Organizational food culture: a theoretical and empirical construct

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ORGANISATIONAL FOOD CULTURE:
A THEORETICAL AND EMPIRICAL CONSTRUCT

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DECLARATION

I certify that the work presented in this thesis is, to the best of my knowledge and belief, original, except as acknowledged in the text, and that the material has not been submitted, either in whole or in part, for a degree at this or any other university.

I acknowledge that I have read and understood the University's rules, requirements, procedures and policy relating to my higher degree research award and to my thesis. I certify that I have complied with the rules, requirements, procedures and policy of the University.

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ORGANISATIONAL FOOD CULTURE: A THEORETICAL AND
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Abstract

Research has indicated that environmental factors influence individual food practice. An individual’s food practice, in turn, will influence the person’s health. Research has also indicated that organisational culture influences individual behaviour. Given this, it should be possible for an organisation’s food culture to have an influence on an employee’s health via its influence on the employee’s food practice.

As there is a current dearth of research on the topic of organisational food culture, this research has been conducted. The aim of this preliminary study is a simple one: to contribute to the literature on organisational food culture research.

In this research, a theoretical construct of organisational food culture is first proposed. Then, a parsimonious empirical construct of organisational food culture is developed based on the proposed theoretical construct. To test for the reliability and validity of the empirical construct, statistical methods such as confirmatory factor analysis, Cronbach’s alpha analysis, and Pearson’s correlation analysis are used.

At the end of the research, a model of organisational food culture constructed from the dimensions of “provision of food and organisational function policy” and “hierarchical policy” is found to be relatively reliable and valid. This has not only contributed to the current literature both theoretically and methodologically, but also has several important implications for both future researchers and the industry.
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CHAPTER 1 – INTRODUCTION

1.0 Introduction
The level of nutritional intake and the balance of diets of individuals influence their health (Sobal, Bisogni, Devine & Jastran 2006). While a balanced nutritional intake can help to maintain a person’s health, poor dietary patterns can lead to dire health consequences.

One such related problem is obesity, a medical condition that is associated with the accumulation of excessive body fat and various serious health consequences. According to the World Health Organization (WHO), the phenomenon of global obesity had reached an epidemic level: there were at least 400 million obese adults worldwide in 2005 (Low, Chin & Deurenberg-Yap 2009). Other than obesity, poor dietary patterns are also associated with increased risks of several other chronic diseases, such as coronary heart disease, cancer, stroke, diabetes, hypertension and osteoporosis (Frazao 1999).

Back in 1999, the total economic cost of these diseases in the United States was already estimated to be around a hefty sum of $70.9 billion (Frazao 1999). Today, the effect has worsened. As a form of anecdotal evidences, consider the following three news reports:

“More than 36 million people a year die from cancer, heart disease, diabetes and other non-communicable diseases (NCDs)…”
UN (United Nations) states “recognise that the most prominent NCDs are linked to common risk factors, namely tobacco use, harmful use of alcohol, unhealthy diet, and lack of physical activity”…

According to the WHO, at least 2.8 million adults die each year as a result of being overweight or obese, with 44 per cent of diabetes, 23 per cent of ischaemic heart disease and from 7 per cent to 41 per cent of certain cancers cases attributable to these factors…

…unhealthy diets are one of the reasons why public health expenditures increased by 50 per cent over the past 10 years in member countries of the Organisation for Economic Co-operation and Development.”


“…A newly released World Economic Forum and Harvard University study estimated that over the next 20 years, non-commutable diseases will cost the global economy more than US$47 trillion (S$59 trillion).

Increasing costs from obesity – and lifestyle – linked illnesses in the next two decades represent 75 per cent of the gross domestic product last year, the study said.

Worldwide, stroke and heart-related diseases account for nearly half of all non-infectious disease deaths – 17 million in 2008 alone, the WHO says.

Next is cancer (7.6 million deaths), followed by respiratory diseases such as emphysema (4.2 million).

Diabetes caused 1.3 million deaths in 2008, but that is misleading, as most diabetics die of cardiovascular causes…
…the UN chose to focus on the four diseases (stroke, heart-related diseases, cancer, and diabetes) and their common risk factors: tobacco use, alcohol abuse, unhealthy diets, physical inactivity and environmental carcinogens…

...(there is) an almost doubling of worldwide obesity rates since 1980, and heavily marketed junk foods high in salt, trans fats and sugar becoming staples in nearly every corner of the world…”


“Productivity losses and medical treatment for cancer, diabetes and other non-contagious diseases will cost US$47 trillion ($58 trillion) by 2030, according to the first study that quantifies the likely expense of leading causes of death…

…Mental health conditions and cardiovascular disease, including heart attack and stroke, account for almost 70 per cent of the lost productivity predicted by the authors of the World Economic Forum and Harvard study.

The main drivers of these chronic, non-infectious diseases are smoking, harmful use of alcohol, physical inactivity and poor diet, they said…”


In these reports, obesity was deemed to be a contributor to many forms of chronic illnesses, which will have detrimental effects on the workforce in the long term, and poor individual dietary practice was proposed to be one of the causes of obesity. These reports have profound implications for industry, and should deserve the attention of managerial personnel.
1.1 The implications of public health trends on organisations

It was mentioned in the reports that a number of deaths can be attributed to non-communicable diseases, which can in turn be associated with individuals’ obesity and their diets. From an organisational perspective, given the implementation of equal employment opportunity laws in many parts of the world (Robbins, Bergman, Stagg & Coulter 2008), it is anticipated that organisations will employ obese employees, who are part of the group of people at risk of the above causes of death. Given their higher risk of negative health outcomes, based on the prior discussion of health-related reports, in the future, organisations are likely to experience the death of obese employees due to health-related issues. If such an extremity occurs in an organisation, it is likely to have several implications for the employing organisation.

Firstly, it can be anticipated that the operation of the organisation will be disrupted to a certain extent, depending on the position and vocation that the deceased was holding. The more important the deceased’s job is to the company’s operations, and the higher the deceased’s position in the company’s hierarchy, the greater the impact on the organisation will be.

Secondly, it is likely that the organisation will also incur a variety of costs. For example, if the employee died of health-related causes, it may cause the organisation’s health protection and insurance premiums to be more expensive in the coming year.

Next, depending on the law of the country that the employee worked in, the company may need to provide the deceased’s family members with a large sum of money in compensation depending on whether the death of the employee is deemed by the local authorities to be work-related. If it is deemed to be work-related, the
employing organisation will not only have to compensate the deceased’s family, but will also suffer damage to its corporate image.

Nevertheless, the costs do not end here. As the employee’s death will cause his/her position to be opened, costs will have to be incurred by the organisation to recruit a new employee to fill up the opening. Depending on the position that the deceased held, the channels and costs that will be incurred in the recruitment process will differ significantly (Stone 2010).

Next, when potential candidates are recruited, the organisation will need to spend additional resources in the selection process. Again, the total costs that will be incurred during this stage depend on the nature of the position that the deceased held.

In general, total costs can be expected to be even greater if the company is in urgent need of a replacement, and when the economy is doing well, the organisation may have to offer a salary that is higher than the market price to attract the relevant talent. If no appropriate candidate is selected in a single recruitment and selection run, the organisation will need to incur additional costs to run the whole process all over again.

When a new employee is hired, costs will have to be incurred again to induct and train the new employee via such processes as indoctrination and instruction (March 1991; Stone 2010). Again, depending on the nature of the job of the deceased, the cost and duration of this period will differ. The more complicated and important the job is, the longer this period will be, and the higher the costs incurred.

At this point, we can already see that the potential costs that may be incurred by an organisation in the event of an unhealthy employee dying due to his/her poor health condition, are high. However, this cost calculation so far has not yet accounted for potential performance loss due to inexperience in duty. According to Rousseau
(1997), some researchers called this phenomenon “organisational forgetting”; that is, when a new person takes over the responsibilities of a departed employee, his/her attainable performance level may be lower due to his/her relative inexperience.

For example, in the research by Epple, Argote, and Devadas (1991), it was found that although the performance of a batch of employees could be transferred to another batch, only 56% of the performance was observed to be transferred in the process. Hence, when a new comer takes over the position of a deceased employee, we can anticipate that the individual may be up to 44% less effective. This lower attainable performance of the new employee is also a form of “cost” to the organisation.

Hence, from above illustration, we can see that obese employees have a higher risk of negative health outcomes. In the event that the obese employee dies, the cost that will be borne by the employer will be great.

Even if the extreme event of death does not occur, the company may still have to shoulder other forms of costs associated with the employment of obese employees. For example, it has been reported that productivity losses can result from diseases associated with obesity (Bloomberg, Associated Press 2011). In addition, it has also been reported that employee obesity is related to performance-depreciating factors such as absenteeism (Berry, Seiders & Hergenroeder 2006). For instance, an obese employee may have to go for medical check-ups more frequently than a healthy employee, given that their weight represents a higher risk for many types of non-commutable diseases.

In summary, when an employee has a weight problem, it is no longer just an issue for the employee. It should also concern the employer – as employee obesity can
involve costs that may be, or are, borne by the employer, and it may also have a bearing on the company’s performance.

Although one may tend to think that the weight issues of individuals should be part of their personal lives and they should be accountable for their own weight issues, do organisations have a part to play in such issues too? The answer should be yes.

1.2 The organisation’s influence on individual dietary patterns and health

Evidence confirms that dietary patterns contribute to an individual’s obesity problem (Associated Press 2011). Given that the workforce tends to spend the majority of their weeks, and the majority of their days, working, what would be a big contributor to unhealthy dietary patterns? A potential answer to the question could be “the organisation that these individuals are working for”.

For example, in the Republic of Singapore, a typical working week for many individuals is from Monday to Friday, from 8 am to 5.30 pm. This does not include the voluntary and involuntary overtime hours that individuals may face in their course of work. Hence, it can be anticipated that since the modern workforce tends to spend the majority of their time working, this may in turn cause their working environment to influence their dietary patterns, as it is highly possible that they will have to spend a big portion of their time in or around their workplace.

Although individual and contextual factors, such as differences in individuals’ taste buds, religious beliefs, and differences in the availability of certain food products in different geographic locations, can have a bearing on individual food practices (Asaria, Chisholm, Mathers, Ezzati & Beaglehole 2007; Pomerleau, Pederson, Ostbye, Speechley & Speechley 1997; Room, Babor & Rehm 2005; Woteki 2002), an
individual’s work environment should also be considered as a crucial external environmental factor that contributes to the shaping of an individual’s food practice (Devine, Connors, Sobal & Bisogni 2003; Meiselman 2006; Sobal et al. 2006).

In typical situations, employees eat one or more meals and/or snacks a day at work. Thus, the workplace can be an agent contributing to good food practices for employees or, vice-versa, provide opportunities for poor food practices, such as overeating or undereating. According to the literature, individual food practices have an impact on a person’s weight and health – specifically, what a person eats, when a person eats, where a person eats, and with whom a person eats influence that person’s health. As an illustration, let’s consider the following anecdotal cases.

1.2.1 What a person eats

What a person eats has been found to be associated with a variety of health outcomes. For example, high intake of food items like salt, processed meat and fish products, sausages, and white bread have been found to be positively associated with the development of stomach cancer (Boeing, Jedrychowski, Wahrendorf, Popiela, Tobiasz-Adamczyk & Kulig 1991). On the other hand, the consumption of food items such as cheese, non-white bread, vegetables, and fruits have been found to be not only negatively associated with stomach cancer, but also found to be negatively correlated with obesity and other forms of cancers, such as lung cancer, too (Boeing et al. 1991; Willett 1994).

In addition, the consumption of food items such as fish have been found to be positively associated with decreased risk of individuals developing coronary health disease and the reduction of blood pressure, while the intake of fast food and soft
drinks have been found to be positively associated with obesity (Jebb 2005; Willett 1994). Hence, what a person eats will definitely have a bearing on their health.

1.2.2 When a person eats

Although some people will eat whenever they are hungry, or feel like eating, many people use time as a cue to tell themselves when to eat (Goldman, Jaffa & Schachter 1968). For example, in some companies in Singapore, when it comes to 11.30 am to 12.00 pm, some individuals will ask their colleagues to go out for lunch together. Then when it comes to 3.00 to 3.30 pm, some of them will ask each other to go for a short tea break, to have some light refreshments, even though they are not hungry.

Despite eating quite frequently throughout the day, many of these individuals are still able to maintain relatively good health as these practices are not really detached from what some nutritionists might recommend to obese individuals: eating a lesser quantity of food at a higher frequency and a regular interval. This may be due to the observation that in situations when people eat at irregular timings, such as eating earlier or later than their usual meal times, the amount of food consumed will be different from their usual consumed portions.

For example, it has been reported that obese people tend to eat more when they are eating at a time later than their usual meal time (Schachter & Gross 1968). This may be due to the fact that when individuals eat later than their usual meal time, they may think that they are more hungry than usual, and hence must eat more than their usual portions to satisfy their hunger. Of course, if such situations occur over a long period of time repeatedly, it is likely that an individual’s health will be influenced in one way or another sooner or later.
On the other hand, for some other individuals, when they anticipate that they are going to eat later than their usual meal time, they may eat more at an earlier meal to “prepare” themselves for the prolonged gap between meals. Nevertheless, many people who tend to do this may also feel hungry around the same time as normal as their bodies may be “conditioned” to feel hungry and eat around that time. Thus, when they reach the next meal, they may feel as hungry as usual, and just eat normally. However, some other people may think that they are “more hungry” than usual because they are eating at a later time, and so will also end up eating more than usual. When these situations occur, we can see that the first type of person will just overeat for one meal, while for the second type of person will overeat for both meals. Essentially, the “preparation” that some people use to “prepare” themselves for an imminent later meal time by eating more at the previous meal may lead to the overconsumption of food, instead of “balancing out” the need for food to “support” the person’s body for their daily activities until the later meal time.

Hence, some researchers have reported that the consumption of food at regular intervals is inversely associated with metabolic syndrome due to the elimination of such variances in terms of the amount of food that individuals consume in each meal (Sierra-Johnson, Unden, Linestrand et al. 2008). In layperson’s terms, it means that by eating at regular intervals, individuals were found to eat more regular portions; that is, they were less likely to eat too much during meals. In turn, these individuals will have a lower risk of putting on additional weight and of having medical problems such as high cholesterol and hypertension in the long term.

In other research about the effect of when an individual eats on his/her health, it has also been reported that the consumption of a higher proportion of total daily calorie intake at breakfast was found to be associated with a relatively lower weight
gain (Purslow, Sandhu, Forouhi et al. 2008). That is, if one eats more during breakfast, and eats less in other meals, one is less likely to gain more weight over time. Hence, from this discussion, we can see that when an individual eats has an influence over his/her health.

1.2.3 Where a person eats

According to research, the amount of food that a person will consume during a particular meal is influenced by their environmental context when consuming the meal (Wansink 2004). For example, it has been reported that when an individual eats in a restaurant where there is soft and warm lighting, and soft music is played, the person will tend to stay longer (Wansink 2004). As a result of the longer stay, the person may consume more food and drinks than usual (Wansink 2004).

On the contrary, if a dining place is extremely noisy, crowded, and warm, with a very dirty environment, such as a dirty toilet and stains on eating utensils, and usually has customers who smoke and drink while hurling vulgarities at each other, it is likely that many people will tend to spend a shorter time eating in it, and hence consume less food and drinks. Individuals who dine in such environments may even try to finish their food as fast as possible, so they can go off to their next destination as soon as possible. Some other customers may even avoid the restaurant totally after one bad experience. Therefore the environment in which a person eats may have an influence over that person’s appetite, and hence the possibility of whether that person will overeat or not. As overeating tends to lead to weight gain, and even obesity to some people, where an individual chooses to eat will also influence his/her health (Jebb 2005).
1.2.4 With whom a person eats

Dining etiquette has always been emphasised for many different types of occasion. There are even guides written by “experts” to try to teach individuals to be “successful” in events such as the first date dinner, the formal company dinner and so on by closely monitoring one’s behaviour during the event, and if options are available, by choosing which type of food that one should eat during the event, and also how one should eat his/her food.

For example, it was taught in a Singapore major public university that during an organisational lunch buffet, a person who wants to be successful should not go in hungry and grab all the food that they need to fill oneself up. Instead, it was advised by the university that the students should eat before they go to such lunch events. The rationale given is simple: these are actually networking functions in disguise, and companies would be looking out for those who know how to network well with other participants during the lunch buffet by sending their observers in as “people who went there just for the lunch”.

In addition, the university even subsidised students to attend courses such as wine appreciation classes to make sure that its students will not embarrass themselves in front of executives, as many business functions are usually associated with wine.

From these examples, we can see that it is a deeply held belief even amongst the general public that a person should monitor their behaviour according to whom they are dining with or who is around while they are eating.

These findings also resonate in formal research. For example, it has been reported that when a person eats alone, that person may tend to eat with a faster speed. This might be because when a person eats alone, there is less perceived need to adhere to social dining etiquette (Singh, Lancioni, Singh et al. 2008). Such increased speed of
consumption might also cause an individual to derive lesser satisfaction from the consumption of food, and could in turn cause the person to eat more to derive the “shortfall amount of satisfaction” that they need from eating (Singh et al. 2008).

On the other hand, it was reported by researchers that when people are dining with friends and family members, they tend to have longer meals (De Castro 2000; De Castro & De Castro 1987; Wansink 2004). This is likely to prolong their contact with food, and hence increases the opportunity for them to eat more (De Castro 2000; De Castro & De Castro 1987; Wansink 2004). For example, it was reported by De Castro (2000) that when a person eats with another person, they will eat 33% more than when the person eats alone.

From this discussion, it can also be observed that with whom a person eats will also potentially influence a person’s health. Hence, in summary, a person’s food practice can be viewed from four perspectives: what a person eats, when a person eats, where a person eats, and with whom a person eats. Each of these four factors can influence a person’s health and weight by influencing what and how much a person eats.

As obesity is associated with an individual’s food practice, it is possible that a person’s health can be influenced by organisational factors via their influence on the person’s food practice, given that the majority of the workforce spends most of their time at work. In addition, if proper interventions are implemented, organisations may even be able to help their employees to achieve better health.

As discussed earlier, the health issues of individual employees should not be viewed as the personal issues of the employee only, as the consequences that can arise out of an employee’s health-related issues can potentially cause significant losses to the employing company.
Given this, if an organisation can positively influence employee health via its policies’ influence on employee food practices, it can potentially reduce the risks of negative outcomes for the organisation due to its employees’ health conditions turning south, such as the death of obese key personnel, and this will bring benefits to the organisation. In short, with a healthy workforce, fewer employees will be sick. When this happens, the organisation will definitely have a more productive workforce. Hence, organisations should play a part to encourage their employees to have better health by having better food practices.

1.3 The need for research on organisational food culture
As there is currently a lack of research on how organisational policy can be utilised towards influencing employee health via its influence on their food practice, I have proposed to conduct research into the topic of organisational food culture – specifically, into the topic of how organisations can influence employee health via their food-related policies’ effect on employee food practices.

The ultimate aim of organisational food culture research is to come up with a model that organisations can use to help their employees to become healthier by influencing their food practices via the changes made in the organisational culture. To be specific: its organisational policies. This is in line with what some organisational researchers and consultants would advise organisations to do when there is something less than desired happening in an organisation: change the culture of the organisation by implementing changes in the organisation’s policies (for example, see Robbins et al. 2008).
Nevertheless, given my research’s preliminary status and the resource constraints faced by a typical doctoral candidate, it is necessary here to limit the scope of this research.

The main focus of my research has been on the proposition of a theoretical construct of organisational food culture based on the literature and the proposition of a parsimonious empirical construct that has focused on the policy side of organisations. As such, the main research objectives of this research are theory building and the proposal of a parsimonious model of organisational food culture. This is a preliminary research that aims to propose a parsimonious theoretical and empirical construct that can provide enough groundwork for future research by interested researchers; that is, it is focused on theory building and theory testing.

Hence, although a theoretical and empirical construct of organisational food culture are proposed in this study, it is not the aim of this study to provide an exhaustive view of organisational food culture. Instead, the aim of this preliminary research is to provide sufficient groundwork for future research to be done.

1.4 The research methodology

For the theoretical construct, a conceptual definition of organisational food culture and its potential theoretical dimensions, derived from the literature of organisational culture research, are proposed in this study.

To derive an empirical construct, a list of survey questions that operationalised the proposed dimensions of organisational food culture, derived from the related literature (discussed later), was proposed in this research.

In summary, 16 survey questions were derived from the literature review to operationalise the four proposed dimensions of organisational food culture. A formal
survey was then created using these 16 organisational food culture survey questions, and four demographic questions. The survey was then administered on a group of respondents that were recruited using a mixture of purposive and snowballing sampling method.

After the survey was administered, the results were keyed into the computer, and analysed statistically. The reliability of the proposed dimensions was checked using Cronbach’s alpha analysis, and the validity of the proposed dimensions was checked using confirmatory factor analysis. More details about the methodology used for this paper will be discussed in Chapter 3.

1.5 The significance and limitations of the research

Given that organisations can potentially play an important part in shaping employee food practices, and influencing their employees’ health, organisations should use their food policies to assist their employees to attain better health via better food practices. However, the current dearth of research on the topic of organisational food culture may cause there to be insufficient grounds on which future researchers can base their research and organisations can base their food policies.

By proposing a parsimonious theoretical and empirical construct of organisational food culture, this study has made a preliminary effort towards a more comprehensive understanding of the relationship between organisational food policy and employee food practice. The effort made will not only provide a better grounding for future researchers studying organisational food culture, but will also serve as a start towards the formation of organisational food policies that can be utilised towards the influencing of employee food practices.
Despite the significance of this study, it has had several limitations. Firstly, the aim of this research is to propose a preliminary theory and a parsimonious empirical construct of organisational food culture; given the study’s preliminary status, it was anticipated that the theory and construct proposed will not be complete.

Secondly, as the survey method is used for data collection, the limitations of survey research in general are also faced by this study. And thirdly, as the purposive and snowball sampling method was used to recruit respondents to this study, the data collected are not random in nature. More details about the limitations of this study will be presented in Chapter 5.

Before proceeding to the discussion on the organisation of this report, I would like to first define what is meant by “theoretical construct” in this study to avoid confusion on the part of readers.

1.6 What is a “theoretical construct”?

Currently, although there is not yet a single definition that is accepted by all researchers about what defines a “construct”, authors such as Neuman (2006), and Zikmund, Babin, Carr and Griffin (2010) essentially take the stand that “construct” is the same as “concept”.

For example, in some parts of Neuman’s (2006) book, he seems to take the terms “concept” and “construct” to both refer to the term “idea”. If this is the case, taking the rule of “parsimony” that is used in scientific research into consideration (Whetten 1989), should not we just drop two of these three terms and keep only one? This will not only prevent potential confusion on the part of new researchers, but it will also facilitate the communication of scientific findings to the public in the future.
if a single and familiar term, such as idea, is used by the scientific community instead of all three (concept, construct, and idea).

Moreover, the creation of jargon is meant to facilitate communication amongst a group of people (Neuman 2006). Given that the use of three terms to refer to the same thing may cause confusion to some group members, these three terms should not be used to refer to the same thing. If this is not the case, the usage of all three terms should be reduced to one.

Hence, in my opinion, although the terms “concept” and “construct” have been proposed by some authors to have the same meaning, this stance has not been adopted in this study. In my opinion, a “construct” should be what Neuman (2006) had proposed to be a “complex concept”, and a “concept” should be what he had proposed to be a “simple concept”; that is, a “concept” should only have a single dimension. When a concept is found to be, or is proposed to be, made up of more than one dimensions, we call it “construct”.

In addition, some readers might also have a different understanding of the terms “theoretical construct” and “theory”. For example, according to Whetten (1989, p. 490), “a complete theory must contain four essential elements”: the (1) what; (2) how; (3) why; and (4) who, when, and where of a theory. The “what” factor refers to:

“Which factors (variables, constructs, concepts) logically should be considered as part of the explanation of the social or individual phenomena of interest? Two criteria exist for judging the extent to which we have included the “right” factors: comprehensiveness (i.e., are all relevant factors included?) and parsimony (i.e., should some factors be deleted because they add little additional value to our understanding?)”

- (Whetten 1989, p. 490)
In relation to the “what” factor, the “how” factor essentially refers to:

“Having identified a set of factors, the researcher’s next question is, How are they related? Operationally this involves using “arrows” to connect the “boxes”… [Although not all theoretical treatises must contain figures with boxes and arrows, but a visual representation often clarifies the author’s thinking and increases the reader’s comprehension.”

- (Whetten 1989, p. 491)

Next, the following discussion is held for the “why” factor in Whetten’s (1989) discussion:

“What are the underlying psychological, economic, or social dynamics that justify the selection of factors and the proposed causal relationships? This rationale constitutes the theory’s assumptions – the theoretical glue that welds the model together… During the theory-development process, logic replaces data as the basis for evaluation… To summarize thus far: What and How describe; only Why explains. What and How provide a framework for interpreting patterns, or discrepancies, in our empirical observations. This is an important distinction because data, whether qualitative or quantitative, characterize: theory supplies the explanation for the characteristics.”

