academics and practitioners will gain from the wide perspectives on all stages of the marketing process.

"I have been on the Advisory Board of Marketing Intelligence and Planning for many years. I am also on the Advisory Boards of many other academic journals. I have seen the "scientific" quality of most journals increase over the years, but alas at the cost of managerial relevance. MIP, on the other hand, whilst also raising the scientific quality of its published papers, has not sacrificed relevance and I would attest to the fact that this particular journal makes a significant contribution to improving managerial practice. It is highly rated by me and in my opinion is due for a significant upgrade by bodies that formally review journal rankings."

- Professor Malcolm McDonald

Manuscript requirements:

Before you submit your manuscript, it's important you read and follow the guidelines below.

Format	Article files should be provided in Microsoft Word format. While you are welcome to submit a PDF of the document alongside the Word file, PDFs alone are not acceptable. LaTeX files can also be used but only if an accompanying PDF document is provided. Acceptable figure file types are listed further below.
Article length / wordcount	Articles should be between 8000 and 12 000 words in length. This includes all text, for example, the structured abstract, references, all text in tables, and figures and appendices. Please allow 280 words for each figure or table.
Article title	A concisely worded title should be provided.
Author details	The names of all contributing authors should be added to the ScholarOne submission; please list them in the order in which you'd like them to be published. Each contributing author will need their own ScholarOne author account, from which we will extract the following details:

- Author email address**.**
- Author name**.** We will reproduce it exactly, so any middle names and/or initials they want featured must be included.
- Author affiliation**.** This should be where they were based when the research for the paper was conducted.

In multi-authored papers, it's important that ALL authors that have made a significant contribution to the paper are listed. Those who have provided support but have not contributed to the research should be featured in an acknowledgements section. You should never include people who have not contributed to the paper or who don't want to be associated with the research.

Biographies and acknowledgements

If you want to include these items, save them in a separate Microsoft Word document and upload the file with your submission. Where they are included, a brief professional biography of not more than 100 words should be supplied for each named author.

Research funding

Your article must reference all sources of external research funding in the acknowledgements section. You should describe the role of the funder or financial sponsor in the entire research process, from study design to submission.

All submissions must include a structured abstract, following the format outlined below. These four sub-headings and their accompanying explanations must always be included:

- Purpose
- Design/methodology/approach
- Findings
- Originality

Structured abstract

The following three sub-headings are optional and can be included, if applicable:

- Research limitations/implications
- Practical implications
- Social implications

You can find some useful tips in our write an article abstract how-to guide. The maximum length of your abstract should be 250 words in total, including keywords and article classification (see the sections below).

Your submission should include up to 12 appropriate and short keywords that capture the principal topics of the paper. Our Creating an SEO-friendly manuscript how to guide contains some practical guidance on choosing search-engine friendly keywords.

Keywords

Please note, while we will always try to use the keywords you've suggested, the in-house editorial team may replace some of them with matching terms to ensure consistency across publications and improve your article's visibility.

During the submission process, you will be asked to select a type for your paper; the options are listed below. If you don't see an exact match, please choose the best fit:

- Research Paper
- Invited Paper
- Viewpoint
- Research Note

You will also be asked to select a category for your paper. The options for this are listed below. If you don't see an exact match, please choose the best fit:

Research paper. Reports on any type of research undertaken by the author(s), including:

- The construction or testing of a model or framework
- Action research
- Testing of data, market research or surveys
- Empirical, scientific or clinical research
- Papers with a practical focus

Article classification

Viewpoint. Covers any paper where content is dependent on the author's opinion and interpretation. This includes journalistic and magazine-style pieces.

Technical paper. Describes and evaluates technical products, processes or services.

Conceptual paper. Focuses on developing hypotheses and is usually discursive. Covers philosophical discussions and comparative studies of other authors' work and thinking.

Case study. Describes actual interventions or experiences within organizations. It can be subjective and doesn't generally report on research. Also covers a description of a legal case or a hypothetical case study used as a teaching exercise.

Literature review. This category should only be used if the main purpose of the paper is to annotate and/or critique the literature in a particular field. It could be a selective bibliography providing advice on information sources, or the paper may aim to cover the main contributors to the development of a topic and explore their different views.