- (Whetten 1989, p. 491)

And lastly, the “who, where, when” factors are just “conditions [that] place limitations on the propositions generated from a theoretical model” (Whetten 1989, p. 492).

In some sense, while theory refers to how some concepts are associated with each other and why these concepts are associated in this way, along with the mentioning of some relevant limiting conditions, a theoretical construct is just how
some concepts are associated with each other, along with the mentioning of some relevant limiting conditions. That is, the difference between “theory” and “theoretical construct” is the latter does not explain why the concepts mentioned in the discussion are associated as proposed, while the first does.

As part of the aim of this study is to derive a theoretical construct of organisational food culture based on the current literature, it is unavoidable that the explanation of why certain concepts are associated with each other in the proposed theoretical construct will also be discussed. Hence, the difference between these two terms will be blurred in the discussion of this study. To avoid confusion for readers, it should be kept in the mind that, for the purpose of this study, I shall not distinguish between “theory” and “theoretical construct” as the process of proposing a “theoretical construct” requires the involvement of “theory” building.

1.7 The structure of the study report
This report has been formatted into five interrelated chapters. Chapter 1 of this report serves as a general introduction to this research. In this chapter, I have discussed the dire global trend of food practice-related health issues and have illustrated its relevance to organisations. I have proposed that organisations should play a part in the shaping of their employees’ food practices, thereby potentially influencing their health towards better outcomes, via their organisational food cultures. This research was conducted as a result of the current dearth of research on this topic.

Chapter 2 pertains to the literature review that was conducted for the purpose of this study. First, the issues related to culture and organisational culture relevant to the research are discussed. The concept of organisational food culture is then formally defined. Next, based on the literature, the following four dimensions of organisational
food culture are formally purposed in the chapter: provision of food and organisational function policy, accessibility of food policy, hierarchical policy, and time policy.

Having proposed the theoretical construct of organisational food culture in Chapter 2, Chapter 3 discusses the methodology that was adopted for the construction, and verification, of the empirical construct of organisational food culture. Issues discussed in Chapter 3 include the choice of the research paradigm, data collection method, and sampling method adopted; ethical considerations; the procedure used for the data collection process; the survey questions used to operationalise the four dimensions of organisational food culture; and the choice of analytical method adopted.

Chapter 4 pertains to the results of the series of analyses conducted on the data collected for the purpose of this research. First, the demographic information of the research’s respondents is reported. Correlation analysis is used to check for the validity of the data encoding process. Issues then discussed include: the correlations between the 16 organisational food culture questions, the correlations between the questions for each proposed dimension, the Cronbach’s alpha of each organisational food culture dimension, and the Cronbach’s alpha for the 16 questions when they are used as indicators of an organisation’s food culture in general. The chapter ends with a discussion on the use of confirmatory factor analysis for the testing of the validity of the proposed organisational food culture construct.

Chapter 5 concludes this research. Firstly, interesting issues that surfaced during the conduct of this study are detailed, before there is a discussion of the theoretical and methodological contributions of this research, the limitations of this study, directions for further research that researchers might consider for their future
endeavours, and the academic implications and industrial and managerial implications of this research. The chapter closes with concluding remarks.

Having outlined the structure of this report, Chapter 2 will continue with a review of the existing literature for the development of a theoretical construct of organisational food culture.
CHAPTER 2 – LITERATURE REVIEW

2.0 Introduction

In Chapter 1, I illustrated the association between employee food practice, employee health, and organisational food policy. Given the current dearth of research on organisational food culture, I conducted this study to contribute a theoretical and empirical construct of organisational food culture.

In this chapter, I first review the literature of culture and organisational culture research. This review was undertaken to ensure that my research would be grounded on the current literature, and to clarify the part that this research would play in organisational culture research in general.

I then propose a theoretical construct of organisational food culture. The concept of organisational food culture is defined and the literature reviewed for the building of the theoretical construct.

2.1 Culture

“Culture” had been defined to be a set of beliefs, values, and norms learnt and shared by a group of people via their common experiences (Barney 1986; Hofstede 1998; Mennell, Murcott & Otterloo 1992; O’Reilly 1989; O’Reilly & Chatman 1996; Schein 1992). In the early days, cultural research was originally a line of research pursued by anthropologists to explain human behaviours. It was later picked up by sociologists in their explanation of societal phenomena, and now it is a line of research that is pursued by many other disciplines of research.
In some situations, the beliefs and values of a particular culture can manifest themselves in forms such as artefacts unique to the culture in perspective. When this is the case, artefacts may also be considered as one of the factors that define a culture. Nevertheless, although the set of factors that define culture consists of concepts of all forms, which can be either explicit or implied, these factors overall affect the way people perceive their environment and make decisions, sometimes even without their personal awareness (Briscoe 2009; Daft 2007; Grossman 2009).

For example, the colour white is usually preferred in many parts of the Western world for use in events such as weddings as it represents positive notions such as purity and holiness; however, it is a colour that is still shunned by many traditional Asians as white is usually used in funerals. Instead, red is a more preferred colour as it is seen as auspicious. Hence, when it comes to wedding events, it is almost without a second thought that Asians will prefer red over white if given the choice.

Despite the influence that culture has on people, it is not part of human’s nature: it is something that is artificially created by humans (Tong & Pakir 1996). According to the literature, when a group of people with a common aim gather and work together, they will form a unique culture that belongs to them after some time. Depending on the scale of the occurrence, people use different terminology to describe the resultant phenomena of such human interactions. When it occurs at a national level, we call the resultant culture “national culture”; when it occurs at an ethnic level, we call it “ethnic culture”; and the when the unit of study is the organisation, we call it “organisational culture”. Ultimately, it is a tool created by a group of people to help them to live and make sense of their lives after they have spent some time together (Ostroff, Kinicki & Tamkins 2003).
In addition, culture can also act as a form of heuristic mechanism that enables individuals who belong to a single group to know how they should act and thus act accordingly in specific situations. For example, it was mentioned by Cunha, Cabral-Cardoso and Clegg (2008) that:

“… someone doing business in Mexico should know that business meals can last from two to three hours (Alisau, 1997) in the middle of the day, after which you return to work, and that meetings rarely start on time, such that a little delay (of 20 minutes or more), is perfectly natural according to national habits. For Americans, this may appear intolerable (Welch, 2000)”.

- Cunha et al. (2008, p. 949)

Hence, although an American may be annoyed when a meeting is delayed for more than 20 minutes, a local Mexican might have avoided this negative emotional experience by simply going to the meeting 20 minutes later intuitively.

In summary, it is sufficient for the purpose of this study for us to know that culture is a socially constructed concept. It refers to the values, beliefs, and norms created and shared by a group of people over time spent together (Barney 1986; Hofstede 1998; Mennell et al. 1992; O’Reilly 1989; O’Reilly & Chatman 1996; Schein 1992). Culture also has a strong influence over people who are part of the group (Briscoe 2009; Daft 2007; Grossman 2009).

Hence, as will be discussed later, although different organisations have different organisational cultures, it is still possible for certain cultural elements to be observable across organisations in the same country (Schein 1999). For example, in China, it is possible to observe certain cultural elements such as collectivism in different companies (Robbins et al. 2008), although the actual way such collectivism manifests itself may be different in different organisations.
For instance, while the employees in one organisation may exhibit very strong collectivism, the employees of another organisation may only be slightly collectivistic. This is because although individuals in an organisation tend to form an organisational culture that belongs to them uniquely, the people who make up the organisation belong to a bigger group – their country – in the first place. Hence different organisations in a country will have certain similar cultural features likely to perpetuate their presence in the organisations, although each organisation’s culture is likely to be unique as a whole.

One associated phenomenon is the effect of the founder on an organisation’s culture. When a founder starts an organisation, it is likely that his/her values and other personal characteristics will influence the operation of the company and that these effects may even extend beyond the founder’s presence in the organisation (Frederick & Kuratko 2010; Giberson, Resick, Dickson, Mitchelson, Randall & Clark 2009; Hofstede 1998; Schein 1999). In most instances, not only will the personal characteristics of the founder influence the strategy and direction of the organisation they founded (Frederick & Kuratko 2010; Hofstede 1998; Schein 1999), it is also likely that the founder will influence the human resource composition of the organisation too.

According to the attraction–selection–attrition theory (Schneider & Reichers 1983), the founder is likely to attract individuals who have characteristics that fit with the founder’s expectations. When individuals are attracted to an organisation, they will in turn join the company if the company’s characteristics – and also potentially the characteristics of their future boss – fit their expectations. If not, even if they do join the organisation, they will leave sooner or later. This is likely to have an influence over the type of people who are usually employed by – and will usually stay
employed in – an organisation. This is likely to, in turn, cause the same type of cultural elements as those observed in organisations with similar characteristics to their founders.

Indeed, in a related study by Giberson et al. (2009), findings suggested that personalities of chief executive officers (CEOs) are related to the culture of their organisation. Using a sample of 32 CEOs from Midwestern US organisations (of whom over half were the founders of their organisations) and 467 of their employees, the authors found that the CEOs’ traits, such as agreeableness, emotional stability (or neuroticism), extraversion, and openness to experience, were associated with organisational culture factors including the organisation’s hierarchical culture values, clan culture values, adhocracy culture values, and market culture values. Although the sample in this research was not made up of only business owners, it is still likely that the cultural characteristics of the business founders influenced the cultural characteristics of their organisations.

In addition, it has been proposed by Frederick and Kuratko (2010) that the personality fit between an entrepreneur – somebody who starts and owns their own business (Davidsson 2004; Gartner 1990) – and a potential successor will influence whether or not the successor will be able to successfully take over the business in the future. That is, a person will be more likely to be able to take over the business of another person if their characteristics are more or less similar. If this is the case, it is likely that even when another person takes over an organisation in the event of business succession, similar practices are likely to be perpetrated in the organisation, and hence cause similar types of people to be employed, and stay employed, in the organisation. This is likely to in turn cause the type of cultural elements similar to the
characteristics of the founders to perpetrate their presence beyond the presence of the founder.

Hence, organisations established by founders from the same country will likely have similar cultural elements, due to the common backgrounds of their founders, although the exact way these manifest is likely to differ. Likewise, it is also possible for two branches of a firm to have dissimilar cultural elements when the two branches are operated by employees of different nationalities (Schein 1999).

Having discussed the concept of culture, I shall next turn to the discussion of organisational culture.

2.2 Organisational culture

In modern society, for the sake of operational efficiency and effectiveness, people pool their resources together and form artificial entities called organisations (Tabalujan & Low 2006). As individuals working in an organisation interact, they will soon form a culture that belongs uniquely to them: an organisational culture.

According to Handel (2003), interest in studying organisational culture can be traced back to the United States in the 1920s. However, systematic studies on organisational culture were only conducted in the 1930s when the Hawthorne studies were almost complete (Ostroff et al. 2003).

Research in organisational culture is rooted in anthropology and has relied heavily on qualitative approaches, such as interviews and participant observation, in the past (Hofstede 1998; Ostroff et al. 2003).

In the early days, the focus of such studies of organisations was on the struggle that companies had with their employees. For example, to protect their rights from processes such as the unionisation of employees, some organisations tried to enhance
their employees’ identification with them by using a range of different policies. Examples of such policies included “employment security… health care, company-sponsored unions, grievance mechanisms, suggestion systems, picnics… company-sponsored athletics… [and] company songs…” (Handel 2003, p. 347). Collectively, these policies were known as welfare capitalism. However, when such policies became too costly, especially during the Great Depression, most of them were discontinued.

The interest in studying organisational culture was revitalised and reached a new high in the 1970s and 1980s, when the success of the Japanese business was observed around the world (Handel 2003). Researchers attributed the credit for desirable employee qualities, such as commitment and conscientiousness, to the “paternalistic” culture of Japanese companies and hoped to find the answers to questions such as the best means to improve morale, commitment, and productivity of employees through their research into organisational culture.

Today, the scope of the answers sought by organisational culture researchers has moved beyond questions related to concepts such as morale, commitment, and productivity of employees to topics such as the organisation’s influence on individual decision-making, how organisational changes can be implemented successfully, the outcomes of mergers and acquisitions, and the policies and practices of organisations. (Schein 1999; Giberson et al. 2009).

Nevertheless, although much work has been done in organisational culture research, there is not yet a single definition of the concept that is accepted by all organisational culture researchers. For example, by reviewing the literature that was published between 1960 and 1993, Verbeke, Volgering, and Hessels (1998) reported that over 50 different definitions of the concept were found. This disagreement might
be due to the fact that past organisational culture researchers were scientists from different backgrounds (Ostroff et al. 2003). For example, they might be previously trained to be an anthropologist, or a sociologist, or a psychologist. Given the different focuses that people from these different disciplines might have, it is corollary that different definitions of the concept will arise. For instance, while sociologically trained researchers may propose a definition that focuses on an organisation’s system or structure, a psychologically trained researcher is more likely to propose a definition that focuses on the individual employees of an organisation.

As an illustration, let’s consider these two definitions of “organisational culture”. According to Kunda (2003), organisational culture is defined as the goals and values of an organisation. It is something that can be created by a company, and it is something a company can communicate to its employees clearly via means such as “teaching them” it in classes. It is also a rationale for the behaviour of a company’s employees, and a guideline for their thoughts and actions. On the other hand, Schein (1992) defined organisational culture to be a set of assumptions that a group of employees hold collectively. It is learnt by employees through their daily experiences in the organisation, and is passed down by them to new comers. From these two definitions, we can see that while Kunda’s (2003) definition is more orientated to the organisational system, Schein’s (1992) definition has a greater focus on the employees.

Nevertheless, despite the use of different definitions by authors to describe organisational culture, common elements can be found across these definitions. Based on the common elements that can be found in the different definitions, “organisational culture” can be defined as the collective values, beliefs, practices and policies (artefacts) of an organisation’s employees (Barney 1986; Hofstede 1998; Mennell et
al. 1992; O’Reilly 1989; O’Reilly & Chatman 1996; Schein 1992). In addition, in line with the definition of culture, organisational culture is learnt and shared by the members of the organisation via their common experiences (Barney 1986; Hofstede 1998; Mennell et al. 1992; O’Reilly 1989; O’Reilly & Chatman 1996; Schein 1992).

In addition, in organisational culture research, the concept of “values” has been further divided into the categories of “espoused value” and “shared value” by some researchers (for example, see Ostroff et al. 2003; Schein 1999). In layman’s terms, while an espoused value refers to the type of value that organisations want their employees to have, or the type of value that organisations have declared their employees to have, a shared value refers to a value that their employees really have. Although it may be subtle, these two types of values can be significantly different in some situations.

Although it is certainly beyond the scope of this research to give a detailed review on all the perspectives and definitions published by organisational research scholars over the years, one perspective by Martin (1992) is worth mentioning as it has been very relevant to this organisational food culture research.

2.2.1 Three perspectives of organisational culture

In her book *Cultures in organizations: three perspectives*, Joanne Martin (1992) proposed that research in organisational culture can be grouped “neatly” into three categories, which reflect the perspective of researchers towards organisational culture research: the integration perspective, the differentiation perspective, and the fragmentation perspective.

In the integration perspective category, we can find research that adopts the stand that there is a “one organisational culture” in each organisation, and members of
an organisation are often assumed to have something in common. Hence, researchers who adopt this perspective of organisation culture will usually propose that “for a set of beliefs or attitudes to count as culture it must be shared by a group” (Handel 2003, p. 348).

Different from those in the integration perspective, researchers who adopt the differentiation perspective do not believe that there is a “one organisational culture” within each organisation. Instead, they believe that the so-called “organisational culture” that can be observed by a researcher is in fact a sum of a number of “sub-organisational cultures”. That is, they believe that it is not likely for a set of beliefs or attitudes to be shared across an organisation. Instead, they propose that only sets of common beliefs or attitudes can be observed at the sub-organisational level.

As an illustration, let’s take the example of two organisational departments often contrasted by academics: the accounting department and the finance department. Although these two departments may be in the same organisation, they are not likely to share exactly the same culture. For example, while accountants will usually associate themselves with the tenet of “prudence”, those who work in the finance department are likely to associate themselves with the tenet of “no risk, no gain; high risk, high gain”.

Hence, when a researcher observes the culture of an organisation, the result is more likely to be a sum of all the subcultures of the departments than for the result to be a “one organisational culture” that is shared by everybody in the firm, from the CEO all the way to the security guard.

In addition, researchers who adopt this differentiation perspective also generally focus their research on issues such as interclass conflicts caused by cultural gaps between different groups in an organisation and may view managerial efforts to
inculcate a strong culture among employees as a manipulative act backed by malicious intentions (Handel 2003, p. 348).

There are also arguments on whether the presence of multiple subcultures within an organisation is a boon or bane to the organisation when these subcultures interact. While some researchers argue that the effect is going to be a negative one, some researchers argue that such interactions between different subcultures within an organisation can bring benefits, such as innovation, to the organisation.

For example, it has been proposed that diversity and dissimilarity in team members’ social backgrounds facilitate the generation of creative ideas. When people from different social backgrounds are brought together as a team, such as those with different work experiences or academic qualifications (Bantel & Jackson 1989), the different insights they can contribute to a team’s discussions (Wiersema & Bantel 1992) based on their personal experience allows the team to think outside of the usual boundaries of thinking and to handle issues with a different approach (Aldrich & Martinez 2001; Ancona & Caldwell 1992). Such contributions are proposed to have a synergistic effect on the generation of novel ideas in organisations, and hence a positive effect on team innovation.

Indeed, on a population of 460 state chartered and national banks in the United States, Bantel and Jackson (1989) found that heterogeneity in team composition had a positive effect on organisation innovation. Hence, if organisations are made up of different subcultures, the path towards greater innovativeness will open up.

The third perspective on organisational culture proposed by Martin (1992) is the fragmentation perspective. The central idea underlying the arguments classified under this perspective is that one will never know if the concept of organisational culture has ever existed in organisations in the first place. That is, when employees are
observed to behave in a certain similar way, one will never know if this is representative of the organisation’s culture or only the way that the employees usually behave.

In other words, even if somebody is able to show empirically that there is such a concept as that called “organisational culture” that exists in organisations, researchers who adopt this perspective on organisational culture may also argue that such observations are just random observations made due to factors such as sampling error and are not because the concept of organisational culture is really in existence. To them, the existence of such data may just mean that there are researchers who believe in it, but may not necessarily imply that such a concept really exists objectively in the world independent of the researchers’ thoughts.

Although these three perspectives of organisational culture may seem contradictory, it makes absolute sense if one is to use these perspectives for a discussion of organisational food culture, as the difference is only due to the difference in the level of analysis.

For example, if one is to look at organisational food culture from an organisational level, it is likely that everybody will have a similar food culture given that organisational functions, such as the end-of-year dinner, are usually participated by almost everybody in the organisation. If we are to study organisational food culture at this level, we are likely to get a one coherent view.

However, if one is to look at organisational food culture from a departmental level, it is likely that each department will have their own food culture. For example, it is not unusual for some departments to spend lunch or dinner together both as a form of social gathering and a channel for work discussion. Given that staff members from each department tend to “stick together” for such occasions, if a researcher is to
observe the organisation’s food culture at this level, it will not be surprising for the researcher to return with a conclusion that each department has its own food culture and to believe that the food culture of the organisation in general will merely be a compilation of all the food subcultures of all its departments.

Finally, if one is to look at organisational food culture from an individual level, it is likely to be observed that each person has a “food culture” of their own. For example, even during joint lunches, it might be observed that employee A tends to like more spicy food, employee B tends to like tea, and so on.

From this point of view, although Martin (1992) proposed that organisational culture research can be grouped under three perspectives, it does not necessarily mean that these three perspectives are contradictory and mutually exclusive. It is analogous to the observation of a chimera: although depending on the angle a person looks at it, a different head will be observed; at the end of the day, it is still the same chimera that is being studied.

Hence, for this research, it has not been necessary to predetermine which perspective organisational food culture research should be categorised into, as it is ultimately dependent on factors such as the unit of analysis used and the time period during which a study is conducted.

For example, although two researchers may set out to conduct a research on organisational food culture using organisational level data as their unit of analysis, the results obtained by them may be very different depending on the time period during which the research is done, especially if a qualitative methodology is used. For instance, if both researchers use the method of ethnography, the researcher who conducted his/her study during the period in which organisational level food functions, such as the end-of-year dinner, are conducted may report the existence of
an organisational food culture at the organisational level, while the researcher who conducted his/her study during a period in which no such organisational level food functions are conducted may report the non-existence of an organisational food culture at the organisational level – even if the organisation being studied by both of them is the same organisation.

Likewise, as discussed above, if two researchers carry out research to study the concept of organisational food culture using different units of analysis, even if they observe the same organisation during the same time period, they may get different findings and so reach different conclusions about the organisation’s food culture at the end of their research.

Hence, I shall not restrict the concept of organisational food culture to the three perspectives suggested by Martin’s (1992) work prematurely at this point in time.

In summarising the discussion of this subsection, organisational culture has an influence on the behaviour of employees. It refers to the collective values, beliefs, practices and policies (artefacts) of an organisation’s employees. Essentially, organisational culture facilitates the functioning of the organisation and helps to keep its employees’ behaviour within the boundary of permissible actions (Johns 2006; Sutton & Rafaeli 1988). Having said this, I shall turn to the next subsection to discuss the theoretical construct of organisational food culture.

2.3 Organisational food culture

As previously discussed, organisational culture can be defined to be the set of beliefs, values, and norms learnt and shared by an organisation’s employees via their common experiences (Barney 1986; Hofstede 1998; Mennell et al. 1992; O’Reilly 1989; O’Reilly & Chatman 1996; Schein 1992). In addition, as the values and beliefs of an
organisation can manifest in forms such as organisational policies and practices, an organisation’s culture can be defined to include artefacts such as organisational policies and practices.

Hence, as organisational food culture is a specific track of research embedded in the bigger field of organisational culture research, a formal definition of the concept of “organisational food culture” can be the set of beliefs, values, norms, and organisational practices and policies related to the food practices of the organisation and its employees.

From an empirical perspective, organisational food culture can be observed at three different levels: the policy level, the norm level, and the individual level.

2.3.1 The policy level

By “policy level”, I refer to the formal food policies adopted by organisations. That is, organisational food culture at the policy level refers to the formal directions of an organisation related to the type of food practices allowed by the organisation. At this level, it is anticipated that there will be a wide range of policy-related practices that can be observed in different organisations, with each organisation having its own set of organisational policies (Duncan 1972; Jauch & Kraft 1986) and hence its own organisational food culture.

For example, organisational food culture at the policy level can include the format of dinner that an organisation will usually have for its formal dinners. For instance, while some organisations will tend to have a formal full-course Western dinner, that starts with bread, followed by starters, the main course, dessert, and coffee, each served to a person individually, some organisations may tend to have a formal Chinese dinner that serves eight different dishes of food in eight big plates or
bowls to be shared by everybody on the same table, one followed by another, throughout the whole dinner, and other organisations may just choose to have a buffet for their formal dinners, where people just pick up food and walk around eating while networking with each other.

Related to such dinner functions, a wide range of different policies are likely to be observed. For example, depending on their financial situation, different organisations may set different budgetary limits for dinner functions. Depending on the culture of the nation that an organisation is in, dinners may also be accompanied by different types of drink served in different ways. For example, in Asian countries, it is usual for individuals to be able to choose the type of alcoholic drink they wish to have with their food in formal dinners, as long as the requested drinks are available. Hence, some people may just request for red wine to go with all types of food.

However, in some Western countries, the types of alcoholic drink served during formal dinners are usually dictated by certain social norms. For example, a typical formal dinner might start with an hour-long social interaction session, accompanied by a free flow of champagne. When the dinner starts, white wine will be served alongside with the bread and starter. Then when the main course is up, red wine will be served. And when the desert is up, desert wine will be served. At the end of the dinner, a cup of tea or coffee will then be served to conclude the event. In addition, while some national cultures may promote the discussion of business-related issues amongst participants during dinners, people from other national cultures may use these occasions solely for the purpose of social networking, with no work-related issues being discussed during “non-office” hours.

In summary, organisational food culture at policy level refers to the study of those formal directions that an organisation imposes on all of its employees.
Depending on which organisation is observed at a particular point in time, a different organisational food culture may be observed. Analogously, organisational food culture at policy level can be linked to the integration perspective of organisational culture research that was proposed by Martin (1992) as there should be only one food culture observable at this level at any single moment in time.

The focus of the organisational food culture research in general is on how organisations can influence their employees’ food practices via policy intervention. Hence, the focus of this paper shall be on this level of organisational food culture. Nevertheless, as part of the aim of this paper is to propose a theoretical construct for interested future researchers to pick up and pursue this line of research in their own endeavours, the levels of food norms and individual food practices shall also be discussed for the sake of theoretical completeness.