General review. Provides an overview or historical examination of some concept, technique or phenomenon. Papers are likely to be more descriptive or instructional ('how to' papers) than discursive.

Headings

Headings must be concise, with a clear indication of the required hierarchy.
The preferred format is for first level headings to be in bold, and subsequent sub-headings to be in medium italics.

Notes/endnotes

Notes or endnotes should only be used if absolutely necessary. They should be identified in the text by consecutive numbers enclosed in square brackets. These numbers should then be listed, and explained, at the end of the article.

All figures (charts, diagrams, line drawings, webpages/screenshots, and photographic images) should be submitted electronically. Both colour and black and white files are accepted.

There are a few other important points to note:

Figures

- All figures should be supplied at the highest resolution/quality possible with numbers and text clearly legible.
- Acceptable formats are .ai, .eps, .jpeg, .bmp, and .tif.
- Electronic figures created in other applications should be supplied in their original formats and should also be either copied and pasted into a blank MS Word document, or submitted as a PDF file.
- All figures should be numbered consecutively with Arabic numerals and have clear captions.
- All photographs should be numbered as Plate 1, 2, 3, etc. and have clear captions.

Tables should be typed and submitted in a separate file to the main body of the article. The position of each table should be clearly labelled in the main body of the article with corresponding labels clearly shown in the table file. Tables should be numbered consecutively in Roman numerals (e.g. I, II, etc.).

Tables

Give each table a brief title. Ensure that any superscripts or asterisks are shown next to the relevant items and have explanations displayed as footnotes to the table, figure or plate.

All references in your manuscript must be formatted using one of the recognised Harvard styles. You are welcome to use the Harvard style Emerald has adopted – we've provided a detailed guide below. Want to use a different Harvard style? That's fine, our typesetters will make any necessary changes to your manuscript if it is accepted. Please ensure you check all your citations for completeness, accuracy and consistency; this enables your readers to exploit the reference linking facility on the database and link back to the works you have cited through CrossRef.

References

Emerald's Harvard referencing style

References to other publications in your text should be written as follows:

- Single author: (Adams, 2006)
- Two authors: (Adams and Brown, 2006)
- Three or more authors: (Adams *et al.*, 2006) Please note, '*et al*' should always be written in italics.

A few other style points. These apply to both the main body of text and your final list of references.

- When referring to pages in a publication, use 'p.(page number)' for a single page or 'pp.(page numbers)' to indicate a page range.
- Page numbers should always be written out in full, e.g. 175-179, not 175-9.
- Where a colon or dash appears in the title of an article or book chapter, the letter that follows that colon or dash should always be lower case.
- When citing a work with multiple editors, use the abbreviation 'Ed.s'.

At the end of your paper, please supply a reference list in alphabetical order using the style guidelines below. Where a DOI is available, this should be included at the end of the reference.

Surname, initials (year), *title of book*, publisher, place of publication.

For books

e.g. Harrow, R. (2005), *No Place to Hide*, Simon & Schuster, New York, NY.

Surname, initials (year), "chapter title", editor's surname, initials (Ed.), *title of book*, publisher, place of publication, page numbers.

For book chapters

e.g. Calabrese, F.A. (2005), "The early pathways: theory to practice – a continuum", Stankosky, M. (Ed.), *Creating the Discipline of Knowledge Management*, Elsevier, New York, NY, pp.15-20.

Surname, initials (year), "title of article", *journal name*, volume issue, page numbers.

For journals

e.g. Capizzi, M.T. and Ferguson, R. (2005), "Loyalty trends for the twenty-first century", *Journal of Consumer Marketing*, Vol. 22 No. 2, pp.72-80.

Surname, initials (year of publication), "title of paper", in editor's surname, initials (Ed.), *title of published proceeding which may include place and date(s) held*, publisher, place of publication, page numbers.

For published conference proceedings

e.g. Wilde, S. and Cox, C. (2008), "Principal factors contributing to the competitiveness of tourism destinations at varying stages of development", in Richardson, S., Fredline, L., Patiar A., & Ternel, M. (Ed.s), *CAUTHE 2008: Where the 'bloody hell' are we?*, Griffith University, Gold Coast, Qld, pp.115-118.

Surname, initials (year), "title of paper", paper presented at [name of conference], [date of conference], [place of conference], available at: URL if freely available on the internet (accessed date).

For unpublished conference proceedings

e.g. Aumueller, D. (2005), "Semantic authoring and retrieval within a wiki", paper presented at the European Semantic Web Conference (ESWC), 29 May-1 June, Heraklion, Crete, available at: http://dbs.uni-leipzig.de/file/aumueller05wiksar.pdf (accessed 20 February 2007).

For working papers

Surname, initials (year), "title of article", working paper [number if available], institution or organization, place of organization, date.

e.g. Moizer, P. (2003), "How published academic research can inform policy decisions: the case of mandatory rotation of audit appointments", working paper, Leeds University Business School, University of Leeds, Leeds, 28 March.

Title of encyclopaedia (year), "title of entry", volume, edition, title of encyclopaedia, publisher, place of publication, page numbers.

For encyclopaedia entries (with no author or editor)

e.g. *Encyclopaedia Britannica* (1926), "Psychology of culture contact", Vol. 1, 13th ed., Encyclopaedia Britannica, London and New York, NY, pp.765-771.

(for authored entries, please refer to book chapter guidelines above)

For newspaper articles (authored)

Surname, initials (year), "article title", *newspaper*, date, page numbers.

e.g. Smith, A. (2008), "Money for old rope", *Daily News*, 21 January, pp.1, 3-4.

For newspaper articles (non-authored)

Newspaper (year), "article title", date, page numbers.

e.g. *Daily News* (2008), "Small change", 2 February, p.7.

For archival or other unpublished sources

Surname, initials (year), "title of document", unpublished manuscript, collection name, inventory record, name of archive, location of archive.

e.g. Litman, S. (1902), "Mechanism & Technique of Commerce", unpublished manuscript, Simon Litman Papers, Record series 9/5/29 Box 3, University of Illinois Archives, Urbana-Champaign, IL.

If available online, the full URL should be supplied at the end of the reference, as well as the date that the resource was accessed.

Surname, initials (year), "title of electronic source", available at: persistent URL (accessed date month year).

For electronic sources

e.g. Weida, S. and Stolley, K. (2013), "Developing strong thesis statements", available at: https://owl.english.purdue.edu/owl/resource/588/1/ (accessed 20 June 2018)

Standalone URLs, i.e. those without an author or date, should be included either inside parentheses within the main text, or preferably set as a note (roman numeral within square brackets within text followed by the full URL address at the end of the paper).

Surname, initials (year), *title of dataset*, name of data repository, available at: persistent URL, (accessed date month year).

For data

e.g. Campbell, A. and Kahn, R.L. (2015), *American National Election Study, 1948*, ICPSR07218-v4, Inter-university Consortium for Political and Social Research (distributor), Ann Arbor, MI, available at: https://doi.org/10.3886/ICPSR07218.v4 (accessed 20 June 2018)

APPENDIX C

CONFIRMATION OF LANGUAGE EDITING

Michael J. McCoy, editor

Make no mistake

Cell: +27 83 664 3982
e-mail: <editor@writeright.co.za>
SA Government CSD supplier number: MAAA0756443
Associate member, Professional Editors' Guild, South Africa

14 January 2021

To whom it may concern

I certify that I was contracted by Mr **Theuns Gerhard Kotzé** to assist with the proofreading and language editing of his PhD thesis, '**Developing a model of the antecedents and consequences of service climate**'.

I edited the document using the 'Track changes' feature of Microsoft Word®. I focused on correcting typing errors, and ensuring that the syntax, spelling, and punctuation were correct, that the language was idiomatically acceptable, that the register was appropriate to an academic document, and that the document was as free from ambiguity as possible.

Where necessary, terms or passages that were unclear to me, such that I was not confident about editing them, were brought to the attention of the author.

In the process I neither made nor suggested any changes to the substance of the document.