2.3.2 The norm level

By food norms, I refer to the collective food practices of employees. For example, in some organisations, employees from some departments will usually spend their lunch together. Depending on the specific organisational groups being studied, different sets of organisational food culture may be observed.

For instance, in some organisations, project teams will often spend their meals together as a means for bonding in hope that greater understanding and trust can be achieved amongst team members to facilitate the cooperation in their daily work. Such groups may tend to go for different places to spend their meals together as the intention behind such gatherings is to “improve relationships with one another while having fun together”. On the other hand, in some other organisations, the aim of meals spent together may be to discuss work-related issues; that is, because schedules
are so tight, work must be discussed even during meals for deadlines to be met. For such groups, the intention behind employees getting together for lunch or dinner is just to get more work done. Hence, it can be anticipated that they may always go to a certain nearby spot for almost all of their gatherings.

As such food norms are usually formed on the team and departmental level, it will be hard to get everybody from an organisation to eat together every working day, especially in big organisations. It can be expected that if an organisation’s food culture is studied on this level, multiple organisational food cultures may be observed. This is in line with the differentiation perspective of organisational culture research that was proposed by Martin (1992).

Empirically, while there may be instances where food norms and food policies coincide, it is not necessary for the two to refer to the same phenomenon. For instance, in some organisations, there may be a food norm that promotes co-workers to have lunch together (Thomson & Hassenkamp 2008). Although employees working in the organisation may all adhere to the norm of eating together faithfully every working day, such a norm of eating lunches together may or may not be specified in the organisation’s formal policies. That is, the employees just know that they should “stick together” for lunch even though there is no formal organisational rule that explicitly states such an expectation of employees.

2.3.3 The individual level

As discussed, individual food practices refer to what, when, and where an individual eats, and with whom they eat. Essentially, organisational food culture at the individual level refers to the dietary patterns of employees and includes the type of people they tend to spend their meals with. An illustration of an individual’s food practice can be
as simple as saying a person $A$ tends to eat pizza at restaurant $B$ every Wednesday 7 pm with party $C$.

Due to factors such as a person’s national culture, personal preferences, religious beliefs and health considerations, different food practices are observed in different individuals (Cunha et al. 2008). Again, although a person’s food practice may coincide with an organisation’s food policy and food norms, these are not necessarily the same at all times. For example, a person may tend to drink red wine during company functions, and beer during dinners spent with their teammates. However, when s/he is alone at the weekend, s/he may just choose plain water to go with his/her meals for a reason as simple as there is nobody around to foot the bill for him/her. Analogously, this is in line with the fragmentation perspective of organisation culture research that is proposed by Martin (1992).

Together, the food policies, food norms, and individual employee food practices of an organisation represent a vibrant and flexible multilevel theoretical construct of organisational food culture. If it is operationalised, at the organisational level, we will have the indicator of organisational food policies. The indicators that belong to this level of analysis represent the formal orders and rules passed down by the company, and represent practices that should be followed by the employees from the perspective of an organisation. If a researcher has difficulty in obtaining such objective organisational data, a viable alternative would be the collective perception of employees of their organisation’s food policies.

On the team or department level, the indicator of food norms represents the type of food practices adopted by employees on a team, departmental or group level. Similar to the data used at the organisational level of analysis, the data used for this
level of analysis can be either objective (formal organisational written policies) or subjective (perception of employees), depending on what is available to the researcher.

And on the individual level, we will have the indicator of individual food practice. Indicators at this level of analysis represent the type of food practices adopted by each individual employee. The data used for this level of analysis is likely to be subjective in nature, however, as this level concerns the behaviours of individual employees. Nevertheless, objective data may still be obtainable if information such as the type of food and drink usually consumed by a specific person is available via sources such as invoices and bills.

Having defined the theoretical definition of organisational food culture, I shall turn to the next section: the proposal of the theoretical dimensions of organisational food culture.

2.4 Four dimensions of organisational food culture

Four dimensions of organisational food culture on the policy level shall be discussed in this section: provision of food and organisational function policy, accessibility of food policy, hierarchical policy, and time policy. The relevant articles are reviewed and discussed in this section under the subsections dedicated to the discussion of each of the four dimensions. For the ease of discussion, I shall just refer these dimensions as “dimensions of organisational food culture” in the following parts of the paper instead of “dimensions of organisational food culture on the policy level”.

Together with the theoretical definition of organisational food culture that was defined in the preceding paragraphs, the four dimensions of organisational food culture and the definition of organisational food culture form a formal theoretical
construct on which future researchers can base their study of organisational food culture.

2.4.1 Provision of food and organisational function policy

“Food provision” refers to the employing organisation subsidises or pays for food items consumed by employees. For example, while this can take the form of the owner of a firm providing lunch for all the employees, it can also take the form of the subsidisation of the costs incurred by an organisation’s executives to entertain clients in restaurants. In addition, although organisations may hold many types of function a year that may or may not involve food, in this paper, an “organisational function” shall refer only to those formal organisational events that involve food.

Firstly, organisations have different functions held by their members on a regular basis for different purposes. For example, while some functions held by organisations are rituals aimed to improve the bonds between employees (Thomson & Hassenkamp 2008), others are ad hoc ceremonies meant for the celebration of significant events (Harris 1994; Meek 1988). Such organisational functions are likely to have an influence over employee food practices and, depending on an organisation’s food culture, the actual impact of this influence is likely to be different.

For example, in an organisation where some employees have special medical needs, the food provided has to accommodate such needs (Buckley, Denton, Robb & Spencer 2006; Ko, Chan, Yeung, Chow, Tsang & Cockram 2001; Pomerleau et al. 1997). Hence, food such as vegetarian food may also be provided in some functions’ buffets.

According to Wansink (2004), while the provision of tasty food may not necessarily increase the volume of a person’s food consumption, the variety of food
made available to a person tends to increase that person’s food consumption. For example, it is reported in Wansink (2004, pp. 465-466) that:

“Rolls and her colleagues have shown that if consumers are offered an assortment with three different flavors of yogurt, they are likely to consume an average of 23% more yogurt than if offered only one flavor [Rolls, Rowe, Rolls, Kingston, Megson & Gurnary 1981]. This basic notion that increasing the variety of a food can increase the consumption volume of that food [Miller, Bell, Pelkman, Peters & Rolls 2000; Rolls 1986] has been found across a wide range of ages [Rolls & McDermott 1991] and across both genders [Rolls, Andersen, Moran, McNelis, Baier & Fedoroff 1992; Rolls, Castellanos, Halford et al. 1998].

Recently, Kahn and Wansink have shown that simply increasing the perceived variety of an assortment can increase consumption [Kahn & Wansink 2004]. In one study they gave people an assortment of 300 M&M candies that were presented in either seven or ten different colors. Although the taste of each colors was identical, those who had been given a bowl with ten colors ate 43% more (91 versus 64 candies) over the course of an hour than those who had been given seven colors. Further evidence of how perceived variety (versus actual variety) can influence consumption was shown when people were offered either organized or disorganized assortments of six flavours of 300 jelly beans. Those offered the disorganized assortments rated the assortment as having more variety, and they ate 69% more jelly beans (22 versus 13) than those offered the organized assortment of identical flavours [Kahn & Wansink 2004].”

- Wansink (2004, pp. 465-466)
Hence, the variety of food served can cause a person to eat more than usual. If this is the case, in an organisation where the variety of food provided for functions involves more vegetarian food, which is supposed to be healthier, to accommodate the needs of some employees, the food practices of its employees in general can be anticipated to be healthier. Since employees will be exposed to a variety of food at such functions anyway, the eating of more vegetables rather than eating only more meat will likely do them more good than harm.

Secondly, other than organisational functions, food is also used in organisations for networking purposes. Networking in organisations can be divided into two types: internal social networking and external social networking.

By “internal social networking”, I refer to the intra-organisational actions that employees take either to build new relationships with their colleagues or to strengthen the current bonds that they have with their colleagues. In the process of internal social networking, food is frequently used as a tool to create opportunities for social interaction. For example, newcomers to an organisation may treat their new colleagues to lunch to create a positive first impression of themselves. In addition, employees may also bring their own food to share with their colleagues during work (Driver 2008; Thomson & Hassenkamp 2008) or go out together for a drink or dinner after work (Flores-Pereria, Davel & Cavedon 2008). In organisations that emphasise teamwork, it would not be unusual for them to subsidise the costs incurred in internal networking.

On the other hand, “external social networking” is performed by employees to secure the relationship they have, or want to have, with external parties who are not part of the firm. For example, in an organisation that places a primary focus on the building of long-term relationships with their clients or partners, employees are
usually encouraged to maintain a close yet professional relationship with such external parties. For such organisations, it is not unusual for them to subsidise their executives to entertain their clients in posh restaurants, as part of the organisation’s image management and networking strategy (Gioia, Schultz & Corley 2000; Dutton & Dukerich 1991). For instance, it was cited in Cunha et al. that:

“Every weekday, some 38,000 Pfizer Inc. sales reps fan out around the globe. Armed with briefcases full of free drug samples, reams of clinical data, and lavish expense accounts for wining and dining their quarry, the reps infiltrate doctors’ offices and hospitals. Their goal: to persuade medical professionals the world over to make Pfizer drugs the treatment of choice for their patients’ aches and pains. (Barrett, 2005: 51)”

- (Cunha et al. 2008, p. 945)

Given this, it is expected that the networking events of organisations will also have an influence on employee food practices, which will potentially influence employee health in the long term. However, depending on the policy of the organisation, the nature of such influence is likely to be different. For example, an organisation may refuse to subsidise the expenditure of employees if they choose to have their weekly dinner gathering in fast food restaurants.

Based on the above discussion, it should be clear that the food provision and organisational function policy of organisations should be an inseparable part of its food culture. Hence:

**Proposition 1:** The food provision and organisational function policy of an organisation is a part of its organisational food culture.
2.4.2 Time policy

Although fundamental to our daily lives and most scientific research, many people still have a hard time formally defining what “time” is. This may be the reason why some scientists such as Connes, Heller, Majid, Penrose, Polkinghorne and Taylor (2008) have suggested that many scientists take the definition of the concept of “time” for granted in their research. However, the reality is, we still do not know exactly what time really is. Nevertheless, for the purpose of this research, we can take “time” to be “a way to distinguish between different points and events, and had no extra existence” (Connes et al. 2008, p. 2). In layperson’s terms, based on our usual understanding and the linguistic usage of time in our usual daily lives, it just means “when does something happen”.

Hence, by “time policy”, I just refer to the length and flexibility of time an organisation allows its employees to have for lunch or breaks. In layperson’s terms, it just means “when you go for lunch [or breaks], how long you will have, and whether you can choose when to go”. Alternatively, one may also call it meal time policy.

Organisations have different meal time policies. For example, firms that do not have their own cafeteria, and are not situated near to any food vendors, may have longer meal or break times to allow their employees to travel to cafeterias situated further away from their office compounds. However, for those firms that do have cafeterias, employees are more likely to have shorter meal or break times. In addition, in some organisations, multiple time slots for breaks may be given to employees, while others may also allow employees to freely choose their breaks without any time restriction.

Though subtle, the implementation of different time policies in organisations is likely to give rise to different organisational food cultures, which will influence
employee food practices differently, and hence cause different impacts on employee health in the long term.

Firstly, an organisation’s time policy will influence the amount of time that a person has to consume his/her meals (after discounting the time that needs to be spent by the person travelling from the workplace to the cafeteria). When the time available for meals is not long enough, it may cause an individual to eat faster than their usual speed of eating. This may cause a person to eat more than their usual portions (Singh et al. 2008).

Secondly, an organisation’s time policy will influence the type of food a person is more likely to choose to eat during breaks. The nature of the influence of this effect depends on the environmental context that the person works in. For example, if a person works in a place surrounded only by fast food restaurants, a shorter time policy will likely cause that person to have a higher tendency to eat in fast food restaurants almost every working day. This is likely to have a negative impact on that person’s health in the long term.

A study was conducted by the National University of Singapore Saw Swee Hock School of Public Health and the University of Minnesota to observe the influence of dietary style on the health of Chinese Singaporeans:

“About 53,000 were surveyed to look at the association of Western fast food with coronary heart disease mortality in Chinese-Singaporeans, and 43,000 for incidence of type 2 diabetes.

Researchers analysed data from men and women aged 45 to 74 who enrolled in the Singapore Chinese Health Study between 1993 and 1998.

A detailed survey was done on the diet and health of these participants… Follow-up interviews were conducted between July 1999 and October 2004 to
find out if they had been diagnosed with diabetes. Researchers also checked the Registry of Births and Deaths to find out participants’ cause of death, up to the end of 2009.

An analysis of the results revealed that those who ate fast food at least twice a week had a 27 per cent increased risk of developing type 2 diabetes compared to those who did not.

They also had a 56 per cent greater risk of dying of coronary heart disease.

Of the 811 who ate fast food at least four times a week, 17 died of heart disease.

This group was nearly 80 per cent more at risk of dying of heart disease compared to those who did not eat fast food.

Factors like age, sex, body mass index, smoking status and educational level that could affect a person’s likelihood of getting diabetes or dying of heart disease were adjusted to have minimal effect…”

- (Pang 2012, p. A3)

Hence, if a person works in a place that is surrounded by mainly fast food restaurants, and has to eat fast food many times a week, it is likely that their health will be affected adversely sooner or later.

However, if a person works in a place that is surrounded by healthy food sellers, it is likely that a shorter time policy may cause that person to have a higher tendency to eat healthily. This is likely to have a positive impact on that person’s health in the long term.

Thirdly, an organisation’s time policy may influence the sources of food available to the employees working in an organisation. For example, if the allowed lunch time period is short, and an employee has already gotten sick of the food that is
sold around the organisation’s complex or when they just do not like what is sold in the nearby food shops, they might bring their own food to work. The effect of this potential employee reaction on their health in the long term will depend on that person’s personal food practice. For example, if a person chooses to bring salads because there are only fast food restaurants in the organisation’s surrounding area, it is likely that the person’s health will be positively influenced by the short time policy in the long run. However, if a person chooses to bring fried food prepared at home because only vegetarian food is sold in nearby locations, it is likely that the person’s health will be negatively influenced by the short time policy in the long run.

Fourthly, the time policy will also influence whether employees can go for lunch or breaks together. For example, if employees are forced to go for lunch during different time slots that change monthly to handle the extremely heavy workload in an organisation, it is likely that employees will not have many chances to eat together.

As meals with more people will tend to take longer (De Castro 2000; De Castro & De Castro 1987; Wansink 2004) and tend to increase the variety and amount of food items that may appear during a meal and be shared amongst employees, an organisation’s time policy is also likely to influence an employee’s health via its influence on the quantity of food that is usually consumed by that person (Wansink 2004).

Finally, it is reported in the literature that the frequency of meals that a person consumes throughout a day is found to be inversely associated with the probability of the person overeating (Gatenby 1997; Metzner, Lamphiear, Wheeler & Larkin 1977). Hence, if an organisation can implement multiple, but short, breaks, this may result in healthier individual food practices too.
Based on the above discussion, we can see that an organisation’s time policy will also have an influence on an employee’s food practices. As organisations may have different time policies in place, it may give rise to different organisational food cultures across different organisations. Hence:

**Proposition 2:** *The time policy of an organisation is a part of its organisational food culture.*

### 2.4.3 Hierarchical policy

Hierarchy refers to the system of how power and status are allocated to employees in an organisation, and how they are treated differentially (Harris & Raviv 2002; Mahoney 1979; Thompson 1961). In organisations that have a strong hierarchical system, the psychological distance between superiors and subordinates will be larger than those that have a weaker hierarchical system.

For example, in organisations that have strong hierarchical systems, such as the military, the difference in rank between individuals is emphasised. Individuals wear their ranks on their uniforms in a conspicuous manner, and individuals from lower ranks are expected to greet or salute those higher in rank from far away. If not, sometimes punishments, in the form of physical exercise, may be meted out. In addition, while individuals of higher rank can address individuals of lower rank by name, the opposite scenario is not usually allowed: individuals of lower rank are usually expected to address their superiors in terms of their rank or official terms such as “sir” or “madam”.

On the other hand, in organisations that have a weaker hierarchical system or that try to downplay the importance of the hierarchical system in their bid to improve
communication between staff members, such as in academia, the psychological
distance between staff members will be much shorter.

For example, although the status of a “director”, “department chair”, “professor”,
“associate professor”, etc., are significantly different in terms of the authority that
each individual holds or the salary they get, one will never see academics wearing a
tag or symbol to reflect their position conspicuously. Although academics also greet
each other when they meet, it is not rare for senior faculty members to take the
initiative to greet junior faculty members if the juniors did not see the seniors coming
their way. Even when such situations occur, the junior faculty members will not be
punished in any way. In addition, instead of addressing each other in terms such as
“madam” or “sir”, academics will usually address each other directly by name.

The differences between a very hierarchical organisation and one that is less
hierarchical are similar to some of the differences found when a mechanistic
organisation is compared to an organic organisation, as organisations that have a tall
hierarchy and strict hierarchical structure and policy are usually organisations that are
categorised as mechanistic organisations, while those organisations that have a flatter
hierarchy and looser hierarchical structure and policy are usually organisations
categorised as organic organisations (Robbins et al. 2008).

In addition, organisations that are older and more established should have a taller
hierarchical structure, and a stricter hierarchical policy. According to Daft (2007),
when an organisation grows, it will have to handle more issues and more external
agents, causing it to recruit more people to handle the increasingly heavy workload.
To make sure that the organisation can handle such increases in manpower over time,
a hierarchy is built into it to make sure the whole organisation can run in a systematic
and efficient manner.
For example, it was mentioned by Stone (2010) that companies will usually look at their forecasted and desired sales performance levels before making decisions on their human resource inventories. The higher the sales performance level an organisation wants to achieve, the more people it will need in the coming year.

When more people are recruited, the organisation will need mechanisms to control and direct its human resources efforts in the right direction to help the organisation achieve its goals in the most efficient and effective way. One such mechanism is the use of hierarchical policy, or what some people would call “bureaucracy” (Daft 2007), to delineate a clear authority and reporting structure. Hence, when an organisation becomes more established, it is likely that its business will grow. When its business grows, it will have to recruit more people. And when it recruits more people, it will become hierarchical. In some sense, despite negative effects, such as “red tape”, which are usually attributed to mechanistic organisations (organisations that have a tall hierarchical structure), hierarchical policy is actually required for an organisation to grow and survive.

To support an organisation’s hierarchical structure, an organisation will usually implement other hierarchical policies to ensure that the authority of those higher up in the hierarchy is obeyed by those below.

For example, towards this end, artefacts such as rank, job titles, office space, view from the office, organisational vehicle for managerial personnel, etc., are employed by some organisations to constantly remind staff of the power difference that exists between employees who are situated at different “spots” along the two ends of an organisation’s hierarchy. This is also a way to motivate those in the lower tiers of the hierarchy to work harder to climb the corporate ladder if they want to enjoy similar benefits and perks.
Although the national culture study by Hofstede proposed that national cultures can differ on the dimension of power distance, and many authors have proposed that power distance is not usually high in many Western countries (for e.g., see Robbins et al. 2008), hierarchical policies are also used by many Western organisations to support their hierarchical structure. For example, the pay difference between the top management team and those on the lower tiers of the corporate ladder is usually very high, and features such as private jets are usually “organisational artefacts” available only to top managerial personnel, such as CEOs (Oliver & Goodwin 2010).

One hierarchical policy used by many organisations should be considered as related to its organisational food culture; that is, in firms where hierarchical structure is emphasised, the organisation also may have different hierarchical food policies for employees of different rank.

For example, features such as an executive dining room or dedicated eating space may be provided to distinguish people who are higher up in the organisation’s hierarchy from other employees (Cunha et al. 2008), and personal chefs may also be allocated to employees on the higher tier of an organisation’s hierarchy. For instance, according to Schein (1999), in the 1960s, a large aerospace firm, Northrop, had three different types of dining room for employees of different rank.

In addition, related to the food provision and organisational functions policy, as employees of higher rank will usually need to entertain clients who are also at the higher end of their organisation’s hierarchy, a bigger budget may be allocated to them to treat their clients to meals.

For example, in a private conservancy with a senior executive from an American multinational company, he mentioned that for most of his business dealings with Japanese firms, he had to start with a formal presentation to the Japanese company’s
management. If he could not capture the CEO’s interest in the first 15 minutes, the CEO might walk out of the office while leaving behind the other managers to continue to listen to the presentation. If this happened, he could forget about going back to the same company again in the foreseeable future. However, if the interest of the CEO was captured throughout the presentation, then the Japanese firm would send a representative who is of equivalent rank to discuss the actual business deal with him over dinner, and most probably also over a few cups of Japanese rice wine.

Hence, it is corollary that any organisation that is really interested in doing business with other similar organisations should expect to give their higher rank employees higher budgets to entertain their clients.

For example, in countries such as China, it is expected by the executives of many companies to be treated at restaurants with food and beverages that are “in tier with their rank”. This will usually mean more expensive restaurants for higher rank personnel. As what Cunha et al. (2008, p. 946) said in their paper, “[f]ine food is reserved for people who think themselves fine, while simple food feeds simple people”. For instance, if a CEO is treated to the same restaurant with wine and food in the same price range as would be given to a manager of another company, it is likely that the deal will be called off as this may be perceived as a form of insult to the CEO. This is analogous to “demoting” them to a lower status, as food at such events might be taken as a representation of one’s status (Cunha et al. 2008). This is even more likely to happen if the insulted CEO’s organisation has more advantages in terms of the business deal being negotiated.

On the other hand, smaller firms, with fewer resources and without the same emphasis on hierarchical structure and policy of big organisations, are less likely to have hierarchical food policies in place.
For example, bootstrap entrepreneurs are likely to face challenges in getting even enough resources to meet the financial needs of the organisation at the end of every month (Frederick & Kuratko 2010). Given this, although they may need business from some other big organisations, it is not possible for them to have large budgets for business meals. For some, they might not even be able to come up with such budgets at all.

Hence, based on the discussion in this subsection, we can expect that organisations with different organisational and business contexts will have differing food policies in place. This is likely to give rise to different individual food practices on the part of their employees, which will likely also create different influences on employee health. For example, senior executives who usually dine with their clients using bigger budgets are more likely to be able to choose food items prepared using the best ingredients, and cooked in the best way, to ensure that the food presented to clients will not only be tasty when cooked, but also healthy for the eater. This is likely to cause these senior executives to have healthier food practices in the long term than lower level executives who do not enjoy budgets as large as those given to those at the top of the organisation’s hierarchy. Hence:

**Proposition 3:** The hierarchical policy of an organisation is a part of its organisational food culture.

### 2.4.4 Accessibility of food policy

“Accessibility of food” refers to the proximity of food vendors and the ease of acquiring food for employees of an organisation. It is influenced by several organisational policies. For example, it can be influenced by an organisation’s decisions on the location of their office sites.
When an organisation begins operating, it has choice about the location where it is to be situated (Delios & Beamish 2004; Fox & Lee 1996). Although the variety and accessibility of food available in its proximity is largely an outcome of market forces and public policy, organisations have influence over the accessibility of food via their choice of location for their office compound. In addition, even if we take into consideration of more advanced ways of acquiring food, such as ordering food online or via phone (Lennon, Ha, Johnson, Jasper, Damhorst & Lyons 2009), an organisation’s location will still affect employees’ accessibility to food as some food delivery services do not deliver to specific locations or to places too far away from their physical stores. Thus, accessibility to food for employees is influenced by organisation policies related to the location of their business.

In addition to the choice of an organisation’s physical location, organisations are also able to influence their employees’ accessibility to food via two other types of policies: those related to the running of an organisation’s “in-house canteen”, and those related to vending machine placement in the organisation’s physical compound.

In many circumstances, it is not completely up to the organisation’s preference when choosing its ideal spot to set up an office. For example, although an entrepreneur might want to set his/her office up in the central business district to gain potential access to the bigger customer base there, the price may be beyond what the entrepreneur can afford or there may just be no vacancy available for the entrepreneur in the foreseeable future.

Moreover, in most circumstances, it is unlikely that organisations are going to consider factors such as what is available for lunch for employees in the surrounding environment when they are choosing the location for setting up their office or shop. This is simply because nobody will really set up a business at a location just to be able
to eat a certain type of food during lunch or dinner. Instead, people set up businesses to either pursue a business opportunity, or to earn themselves a living (Frederick & Kuratko 2010). As such, it is more likely that organisations will consider factors such as rental price, customer reach, traffic flow, and accessibility to suppliers than for them to consider their accessibility to healthy food if they set up an office in a certain location.