The final decision about accepting or rejecting all the changes and suggestions remained with the author.

Michael J. McCoy BA (Hons), BTh (Hons), MTh, DPS
Proofreader and language editor

APPENDIX D

LETTER FROM STATISTICAL CONSULTANT

I, Dr Marthi Pohl, hereby confirm that as an independent statistician, providing statistical consulting services to the Faculty of Economic and Management Sciences at the University of Pretoria, I assisted in analysing the data and assisted with the interpretation of the results of Mr Theuns Kotzé, a PhD (Marketing Management) student at the University of Pretoria.

Dr Marthi Pohl
12 January 2021

APPENDIX E

DECLARATION REGARDING PLAGIARISM

© University of Pretoria

FACULTY OF ECONOMIC AND MANAGEMENT SCIENCES

Declaration Regarding Plagiarism

The Faculty of Economic and Management Sciences emphasizes integrity and ethical behaviour with regard to the preparation of all written assignments. Although the lecturer will provide you with information regarding reference techniques, as well as ways to avoid plagiarism, you also have a responsibility to fulfil in this regard. Should you at any time feel unsure about the requirements, you must consult the lecturer concerned before submitting an assignment.

You are guilty of plagiarism when you extract information from a book, article, web page or any other information source without acknowledging the source and pretend that it is your own work. This does not only apply to cases where you quote the source directly, but also when you present someone else's work in a somewhat amended (paraphrased) format or when you use someone else's arguments or ideas without the necessary acknowledgement. You are also guilty of plagiarism if you copy and paste information <u>directly</u> from an electronic source (e.g., a web site, e-mail message, electronic journal article or CD-ROM) without paraphrasing it or placing it in quotation marks, <u>even if you acknowledge the source</u>.

You are not allowed to submit another student's previous work as your own. You are furthermore not allowed to let anyone copy or use your work with the intention of presenting it as his/her own.

Students who are guilty of plagiarism will forfeit all credits for the work concerned. In addition, the matter will be referred to the Committee for Discipline (Students) for a ruling. Plagiarism is considered a serious violation of the University's regulations and may lead to your suspension from the University. The University's policy regarding plagiarism is available on the Internet at *http://www.library.up.ac.za/plagiarism/index.htm*.

For the period that you are a student at the Department of Business Management, the following declaration must accompany **all** written work that is submitted for evaluation. No written work will be accepted unless the declaration has been completed and is included in the particular assignment.

I (full names & surname):	Theuns Gerhard Kotzé
Student number:	01268511

Declare the following:

1. I understand what plagiarism entails and am aware of the University's policy in this regard.

2. I declare that this assignment is my own, original work. Where someone else's work was used (whether from a printed source, the Internet or any other source) due acknowledgement was given and reference was made according to departmental requirements.

3. I did not copy and paste any information <u>directly</u> from an electronic source (e.g., a web page, electronic journal article or CD ROM) into this document.

4. I did not make use of another student's previous work and submitted it as my own.

5. I did not allow and will not allow anyone to copy my work with the intention of presenting it as his/her own work.

2021-03-12

_____	_____
Signature	**Date**

APPENDIX F

QUESTIONNAIRES USED IN THE STUDY

© University of Pretoria

The three questionnaires used in this study are included below. The employee and store managers questionnaires were administered in online surveys hosted on Qualtrics, while frontline employees administered the paper-based customer questionnaire to customers intercepted in the different retail stores. In the questionnaires shown below, the brand name of the participating retailer was replaced with "[BRAND]" to ensure the participating retailer's anonymity.

Employee questionnaire:

- 2019 [BRAND] Employee Survey -

Dear [BRAND] employee,

Welcome to the 2019 [BRAND] Employee Survey. This survey investigates how you feel about the Human Resource Management (HRM) practices, leadership and internal service quality in your store.

Your participation is very important to help us find ways to further improve your work experiences and the quality of service we deliver to our customers. The survey is confidential and anonymous. **No one in [BRAND] will see your individual answers**.

This survey will take **about 10 minutes** to complete. Please read each question carefully and then answer it <u>honestly</u> based on how you feel. There are no right or wrong answers. Think of the store you currently work in when answering the questions.

Contact Theuns Kotzé, the survey coordinator at the University of Pretoria, on 082 415 2569 or via e-mail at theuns.kotze@up.ac.za with questions or comments about the survey.

You can complete the survey on any desktop, laptop, tablet or smartphone connected to the Internet. Please answer all the questions in one session without closing your browser window. Scroll down and click the **Next ≫** button below to start the survey.

SECTION A: Service climate

Q1. The following items ask about how important customer service in your store. Please rate **your store** on each item based on what you have personally observed and experienced. Answer each statement honestly by clicking on the answer option below that best applies to you.

How would you rate **your store** on …

	Very poor	Poor	Fair	Good	Excellent
… the overall quality of service provided to customers?	1	2	3	4	5
… the effectiveness of your store's communication efforts with customers?	1	2	3	4	5

	Very poor	Poor	Fair	Good	Excellent
… the effectiveness of your store's communication efforts with employees?	1	2	3	4	5
… the tools, technology, and other resources provided to employees to support the delivery of superior quality service?	1	2	3	4	5
… the knowledge and skills of employees in your store to deliver high quality service?	1	2	3	4	5
… the efforts to measure and track the quality of the service in your store?	1	2	3	4	5

SECTION B: Service-focused HR practices

Q2.   The statements below deal with the HR practices in **your store** and how **your store** manages employees like you who serve customers. Please indicate how much you agree or disagree with each statement. Answer each statement honestly by clicking on the answer option that best applies to you.

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Staffing					
My store selects new employees with the necessary skills to serve customers well.	1	2	3	4	5
My store carefully evaluates the ability of job applicants to provide high quality service to customers when hiring new staff.	1	2	3	4	5
My store carefully evaluates the customer service skills of job applicants before making new appointments.	1	2	3	4	5
My store selects new employees based on their ability to provide high quality customer service.	1	2	3	4	5
My store makes a lot of effort to select the right people for customer service jobs.	1	2	3	4	5
Training					
In my store, we receive enough training on how to provide excellent customer service.	1	2	3	4	5
We regularly receive customer service training in my store.	1	2	3	4	5
My store invests a lot of time and effort on customer service training.	1	2	3	4	5
My store emphasizes training to improve our customer service skills.	1	2	3	4	5
Financial compensation					
In my store, our profit share incentive is influenced by the quality of service we deliver to customers.	1	2	3	4	5

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
In my store, part of our profit share incentive depends on how well we serve customers.	1	2	3	4	5
We get more money for providing good customer service.	1	2	3	4	5
We will get a larger profit share incentive for providing high levels of service to customers.	1	2	3	4	5
Non-financial rewards and recognition					
My store gives recognition to employees who are excellent in serving customers.	1	2	3	4	5
My store gives recognition to employees for new ideas on improving customer service.	1	2	3	4	5
In my store, if we improve the quality of service to customers, we will be recognized and rewarded.	1	2	3	4	5
The recognition we get in my store is based on the customers' evaluations of our service.	1	2	3	4	5
In my store, employees who provide excellent customer service will be promoted.	1	2	3	4	5
Involvement					
Our store management asks our opinions on how to improve the customer service of this store.	1	2	3	4	5
In my store, employees' suggestions for customer service improvements are usually implemented.	1	2	3	4	5
In my store, employees have opportunities to suggest improvements to service processes.	1	2	3	4	5
In my store, we often participate in decisions about customer service.	1	2	3	4	5
Our store management shares information about customer satisfaction and customer surveys with us.	1	2	3	4	5
Empowerment					
In my store, we are encouraged to take initiative when dealing with customers.	1	2	3	4	5
In my store, we may do more than the minimum required by company policy to satisfy customer needs.	1	2	3	4	5
In my store, we have the flexibility to do our jobs well within the boundaries of company policy and financial considerations.	1	2	3	4	5

SECTION C: Work engagement

Q3. The statements below are about how you feel at work. Read each statement carefully and then decide <u>how often</u> you feel this way about your job. If you have never had this feeling, choose the "Never" (0) option below. If you have had this feeling, choose the specific option from 1 to

6 that best describes <u>how often</u> you feel this way. Please answer each statement honestly by clicking on the answer option below that best applies to you.