Nevertheless, under such circumstances, organisational policies can still influence employee food practices via their stand on how accessible food items are within an organisation. For example, many organisations dedicate a certain amount of space for external food vendors to bid for stall ownership for a period of time to sell food to their employees. Typical examples of such organisations would be schools, universities, military facilities, and companies that are not located near to any external eateries or shopping malls. For these organisations, there is potential to influence the type of food made available to their employees via their policies on choosing external vendors, and the regulations that they impose on external food vendors. For example, an organisation can potentially influence its employees’ food practices by making sure that the food vendors who operate in its canteen always display the relevant nutritional information about the food that they sell, as the display of such information may cause employees to make healthier food choices during their purchases (Glanz & Mullis 1988).

Even if the organisation’s compound is not big enough to house an in-house canteen, it is still possible for the organisation to influence their employees’ food practices via the placement of food-vending machines. Wansink reported in his review that:
“Simply seeing (or smelling) a food can stimulate unplanned consumption
[Boon, Stroebe, Schut & Jansen 1998; Cornell, Rodin & Weingarten 1989]…

Recent physiological evidence suggests that the visibility of a tempting food can
enhance actual hunger by increasing the release of dopamine, a neurotransmitter
associated with pleasure and reward [Volkow, Wang, Fowler et al. 2002].”


Hence, the food practices of employees who work in an organisation with more
fruit-vending machines are likely to be healthier than those who work in an
organisation with more snack-vending machines, with snacks such as chocolate bars,
as they will be likely to eat more fruit than snacks.

Even if these organisational practices are not available to an organisation due to
its lack of size, it is still possible for it to set up a simple water point to encourage
employees to drink more water rather than soft-drinks bought from shops outside of
the office. This is also likely to have a positive influence on employee food practices.

Based on the discussion above, we can see that several types of accessibility of
food policies can influence the health of employees via their influence on the
employees’ food practice. Hence:

**Proposition 4:** The accessibility of food policy of an organisation is a part of its
organisational food culture.

**2.5 Summary**

The literature of cultural research and organisational culture research had been
reviewed in this chapter. Then, a formal definition of organisational food culture was
presented, and four dimensions of organisational food culture were proposed; namely,
provision of food and organisational function policy, accessibility of food policy, hierarchical policy, and time policy. Together, the definition of organisational food culture and the proposed four dimensions of organisational food culture form a theoretical construct of organisational food culture. Based on the theory proposed in this chapter, the theoretical construct was operationalised and tested empirically.

The methodology of the process used for the operationalisation of the theoretical construct of organisational food culture and the testing of it empirically is the focus of Chapter 3.
CHAPTER 3 – METHODOLOGY

3.0 Introduction

In Chapter 2, culture was defined as a set of beliefs, values, and norms learnt and shared by a group of people via their common experiences (Barney 1986; Hofstede 1998; Mennell et al. 1992; O’Reilly 1989; O’Reilly & Chatman 1996; Schein 1992). Being a specific type of culture, organisational culture was defined as the collective values, beliefs, practices and policies (artefacts) of an organisation’s employees (Barney 1986; Hofstede 1998; Mennell et al. 1992; O’Reilly 1989; O’Reilly & Chatman 1996; Schein 1992). As organisational food culture, in turn, is a specific type of organisational culture, organisational food culture was defined as the set of beliefs, values, norms and organisational practices and policies related to the food practices of the organisation and its employees.

Based on the literature, a theoretical construct of organisational food culture that is made up of these four dimensions was proposed: (1) provision of food and organisational function policy, (2) accessibility of food policy, (3) hierarchical policy, and (4) time policy.

This paper is made up of two parts: the first part has proposed a theoretical construct of organisational food culture; that is, it is about theory building. This was done in Chapter 2. The second part proposes a parsimonious empirical construct of organisational food culture. Essentially, the second part of the paper is a preliminary effort to operationalise and test an empirical construct of organisational food culture.
based on the theory proposed. The methodology that has been used for this process is the focus of the discussion of this chapter.

This chapter discusses the methodology adopted for the building and testing of the empirical construct of organisational food culture: the research paradigm of the empirical research is first discussed, followed by the relevant research ethics issues, and then the data collection and analysis method chosen for this study.

3.1 Research paradigm

Modern research can be broadly categorised into two categories, depending on the main type of data collected during the research; these being: quantitative research and qualitative research. The differences between these two types of research go beyond the type of data usually collected by researchers who adopt either one of these approaches, and involve differences in the fundamental beliefs of researchers about the nature of our world, and what constitutes scientific research. That is, the difference between quantitative and qualitative research is not merely that in quantitative research, the researcher tends to collect data in numbers and analyse the data using statistical tools, while in qualitative research, the researcher tends to collect data in words, and tend to analyse and report the data collected using a quasi-story-telling reporting style: the main difference lies in the “fundamental philosophy” underlying each research paradigm. Hence, to some researchers, it is not advisable to use a research method made up of a mixture of both qualitative and quantitative approach because of such “fundamental differences” (Easterby, Thorpe & Lowe 1991).
In general, quantitative research tends to be categorised under the “positivism” paradigm of research, and qualitative research tends to be categorised under the “interpretivism” or “constructionism” paradigm of research (Neuman 2006). That is, most quantitative researchers tend to be positivists, and most qualitative researchers tend to be interpretivists. Hence, some authors such as Neuman (2006) have essentially used the terms “positivist” and “quantitative researcher” interchangeably, and the terms “interpretivist” and “qualitative researcher” interchangeably. Given this, in this paper, for the ease of discussion, positivists are assumed to be quantitative researchers by default, and interpretivists are assumed to be qualitative researchers by default.

Each of these two paradigms has its own distinctive ontological and epistemological stance, and each of these research methodological categories has its own strengths and weaknesses. By “paradigm”, I refer to the “general organizing framework for theory and research that includes basic assumptions, key issues, models of quality research, and methods for seeking answers” (Neuman 2006, p. 81); that is, it is the philosophy behind a particular research methodological category. These two paradigms are discussed in the following paragraphs, before I justify the adoption of the positivism paradigm for this research.

### 3.1.1 The positivism paradigm

According to Neuman (2006), positivism is the paradigm that most people might consider to be scientific research in general. In Neuman’s (2006, p. 82) words, it is “an organized method for combining deductive logic with precise empirical observations of individual behavior in order to discover and confirm a set of probabilistic causal laws that can be used to predict general patterns of human
activity”, and positivistic researchers “prefer precise quantitative data and often use experiments, surveys, and statistics…”[and t]hey seek rigorous, exact measures and “objective” research, and they test hypotheses by carefully analyzing numbers from the measure.” Although it may sound plausible to some readers, this stand on positivism by Neuman (2006) is only partially right.

This is because although it might be true that positivists tend to be quantitative researchers, it is not true that all of them are trying to find the causal laws behind human activities. For example, it is already widely known in correlation studies that a correlation is not the same as a causal relationship, and sometimes researchers are really just trying to look out for the tendency of one event to be accompanied by another event, and not whether one of these events caused the other. Although the “thing” that these researchers are looking out for in their research may be the “law” underlying the phenomenon that is being studied, such as if A will always be observed with B, the relationship that is being investigated in such circumstances is just a correlation, but not a causal relationship.

Nevertheless, Neuman (2006) is right that positivism is the research paradigm that most people may consider to be scientific research in general. This is because the approach towards research adopted by most positivists is similar to that adopted by most natural scientists – the type of “science” that most members of the public take to be “science” (Neuman 2006).

For example, astronomers, who are essentially physicists, will usually conduct their research by first proposing a theory [or hypothesis], and then go ahead to collect data to confirm the theory’s validity (Chaisson & McMillan 2008). Nevertheless, although a “theory can be invalidated by a single wrong prediction… no amount of
observation or experimentation can ever prove it “correct”” (Chaisson & McMillan 2008, p. 7).

Such a stand on what constitutes scientific research in natural science is very similar to what quantitative researchers are doing in general; that is, first, quantitative researchers will come up with some hypotheses or propositions based on the literature, and then test for them using the empirical data collected. If the empirical data are supportive of the hypotheses made, the hypotheses can be accepted by the scientific community for the time being. However, further confirmatory studies need to be carried out to attempt to falsify the findings of the research for such studies to be called scientific. Hence, given the similarity between quantitative researchers and natural science researchers in terms of their approach towards research methodology in general, it is no wonder that most of the public take positivistic research to be scientific research.

In general, the central belief of positivism is that “the social world exists externally, and that its properties should be measured through objective methods, rather than being inferred subjectively through sensation, reflection or intuition…[and] knowledge is only of significance if it is based on observations of this external reality” (Easterby et al. 1991, p. 22).

Hence, in positivist research, the researcher is required to remain independent of “what is being observed” (Easterby et al. 1991, p. 23). That is, during data collection, the researcher should not influence potential replies that participants may give in response to the questions posted to them, and during data analyses, the researcher must not impose their opinions or views onto the data. For example, although the researcher is required to report and discuss what they have found after statistical analyses are done on a set of quantitative data, they must not wilfully manipulate the
data to make them reflect the “reality” they believe the data should reflect to make their findings as significant as intended.

In addition, in positivist research, research is required to be value-free. In the words of Easterby et al. (1991, p. 23), this means that “the choice of what to study, and how to study it, [must] be determined by objective criteria rather than by human beliefs and interest”. That is, “scientific knowledge [should not be] based on values, opinions, attitudes, or beliefs” and should be “free of personal, political, or religious values” (Neuman 2006, p. 86).

In layperson’s terms, this just means that when a person decides to conduct research, their aim should be to contribute to knowledge. The research should be about theory building and contributing to theory, and for the research to be scientific, it should not be motivated by personal desires, opinions, political views, etc. (Kerlinger & Lee 2000).

In terms of ontology, positivists can be deemed to believe that there is an objective reality in this world. Analogous to laws of physics, such as Newton’s laws – a set of laws that describe the way objects should interact in general and which stay as is, regardless of how people think about them – positivists believe that similar laws should also exist between human interactions. Positivists appear to believe that there should be a set of “rules” that individuals can use to describe and anticipate how people will behave, or tend to behave, when faced with certain circumstances, and that such “rules” exist in reality regardless of whether other people believe in the existence of such “rules” or not.

Given such beliefs about “how the world works” (ontology), positivists believe that knowledge of such “laws” can be derived via the research they conduct, as long as some appropriate measures are practised during the conduct of such research. This
belief relates to the general practices that guide the epistemology of most positivistic research.

Positivists believe that knowledge about “objective reality” can be derived via well-designed research, and by well-designed research, they refer to research that has attributes such as being independent of the researcher and being systematically controlled (Neuman 2006). Hence, quantitative research is typically preferred by positivists as it is usually conducted in a systematic and orderly manner and is usually independent of the researcher.

In quantitative research, the process is usually well-planned: issues such as the type of data to be collected, the type of data collection tools to be used, the type of participants to be approached, how participants will be approached, the type of statistical analytical tools to be used, etc., are usually all planned out beforehand. Thus, quantitative research is generally conducted in a systematic and orderly manner.

When it comes to data collection and analysis, as quantitative researchers are not supposed to influence the responses of participants in one way or another and have to abide by strict established rules when it comes to statistical analyses, these processes are independent of the researchers – given that the researcher cannot influence the outcome of these processes towards their preference.

These features of quantitative research allow positivists’ aim of learning more about the “objective reality” of the world to be achievable with relative ease by facilitating the conduct of follow-up research, such as confirmatory research, by other researchers. This is because if a relationship found in a single study is “true”, it should be able to remain “true” in future confirmatory studies, and the use of a systematic process facilitates the conduct of such follow-up studies. Again, hence most positivists are quantitative researchers.
According to Easterby et al. (1991, p. 32), the strengths of quantitative methodologies are “they can provide wide coverage of the range of situations; they can be fast and economical; and, particularly when statistics are aggregated from large samples, they may be of considerable relevance to policy decisions.” However, the weaknesses of such an approach are “these methods tend to be rather inflexible and artificial; they are not very effective in understanding processes or the significance that people attach to actions; they are not very helpful in generating theories; and because they focus on what is, or what has been recently, they make it hard for the policy-maker to infer what changes and actions should take place in the future” (Easterby et al. 1991, p. 32).

3.1.2 The interpretivism paradigm

Researchers who adopt an interpretivism paradigm, or constructionism paradigm, for their research are usually qualitative researchers (Neuman 2006). In contrast to the ontological view of positivists about the existence of an “external reality”, interpretivists believe that:

“…the social world is largely what people perceive it to be. Social life exists as people experience it and give it meaning… [Interpretivists] assume that the interactions and beliefs of people create reality. There is no inner essence that causes the reality people see; it is a product of social processes”

- (Neuman 2006, p. 88)

Similar to what Erving Goffman proposes in his famous book The presentation of self in everyday life (Goffman 1959), interpretivists essentially propose that whatever “thing” a person observes, or believes they have observed, should not be taken to be a part of “reality”. The thing that was observed, in fact, is likely to be what a person
wanted another person to observe, and what the observer believes that they had observed.

Analogous to what Goffman (1959) proposed, interpretivists propose people will do whatever they can to manage the impression they want others to have about them. For example, to make themselves look ethical and socially responsible, many firms are involved in “green-washing” to make themselves look environmentally concerned when the owners of these firms might in fact be people who do not believe in such things as corporate social responsibility at all (Frederick & Kuratko 2010). However, when these firms’ actions are observed by another party, the impression that the other party will have of the acting firms will be dependent on how they interpret these actions. For instance, some people will tend to see these actions as “green-washing” and will call the firms involved unethical as they believe these firms are pretending to be something that they are in fact not, while other people may believe that the firms’ acts are acts that were genuinely done to protect the environment and will see these firms as socially responsible.

That is, interpretivists believe that there is no such thing as an “objective reality”: instead the “reality” that people usually see in their daily lives is just an artificial product of people’s acts and people’s interpretation of these acts. This ontological stance of interpretivists may be the reason why interpretivist researchers tend to prefer qualitative research methodologies (Neuman 2006).

Interpretivist researchers tend to have the epistemological stance that knowledge about the social world is produced by the interactions of individuals (Neuman 2006). Specifically, as discussed above, they believe that knowledge about the social world is essentially the interpretation or perception of each other’s actions and, potentially, also the intention of, and reason behind, those actions – and really there is no such
thing as “external objective reality”. Thus, knowledge is essentially what one believes one has learnt. Such a belief about the nature of the knowledge that can be obtained by individuals, whether in their daily lives or in research, is very similar to that found in qualitative research and is reflected in the type of data usually gathered via qualitative research methods.

In qualitative research, researchers rely on research methodologies in which their own personal involvement plays a very important part. For example, in in-depth personal interviews and focus groups, the experience and skill of the researcher who conducts the research are deemed to be important as the way participants will react, and hence the type of data that will be collected in the process, depends on issues such as how the researcher has led the discussion, the degree of involvement by the researcher, whether a rapport has been built in the process between the researcher and the participants, and so on. (Adler & Clark 2008; Neuman 2006). When it comes to the data analysis, the researcher reports what they believe that they have observed, or found out, via the data-collection process, or from the data collected.

In addition, in qualitative research that uses methods such as ethnography, the researcher is the one who decides what should be observed, and what should be reported. Essentially, it is analogous to being a storyteller: the researcher goes to a place where a story happens and then tells the story to the rest of the world in the name of ethnographic research. To the extent that the researcher is the person who provides the information that will be used in the research as data, the researcher is essentially a participant during the process in which the research is conducted. In such cases, the report of the research is nothing more than the researcher’s perceptions and interpretations of what has happened.
As such an approach towards research is similar to the epistemological stance of interpretivists in general, interpretivist researchers tend to be qualitative researchers. As qualitative researchers, interpretivists tend to derive their theory inductively (Bansal & Corley 2012), and base their research on logic in practice, rather than relying on the deductive logic and reconstructed logic usually used by quantitative researchers (Neuman 2006). These differences are most visible in the way research is conducted by quantitative researchers and qualitative researchers.

Firstly, the most visible difference between the use of inductive logic by qualitative researchers and the use of deductive logic by quantitative researchers is in the way their research is generally conducted and how their reports are generally crafted (Neuman 2006).

Quantitative researchers who use deductive logic tend to start their research formally by doing a literature review, then coming up with a theory on the topic via this literature review process, and formulating their hypotheses or propositions based on the theory developed, before collecting data to test their hypotheses or propositions, and hence their theory, empirically. That is, they have to come up with a theory first, and then test it.

On the other hand, qualitative researchers who use inductive logic will tend to start their research with some research questions that they have in mind. Then they will start their research formally by collecting data, analyse their data, and then try to come up with a theory at the end of the research. To make their contribution more significant, some qualitative researchers may also choose to do a literature review at this stage of their research to illustrate how the theory proposed has contributed to the current base of scientific knowledge. To do this, some qualitative researchers may choose to review the literature of several existing theories with some similarities to
the theory generated by their research to illustrate the significant contribution made by
the development of their theory to the current base of scientific knowledge.

Secondly, the most visible difference between reconstructed logic and logic in
practice is also in the way research is conducted and reported by the quantitative
researchers and qualitative researchers (Neuman 2006).

When reconstructed logic is used by a quantitative researcher, the research will
be carried out orderly; that is, the research is likely to be well planned, the literature
review done well, and so on, and when the report is written, it is also likely to be
highly structured and planned out. In Neuman’s (2006) words, reconstructed logic is:
“a logic of research based on reorganizing, standardizing, and codifying research
knowledge and practices into explicit rules, formal procedures, and techniques”.
- (Neuman 2006, p. 151)

On the other hand, when logic in practice is used by a qualitative researcher, the
research may be carried out in an almost haphazard way, at least on prima facie.
In Neuman’s (2006) words, logic in practice is:
“… the logic of how research is actually carried out. It is relatively messy,
with ambiguity, and is tied to specific cases and oriented toward the
practical completion of a task. It has fewer set rules and is based on
judgment calls or norms shared among experienced researchers. It depends
on an informal folk wisdom passed among researchers when they get
together over lunch or coffee and discuss doing research.”
- (Neuman 2006, p. 151)

In general, qualitative research has been claimed by researchers to have
strengths in understanding the meanings that people attribute to certain issues,
in being able to adapt to new ideas or theories found in midst of a data
collection process but not found at other earlier stages of the research, and in being able to contribute to the development of new theories that were previously not well researched (Easterby et al. 1991; Neuman 2006).

On the other hand, qualitative research has been attributed with weaknesses, such as it requiring a lot more time and resources than quantitative research, it usually being not systematic, the replicability of its research findings usually being rare, there not being a standardised way to do its research, and its researchers having a lot of leeway to decide how they want to conduct their research, such as how they want to conduct their data collection and analysis (Bansal & Corley 2012; Easterby et al. 1991; Neuman 2006).

In addition, despite acknowledging that qualitative research is subjective and has a low replicability rate in terms of findings and theory “discovery” in general, qualitative researchers still believe that the findings, and/or theory, produced by their research are still generalisable to situations beyond the data set of their research. In general, qualitative researchers try to increase the validity of claims for the generalisability of their research by ensuring the dependability and credibility of their research, and by stopping their data collection process only when saturation of data occurs (Neuman 2006).

To improve a research’s dependability and credibility, a process called “triangulation” is used (Neuman 2006). Qualitative researchers can adopt such a triangulation process via the use of multiple measures, observers, theories, or methods (Neuman 2006). The main idea is that if the same findings can be obtained with the use of different methods, we can be more sure that the findings of the research are correct or valid. For example, if two interviewers
report the same findings after interviewing a particular person independently, without any prior communication with each other before the report is written, we can be more assured that the findings reported by them are likely to be a good reflection of the participant’s opinion, and not just opinions of the individual interviewers.

3.1.3 The adoption of positivism and quantitative research

Having discussed the paradigms of research (positivism versus interpretivism) and research categories (quantitative research versus qualitative research), the paradigm of research and research category chosen for the building and testing of the parsimonious empirical construct of organisational food culture, and the reasons behind the choice made, are discussed in this section. In summary, the building and testing of the parsimonious empirical construct of organisational food culture has been conducted using quantitative research methodology, under the positivism paradigm.

Firstly, as discussed, the aim of positivistic research is to contribute to knowledge, and theory building. It should not be driven by personal motives such personal desires, opinions, political views, etc. (Kerlinger & Lee 2000). This is in line with the aim of this preliminary research on organisational food culture: to propose a theoretical construct of organisational food culture, and to propose and test a parsimonious empirical construct of organisational food culture.

Secondly, as also discussed, positivists believe in the existence of an objective reality, and aspects of this objective world can be glimpsed via the conduct of well-planned research. On the other hand, interpretivists do not believe in the existence of such an objective reality. Rather, they believe the facts that we see in this
world are socially constructed, and that as these facts are socially constructed, their nature may change when the parties involved are different.

Hence, although confirmatory studies are usually conducted for quantitative research to see if the findings of previous research are valid, such studies are not usually conducted for qualitative research. Rather, the low replicability of findings is recognised as a weakness of qualitative research (Neuman 2006).

Given this, if the interpretivism paradigm were to be adopted, and this current research were to be conducted using qualitative methods, the end product of this research might just be an independent opinion piece with findings that are not likely to be replicable in future research. However, this is not likely to be the case if the current research is conducted using quantitative methods.

If the positivism paradigm is adopted, and this current research is conducted using quantitative methods, it should be possible for the findings of this research to be replicated in future research. In view of the preliminary status of this research, the conduct of such confirmatory studies in the future is highly desirable. Given this, positivism and quantitative research have a distinct advantage over interpretivism and qualitative research.

Thirdly, as also discussed, part of the aim of proposing a parsimonious theoretical and empirical construct of organisational food culture in this research is to provide enough groundwork for other researchers to be able to pick up and use what has been done in this research in their own research in the future. Given this, the current research needs to be conducted in a well thought-out and systematic manner. Without this, it will be difficult for future research, such as confirmatory studies, to be conducted. Given this, quantitative research has a distinct advantage over qualitative research: it is more systematic and less ambiguous than qualitative research, and the
results of quantitative research are more likely to be replicable than qualitative research.

Finally, quantitative research is more efficient than qualitative research in terms of the resources required for good quality research of either type to be completed – resources such as the time taken and monetary costs that have to be incurred. Given the resource constraints usually faced by a typical doctoral candidate, quantitative research has another distinct advantage over qualitative research.

Given these reasons, the adoption of positivism as the research paradigm for my research has distinct advantages over the adoption of interpretivism. In addition, the use of quantitative methods for the empirical stage of this study on organisational food culture also has distinct advantages over the use of qualitative research. Hence, I decided to conduct my research under the paradigm of positivism and to use a quantitative method.

The specific type of quantitative method used for this research is discussed in the next subsection.

3.2 Adoption of survey research method

In quantitative research, a few research methods are available, each with its own strengths and weaknesses. For example, experimental research, secondary data research, and the survey are the most commonly used quantitative research methods.

3.2.1 Why not experimentation?

The strength of experimental research is that it allows the researcher to be able to isolate the causes to certain phenomena, and hence be able to determine the potential causal relationships that exist between certain variables (Neuman 2006). It is a very
powerful research method, but it has a very great limitation: it can only be used for certain types of research, and the results that are found may be too artificial to be reflective of reality.

For example, although experimental research can be used to study how a group of undergraduates will react to something under the influence of a certain condition, it is harder for researchers to do a similar research in a business context. Not to mention that industry practitioners are more unlikely than undergraduates to have the time to willingly take part in experimental research, and even if they do, the highly controlled environment in an experimental context may produce a result that is too artificial to be reflective of reality.

For instance, in experimental research, the researcher will usually have to first build a pseudo context for the participants to participate in. Then, the researcher will have to fix all the conditions that they can fix, and then conduct the first experiment. This group is usually called the control group. Then, the researcher will change the one specific condition that they are interested in, and then repeat the whole experimental process on another group of participants. The results obtained from this experiment will then be compared with the results of the control group. The use of this method to isolate the factor that causes a certain phenomenon to be observed is what gives the experimental research method strength in identifying causal relationships. However, other than in the context of experiments, when does anything influence another thing solely in isolation in this world? Hence, experimental research is criticised for being too artificial to be reflective of reality.

Part of the aim of my research is to build and test a preliminary parsimonious empirical construct of organisational food culture that has real implications for industry and industry practitioners. In view of this limitation, even if a parsimonious
construct can be built and tested using experimental research, the construct that is created at the end of the research may be too artificial for it to have real industrial implications. Hence, I didn’t choose the experimentation method for the purpose of this research.

### 3.2.2 Why not secondary data research?

Another very commonly seen quantitative method is that which uses secondary data. In this type of quantitative research, the secondary data usually used are either in the form of raw data or processed data. Those secondary data in the form of raw data are usually data that were collected by governmental agencies, such as census data. As these data are usually collected by the government of a country, they are also usually made available to the public at a nominal cost, or even no cost at all.

On the other hand, secondary raw data can also be gathered from reports published by companies or research institutes. For example, the annual reports of listed companies can be a good source of information for organisational performance, and the reports of some research institutes or organisations can also be a great source of information for individuals interested in studying issues from a larger perspective such as the market performance of a country.