	Never 0 Never	Almost never 1 A few times a year or less	Rarely 2 Once a month or less	Sometimes 3 A few times a month	Often 4 Once a week	Very often 5 A few times a week	Always 6 Every day
I have a lot of energy when I am at work.	0	1	2	3	4	5	6
At my job, I feel strong and full of energy.	0	1	2	3	4	5	6
I like my job very much.	0	1	2	3	4	5	6
My job inspires me.	0	1	2	3	4	5	6
When I get up in the morning, I feel like going to work.	0	1	2	3	4	5	6
I feel happy when I am working hard.	0	1	2	3	4	5	6
I am proud of the work that I do.	0	1	2	3	4	5	6
I give all my attention to my work.	0	1	2	3	4	5	6
I am very excited when I am working.	0	1	2	3	4	5	6

SECTION D: Demographics

People's personal characteristics and background may influence how they feel about their work. We are asking the next few questions to study the possible effects of these characteristics on people's answers. Your answers to all the questions in this questionnaire are anonymous and confidential.

Q5. Are you male or female?

Male	1
Female	2

Q6. In which year were you born? Please enter your year of birth in the text box below (e.g., 1970 or 2002).

_____

Q7. Are you a full-time or flexi-time employee?

Full-time	1
Flexi-time	2

Q8. How long have you worked in your current store?

Less than one year	1	Go to Q14.
One year or more	2	Go to Q15.

Q9. In total, for how many **months** have you worked in your current store? Please enter the number of months in the box below:

Number of months: _____

Q10. In total, for how many **years** have you worked in your current store? Please enter the number of years in the box below

Numbers of years: _____

Thank you for completing the questionnaire.

Store manager questionnaire:

- 2019 [BRAND] Store Manager Survey -

Dear [BRAND] Store Manager,

Welcome to the 2019 [BRAND] Store Manager Survey. In this survey, you will be asked to evaluate the service behaviours of the front-line employees in your store who serve customers.

Your participation is very important. We need your inputs on how [BRAND] can provide even better service to its customers. The survey is confidential and anonymous. **No one in [BRAND] will see your individual answers.**

This survey will take **less than 10 minutes** to complete. Please read each question carefully and then answer it honestly based on how you feel. There are no right or wrong answers. Think of the store you currently work in when answering the questions.

Contact Theuns Kotzé, the survey coordinator at the University of Pretoria, on 082 415 2569 or via e-mail at theuns.kotze@up.ac.za if you have questions or comments about the survey.

You may complete the survey on a desktop PC, laptop, tablet or smartphone connected to the Internet. Please answer all the questions in one session without closing your web browser. Scroll down and click the **Next >>** button below to start the survey.

SECTION A: In-role service performance

Q1. The statements below focus on the front-line employees **in your store** who serve customers. These statements deal with the extent to which these employees behave in line with their formal job descriptions when serving customers. Think about the *typical* behaviour of the front-line employees in your store when answering the statements. Indicate how much you agree or disagree with each statement by clicking on the answer option that best applies to you.

The front-line employees **in my store** …

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
… perform all the tasks for customers that the company expects of them.	1	2	3	4	5
… meet formal performance requirements when serving customers.	1	2	3	4	5
… fulfil responsibilities to customers as specified in the "[BRAND] Way" and related company policies.	1	2	3	4	5
… adequately complete all the customer-service behaviours expected of them.	1	2	3	4	5
… help customers with those things which are required of them.	1	2	3	4	5

SECTION B: Extra-role service performance

Q2.　The statements below again focus on the front-line employees **in your store** who serve customers. These statements deal with the extent to which these employees go above and beyond the call of duty to serve customers. Think about the *typical* behaviour of the front-line employees in your store when answering the statements. Indicate how much you agree or disagree with each statement by clicking the answer option that best applies to you.