A strength of using such raw data is usually the relatively low cost, or even lack of cost, incurred in the process to obtain the data. In addition, as these data have already been collected, they can also be obtained in a relatively shorter period of time than if the researcher were to collect the data themselves. Moreover, if the data are from a governmental census, the sample size and statistical power of the data would be something unachievable to individual researchers if they were to try to collect such
data themselves. The use of this type of data may give the results of one’s analyses greater significance than if a researcher were to collect their own data.

However, there are downsides of the use of such data: they may not appear in the unit of analysis desired by the researcher; they may not be collected in a place that is relevant to the researcher; they may be outdated; and sometimes the data required by the researcher may not be available at all as there may be nobody who has conducted similar research before (Neuman 2006).

In addition, there may also be some ethical issues associated with the use of such secondary raw data. For example, in the current “publish or perish” culture of academic research, researchers are all trying their best to get quality work published within time limits. Although the intense competition created in this process should be favourable to scientific research development in general, it has also caused some researchers to do things that are slightly ambiguous in terms of whether they should be considered ethical or not. One of these acts is what Kerr (1998) has called “HARKing”; that is, hypothesising after the results are known.

As previously discussed, the “correct” way to conduct quantitative research should be that the researcher first conducts a literature review to develop their hypotheses or propositions, and then they collect data to test these hypotheses or propositions. However, the availability of such types of raw data gives some researchers the chance to do what Kerr (1998) calls “HARKing”. For example, an unethical researcher can potentially first correlate all the data that they can find in a census, and then formulate hypotheses for whatever relationships that are observed to be statistically significant, and then report their research as if they have conducted it in the “correct” way. According to Kerr (1998, p. 211), this is not desirable for scientific research because of these 12 potential costs:
“1. Translating Type I errors into hard-to-eradicate theory.
2. Propounding theories that cannot (pending replication) pass Popper’s disconfirmability test.
3. Disguising post hoc explanations as a priori explanations (when the former tend also be more ad hoc, and consequently, less useful).
4. Not communicating valuable information about what did not work.
5. Taking unjustified statistical licence.
6. Presenting an inaccurate model of science to students.
7. Encouraging “fudging” in other grey areas.
8. Making us less receptive to serendipitous findings.
9. Encouraging adoption of narrow, context-bound new theory.
10. Encouraging retention of too-broad, disconfirmable old theory.
11. Inhibiting identification of plausible alternative hypotheses.
12. Implicitly violating basic ethical principles.”

- (Kerr 1998, p. 211)

In this case, given the preliminary status of my research, it is unlikely that the raw data required will exist in the exact form I desire. Hence, the use of secondary raw data is not feasible for this research.

Secondary data in the form of processed data are usually available in sources such as published academic journals, and are used for specific research methods. For example, one of the more commonly known methods used for analysing processed secondary data is meta-analysis.

According to Schmidt and Hunter (2001), there are a lot of inconsistencies in terms of the findings in quantitative research. If one is to do a narrative literature
review of the findings of all published articles relevant to a particular topic, just like a
typical textbook does, it is likely that one will face two problems:

1) It will be very hard for a person to do a narrative literature review for all the
research related to a topic, especially when the number of published articles
is great.

2) It will be very hard for a person to do a coherent narrative literature review
for all the research related to a topic if contradictory findings are reported
across the many articles reviewed, which is not uncommon in quantitative
research.

As a result of this, Schmidt and Hunter (2001) have proposed meta-analysis is a good
way to do a complete literature review for quantitative research literature. However,
they also state that quantitative research is bugged with several issues; for example,
inaccuracy in findings can occur due to issues such as sampling error, which in turn
can be due to small sample sizes, measurement errors, and/or dichotomisation of
measures (Schmidt & Hunter 2001).

According to Schmidt and Hunter (2001), quantitative researchers have
misperceived the significance level of a statistical relationship as the probability of
replication of findings, as the probability of replication of findings should be the
statistical power of the relationship, which is determined by the sample size used to
test for the relationship. As quantitative researchers usually use a relatively small
sample size for their research, the statistical power of their findings is usually low,
and this may cause the conclusion of a proposed relationship to be inaccurate. For
example, a significant relationship in reality may be found to be insignificant in
research, and an insignificant relationship in reality may be found to be significant in
research.
Hence, in meta-analysis, the relationships reported in published articles are taken out and combined to allow researchers to be able to find the true effect size of the relationships on a wider scale after correcting for errors such as sampling error. As the total sample size is greater in a meta-analysis as it is the total of all the samples used in all the articles reviewed, the researchers may also be able to discover relationships not previously discovered in the individual studies, due to their relatively small sample size.

Other than finding the true effect size of a particular relationship, meta-analysis has also been used by researchers interested in finding new relationships, such as the interacting effects between variables that have not been analysed in any single individual research studies (Schmidt & Hunter 2001). In addition, other than correcting for sampling error, meta-analysis also allows researchers to correct for statistical problems, such as measurement error and dichotomisation of measures (Schmidt & Hunter 2001).

Despite these strengths, meta-analysis has several weaknesses. For example, it requires the literature reviewed to be quantitative, and it assumes that the reported research is done accurately (i.e., contains no errors such as coding error). In addition, it also assumes that the environmental context of the participants involved in all the reviewed research has had no significant influence on the participants’ answers. For example, it is unlikely that all the research studies reviewed were conducted during the same timeframe. When “combining” the findings in meta-analysis, it assumes that environmental factors, such as time, have not had a significant influence on the answers given by the participants.

Most importantly, from the perspective of my current research, meta-analysis requires a relatively “big pool” of previous studies to have been conducted and
reported prior to the analysis in order to have enough data. That is, similar to the use of secondary raw data, it requires the availability of previous studies for it to “work”. Hence, given the preliminary status of my research on organisational food culture, the use of such secondary data is also not feasible.

3.2.3 Why survey research?

The next commonly used quantitative research method, which is also the one most widely used (Neuman 2006), is the survey method. The survey method is a research method belonging to the positivism paradigm (Neuman 2006).

According to Neuman (2006), the modern survey may be an adapted form of census and, in the early 1900s, surveys were mainly used to obtain detailed descriptive information for the purpose of informing the public about social indicators, and to facilitate decision making. As this technique was initially used more by those in private industry, and it required the involvement of a relatively high number of human resources, and hence relatively higher costs, the use of the survey as a research method was not initially well received by the academics (Neuman 2006).

However, during World War II, many academics and industry practitioners gathered in the United States’ capital and worked together to make their contribution towards the war (Neuman 2006). These two groups of people conducted large-scale surveys together, and learnt from each other in the process. According to Neuman (2006), while the academics gave the industry practitioners knowledge on topics such as statistics to allow them to conduct surveys more scientifically, the practitioners showed the academics the practical value that could be delivered by the survey research method.
When the war ended, the academics brought this knowledge back with them to the universities, and used it in their research (Neuman 2006). Although the survey method was not initially well received, its influence grew over the 1970s throughout many parts of the world (Neuman 2006). Today, it is one of the most commonly used research methods, and the professional survey industry of the United States alone employs more than 60,000 people (Neuman 2006). In addition, with advances in technological development and postal services, the cost of administering surveys to a large group of respondents has become relatively cheap in comparison to other data collection methods.

In general, the strengths of the survey research method are that it is relatively more cost-efficient than many other research methods in terms of the quality and quantity of data that can be collected within a short period of time; it allows the research to be conducted objectively, especially when the data collected will be later analysed with statistical tools; and it allows the research findings to be replicable in future research due to the systematic way that survey research is usually crafted and its data are systematically collected and analysed (Kerlinger & Lee 2000).

However, the biggest criticism of the survey method is that it may not reflect what respondents really think (Neuman 2006). That is, as the survey method is ultimately a research method that involves asking respondents their opinions on questions that the researcher thought should be associated with the concept under investigation, the findings of a survey may show how much the respondents agreed with the researcher’s viewpoint, but may not reflect their true opinions. In addition, even if the researcher’s questions may be reflective of the respondents’ viewpoints, these viewpoints may not be complete as the respondents might have other important views that were not captured by the survey. Moreover, even if the viewpoints of the
respondents could be fully reflected in the questions used in a survey, the answers given by the respondents may not be reflective of their true opinions. That is, some respondents may give false answers when they do not wish to give the real ones (Neuman 2006).

Although these criticisms are targeted at survey research in general, these criticisms should not pose too big an issue in my research. When a researcher wants to know what the respondents’ opinions on an issue are, they can go for qualitative research methods, such as in-depth interviews, first. And when they want to find out if the views of the interviewed group of respondents are reflective of the wider population, or if others hold the same opinions, the researcher can then use the information collected in the interviews to craft survey questions and then survey a bigger group of respondents. For example, a mixed research method is adopted by researchers such as Bunderson and Thompson (2009) in their research.

However, such a qualitative-followed-by-quantitative mixed method approach is not necessary for my research given that there is already a vast amount of literature available from which a theoretical construct of organisational food culture can be proposed. That is, there is already enough research conducted on relevant topics for me to adequately infer the potential opinions of the public on the issue of organisational food culture. Hence, as long as my survey’s questions are based on the theoretical construct developed for the concept of organisational food culture discussed in the earlier part of this paper, which is in turn based on the literature, the survey should be fairly representative of the public’s views.

Moreover, the replies of respondents to a survey are their opinions of the issues asked in it, particularly given that they have the right to refuse to take part at all if
nothing in the research interests them. In addition, as my research topic is on food-related organisational policies, and not on policies related to sensitive issues, such as competitive strategy, and participation is absolutely voluntary, with no adverse effect to those who refuse to take part, there should be no reason why someone who wants to participate in my research would want to falsify their answers.

Given these points, while some survey research may have a problem with being not reflective of respondents’ true opinions, this concern is not really relevant to this study.

Moreover, while some may potentially comment that the use of qualitative research methods such as in-depth interviews can potentially resolve this issue, in my opinion, this is a misperception as the use of in-depth interviews cannot give us the complete picture of the public’s opinion about organisational food culture without the cumulative efforts of researchers in general.

As mentioned earlier, research conducted under the interpretivism paradigm is usually qualitative in nature (Neuman 2006). The research is supposed to be unique, is not usually replicable, and stops only when data saturation is reached (Neuman 2006). That is, insofar as the participants involved are concerned, their opinions should be all taken into consideration in the research, as the research stops only when no more new information appears.

However, given that qualitative research is not usually replicable, it means that something new or different will usually be found in each subsequent independent research study. If this is the case, the data saturation stopping point can only allow qualitative researchers to ensure that the opinions of their participants are fully considered, but cannot really ensure that the opinions of the population in general are fully considered.
Given that this research is carried out under the positivism paradigm, I am more interested in how the public in general perceives something, and not how a particular group of research participants perceive something. If this is the case, to get a complete view of the public’s opinion on organisational food culture, a series of related future research studies will need to be conducted even if I were to use qualitative research methods.

If this is the case, given the relative efficiency of quantitative research methods over qualitative research methods in general, the survey research method is likely to be a better choice than using qualitative research methods. Hence, in view of the strengths of the survey research method, I adopted it for my research. In addition, as modern data collection for the survey research method usually involves the administration of the survey both physically, using hard copy survey forms, and electronically, using an online version of the survey, both these methods of survey administration were used in this research.

3.3 Adoption of the sampling method

The level of analysis adopted for this research is the individual level. The individual level of analysis was adopted because my research is on organisational food culture, which is a subset of an organisation’s culture. An organisation’s culture can be simply defined as how people think people do things in an organisation (Robbins et al. 2008); that is, an organisation’s culture is a matter of the perception of the individuals working in the organisation. Hence, data were collected at the individual level.

To get data for the purpose of this research, a mixture of purposive sampling and snowball sampling was used to identify and recruit participants.
It is well known that the survey research method has a relatively low response rate these days. Two of the primary reasons behind the low response rate are the presence of unethical pseudo-research and the great number of surveys organisations are invited to participate in.

Firstly, unethical pseudo-research includes disguised marketing approaches that appear to be invitations to participate in research. For example, sales people may stand along the street, and invite individuals they approach to be part of a survey. However, during and/or after the administration of the survey, the sales person will start to market their products to the survey participants. Other more “patient” sales people may even invite survey respondents to take part in a focus group or in-depth interviews and will start marketing their products when the respondents are moved to a location more strategically advantageous to the sales people. This has caused the public to be more and more sceptical towards individuals claiming to be conducting a survey and has caused many people to be reluctant to take part in a survey in case they become the “victim” of pseudo-scientific research. Hence, when individuals are now approached to take part in a survey, one can expect a response rate lower than what one could expect in the past.

Secondly, there are just too many people conducting surveys nowadays. As mentioned by Neuman (2006), the professional survey industry employs over 60,000 people in the United States. Given this, we can imagine how many invitations to participate in survey research organisations will be exposed to everyday. If we are also to consider surveys conducted by those not in the professional survey industry, such as students who invite people to take part in surveys for their college assignments, the number of surveys that a typical organisation will be invited to take part in will be even much higher. Given this, it is not unimaginable that some
organisations may just completely “give up” taking part in survey research in order to avoid being perceived as biased towards any particular party when it comes to participating in surveys. Moreover, organisations exist for a purpose. Regardless of whether they are for-profit or not-for-profit organisations, their purpose will definitely not be to help researchers to do surveys. As a result, it can be anticipated that not all organisations will be willing to spend valuable resources in helping researchers to do their surveys. Hence, in view of the low response rate plaguing the survey research method in general, some researchers are now resorting to means such as providing compensation for participants taking part in research, or sending out more invitations, and/or employing more research assistants to go to more places in hope that these will increase the response rate. However, although the response rate of the survey research can be increased via such means, the cost of the research also increases.

In view of the resource constraints faced by a doctorate candidate, these alternative means are not viable. Hence, it is necessary for sampling methods that has advantages in attracting more potential participants to be used. Given this, a mixture of purposive sampling and snowballing sampling methods is adopted in this research.

“Purposive sampling” just means sampling with a purpose (Neuman 2006). For this current research, the purpose is to attract the greatest number of respondents at the lowest cost, while ensuring that the respondents recruited are the “correct” people to be approached.

After the literature review, the only clear criterion for sampling I have for my research is that respondents should be employees working in an organisation. Other than this, it is not clear whether if there is any other factor that should strictly be used for sampling purposes.
Hence, with the use of purposive sampling for this research, specific effort was made to look for potential respondents who were working in an organisation and who were likely to be willing to take part in this research. However, although purposive sampling could “tell” me who I should go for, it did not “tell” me how I should approach the targeted potential respondents. Thus, to better approach the potential respondents targeted for this research, the snowballing sampling method was also used in the sampling process.

By snowballing method, I first tried to identify a potential contact person from an organisation that is chosen for this research. This person could be somebody from the organisation’s human resource department, or just somebody who is working in the organisation, but who could nevertheless be contacted by me. I then invited the contact person to take part in this research, to help invite others from their organisation to take part, and also to recommend or invite others from other organisations to also take part.

By doing this, the recruitment of a few contact persons for my research attracted a lot more respondents who were also willing to take part. As the majority of the respondents were recruited via my initial contact person in the organisation, the use of this snowball sampling method has two advantages.

Firstly, as the majority of the respondents were recruited via the contact person, I expected a higher response rate as I anticipated that a person would be more likely to accept the invitation to do a survey if the invitation came from someone known to them, or if the invitation came from a person within the same organisation, than if they would be if it came from a stranger.

Secondly, as the majority of the respondents were recruited via the initial contact person, this could limit the amount of influence that I could have over who
was selected for my research, which was given to me by the purposive sampling method. That is, I could not select only those people I thought would give the answers that would generate the findings that I am looking out for in my research because the majority of the respondents were essentially selected and recruited by the contact persons. This enhanced the objectivity of the research.

Hence, for this research, a combination of purposive sampling and snowball sampling methods was used to recruit the respondents.

3.4 Ethical considerations

By definition, ethics “refers to the principles, values and beliefs that define what is right and wrong behaviour” (Robbins et al. 2008, p. 183). In view of the negative impact that some unethical research has had on participants in the past, including those people who became part of a research study without even knowing that they were taking part, specific emphasis is made to ensure that modern day research is ethical by nature, or at least is conducted ethically by professional organisations.

For example, two of the most prominent unethical research studies are a study conducted by three physicians from the Brooklyn Jewish Chronic Disease Hospital, and a study conducted by the United States Public Health Service (Adler & Clark 2008). In the research conducted by the three physicians from the Brooklyn Jewish Chronic Disease Hospital in 1963, the researchers injected live cancer cells into 22 patients without informed consent (Adler & Clark 2008). In the study by the United States Public Health Service from 1932 to 1972, hundreds of patients were not offered proper treatments for their late-stage syphilis and were not even informed about their illness, in order for the researchers to be able to study the natural history of the disease (Adler & Clark 2008). Many were affected negatively in both cases, and even
the President of the United States had to apologise to those who were affected by the
United States Public Health Service’s research (Adler & Clark 2008).

To prevent similar issues from happening again, different professional
communities have come up with their own elaborate lists of ethical considerations that
researchers must oblige by in the conduct of their research (Oates 2006); for example, the American Psychological Association and the American Sociological Association have their own lists of ethical principles.

Nevertheless, despite the presence of different lists of ethical principles used by
different professional communities, many of the rules stipulated in such lists bear resemblance to the works and ideas of early ethics researchers such as Immanuel Kant. For example, many rules about ethics bear resemblance to Kant’s propositions that one should not forbid another’s person freedom, and human beings should be treated as ends rather than as means (Gregor 2009).

For instance, Adler and Clark (2008), translate these two propositions into three principles for ethical research: research should have respect for the participants, should be beneficial to the participants, and should be just to the participants. Specifically, the researcher must protect participants from harm, participation in research should be voluntary, informed consent must be obtained from the participants, and the anonymity and confidentiality of the data collected from the participants must be strictly protected (Adler & Clark 2008).

Similar stands can also be found in other books or articles that discuss the ethical considerations of research. For example, Oates (2006) suggests that, before a research study is conducted, a benefit versus cost analysis should be conducted from both the perspective of the researcher and the participants before deciding whether it should be carried out.
By benefit, Oates (2006, p. 209) refers to factors such as “research as intrinsic good, contribution to knowledge, development of theories, improvements to life, training researchers, enhancing reputation/image, increasing commercial success, entertainment and enjoyment, personal development, and career advancement.”

And by costs, Oates (2006, p. 210) refers to potential risks and harm such as “physical trauma/injury, psychological damage, distress, offence, coercion, breach of confidence, inconvenience, disrepute or litigation, waste of time, waste of resources/funds, and failure to publish.”

If a researcher decides to continue with their research after doing this benefit–cost analysis, then the researcher needs to ensure that during data collection, these following issues are considered: informed consent must be obtained from the participants; the anonymity and confidentiality of the data collected from participants must be protected; if the participants are to be compensated for expenses such as travelling costs the amount of compensation given must not be so large an amount that it can essentially “force” participants to take part in the survey, who might otherwise refuse to take part; if deception or the withholding of information is necessary in the process, it must be well justified and the participants must be properly debriefed at the end of their participation; data collected must be properly stored; and, if vulnerable groups such as children are involved, special attention must also be given by the researcher to protect the wellbeing of the participants (Oates 2006).

Given these considerations, for my research, specific attention was given to the following issues: the benefit–cost analysis, the informed consent of participants, voluntary participation, the confidentiality and anonymity of data, and data storage. The issue of compensation for participants is not discussed in this chapter as the
participants were not compensated monetarily for their participation, given that it was not necessary for them to expend any significant amount of money in the process of answering the survey. In addition, the issue about the care for vulnerable groups is also not discussed as my research only involved working employees and not individuals from vulnerable groups, such as minorities.

3.4.1 The benefit–cost analysis

This research should be able to “score well” if a benefit–cost analysis is conducted on it. Firstly, given that there was a need for research to be conducted on organisational food culture, the benefits of my research should be well justified in terms of the contribution to knowledge and the development of theories. In addition, if future research is conducted on organisational food culture by both academic researchers and industry practitioners, the amount of benefit realised in terms of knowledge contribution and theory development will be even much greater.

Secondly, this research should also be well justified in terms of the costs incurred in the process. As discussed, the current available literature is enough for the theoretical construct to be developed for the theory-building process; the construct is developed based upon the current literature, instead of the results of an additional qualitative study. Such approach minimised the potential cost of the first part of this research as much as possible while not potentially placing the quality of the research at risk.

On the other hand, for the empirical construct-building and -testing process, the survey research method is chosen as this method is known to be the one that is most efficient in comparison to other research methods. Although a slight inconvenience might have been caused to participants while answering the survey, the cost of this
research should also be considered to be minimal both to the participants and the researcher. Hence, as the cost of this research is minimal and the benefits to be realised from it being conducted are great, the research should be considered to be well justified in terms of the benefit–cost analysis.

### 3.4.2 Informed consent and voluntary participation

As my research did not require the withholding of information from respondents, before they were asked to answer the survey, respondents were given an information sheet that contains the relevant information about this research so they could give informed consent for their voluntary participation.

The following information was included in the information sheet:

1) The title of the research
2) Information about the researcher
3) The aim and purpose of the research
4) What the participants were required to do to take part in the research
5) If there was any potential harm or risk to participants in taking part in this research
6) The amount of time that was likely to be required for participation in the survey
7) The potential usage of the data collected
8) Information saying that the confidentiality and anonymity of the data will be protected.
9) Information saying that participation in the research was absolutely voluntary and that participants could withdraw at any time during the process without any negative consequences
10) The ethics approval number of the research

11) Information saying that the data collected would be kept for 7 years as required by the university of the researcher

12) The contact details of the researcher and the researcher’s supervisor in case the participants needed it.

A copy of the information sheet used is attached in Appendix A. The details of the actions taken to ensure the participants’ informed consent and voluntary participation are discussed in section 3.5. Given that precautions were taken to ensure informed consent was obtained and the voluntary participation of participants, this research should also be considered ethical.

3.4.3 The confidentiality and anonymity of data

By ensuring “confidentiality of data”, I refer to the protection of the information given by participants to the researcher for the purpose of the research from any other party that is not involved in the research. When I refer to ensuring “anonymity of data”, I refer to ensuring that the information gathered from participants cannot be associated back to the specific person who gave the information.

In modern research, the protection of the confidentiality and anonymity of data is taken as a basic requirement that a researcher must fulfil for their research to be considered ethical. Although there are guidelines for when these two requirements should be ignored, such as when an order is received from a court or when a murderous intention is revealed in the information gathered from the participants (Adler & Clark 2008), these guidelines shall not be discussed in detail as these are extreme scenarios unlikely to happen in the context of this research.
For this research, the confidentiality and anonymity of data are strictly protected throughout the whole data collection, analysis, and storage process. As the use of the survey research method in this research involved the administration of the survey both physically and electronically, the processes used to ensure the confidentiality and anonymity of data in both scenarios will be discussed in this section.

Although some researchers may ensure the confidentiality and anonymity of data by allocating the job of data collection, data coding, and data analysis to three different research assistants, or three different groups of research assistants, this method was not be used for this research due to the resources constraints faced by myself as a doctorate candidate. While the data collection, coding, and analysis process of this research were all carried out by me, the researcher, the confidentiality and anonymity of the data are not compromised and are protected by the use of a three-level protection plan.

Firstly, as the survey did not include questions that asked for personally identifying information, such as the participant’s name and/or organisation, the exclusion of these types of questions formed the first level of protection for the data’s confidentiality and anonymity.

Secondly, when the survey was physically administered by me, efforts were made to ensure that no identification marks were used to link the respondents to the completed hard copies of the survey.

On the other hand, when the survey was administered electronically, I also ensured that no personally identifying information was intentionally collected in the process. For example, although email was used in the data collection process, the participants were invited to answer the survey on the survey collection website “surveymonkey.com”. No personally identifying question was asked for on this
website. This data collection method was preferred over the method in which participants were asked to complete an electronic version of the survey, and then return the survey by sending the completed survey via email, because the email itself can be potentially a source of personally identifying information. These precautions formed a second level of protection for the data’s confidentiality and anonymity.

Thirdly, when the hard copy data collected were keyed into the computer system, I first took all the hard copy survey forms and shuffled them randomly before keying in the data collected into the computer system. This ensured that I will not even vaguely know which survey form came from which contact person or organisation. This move was taken because the forms placed in proximity to each other in an unshuffled stack are likely to be from the same source. This formed a third level of protection for the data’s confidentiality and anonymity.

Given the use of such stringent protection procedure for the participants’ confidentiality and anonymity, the conduct of the current research should also be considered ethical.

3.4.4 Data storage

As required by Southern Cross University, the data collected for the purpose of this research have to be stored for a period of 7 years. During this 7-year period, it is expected that the researcher will ensure that the data are kept intact in case of potential future assessment of the data set by various authorities, including the university, for purposes including the verification of the authenticity and credibility of the research conducted. At the same time, the researcher also needs to ensure that the data are kept out of the reach of people unrelated to the research in order to protect the confidentiality of the data. Hence, in this subsection, the processes used to keep the
data collected intact for 7 years, while ensuring its confidentiality, will be discussed. In addition, as the survey was administered both physically and electronically, the processes used for the handling of data from both sources shall also be discussed.

Firstly, for those data collected using physical survey forms, a non-repetitive identification (ID) number was allocated to each completed survey, and the number was written on the top right-hand corner of the survey form. When the data were keyed into the computer, the allocated ID number was also keyed into the computer along with the data set. This was to allow the researcher to be able to double-check the accuracy of the data encoding process at a later time, and also to allow potential cross-checking of data in the computer with the physical survey forms in the future if the need shall arise.

After the data set was keyed into the computer, I then keyed the same data set again into the computer under a different variable term. For example, for the data of question 5 of the survey, the data that were keyed into the computer system during the two rounds of data encoding were named as “Q5” (question 5) and “T5” (test for question 5) respectively. After the two sets of identical data were keyed into the computer, I conducted a correlation test for each respective pair of Q and T variables to ensure that the data were keyed into the computer accurately. This method ensured that I had keyed the correct data into the computer accurately during both rounds of data encoding, as any deviation of the correlation of any pair of variables from the value of 1.0 was an indication of inaccuracy in the data sets.

It is common and fundamental knowledge in basic statistics texts that the correlation of two variables will always be in the range of -1.0 to 1.0: the value of 1.0 indicates a perfect positive relationship, the value of -1.0 indicates a perfect negative
relationship, and the value of 0 indicates that the two variables behave independently of each other (Cohen, Cohen, West & Aiken 2003).

However, it is unlikely for two people to behave exactly in the same way. Due to the influence of individual differences, the responses of two individuals to a survey are unlikely to be the same. Hence, although it is theoretically possible to have the correlation between two variables to be 1.0 or -1.0, it is unwritten common knowledge in behavioural science research that it is almost not possible for a researcher to obtain such “perfect figures” in their correlation analyses. Given this, although the figures of 1.0 and -1.0 are the limits of the correlation between two variables, these figures have limited practical use in empirical research. However, what if the two variables have to be the same for the data to be accurate?

One of the errors of empirical research that can be avoided if necessary checks are appropriately taken is inaccuracy in the data keyed into a computer system. There are several ways to do this. For example, when there are two or more research assistants engaged for research, the researcher can request one to do the data encoding, while the other checks the first person’s work. Alternatively, the researcher can key the data into the computer system themselves, and then check for any error made in the process after the encoding process was done.

Although both methods sound fine, there is one issue inherent in both methods: if the data to be keyed into the computer system are large in quantity, mistakes are likely to still be present once the encoder or checker, or both, are tired. Moreover, if the first method where two people are processing a single set of data at any moment in time is used, it is rather inefficient. On the other hand, if the second method is used, the chances of the researcher making a mistake will be significantly higher,
particularly once tiredness sets in. Hence, it was necessary to come up with another way to ensure that data that are keyed into the computer system are accurate.

A potential way to do this was to key in the data twice as two variables, and then find the correlation of these two variables. That is, the encoder has to key the data into the computer twice, once as a variable and once as a test variable, and then correlate these two variables. The rationale behind the use of this method is simple. If the data are keyed into the computer accurately, the correlation between the variable and the test variable should be 1.0, and any deviation from 1.0 indicates that something has gone wrong in the data encoding process. As it is more likely that a person will key in the “correct answer” twice than a person will key in the same “wrong answer” twice, it is relatively safe to assume that, insofar as a correlation of 1.0 is achieved, the data keyed into the computer system should be accurate.

For this research, to ensure that I would not have much difficulty in terms of tracing the source of the error once an inaccuracy in the set of the data keyed in was detected, the correlation test was conducted once per 10 survey forms processed.

Although this method requires the person who keys in the data to process the data twice, it has two advantages over the other two previously mentioned methods usually used to ensure data accuracy.

Firstly, as there is now statistical software that “tells” the person who processes the data that if there are inaccuracies in the data set keyed into the computer system via the results from correlation analyses, the accuracy of the data keyed into the computer system will not be influenced by factors such as tiredness on the part of the data encoder and/or checker when a large quantity of data are processed.

Secondly, this method is easy to use, and it can be done easily by a single encoder. Hence, it is more efficient than the method that requires more than one
person to be involved in the data keying process. In view of these two advantages, the accuracy of the data keyed into the computer system in this research was checked by this method that utilises correlation analyses.

After it was confirmed that the data had been keyed into the computer accurately, the hard copy survey forms were filed in a cabinet that is only accessed by me.

Next, for those data that were collected electronically, a copy of the raw data collected was printed for storage purposes, lest the raw data collected electronically be destroyed in the future due to unforeseeable circumstances, such as system failure. Next, these data were keyed into the computer, and double-checked using the correlation method. After this was done, the print-outs of the raw data were stored with the other physical survey forms.

In addition, the electronic version of the keyed-in data was also copied onto a thumb-drive only used to keep the data of this research, and the thumb-drive was also stored with the physical copies of the raw data. This was done to facilitate potential future endeavours to check the data set used for the analyses carried out in this research.

As the copies of the data are stored in a place that is only accessed by me, the confidentiality of the data is protected. The data will be discarded after the 7-year period required by Southern Cross University is over. Hence, from this perspective, this research should also be considered ethical.

3.5 Research procedures
The aim of this part of the research is to come up with a preliminary parsimonious empirical construct of organisational food culture; that is, this model that is
operationalised in the form of a set of organisational food culture questions and tested by statistical means to ensure that it is both reliable and valid. To do this, a survey that contains the proposed organisational food culture questions was administered to a group of participants to collect enough quantitative data for statistical analyses.

The purposive and snowball sampling method was used to recruit participants for the survey. First, several initial people were contacted via means such as email, phone messages, phone calls, etc. These contact persons included individuals such as human resource personnel of organisations, employees of organisations, managers or owners of organisations, etc. These contact persons were then briefed about the nature of the research and were invited to take part in the survey, and to help to forward the invitation to others who were eligible to take part in the survey.

As it is not conclusive from the literature review what role factors such as industry, the level of an employee in an organisation, or the functional area of an employee should play in this stage of the research, the initial contact persons were told that the only criterion for that recruitment exercise is that the personnel invited to participate must be non-minors who were working.

To facilitate the data collection process of this research, the survey was administered via two means: physical hard copy and electronic form.

First, I created the online survey using the survey collection website “Surveymonkey.com”. Then, I saved a printable PDF version of the survey created. The hard copies of the survey were then printed using this PDF file.

For physical hard copy form, a copy of the survey was first given to the contact person to brief and invite them to take part. If the contact person was willing to help to invite others to be involved in the research, the contact person was also given a stack of hard copy survey forms, or the PDF file of the survey form for them to print
the forms out on their own to give to participants, or both. The completed survey forms were subsequently collected from the contact person at a later point in time.

For the electronic form, I first sent an invitation email to my initial contact person to brief and invite them to take part in the survey. For those who were contactable via more direct means, such as phone calls, the email was usually sent after an agreement to participate and to help to forward the invitation on to others was secured. This was done in view of the relatively longer waiting time likely to be experienced if the contact person was initially contacted via email. In each of these invitation emails, a link that could direct the user to the online version of the survey hosted in Surveymonkey.com was included. The completed surveys were accessible to me online once they were completed by participants.

The help given by the contact persons to invite more people to do the survey online or in hard copy and the help given by them to collect and later pass back the completed hard copy survey forms was totally voluntary in nature, and they were not compensated with money for the help rendered.

The survey used in this research is made up of three parts.

The first part of the survey is an information sheet that provided the participants with basic information about the research and the researcher. Details of the information contained in the information sheet have been discussed in section 3.4.2.

The second part of the survey is made up of four demographic questions that are used for descriptive purposes: gender, age, industry, number of years in the current organisation. Respondents indicated their gender on a two-point nominal scale (1 = male, 2 = female), their age on a 5-point categorical scale (1 = 20 and below, 2 = 21-30, 3 = 31-40, 4 = 41-50, 5 = 51 and above), their industry in an open-ended
question, and their number of years in their working organisation in an open-ended question.

The third part of the survey is made up of sixteen questions about food-related organisational policies. These sixteen questions were developed based on the literature review of the four proposed dimensions of organisational food culture (provision of food and organisational function policy, accessibility of food policy, hierarchical policy, and time policy).

The 16 items were not direct products of the literature review i.e. these items were not taken word by word out of the literature review. The content of the literature review provided the general direction that the questions should be pointing towards, and I formulated the questions based on the direction obtained.

Question 5, 10

In section 2.4.1 – provision of food and organisational function policy, p. 43, I mentioned:

“Firstly, organisations have different functions held by their members on a regular basis for different purposes. For example, while some functions held by organisations are rituals aimed to improve the bonds between employees (Thomson & Hassenkamp 2008), others are ad hoc ceremonies meant for the celebration of significant events (Harris 1994; Meek 1988).”

Based on this paragraph, I came up with the following questions:

Question 5 – Events are celebrated at my organisation with generous portions of food and drink.
Question 10 - In my company, we frequently celebrate successes with lunch or dinner parties.

Question 6, 8, 18

In section 2.4.1 – provision of food and organisational function policy, p. 45 – 46, I mentioned:

“On the other hand, “external social networking” is performed by employees to secure the relationship they have, or want to have, with external parties who are not part of the firm. For example, in an organisation that places a primary focus on the building of long-term relationships with their clients or partners, employees are usually encouraged to maintain a close yet professional relationship with such external parties. For such organisations, it is not unusual for them to subsidise their executives to entertain their clients in posh restaurants, as part of the organisation’s image management and networking strategy (Gioia, Schultz & Corley 2000; Dutton & Dukerich 1991). For instance, it was cited in Cunha et al. that:

“Every weekday, some 38,000 Pfizer Inc. sales reps fan out around the globe. Armed with briefcases full of free drug samples, reams of clinical data, and lavish expense accounts for wining and dining their quarry, the reps infiltrate doctors’ offices and hospitals. Their goal: to persuade medical professionals the world over to make Pfizer drugs the treatment of choice for their patients’ aches and pains. (Barrett, 2005: 51)”

- (Cunha et al. 2008, p. 945)”

Based on this paragraph, I came up with these questions:
Question 6 – Business contracts and connections are made while eating and drinking in my organisation.

Question 8 - In my organisation, business issues are often discussed over the dining table.

Question 18 – In my company, we “wine and dine” our customers regularly.

Question 7

In section 2.4.2 – time policy, p. 47, I mentioned:

“Organisations have different meal time policies. For example, firms that do not have their own cafeteria, and are not situated near to any food vendors, may have longer meal or break times to allow their employees to travel to cafeterias situated further away from their office compounds. However, for those firms that do have cafeterias, employees are more likely to have shorter meal or break times. In addition, in some organisations, multiple time slots for breaks may be given to employees, while others may also allow employees to freely choose their breaks without any time restriction.”

Based on this paragraph, I came up with Question 7 – People have fixed schedules for meals in my workplace.

Question 9

In section 2.4.4 – accessibility of food policy, p. 58 – 59, I mentioned:

“Even if the organisation’s compound is not big enough to house an in-house canteen, it is still possible for the organisation to influence their employees’ food
practices via the placement of food-vending machines. Wansink reported in his review that:

“Simply seeing (or smelling) a food can stimulate unplanned consumption [Boon, Stroebe, Schut & Jansen 1998; Cornell, Rodin & Weingarten 1989]…

Recent physiological evidence suggests that the visibility of a tempting food can enhance actual hunger by increasing the release of dopamine, a neurotransmitter associated with pleasure and reward [Volkow, Wang, Fowler et al. 2002].”


Hence, the food practices of employees who work in an organisation with more fruit-vending machines are likely to be healthier than those who work in an organisation with more snack-vending machines, with snacks such as chocolate bars, as they will be likely to eat more fruit than snacks.”

Based on this paragraph, I came up with Question 9 – There are food vending machines near the place I work.

Question 11

In section 2.4.4 – accessibility of food policy, p. 58, I mentioned:

“Nevertheless, under such circumstances, organisational policies can still influence employee food practices via their stand on how accessible food items are within an organisation. For example, many organisations dedicate a certain amount of space for external food vendors to bid for stall ownership for a period of time to sell food to their employees. Typical examples of such organisations would be schools, universities, military facilities, and companies that are not located near to any external
eateries or shopping malls. For these organisations, there is potential to influence the type of food made available to their employees via their policies on choosing external vendors, and the regulations that they impose on external food vendors. For example, an organisation can potentially influence its employees’ food practices by making sure that the food vendors who operate in its canteen always display the relevant nutritional information about the food that they sell, as the display of such information may cause employees to make healthier food choices during their purchases (Glanz & Mullis 1988).”

Based on this paragraph, I came up with Question 11 – Many external food sellers are located near my workplace.

Question 12, 16, 17

In section 2.4.2 – time policy, p. 48, I mentioned:

“Firstly, an organisation’s time policy will influence the amount of time that a person has to consume his/her meals (after discounting the time that needs to be spent by the person travelling from the workplace to the cafeteria). When the time available for meals is not long enough, it may cause an individual to eat faster than their usual speed of eating. This may cause a person to eat more than their usual portions (Singh et al. 2008).”

Based on this paragraph, I came up with these questions:

Question 12 – Employees of my organisation tend to take very short breaks for lunch.

Question 16 – People working here spend little time to eat.

Question 17 - People in my organisation often eat without stopping their work.
Question 13, 19

In section 2.4.3 – hierarchical policy, p. 54, I mentioned:

“For example, features such as an executive dining room or dedicated eating space may be provided to distinguish people who are higher up in the organisation’s hierarchy from other employees (Cunha et al. 2008), and personal chefs may also be allocated to employees on the higher tier of an organisation’s hierarchy. For instance, according to Schein (1999), in the 1960s, a large aerospace firm, Northrop, had three different types of dining room for employees of different rank.”

Based on this, I came up with these questions:

Question 13 - My organisation provides different foods for people holding different official positions.

Question 19 – There are dining places in my organisation exclusively for managers and / or executives.

Question 14

In section 2.4.3 – hierarchical policy, p. 54 - 56, I mentioned:

“In addition, related to the food provision and organisational functions policy, as employees of higher rank will usually need to entertain clients who are also at the higher end of their organisation’s hierarchy, a bigger budget may be allocated to them to treat their clients to meals.

For example, in a private conservation with a senior executive from an American multinational company, he mentioned that for most of his business dealings with Japanese firms, he had to start with a formal presentation to the Japanese company’s management. If he could not capture the CEO’s interest in the first 15 minutes, the CEO might walk out of the office while leaving behind the other managers to
continue to listen to the presentation. If this happened, he could forget about going back to the same company again in the foreseeable future. However, if the interest of the CEO was captured throughout the presentation, then the Japanese firm would send a representative who is of equivalent rank to discuss the actual business deal with him over dinner, and most probably also over a few cups of Japanese rice wine.

Hence, it is corollary that any organisation that is really interested in doing business with other similar organisations should expect to give their higher rank employees higher budgets to entertain their clients.

For example, in countries such as China, it is expected by the executives of many companies to be treated at restaurants with food and beverages that are “in tier with their rank”. This will usually mean more expensive restaurants for higher rank personnel. As what Cunha et al. (2008, p. 946) said in their paper, “[f]ine food is reserved for people who think themselves fine, while simple food feeds simple people”. For instance, if a CEO is treated to the same restaurant with wine and food in the same price range as would be given to a manager of another company, it is likely that the deal will be called off as this may be perceived as a form of insult to the CEO. This is analogous to “demoting” them to a lower status, as food at such events might be taken as a representation of one’s status (Cunha et al. 2008). This is even more likely to happen if the insulted CEO’s organisation has more advantages in terms of the business deal being negotiated.

On the other hand, smaller firms, with fewer resources and without the same emphasis on hierarchical structure and policy of big organisations, are less likely to have hierarchical food policies in place.

For example, bootstrap entrepreneurs are likely to face challenges in getting even enough resources to meet the financial needs of the organisation at the end of every
month (Frederick & Kuratko 2010). Given this, although they may need business from some other big organisations, it is not possible for them to have large budgets for business meals. For some, they might not even be able to come up with such budgets at all.”

Based on this discussion, I came up with Question 14 – Business meal reimbursement scheme is different according to an employee’s status in the organisation.

Question 15

In section 2.4.4 – accessibility of food policy, p. 59, I mentioned:

“Even if these organisational practices are not available to an organisation due to its lack of size, it is still possible for it to set up a simple water point to encourage employees to drink more water rather than soft-drinks bought from shops outside of the office. This is also likely to have a positive influence on employee food practices.”

Based on this paragraph, I came up with Question 15 – There is a pantry in my workplace for employee use.

Question 20

In section 2.4.2 – time policy, p. 50, I mentioned:

“Fourthly, the time policy will also influence whether employees can go for lunch or breaks together. For example, if employees are forced to go for lunch during different time slots that change monthly to handle the extremely heavy workload in an organisation, it is likely that employees will not have many chances to eat together.”
As meals with more people will tend to take longer (De Castro 2000; De Castro & De Castro 1987; Wansink 2004) and tend to increase the variety and amount of food items that may appear during a meal and be shared amongst employees, an organisation’s time policy is also likely to influence an employee’s health via its influence on the quantity of food that is usually consumed by that person (Wansink 2004).”

Based on this discussion, I came up with Question 20 – At my workplace, employees can decide by themselves when to take the lunch break or coffee breaks.

Participants ranked their answers on a 5-point Likert scale for each of these questions (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree). The following 16 questions were used to operationalise the four dimensions of organisational food culture, and their order was mixed up randomly before they were administered on the respondents:

i) Provision of food and organisational function policy

- Events are celebrated at my organisation with generous portions of food and drink. (Question 5, Q5)
- Business contracts and connections are made while eating and drinking in my organisation. (Question 6, Q6)
- In my organisation, business issues are often discussed over the dining table. (Question 8, Q8)
- In my company, we frequently celebrate successes with lunch or dinner parties. (Question 10, Q10)
- In my company, we “wine and dine” our customers regularly. (Question 18, Q18)

ii) Accessibility of food policy
- There are food vending machines near the place I work. (Question 9, Q9)
- Many external food sellers are located near my workplace. (Question 11, Q11)
- There is a pantry in my workplace for employee use. (Question 15, Q15)

iii) Hierarchical policy

- My organisation provides different foods for people holding different official positions. (Question 13, Q13)
- Business meal reimbursement scheme is different according to an employee’s status in the organisation. (Question 14, Q14)
- There are dining places in my organisation exclusively for managers and/or executives. (Question 19, Q19)

iv) Time policy

- People have fixed schedules for meals in my workplace. (Question 7, Q7)
- Employees of my organisation tend to take very short breaks for lunch. (Question 12, Q12)
- People working here spend little time to eat. (Question 16, Q16)
- People in my organisation often eat without stopping their work. (Question 17, Q17)
- At my workplace, employees can decide by themselves when to take the lunch break or coffee breaks. (Question 20, Q20)

The question numbers in brackets at the end of each question above are the numbering of the questions as used in the actual survey. These numbers were also used in the analyses of the data. A sample of the survey form used is attached in Appendix B.
3.6 The justification of the analytical method used

Confirmatory factor analysis, using the statistical software LISREL, was the main statistical tool used for analysing the empirical data of this research, along with the use of other statistical methods, such as correlation analysis, as complimentary tools of analysis, using the statistical software SPSS and STATA.

The aim of the empirical part of this research is to propose and test a preliminary parsimonious empirical construct of organisational food culture. To do this, a survey was created based on the literature review that had been conducted to develop the theoretical construct of organisational food culture. Then the survey was administered on a group of participants to see if the same four dimensions of organisational food culture could be found in their responses to the survey. In layperson’s terms, the aim of conducting the survey is to see if the participants’ answers to the 16 food-related organisational policy questions will fall into the same four groupings as the four proposed organisational food culture theoretical dimensions upon statistical analysis.

According to Nunnally and Bernstein (1994), factor analysis can be used to determine issues such as:

“1. Groupings or clustering of variables
2. Which variables belong to which group and how strongly they belong
3. How many dimensions are needed to explain the relations among the variables
4. A frame of reference (coordinate axes) to describe the relations among the variables more conveniently
5. Scores of individuals on such groups…”

Hence, as the aim of this part of the research on organisational food culture fits the capability of factor analysis to determine if a number of observed variables can be grouped together, factor analysis was chosen as the main statistical tool of analysis for this part of the research.

In general, factor analysis can be divided into two general categories: explanatory factor analysis and confirmatory factor analysis. According to Nunnally and Bernstein’s (1994) discussion, the difference between these two general categories of factor analysis is that while explanatory factor analysis is more data driven, confirmatory factor analysis is more theory driven.

For example, for researchers who adopt explanatory factor analysis, in the extreme scenario, the researchers may start their research with minimal theory but a lot of survey questions. The researchers collect data for their survey questions by administering the survey to a group of respondents, and then find out how the questions should be grouped and also how many groupings these questions should be placed into, by analysing the data collected using explanatory factor analysis. Most of the time, what such analysis does is merely meet “such mathematical objectives as maximizing the variance accounted for” via the grouping of the questions (Nunnally & Bernstein 1994, p. 447), but it does not really tell you why the questions should be grouped in such a way.

On the other hand, researchers who adopt confirmatory factor analysis usually start their research with a relatively detailed literature review. Then, based on the literature review, the researchers will determine if factor analysis is required for analytical purposes of the research. If factor analysis is required, the researchers then have to determine issues such as the number of factors that can be derived from the literature, and the content of each factor based on the literature, before any data are
collected for the research. After this is done, the researchers can then proceed to collect data for their research, and then test how well the data fits the proposed factorial construct (Nunnally & Bernstein 1994). In layperson’s terms, it just means in confirmatory factor analysis, the researchers will first propose “how things should stick together”, and then use confirmatory factor analysis to test if “things do stick together in the preconceived way in the real world”.

Hence, as the aim of the empirical part of this research is to propose and test an empirical construct of organisational food culture based on the theory developed in the literature review, confirmatory factor analysis was clearly the statistical tool to be used for analytical purposes in this research.

Before proceeding to the presentation of the results of the statistical analyses for this research, one relevant issue about the use of both explanatory factor analysis and confirmatory factor analysis in a single research study shall be discussed.

Recently, there have been some researchers who conducted an explanatory factor analysis on a set of data first, and then further confirmed the findings of the analysis by doing a confirmatory factor analysis on the same set of data. For example, in Bunderson and Thompson’s study (2009), the authors first arbitrarily separated their sample set of 982 into two groups without strong reasoning to back their decision. They then conducted an explanatory factor analysis on one of the two sample sets, followed by a confirmatory factor analysis on the other sample set, to validate their construct. Although some authors might do this to make their construct “look more valid”, this approach has been criticised by other researchers.

Kline (2005, p. 204) states that “[i]t is not entirely appropriate to specify a CFA model based on results of an exploratory factor analysis (EFA) and to estimate the former using the same data.” According to Kline (2005, p. 205), “[t]his is because
EFA results are subject to capitalization on chance variation, and specification of a CFA model based on the EFA outcomes and analyzed with the same data may just compound this problem.”

However, it is appropriate to test for the same structure using either explanatory factor analysis or confirmatory factor analysis across different samples. That is, although it is not right to do an explanatory factor analysis followed by a confirmatory factor analysis on one set of data to ensure that the results of an explanatory factor analysis done on the set of data are correct, it is right to do an explanatory factor analysis on one set of data and then to confirm the findings of the first set of data using confirmatory factor analysis on another set of data. Hence, by arbitrarily dividing their one sample set into two, it is unclear whether the method adopted by Bunderson and Thompson (2009) was really justifiable.

Nevertheless, although this approach of doing explanatory factor analysis on one set of data and then confirming the findings using confirmatory factor analysis on another set of data may be more appropriate than the one that analysed the same set of data using both explanatory factor analysis and confirmatory factor analysis, the use of both types of factor analysis to validate a single construct is also not really recommended by authors such as Nunnally and Bernstein (1994). In their words, “most factoring methods are clearly applicable to one or the other need, but not to both” (Nunnally & Bernstein 1994, p. 450).

Indeed, although some researchers may argue that it is necessary to do both types of factor analysis to first “explore” the construct that they are trying to find out, and then “confirm” the construct that they have found, this is not how these two types of factor analysis should be used. Researchers should choose between these two types of factor analyses based on the amount of information they have on hand, such as how
much confidence they have in their theory in terms of the number and content of the factors that should be involved in their research, and make their decision accordingly. That is, in the event that an explanatory factor analysis is done, it should imply that there is not enough theory for the data to be analysed with confirmatory factor analysis, and confirmatory factor analysis should not be involved in the picture. On the other hand, once a confirmatory factor analysis is conducted, it should imply that as there is enough theory for the data to be analysed with confirmatory factor analysis, it is not necessary for explanatory factor analysis to be done for the research. If this is so, the use of both types of factor analysis in a single research study could be considered as a case of poor planning of the research, and not a case of “more valid” research.

Hence, for this research, confirmatory factor analysis was used as the main tool of statistical analysis, without the simultaneous use of exploratory factor analysis.