The front-line employees **in my store** …

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
… voluntarily assist customers even if it means going beyond their formal job requirements.	1	2	3	4	5
… help customer with problems beyond what is expected or required.	1	2	3	4	5
… often go above and beyond the call of duty when serving customers.	1	2	3	4	5
… willingly go out of their way to satisfy customers.	1	2	3	4	5
… frequently go out their way to help customers.	1	2	3	4	5

SECTION C: Store characteristics

Please answer the following two questions about **your store**.

Q3.　In total, how many employees currently work in your store, including the store management? Please enter the number of employees in the box below.

_____ employees

Q4.　For how many years has your store been in operation? Please enter the number of years in the box below.

_____ years

SECTION D: Demographics

People's personal characteristics and background may influence how they feel about their work. We are asking the next few demographic questions so that we can study the possible effects of these characteristics on people's answers. Your answers to all questions are anonymous and confidential.

Q5.　Are you male or female?

Male	1
Female	2

Q6.　In which year were you born? Please enter your year of birth in the text box below (e.g., 1970 or 2002)

Year of birth: _____

Q7.   How long have you worked in your current store?

Less than one year	1	Go to Q8.
One year or more	2	Go to Q9.

Q8.   In total, how many **months** have you worked in your current store? Please enter the number of months in the box below:

Number of months: _____

Q9.   In total, how many **years** have you worked in your current store? Please enter the number of years in the box below:

Number of years: _____

Thank you for completing the questionnaire.

Customer questionnaire:

- [BRAND] Customer Survey -

Dear [BRAND] customer,

Thank you for completing the [BRAND] Customer Survey. This survey is about your satisfaction with the quality of service you received from the [BRAND] store you visited today.

This is an anonymous and confidential survey and will take **less than 3 minutes** to complete. Please read each question carefully and then answer it honestly based on how you feel. There are no right or wrong answers. Please think of **the specific [BRAND] store you visited today** when answering the questions.

Q1.   Please indicate how much you agree or disagree with each of the statements below:

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
I am satisfied with my visit to this store.	1	2	3	4	5
Shopping at this store was an enjoyable experience.	1	2	3	4	5
My choice to shop at this store was a wise one.	1	2	3	4	5

Q2.   Based on your experiences at this [BRAND] store today, how likely or unlikely are you to do the following?

	Very unlikely	Unlikely	Neither unlikely nor likely	Likely	Very likely
Say positive things about this [BRAND] store to other people.	1	2	3	4	5
Consider this [BRAND] store your first choice to buy tiles, bathroom ware and related products.	1	2	3	4	5
Shop at this [BRAND] store the next time you need to shop for tiles, bathroom ware and related products.	1	2	3	4	5
Do more business with this [BRAND] store in future.	1	2	3	4	5

Q3.   Are you male or female?

Male	1
Female	2

Q4.   In which year were you born? 19_____

Thank you for completing the questionnaire.

APPENDIX G

STANDARDIZED FACTOR LOADINGS OBTAINED IN
CONFIRMATORY FACTOR ANALYSES

Table 1 lists the standardized factor loadings obtained from the confirmatory factor analyses conducted on the employee-, manager-, and customer-rated scales respectively.

Table 1: **Standardized factor loadings obtained in confirmatory factor analyses**

Scale items	Standardized factor loading
Employee-rated scales (n = 781)	
SO-HPWSs	
Staffing (AVE = 0.74, CR = 0.93, α = 0.90)	
My store selects new employees with the necessary skills to serve customers well.	0.82
My store carefully evaluates the ability of job applicants to provide high quality service to customers when hiring new staff.	0.86
My store carefully evaluates the customer service skills of job applicants before making new appointments.	0.87
My store selects new employees based on their ability to provide high quality customer service.	0.88
My store makes a lot of effort to select the right people for customer service jobs.	0.87
Training (AVE = 0.79, CR = 0.94, α = 0.90)	
In my store, we receive enough training on how to provide excellent customer service.	0.88
We regularly receive customer service training in my store.	0.86
My store invests a lot of time and effort on customer service training.	0.90
My store emphasizes training to improve our customer service skills.	0.91
Financial compensation (AVE = 0.78, CR = 0.93, α = 0.89)	
In my store, our profit share incentive is influenced by the quality of service we deliver to customers.	0.89
In my store, part of our profit share incentive depends on how well we serve customers.	0.88
We get more money for providing good customer service.	0.85
We will get a larger profit share incentive for providing high levels of service to customers.	0.91
Non-financial rewards & recognition (AVE = 0.68, CR = 0.92, α = 0.88)	
My store gives recognition to employees who are excellent in serving customers.	0.87
My store gives recognition to employees for new ideas on improving customer service.	0.88
In my store, if we improve the quality of service to customers, we will be recognized and rewarded.	0.82

Scale items	Standardized factor loading
The recognition we get in my store is based on the customers' evaluations of our service.	0.81
In my store, employees who provide excellent customer service will be promoted.	0.75
Involvement (AVE = 0.72, CR = 0.93, α = 0.88)	
Our store operator asks our opinions on how to improve the customer service of this store.	0.82
In my store, employees' suggestions for customer service improvements are usually implemented.	0.86
In my store, employees have opportunities to suggest improvements to service processes.	0.87
In my store, we often participate in decisions about customer service.	0.86
Our store management shares information about customer satisfaction and customer surveys with us.	0.84
Empowerment (AVE = 0.59, CR = 0.81, α = 0.71)	
In my store, we are encouraged to take initiative when dealing with customers.	0.78
In my store, the store operator trusts us to use good judgement when dealing with customers.	0.76
In my store, we have the flexibility to do our jobs well within the boundaries of company policy and financial considerations.	0.77
Work engagement (AVE = 0.67, CR = 0.95, α = 0.89)	
I have a lot of energy when I am at work.	0.83
At my job, I feel strong and full of energy.	0.88
I like my job very much.	0.86
My job inspires me.	0.83
When I get up in the morning, I feel like going to work.	0.86
I feel happy when I am working hard.	0.67
I am proud of the work that I do.	0.81
I give all my attention to my work.	0.73
I am very excited when I am working.	0.86
Service climate (AVE = 0.53, CR = 0.87, α = 0.82)	
How would you rate your store on …	
… the overall quality of service provided to customers?	0.71
… the effectiveness of your store's communication efforts with customers?	0.71
… the effectiveness of your store's communication efforts with employees?	0.78
… the tools, technology, and other resources provided to employees to support the delivery of superior quality service?	0.68
… the knowledge and skills of employees in your store to deliver high quality service?	0.73

Scale items	Standardized factor loading
… the efforts to measure and track the quality of the service in your store?	0.77
Manager-rated variables (n = 70)	
In-role service performance (AVE = 0.67, CR = 0.91, α = 0.81)	
… perform all the tasks for customers that the company expects of them.	0.70
… meet formal performance requirements when serving customers.	0.81
… fulfil responsibilities to customers as specified in the "CTM Way" and related company policies.	0.90
… adequately complete all the customer-service behaviours expected of them.	0.80
… help customers with those things which are required of them.	0.87
Extra-role service performance (AVE = 0.70, CR = 0.92, α = 0.85)	
… voluntarily assist customers even if it means going beyond their formal job requirements.	0.75
… help customer with problems beyond what is expected or required.	0.94
… often go above and beyond the call of duty when serving customers.	0.75
… willingly go out of their way to satisfy customers.	0.83
… frequently go out their way to help customers.	0.89
Customer-rated variables (n = 803)	
Customer satisfaction (AVE = 0.80, CR = 0.92, α = 0.89)	0.90
I am satisfied with my visit to this store.	0.89
Shopping at this store was an enjoyable experience.	0.89
My choice to shop at this store was a wise one.	
Store loyalty (AVE = 0.79, CR = 0.94, α = 0.89)	
Say positive things about this [brand name] store to other people.	0.88
Consider this [brand name] store your first choice to buy tiles, bathroom ware and related products.	0.88
Shop at this [brand name] store the next time you need to shop for tiles, bathroom ware and related products.	0.92
Do more business with this [brand name] store in future.	0.88

Note: All standardized loadings are significant at the .01 level. AVE = Average variance extracted; CR = Construct reliability; α = Cronbach's alpha.