3.7 Summary
In this chapter, I have discussed why I chose to conduct my research under the positivism paradigm, and not under the interpretivism paradigm. I explained why the survey research method was preferred over the experimentation and secondary data research methods. In addition, I have also discussed the strength of using a mixture of the purposive sampling method and the snowballing method as the sampling method for this research. I have also addressed the relevant ethical considerations of this research via a discussion of the benefit–cost analysis on the conduct of this research, the protection of the confidentiality and anonymity of the data, and the storage of data. The procedures used for the collection of data for my research were then
detailed, and this chapter has ended with a justification of the use of confirmatory factor analysis as the main statistical tool of analysis for this research.
CHAPTER 4 – RESULTS

4.0 Introduction

The methodological issues of this research were discussed in Chapter 3. Firstly, the positivism paradigm of research was adopted because it is in line with the aims of my research: it allows the possibility of, and can facilitate, the replication of the findings of my research and is more efficient than interpretivist research in general. Secondly, in view of the strengths of survey research in terms of its efficiency, objectivity and replicability, it was chosen as the means of data collection for this study. Thirdly, to ensure that an adequate sample size could be recruited for this study, a mixture of purposive sampling and snowballing sampling was adopted for this research. Fourthly, the ethical nature of this study was justified via a discussion of issues related to the benefit–cost analysis of the conduct of this study, the ensuring of informed consent and voluntary participation of respondents, the means used to ensure the confidentiality and anonymity of data, and the processes used for data storage. Fifthly, the procedures used for data collection were discussed and, finally, the chapter ended with a discussion to illustrate that confirmatory factor analysis was chosen as the main statistical tool of analysis because it is the right choice based on the literature.

The discussion in this chapter is divided into a few subsections. The first subsection is a discussion of the characteristics of the respondents of this research. The second subsection details the use of correlation analysis to check for the validity of the data-encoding process. The third subsection is a discussion of issues such as the
correlations between the 16 organisational food culture questions, the correlations between each proposed factor’s questions, the Cronbach’s alpha of each organisational food culture factor (dimension), and the Cronbach’s alpha for the 16 questions when they were used as indicators of an organisation’s food culture in general. The final subsection details the confirmatory factor analysis conducted on the set of organisational food culture data collected.

4.1 Characteristics of respondents

By the end of the data-collection stage, a total of 31 contact persons had been contacted by me and 224 completed surveys had been collected. The data collection occurred in the Republic of Singapore. As one of the surveys collected online did not have any responses in it despite the settings of the online survey collector, which should not have permitted the submission of an empty survey, it was deemed to be a system error, and was deleted. Hence, there is an effective total sample size of 223 completed surveys collected in this research.

Amongst the 31 contact persons contacted, 20 of them expressed their willingness to take part in the survey, and 15 expressed their willingness to help to invite other eligible personnel to take part. However, at the end of the data-collection period, four of the 20 contact persons (20% of the total number of contact persons who took part in the survey) provided approximately 190 out of the total 223 completed surveys (about 85% of the total number of completed surveys collected). This figure faintly reflected “the 20–80 rule” that is widely used in the business world, although the context of our discussion is about the total number of respondents recruited for the survey, and not organisational profits.
One of the four contact persons returned a total of 52 hard copies of the survey, another returned 21 hard copies of the survey, the third returned 12 hard copies of the survey, and the fourth returned 104 hard copies of the survey. Although some of these contact persons also helped to attract respondents to the online survey, it is not possible to find out the number of respondents attributable to each of these four contact persons as no questions asking for personally identifying information were included in the survey.

In addition, as the respondents who took part in the survey via these contact persons were not homogenous in terms of their industry, it appears that these contact people also invited respondents from outside the organisations they worked in.

Amongst the 223 respondents, 117 of them are males, 101 are females, and five chose to not indicate their gender (see Table 1). Next, out of the 223 respondents, 20 of them were in the age range of 20 years and below, 58 were aged 21–30 years, 78 were aged 31–40 years, 39 were aged 41–50 years, 27 were aged 51 and above, and one respondent chose not to respond to the question (see Table 2).

<table>
<thead>
<tr>
<th>Table 1: Gender of respondents</th>
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<td>Gender</td>
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<tr>
<td>--------</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>Did not indicate</td>
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</table>
Table 2: Age range of respondents

<table>
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<th>Age range</th>
<th>Frequency</th>
<th>Percentage (%)</th>
<th>Cumulative percentage (%)</th>
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</thead>
<tbody>
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<td>8.97</td>
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<tr>
<td>21–30</td>
<td>58</td>
<td>26.01</td>
<td>34.98</td>
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<td>31–40</td>
<td>78</td>
<td>34.98</td>
<td>69.96</td>
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<tr>
<td>41–50</td>
<td>39</td>
<td>17.49</td>
<td>87.45</td>
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<tr>
<td>51 and above</td>
<td>27</td>
<td>12.11</td>
<td>99.56</td>
</tr>
<tr>
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<td>1</td>
<td>0.45</td>
<td>100.00*</td>
</tr>
</tbody>
</table>

*Discrepancy due to the rounding of numbers to two decimal places.

Next, out of the total of 223 respondents, 208 of them gave a response to the question that asked for their “number of years in their current organisation”. For respondents who did not give an exact response to this question, the lower limit of the range of potential answers that could be implied by the response was chosen for reporting purposes for the sake of prudency. For example, where a participant reported “10 plus years”, this has been reported in this report as 10 years; and where respondents reported “less than 1 year” or indicated the year in which the survey was conducted in the answer column (meaning they have worked at their current company for less than a year), this has been reported in this report as 0 years. In summary, the mean of the number of years that respondents have worked in their organisation was 8.17 years, with a standard deviation of 8.13 years, and a median of 6 years, with a range of 0–54 years.

Next, for the question that asked for the industry that the respondents worked in, a wide range of different industries were indicated by the respondents, although 11 of
them chose not to indicate their industry (see Table 3 for the list of industries that respondents were from).

**Table 3: Industry of respondents**

<table>
<thead>
<tr>
<th>Industry</th>
<th>Frequency</th>
<th>Percentage (%)</th>
<th>Cumulative percentage (%)</th>
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<tbody>
<tr>
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<tr>
<td>Public sector</td>
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<td>21.52</td>
<td>26.45</td>
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<td>Education</td>
<td>18</td>
<td>8.07</td>
<td>34.52</td>
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<td>Food and beverage</td>
<td>16</td>
<td>7.17</td>
<td>41.69</td>
</tr>
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<td>Service</td>
<td>13</td>
<td>5.83</td>
<td>47.52</td>
</tr>
<tr>
<td>Security/safety</td>
<td>10</td>
<td>4.48</td>
<td>52.00</td>
</tr>
<tr>
<td>Finance and accounting</td>
<td>8</td>
<td>3.59</td>
<td>55.59</td>
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<tr>
<td>Beauty</td>
<td>7</td>
<td>3.14</td>
<td>58.73</td>
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<td>Information technology</td>
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<td>2.69</td>
<td>61.42</td>
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<td>Entertainment</td>
<td>5</td>
<td>2.24</td>
<td>63.66</td>
</tr>
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<td>Transportation</td>
<td>5</td>
<td>2.24</td>
<td>65.90</td>
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<td>Human resources/administration</td>
<td>5</td>
<td>2.24</td>
<td>68.14</td>
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<td>Health, wellness and lifestyle</td>
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<td>1.79</td>
<td>69.93</td>
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<td>Chemical</td>
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<td>Retail</td>
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<td>Telecommunications</td>
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<td>76.65</td>
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<td>Manufacturing</td>
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<td>1.35</td>
<td>78.00</td>
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<td>Medical care/nursing</td>
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<td>1.35</td>
<td>79.35</td>
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<tr>
<td>Industrial Category</td>
<td>Total</td>
<td>Percentage</td>
<td>Total Revenue</td>
</tr>
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<td>-------</td>
<td>------------</td>
<td>---------------</td>
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<tr>
<td>Sales</td>
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<td>1.35%</td>
<td>80.70</td>
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<tr>
<td>Insurance</td>
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<td>0.90%</td>
<td>81.60</td>
</tr>
<tr>
<td>Software</td>
<td>2</td>
<td>0.90%</td>
<td>82.50</td>
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<td>Hotel</td>
<td>2</td>
<td>0.90%</td>
<td>83.40</td>
</tr>
<tr>
<td>Engineering</td>
<td>2</td>
<td>0.90%</td>
<td>84.30</td>
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<tr>
<td>Moulding/fabrication</td>
<td>2</td>
<td>0.90%</td>
<td>85.20</td>
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<td>Arts</td>
<td>2</td>
<td>0.90%</td>
<td>86.10</td>
</tr>
<tr>
<td>Others</td>
<td>31</td>
<td>13.90%</td>
<td>100.00</td>
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</tbody>
</table>

Before continuing with the next section of this report, it should be noted that the industrial categories in Table 3 are just general categories that were used to summarise the wide range of organisations, titles and industries that were given by the respondents in their responses to the survey.

For example, respondents who were categorised under the “public sector” of Table 3 were actually from many different Singapore governmental ministries and agencies with differences in varying factors such as whether they were required to wear an uniform to work, the type of uniform they wore if required to do so, the type of hierarchical system they worked under, the location of their workplace, and the type of “clients” and “businesses” they usually handle in their daily operations, etc.

The “food and beverage” category included respondents who sold food, those who worked in kitchenware sales organisations, and so on. The “service” category included respondents who indicated their industry as “service”, or “service provision” and those who indicated jobs such as “life maintenance” and “janitor” in the survey. The “finance and accounting” category included respondents from the banking, finance, accounting and auditing sectors.
The respondents categorised under the “others” category were mainly respondents who were either from an industry I was unaware of (and hence did not know how to categorise) or who were the only representative from their industry for this survey. Some examples of the original list of titles and industries indicated by these respondents were secretary, professional, business, pilot, seaman, painter, design, industrial technology, oil and gas, quality assurance, sports, legal, consulting, logistics, pharmaceutical, etc.

4.2 Checking for data input accuracy using correlation analysis

As discussed earlier, the accuracy of the data keyed into the computer system was checked in this research by keying the same set of data twice into the computer system as two variables (one actual and one test variable), and by correlating each set of actual and test variables. In general, this method detected data-encoding errors: whenever there was an error in the encoding of data, the correlation of the set of actual and test variables was less than 1.0.

For example, the following correlation figures were obtained during the data-encoding phase of the research when an error had occurred: 0.92, 0.75, 0.98, 0.96, 0.99, and 0.90. Although these correlation figures did not tell me how many errors there were in the keyed-in data set, their presence indicated the presence of error(s) in the data set, and corrective actions were immediately taken. These correlation analyses were conducted after every 10 survey forms were keyed into the computer system. Whenever a correlation less than 1.0 was obtained, the values of both the actual and test variables keyed in the computer system would be tallied with the figures indicated on the actual survey form. The data-keying process only continued after a correlation of 1.0 was obtained.
At the end of the data-encoding process, I was certain that the data keyed into the computer system are accurate, as a correlation of 1.0 had been obtained for all the correlations for each respective set of actual and test variables. The analyses discussed in the following subsections were conducted using the actual variables.

4.3 Analyses conducted before the confirmatory factor analysis

To allow us to better understand the characteristics of the responses given by the survey’s respondents and the relationships that may exist between the 16 organisational food culture questions, a series of analyses was conducted prior to the confirmatory factor analysis being conducted on the data set. The aim of these analyses is to provide more information in order for us to gain a wider understanding of the nature of the information that could be glimpsed from the collected data, rather than just doing a confirmatory factor analysis to determine whether the proposed empirical construct is valid or not.

According to Hofstede (1998), a sample size of 20 is required for statistical analyses to have sufficient reliability and a sample size larger than the number of variables used is required for factor analysis. If this is so, the sample size of 223 respondents collected for this part of the research should be considered as enough for analytical purposes, given the preliminary nature of this research and my resource constraints as a doctoral candidate. However, in comparison to those sample sizes in the thousands used by some researchers, a sample size in the hundreds, although sufficient, may still be considered as relatively small by them (Schmidt & Hunter 2001). Hence, for the results of the analyses reported in the subsections below, I have also highlighted those relationships that were found to be significant at the 0.10 level.
The aim of the series of analyses reported on in this subsection is to allow us to better understand the relationships between the 16 organisational food culture questions used in the survey and to better understand how reliable the proposed parsimonious empirical construct of organisational food culture is in terms of the data collected.

This aim is different from the aim of the analyses reported on earlier, which is to confirm that the data-coding process was accurately conducted and to better understand how the actual responses of the participants correlate with each other. Hence, although there were missing data present in the participants’ responses, this was ignored by the researcher during those analyses. The issue of missing data was ignored in the analyses to ensure the accuracy of the data-encoding process because any action, or inaction, taken on the part of the researcher would not influence the outcome of the analyses insofar as the researcher was consistent in the process, such as replacing the missing data with a certain value for both the actual and test variables, or to take no action at all for both variables.

However, as will be discussed later, the analyses reported on in this subsection pertain to not only the relationships between the 16 organisational food culture questions but also to the reliability of the empirical construct of organisational food culture as a whole. These analyses are closely related to the confirmatory factor analyses reported on in the next subsection, which pertain to the construct validity of the parsimonious empirical construct of organisational food culture, and the results from both these sets of analyses are studied together in a later part of this report.

Due to individual preference, the correlation analyses conducted to ensure the accuracy of the data-encoding process were done using STATA, while other analyses
were conducted using SPSS and confirmatory factor analyses were conducted using LISREL.

For confirmatory factor analyses, an important part of the process is the interpretation of the goodness-of-fit statistics of the model being tested. However, if there are missing data, the LISREL program will not produce most of the goodness-of-fit statistics required for confirmatory factor analyses. Hence, for this process to be done properly, it is necessary for the researcher to handle the issue of missing data prior to starting the actual confirmatory factor analysis. Towards this end, the researcher replaced the missing data from these 16 organisational food culture questions with the mean of the scores for each respective observed variable.

The number of missing data replaced for the each of the 16 organisational food culture questions is in the range of 0–2. Specifically, one missing value was replaced for questions 5, 7, 9, 13, 14, 15, and 18; two missing values were replaced for questions 6, 8, and 10; and no missing values were replaced for the rest of the questions. As there were 223 respondents involved in this research, the total number of cases analysed in this research is 3568. As the number of cases in which missing data were replaced by the respective variable’s mean score is just 13 (0.36% of the total number of cases analysed), this artificial act on the part of the researcher should not have a significant impact on the accuracy of the results of the confirmatory factor analyses conducted subsequently.

The means and standard deviations of the 16 items are shown in the table below.
Table 4: Mean and standard deviation of all 16 organisational food culture questions

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q5</td>
<td>3.44</td>
<td>0.815</td>
</tr>
<tr>
<td>Q6</td>
<td>3.10</td>
<td>0.886</td>
</tr>
<tr>
<td>Q7</td>
<td>3.16</td>
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<tr>
<td>Q8</td>
<td>2.95</td>
<td>0.947</td>
</tr>
<tr>
<td>Q9</td>
<td>3.06</td>
<td>1.138</td>
</tr>
<tr>
<td>Q10</td>
<td>3.35</td>
<td>0.982</td>
</tr>
<tr>
<td>Q11</td>
<td>3.56</td>
<td>1.029</td>
</tr>
<tr>
<td>Q12</td>
<td>3.23</td>
<td>0.884</td>
</tr>
<tr>
<td>Q13</td>
<td>2.61</td>
<td>1.057</td>
</tr>
<tr>
<td>Q14</td>
<td>2.84</td>
<td>1.015</td>
</tr>
<tr>
<td>Q15</td>
<td>3.62</td>
<td>1.056</td>
</tr>
<tr>
<td>Q16</td>
<td>3.03</td>
<td>0.937</td>
</tr>
<tr>
<td>Q17</td>
<td>2.81</td>
<td>0.970</td>
</tr>
<tr>
<td>Q18</td>
<td>2.65</td>
<td>1.017</td>
</tr>
<tr>
<td>Q19</td>
<td>2.54</td>
<td>1.012</td>
</tr>
<tr>
<td>Q20</td>
<td>3.34</td>
<td>0.920</td>
</tr>
</tbody>
</table>

Nevertheless, to ensure a higher level of accuracy in the simultaneous examination of the organisational food culture empirical construct’s reliability and validity, which will be reported on in a later subsection, the data set that has its missing values replaced by the respective variable’s mean scores was also used for correlation and Cronbach’s alpha analyses. Having now discussed the actions taken to
handle the issue of missing data for the purpose of the analyses reported in this subsection, I report on these correlation and Cronbach’s alpha analyses in the paragraphs below.

In order to have a better understanding of the relationships that existed between the 16 organisational food culture questions, a correlation analysis was performed for all the 16 questions as shown in Tables 5.1 and 5.2. All the significance levels of the questions’ correlations were calculated at two-tails.
<table>
<thead>
<tr>
<th>Question</th>
<th>Q5</th>
<th>Q6</th>
<th>Q7</th>
<th>Q8</th>
<th>Q9</th>
<th>Q10</th>
<th>Q11</th>
<th>Q12</th>
<th>Q13</th>
<th>Q14</th>
<th>Q15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q5</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Q6</td>
<td>0.28***</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q7</td>
<td>0.07</td>
<td>0.13*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q8</td>
<td>0.13#</td>
<td>0.37***</td>
<td>0.16*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q9</td>
<td>0.06</td>
<td>0.03</td>
<td>0.18**</td>
<td>0.05</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q10</td>
<td>0.27***</td>
<td>0.28***</td>
<td>0.16*</td>
<td>0.22**</td>
<td>0.16*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q11</td>
<td>0.17*</td>
<td>-0.04</td>
<td>0.05</td>
<td>-0.23**</td>
<td>-0.01</td>
<td>0.10</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q12</td>
<td>-0.08</td>
<td>-0.05</td>
<td>-0.05</td>
<td>0.04</td>
<td>-0.05</td>
<td>-0.06</td>
<td>-0.09</td>
<td>1</td>
<td></td>
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<tr>
<td>Q13</td>
<td>-0.04</td>
<td>0.12#</td>
<td>0.22**</td>
<td>0.22**</td>
<td>0.22**</td>
<td>-0.004</td>
<td>-0.10</td>
<td>0.13*</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q14</td>
<td>0.12#</td>
<td>0.12#</td>
<td>0.15*</td>
<td>0.18**</td>
<td>0.25***</td>
<td>0.004</td>
<td>-0.01</td>
<td>-0.07</td>
<td>0.46***</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Q15</td>
<td>0.16*</td>
<td>0.06</td>
<td>-0.004</td>
<td>-0.08</td>
<td>-0.09</td>
<td>0.15*</td>
<td>0.31***</td>
<td>-0.20**</td>
<td>-0.05</td>
<td>-0.03</td>
<td>1</td>
</tr>
<tr>
<td>Q16</td>
<td>-0.07</td>
<td>0.01</td>
<td>0.02</td>
<td>0.02</td>
<td>0.03</td>
<td>-0.04</td>
<td>-0.14*</td>
<td>0.39***</td>
<td>0.03</td>
<td>0.10</td>
<td>-0.16*</td>
</tr>
<tr>
<td>Q17</td>
<td>-0.16*</td>
<td>0.12#</td>
<td>-0.15*</td>
<td>0.10</td>
<td>0.18**</td>
<td>-0.06</td>
<td>-0.09</td>
<td>0.15*</td>
<td>0.15*</td>
<td>0.09</td>
<td>-0.27***</td>
</tr>
</tbody>
</table>
Table 5.2: Correlations of all 16 organisational food culture questions

<table>
<thead>
<tr>
<th></th>
<th>Q16</th>
<th>Q17</th>
<th>Q18</th>
<th>Q19</th>
<th>Q20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q16</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q17</td>
<td>0.34***</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q18</td>
<td>0.11</td>
<td>0.14*</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q19</td>
<td>0.21**</td>
<td>0.22**</td>
<td>0.43***</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Q20</td>
<td>-0.10</td>
<td>-0.06</td>
<td>0.09</td>
<td>-0.01</td>
<td>1</td>
</tr>
</tbody>
</table>

* p < .05  
** p < .01  
*** p < .001
Next, as the aim of this part of the research is to propose and test the proposed parsimonious empirical construct of organisational food culture, another set of correlation analyses was conducted for the questions of each proposed dimension as shown in Tables 6 to 9. All the significance levels of the questions’ correlations were calculated at two-tails.

**Table 6: Correlations of the provision of food and organisational function policy questions**

<table>
<thead>
<tr>
<th></th>
<th>Q5</th>
<th>Q6</th>
<th>Q8</th>
<th>Q10</th>
<th>Q18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q5</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q6</td>
<td>0.28***</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q8</td>
<td>0.13#</td>
<td>0.37***</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q10</td>
<td>0.27***</td>
<td>0.28***</td>
<td>0.22**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Q18</td>
<td>0.01</td>
<td>0.24***</td>
<td>0.35***</td>
<td>0.19**</td>
<td>1</td>
</tr>
</tbody>
</table>

# p < .10  
** p < .01  
*** p < .001

**Table 7: Correlations of the time policy questions**

<table>
<thead>
<tr>
<th></th>
<th>Q7</th>
<th>Q12</th>
<th>Q16</th>
<th>Q17</th>
<th>Q20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q7</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q12</td>
<td>-0.05</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q16</td>
<td>0.02</td>
<td>0.39***</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q17</td>
<td>-0.15*</td>
<td>0.15*</td>
<td>0.34***</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Q20</td>
<td>-0.01</td>
<td>0.07</td>
<td>-0.10</td>
<td>-0.06</td>
<td>1</td>
</tr>
</tbody>
</table>

* p < .05  
*** p < .001
For the dimension of provision of food and organisational function policy, as reported in Table 6, question 5 was found to be significantly positively correlated with question 6 ($r = 0.28$, $p < 0.001$), mildly positively correlated with question 8 ($r = 0.13$, $p < 0.10$), and significantly positively correlated with question 10 ($r = 0.27$, $p < 0.001$). However, a similar significant positive relationship was not found between question 5 and question 18 ($r = 0.01$, $p = 0.90$).

Question 6 was found to be significantly positively correlated with question 5 ($r = 0.28$, $p < 0.001$), significantly positively correlated with question 8 ($r = 0.37$, $p < 0.001$), significantly positively correlated with question 10 ($r = 0.28$, $p < 0.001$), and significantly positively correlated with question 18 ($r = 0.24$, $p < 0.001$). That is, question 6 was found to be significantly positively correlated with all the other questions within this dimension.
Question 8 was found to be mildly positively correlated with question 5 ($r = 0.13, p < 0.10$), significantly positively correlated with question 6 ($r = 0.37, p < 0.001$), significantly positively correlated with question 10 ($r = 0.22, p < 0.01$), and significantly positively correlated with question 18 ($r = 0.35, p < 0.001$).

Question 10 was found to be significantly positively correlated with question 5 ($r = 0.27, p < 0.001$), significantly positively correlated with question 6 ($r = 0.28, p < 0.001$), significantly positively correlated with question 8 ($r = 0.22, p < 0.01$), and significantly positively correlated with question 18 ($r = 0.19, p < 0.01$). That is, as found with question 6, question 10 was found to be significantly positively correlated with all the other questions within the dimension.

Although question 18 was not found to have a significant positive relationship with question 5 ($r = 0.01, p = 0.90$), it was found to be significantly positively correlated with question 6 ($r = 0.24, p < 0.001$), significantly positively correlated with question 8 ($r = 0.35, p < 0.001$), and significantly positively correlated with question 10 ($r = 0.19, p < 0.01$).

As most of these questions are positively correlated with each other relatively significantly, it may be an indication that these questions “stick” quite well together in terms of describing a dimension of an organisation’s food culture. Indeed, if we treat these five questions as components of a composite variable “provision of food and organisational function policy”, and check the reliability of this variable, the Cronbach’s alpha of this composite variable would be 0.60, which is a relatively high reliability score.

Hence, Proposition 1 (“The food provision and organisational function policy of an organisation is a part of its organisational food culture”) is supported by the correlation and reliability analyses done on the data.
Next, for the dimension of time policy, it was found that question 7 only has a significant negative relationship with question 17 (r = -0.15, p < 0.05), and it was not found to have any significant relationship with question 12 (r = -0.05, p = 0.51), question 16 (r = 0.02, p = 0.79), and question 20 (r = -0.01, p = 0.90).

Question 12 was found to have a significant positive correlation with question 16 (r = 0.39, p < 0.001) and a significant positive correlation with question 17 (r = 0.15, p < 0.05), although it was not found to have any significant correlation with question 7 (r = -0.05, p = 0.51) and question 20 (r = 0.07, p = 0.30).

Question 16 was found to have a significant positive relationship with question 12 (r = 0.39, p < 0.001) and a significant positive correlation with question 17 (r = 0.34, p < 0.001), although it was not found to have any significant relationship with question 7 (r = 0.02, p = 0.79) and question 20 (r = -0.10, p = 0.13).

Although question 17 was not found to have a significant correlation with question 20 (r = -0.06, p = 0.40), question 17 was found to have a significant negative correlation with question 7 (r = -0.15, p < 0.05), a significant positive correlation with question 12 (r = 0.15, p < 0.05) and a significant positive correlation with question 16 (r = 0.34, p < 0.001).

Question 20 was not found to have any significant correlation with question 7 (r = -0.01, p = 0.90), question 12 (r = 0.07, p = 0.30), question 16 (r = -0.10, p = 0.13), or question 17 (r = -0.06, p = 0.40); that is, question 20 was not found to have any significant relationship with any of the other questions that were proposed to belong to the dimension of time policy.

As only four out of the total 10 sets of correlations observed for the dimension of time policy were found to be statistically significant, it might indicate that the data collected for these questions do not behave as for questions from a single dimension.
Indeed, if we treat these five questions as components of a composite variable “time policy”, and do a reliability check on this variable, the Cronbach’s alpha of this composite variable is only 0.23, which is not the high reliability score that should be observed for the data of a composite variable.

Hence, Proposition 2 (“The time policy of an organisation is a part of its organisational food culture”) is not supported by the correlation and reliability analyses done on the data.

For the dimension of hierarchical policy, it was found that question 13 has a significant positive correlation with question 14 (r = 0.46, p < 0.001) and question 19 (r = 0.58, p < 0.001). In addition, it was also found that question 14 has a significant positive relationship with question 19 (r = 0.48, p < 0.001).

As all the three indicators of the dimension were found to have significant positive correlations with each other, it might be an indication that these three questions together are good indicators of an organisation’s hierarchical policy on food-related issues. Indeed, if we treat these three questions as components of a composite variable “hierarchical policy” and do a reliability check on this variable, the Cronbach’s alpha of this composite variable will be 0.76, which is a relatively high reliability score for a composite variable.

Hence, Proposition 3 (“The hierarchical policy of an organisation is a part of its organisational food culture”) is supported by the correlation and reliability analyses done on the data.

Finally, for the dimension of accessibility of food policy, it was found that question 9 does not have a significant correlation with question 11 (r = -0.01, p = 0.95) and question 15 (r = -0.09, p = 0.19). However, although question 11 and question 15 were not found to have a significant relationship with question 9, a
significant positive correlation was observed between question 11 and question 15 ($r = 0.31, p < 0.001$).

As two out of the three sets of correlations of the questions of this dimension were not observed to be statistically significant, it might be an indication that the data collected for these questions do not behave as per questions from a single dimension. Again, if we treat these three questions as components of a composite variable “accessibility of food policy” and do a reliability check on this variable, the Cronbach’s alpha of this composite variable will only be 0.17, which is not the high reliability score that should be observed for the data of a composite variable.

Given this, Proposition 4 (“The accessibility of food policy of an organisation is a part of its organisational food culture”) is not supported by the correlation and reliability analyses done on the data.

Although not formally proposed during the literature review stage, it was observed that all the organisational food culture questions placed in the survey also have significant correlations with questions that were not proposed to be from the same dimension. These correlations with questions from other dimensions are shown in Tables 10.1 to 10.13.
<table>
<thead>
<tr>
<th>Dimension</th>
<th>Question</th>
<th>Question from other dimension</th>
<th>Dimension of the other question</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>11</td>
<td>Accessibility of food policy</td>
<td>11</td>
<td>0.17*</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>Hierarchical policy</td>
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<td>0.12#</td>
</tr>
<tr>
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<td>15</td>
<td>Accessibility of food policy</td>
<td>11</td>
<td>0.16*</td>
</tr>
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<td></td>
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# p < .10
* p < .05
Table 10.2: Correlations of organisational food culture questions with questions from other dimensions

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* p < .05
** p < .01
Table 10.3: Correlations of organisational food culture questions with questions from other dimensions

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# p < .10
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*** p < .001
Table 10.4: Correlations of organisational food culture questions with questions from other dimensions

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** p < .01
*** p < .001
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* p < .05
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Table 10.6: Correlations of organisational food culture questions with questions from other dimensions

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* p < .05
** p < .01
*** p < .001
Table 10.7: Correlations of organisational food culture questions with questions from other dimensions

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*** p < .001
Table 10.8: Correlations of organisational food culture questions with questions from other dimensions

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** p < .01  
*** p < .001
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* p < .05  
** p < .01  
*** p < .001
Table 10.10: Correlations of organisational food culture questions with questions from other dimensions

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* p < 0.05  
** p < 0.01  
*** p < 0.001
Table 10.1: Correlations of organisational food culture questions with questions from other dimensions

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# p < .10  
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** p < .01  
*** p < .001
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* p < .05  
** p < .01
Question 5 from the provision of food and organisational function policy dimension was found to have significant relationships with question 11 (r = 0.17, p < 0.05) and question 15 (r = 0.16, p < 0.05) from the dimension of accessibility of food policy, and to have significant relationships with question 17 (r = -0.16, p < 0.05) and question 20 (r = 0.14, p < 0.05) from the time policy dimension. Question 5 was also found to have a mildly significant relationship with question 14 (r = 0.12, p < 0.10) from the dimension of the hierarchical policy.

Question 6 from the provision of food and organisational function policy dimension was found to have mildly significant relationships with Question 17 (r = 0.12, p < 0.10) from the Time Policy dimension, and to have mildly significant relationships with question 13 (r = 0.12, p < 0.10) and question 14 (r = 0.12, p < 0.10) from the hierarchical policy dimension. Question 6 was also found to have a significant relationship with question 7 (r = 0.13, p < 0.05) from the time policy dimension.

Question 7 from the time policy dimension was found to have significant relationships with question 6 (r = 0.13, p < 0.05), question 8 (r = 0.16, p < 0.05), question 10 (r = 0.16, p < 0.05), and question 18 (r = 0.24, p < 0.001) from the dimension of provision of food and organisational function policy; to have a significant relationship with question 9 (r = 0.18, p < 0.01) from the dimension of accessibility of food policy; and to have significant relationships with question 13 (r = 0.22, p < 0.01), question 14 (r = 0.15, p < 0.05), and question 19 (r = 0.22, p < 0.01) from the dimension of hierarchical policy.

Question 8 from the provision of food and organisational function policy dimension was found to have a significant relationship with question 7 (r = 0.16, p < 0.05) from the dimension of time policy, to have a significant relationship with
question 11 \((r = -0.23, p < 0.01)\) from the dimension of accessibility of food policy, and to have significant relationships with question 13 \((r = 0.22, p < 0.01)\), question 14 \((r = 0.18, p < 0.01)\) and question 19 \((r = 0.21, p < 0.01)\) from the dimension of hierarchical policy.

Question 9 from the accessibility of food policy dimension was found to have significant relationships with question 7 \((r = 0.18, p < 0.01)\) and question 17 \((r = 0.18, p < 0.01)\) from the dimension of time policy, to have a significant relationship with question 10 \((r = 0.16, p < 0.05)\) from the dimension of provision of food and organisational function policy, and to have significant relationships with question 13 \((r = 0.22, p < 0.01)\), question 14 \((r = 0.25, p < 0.001)\), and question 19 \((r = 0.26, p < 0.001)\) from the dimension of hierarchical policy. Question 9 was also found to have a mildly significant relationship with question 18 \((r = 0.13, p < 0.10)\) from the dimension of provision of food and organisational function policy.

Question 10 from the provision of food and organisational function policy dimension was found to have significant relationships with question 7 \((r = 0.16, p < 0.05)\) and question 20 \((r = 0.21, p < 0.01)\) from the dimension of time policy, and to have significant relationships with question 9 \((r = 0.16, p < 0.05)\) and question 15 \((r = 0.15, p < 0.05)\) from the dimension of accessibility of food policy.

Question 11 from accessibility of food policy dimension was found to have significant relationships with question 5 \((r = 0.17, p < 0.05)\), question 8 \((r = -0.23, p < 0.01)\), question 16 \((r = -0.14, p < 0.05)\) and question 18 \((r = -0.14, p < 0.05)\) from the dimension of provision of food and organisational function policy, and to have a significant relationship with question 20 \((r = 0.16, p < 0.05)\) from the dimension of time policy.
Question 12 from the time policy dimension was found to have significant relationships with question 13 (r = 0.13, p < 0.05) and question 19 (r = 0.13, p < 0.05) from the dimension of hierarchical policy, and to have a significant relationship with question 15 (r = -0.20, p < 0.01) from the dimension of accessibility of food policy.

Question 13 from the hierarchical policy dimension was found to have significant relationships with question 8 (r = 0.22, p < 0.01) and question 18 (r = 0.32, p < 0.001) from the dimension of provision of food and organisational function policy, to have significant relationships with question 7 (r = 0.22, p < 0.01), question 12 (r = 0.13, p < 0.05), and question 17 (r = 0.15, p < 0.05) from the dimension of time policy, and to have a significant relationship with question 9 (r = 0.22, p < 0.01) from the dimension of accessibility of food policy. Question 13 was also found to have a mildly significant relationship with question 6 (r = 0.12, p < 0.10) from the dimension of provision of food and organisational function policy.

Question 14 from the hierarchical policy dimension was found to have significant relationships with question 8 (r = 0.18, p < 0.01) and question 18 (r = 0.32, p < 0.001) from the dimension of provision of food and organisational function policy, to have significant relationships with question 7 (r = 0.15, p < 0.05) and question 20 (r = -0.16, p < 0.05) from the dimension of time policy, and to have a significant relationship with question 9 (r = 0.25, p < 0.001) from the dimension of accessibility of food policy. Question 14 was also found to have mildly significant relationships with question 5 (r = 0.12, p < 0.10) and question 6 (r = 0.12, p < 0.10) from the dimension of provision of food and organisational function policy.

Question 15 from the accessibility of food policy dimension was found to have significant relationships with question 5 (r = 0.16, p < 0.05) and question 10 (r = 0.15, p < 0.05) from the dimension of provision of food and organisational function policy,
and to have significant relationships with question 12 (r = -0.20, p < 0.01), question 16 (r = -0.16, p < 0.05), question 17 (r = -0.27, p < 0.001), and question 20 (r = 0.21, p < 0.01) from the dimension of time policy.

Question 16 from the time policy dimension was found to have significant relationships with question 11 (r = -0.14, p < 0.05) and question 15 (r = -0.16, p < 0.05) from the dimension of accessibility of food policy, and to have a significant relationship with question 19 (r = 0.21, p < 0.01) from the dimension of hierarchical policy dimension.

Question 17 from the time policy dimension was found to have significant relationships with question 5 (r = -0.16, p < 0.05) and question 18 (r = 0.14, p < 0.05) from the dimension of provision of food and organisational function policy, to have significant relationships with question 9 (r = 0.18, p < 0.01) and question 15 (r = -0.27, p < 0.001) from the dimension of accessibility of food policy, and to have significant relationships with question 13 (r = 0.15, p < 0.05) and question 19 (r = 0.22, p < 0.01) from the dimension of hierarchical policy. Question 17 was also found to have a mildly significant relationship with question 6 (r = 0.12, p < 0.10) from the dimension of provision of food and organisational function policy.

Question 18 from the provision of food and organisational function policy dimension was found to have significant relationships with question 7 (r = 0.24, p < 0.001) and question 17 (r = 0.14, p < 0.05) from the dimension of time policy, to have significant relationships with question 9 (r = 0.13, p < 0.10) and question 11 (r = -0.14, p < 0.05) from the dimension of accessibility of food policy, and to have significant relationships with question 13 (r = 0.32, p < 0.001), question 14 (r = 0.32, p < 0.001), and question 19 (r = 0.43, p < 0.001) from the dimension of hierarchical policy.
Question 18 was also found to have a mildly significant relationship with question 9 ($r = 0.13, p < 0.10$) from the dimension of accessibility of food policy.

Question 19 from the hierarchical policy dimension was found to have significant relationships with question 7 ($r = 0.22, p < 0.01$), question 12 ($r = 0.13, p < 0.05$), question 16 ($r = 0.21, p < 0.01$), and question 17 ($r = 0.22, p < 0.01$) from the dimension of time policy, to have significant relationships with question 8 ($r = 0.21, p < 0.01$) and question 18 ($r = 0.43, p < 0.001$) from the dimension of provision of food and organisational function policy, and to have a significant relationship with question 9 ($r = 0.26, p < 0.001$) from the dimension of accessibility of food policy.

Question 20 from the time policy dimension was found to have significant relationships with question 5 ($r = 0.14, p < 0.05$) and question 10 ($r = 0.21, p < 0.01$) from the dimension of provision of food and organisational function policy, to have significant relationships with question 11 ($r = 0.16, p < 0.05$) and question 15 ($r = 0.21, p < 0.01$) from the dimension of accessibility of food policy, and to have a significant relationship with question 14 ($r = -0.16, p < 0.05$) from the dimension of hierarchical policy.

Before proceeding to the next subsection to report the results of the analyses conducted on the data collected for the 16 organisational food culture questions using confirmatory factor analysis, I shall first discuss an interesting observation about the data here.

Firstly, I observed that if I was to base my decision of whether to accept the four propositions proposed in the literature review on the analyses of the data using correlation analyses and the Cronbach’s alphas of the four composite variables, two of the four propositions would be rejected. Specifically given that the data collected using questions developed from the literature review are not able to “stick together” in
the way proposed in the literature review, the data do not seem to support the proposition that the dimensions of time policy (Proposition 2) and accessibility of food policy (Proposition 4) should be two dimensions of organisational food culture.

However, even if the questions of the proposed time policy dimension and accessibility of food policy dimension were not found to have significant correlations with questions from the same dimension, and were not found to produce high enough Cronbach’s alpha figures when the questions were analysed as two composite variables, these reasons are still not enough to determine if these questions should not be considered as indicators for organisational food culture as a whole. That is, even if these questions do not “stick well together” when they are considered as the two dimensions proposed, these questions might still be good indicators for an organisation’s food culture given the number of significant relationships that these questions have with questions from the other dimensions as shown in Table 10.1 to Table 10.13.

To test for this possibility, the 16 questions were taken as 16 indicators for a composite variable “organisational food culture”, and this was tested for its Cronbach’s alpha figure. The Cronbach’s alpha for this composite variable, which is made up of all the 16 indicators, was found to be 0.60.

Next, another composite variable, also called “organisational food culture”, was created with only the eight questions from the provision of food and organisational function policy dimension and the hierarchical policy dimension, and its Cronbach’s alpha figure was calculated. Upon analysis, the Cronbach’s alpha figure for this composite variable was found to be 0.69.

As the Cronbach’s alpha figure of the composite variable “organisational food culture” is much higher when the questions from the time policy dimension and the
accessibility of food policy dimension were excluded from the calculation, it indicated that the reliability of the composite variable is much better when these questions are not taken into consideration. Hence, this might indicate that these questions are not good indicators for an organisation’s food culture, although they were derived from the review of the current literature. In addition, this might also indicate that although we can accept Proposition 1 and Proposition 3, based on the analyses of the data collected for the purpose of this research, we should reject Proposition 2 and Proposition 4.

4.4 Confirmatory factor analyses

Having discussed the evaluation of the reliability of the proposed organisational food culture’s empirical construct in the last subsection, the discussion in this part of the report is focused on the evaluation of the empirical construct’s validity. Towards this end, a confirmatory factor analysis was performed, using LISREL, on the proposed parsimonious empirical construct of organisational food culture with the collected data.

As stated earlier in section 4.3.2., in order for LISREL to be able to generate all the goodness-of-fit statistics for the confirmatory factor analysis, all the missing data were replaced with the mean of the scores for each respective observed variable.

As proposed, the model that was tested at this stage of the analysis was made up of four latent variables and 16 observed variables. The four latent variables were: PF (provision of food and organisational function policy), Time (time policy), Hierarch (hierarchical policy), and Access (accessibility of food policy). The 16 observed variables are the 16 survey questions on organisational food culture (Q5–Q20).
The 16 observed variables were grouped under their respective proposed dimension (latent variable) for the purpose of this analysis.

Again, question 5 (“Events are celebrated at my organisation with generous portions of food and drink”), question 6 (“Business contracts and connections are made while eating and drinking in my organisation”), question 8 (“In my organisation, business issues are often discussed over the dining table”), question 10 (“In my company, we frequently celebrate successes with lunch or dinner parties”) and question 18 (“In my company, we “wine and dine” our customers regularly”) were placed under PF.

Question 7 (“People have fixed schedules for meals in my workplace”), question 12 (“Employees of my organisation tend to take very short breaks for lunch”), question 16 (“People working here spend little time to eat”), question 17 (“People in my organisation often eat without stopping their work”) and question 20 (“At my workplace, employees can decide by themselves when to take the lunch break or coffee breaks”) were placed under Time.

Question 13 (“My organisation provides different food for people holding different official positions”), question 14 (“Business meal reimbursement scheme is different according to an employee’s status in the organisation”) and question 19 (“There are dining places in my organisation exclusively for managers and/or executives”) were placed under Hierarch.

Question 9 (“There are food vending machines near the place I work”), question 11 (“Many external food sellers are located near my workplace”) and question 15 (“There is a pantry in my workplace for employee use”) were placed under Access.
The outcome of the confirmatory factor analysis using LISREL is shown below in Figure 1. Figure 1 was redrawn using Microsoft Office Word 2007 software to improve the readability and clarity of the original graphical output of LISREL.

Firstly, interestingly, it was observed that the dimension of time policy is the only dimension that correlated negatively with the other three dimensions. The other dimensions correlated with each other positively.

Secondly, the root mean square error of approximation (RMSEA) of the model is 0.09, the standardised root mean square residual (RMR) is 0.10, the normed fit index (NFI) is 0.68, and the non-normed fit index (NNFI) is 0.71. The comparative fit index (CFI) is 0.76, the incremental fit index (IFI) is 0.77, the goodness-of-fit index (GFI) is 0.87, and the adjusted goodness-of-fit index (AGFI) is 0.82.

In terms of the goodness-of-fit statistics of the model, although the RMSEA and RMR figures of the model are around 0.10, which indicated that the model has a relatively good fit, the other goodness-of-fit statistics are mainly around 0.7 and 0.8, which indicated that the fitness of the model is relatively weak. Hence, while the model could be said to be valid, the validity of the proposed organisational food culture’s empirical construct could not be said to be strong.
 Nevertheless, as we saw in the last subsection, the reliability of the proposed construct improved significantly after I dropped the time policy and accessibility of food policy dimensions in view of their very low reliability when they were each considered as a composite variable. This led to the consideration of the rejection of Proposition 2 and Proposition 4 and the possible dropping of these two dimensions from the proposed parsimonious empirical construct of organisational food culture.
Given this, it might be possible that the proposed empirical construct of organisational food culture would be more valid if we drop these two dimensions that have very low reliability.

In view of this, another confirmatory factor analysis was conducted to test whether the proposed parsimonious empirical construct of organisational food culture would be more valid if these two less reliable dimensions are dropped from the model. For this analysis, a model that only included the latent variables “PF” and “Hierarch”, and their respective observed variables, was tested. The outcome of this analysis is shown below in Figure 2. Figure 2 was redrawn using Microsoft Office Word 2007 software to improve the readability and clarity of the original graphical output of LISREL.

![Figure 2: CFA Analysis Outcome for 2 Factors Model](image)

Hierarch, hierarchical policy; PF, provision of food and organisational function policy; Q, question.

Similar with the findings of the reliability analyses that were conducted on the proposed empirical construct, the goodness-of-fit statistics of the model improved significantly after the dropping of the two less reliable dimensions. The RMSEA of
the model is 0.11, the RMR is 0.08, the NFI is 0.85, and the NNFI is 0.84. The CFI of the model is 0.89, the IFI is 0.89, the GFI is 0.93, and the AGFI is 0.86.

Although the RMSEA figure increased by 0.02, the RMSEA and RMR figure of the model’s goodness-of-fit statistics are still around 0.10, and the rest of the other goodness-of-fit statistics are around 0.90, indicating a much better fit than in the previous model.

By removing the two less reliable dimensions (time policy and accessibility of food policy), the model has become more valid. Hence, as both the reliability and validity analyses of the parsimonious empirical construct of organisational food culture found that the proposed construct is more valid and reliable without the presence of the dimensions of time policy and accessibility of food policy, Proposition 1 and Proposition 3 are supported by the findings of this research, while Proposition 2 and Proposition 4 are not supported by the findings.

Hence, Proposition 1 (“The food provision and organisational function policy of an organisation is a part of its organisational food culture”) and Proposition 3 (“The hierarchical policy of an organisation is a part of its organisational food culture”) have been accepted, while Proposition 2 (“The time policy of an organisation is a part of its organisational food culture”) and Proposition 4 (“The accessibility of food policy of an organisation is a part of its organisational food culture”) have been rejected.

Since only two out of the four proposed dimensions were accepted at the end of this study, it means that future researchers can use the items from the provision of food and organisational function policy dimension and hierarchical policy dimension in their future research straightaway. The items from the other dimensions should only be used if they were proved to be both reliable and valid in future research.
4.5 Summary

This chapter has discussed the analyses conducted on the set of data collected for this research. The characteristics of the 223 respondents who took part in the survey conducted were detailed, before the effectiveness of using correlation analysis to ensure the accuracy of the data input process was discussed. The reliability of the proposed empirical construct of organisational food culture was also investigated via the study of the inter-question correlations of all the organisational food culture questions, the Cronbach’s alpha of each of the dimensions, and the Cronbach’s alpha of the composite variable “organisational food culture” when the various dimensions were combined. Finally, the chapter has ended with the validity of the proposed parsimonious empirical construct of organisational food culture being studied via the conduct of a confirmatory factor analysis on the collected data.
CHAPTER 5 – DISCUSSION AND CONCLUSION

5.0 Introduction

In Chapter 4, the characteristics of the 233 respondents who took part in the survey and the effectiveness of using correlation analyses to ensure the accuracy of the data input process were discussed. To test for the proposed empirical construct of organisational food culture’s reliability, I then analysed and discussed the inter-question correlations for each of the organisational food culture questions, and calculated the Cronbach’s alpha for the proposed four dimensions of organisational food culture (provision of food and organisational function policy, accessibility of food policy, hierarchical policy, and time policy) and the Cronbach’s alpha of the composite variable “organisational food culture”.

Next, a confirmatory factor analysis was conducted on the collected data to test for the proposed empirical construct’s validity. In view of the low Cronbach’s alpha figures of the dimensions of time policy and accessibility of food policy (0.23 and 0.17 respectively), the improved Cronbach’s alpha of the composite variable “organisational food culture” when these two dimensions were not considered in the Cronbach’s alpha calculation (from 0.60 to 0.69), and the improvements in the various goodness-of-fit statistics when the confirmatory factor analysis was conducted without these two dimensions, Proposition 2 (“The time policy of an organisation is a part of its organisational food culture”) and Proposition 4 (“The accessibility of food policy of an organisation is a part of its organisational food culture”) were rejected,
while Proposition 1 (“The food provision and organisational function policy of an organisation is a part of its organisational food culture”) and Proposition 3 (“The hierarchical policy of an organisation is a part of its organisational food culture”) were accepted.

In this final chapter, some general issues pertaining to the conduct of this research will be discussed first, before the contributions of this research to the current base of scientific knowledge, its limitations and potential directions of future research will be detailed. This report will then conclude with a discussion of the academic and industrial/managerial implications of this research.

5.1 General discussion

First of all, in the correlation analyses conducted on all the organisational food culture questions, it could be observed that many of the questions are significantly correlated with questions that were proposed to be from the same dimension, but were also significantly correlated with questions from the other dimensions. Given that these questions were all questions proposed to represent different dimensions of the construct “organisational food culture”, such a correlation with questions from both within and without the different dimensions was expected. If this has not occurred, one would really have to ask if the questions from these dimensions really do represent a single construct of “organisational food culture”.

These correlrelationships between the questions might be the reason why a relatively acceptable Cronbach’s alpha figure of 0.60 was obtained when a composite variable of “organisational food culture” was created using all the 16 organisational food culture questions. Nevertheless, despite the existence of significant correlrelationships between the 16 organisational food culture questions, the reliability
of the construct of “organisational food culture” improved to 0.69 after questions from the time policy and accessibility of food dimensions (two dimensions found to have low reliability) were removed. Hence, for the sake of prudence, I have rejected Proposition 2 and Proposition 4 in view of the greater reliability of the empirical construct in general after the removal of these two dimensions from the model.

The low reliabilities found with the questions from the time policy and accessibility of food dimensions might indicate that the participants’ responses to the questions from these two dimensions might be dissimilar. The differences in terms of the participants’ responses could be due to two potential reasons. The first reason might be the organisations that the participants worked in had different policies that influenced the time factor of their food practices and their accessibility to food differently. The second reason might be that, despite the organisations they worked in having similar time and accessibility to food policies, the participants perceived these policies differently.

Indeed, if we look at questions such as “Employees of my organisation tend to take very short breaks for lunch” and “People working here spend little time to eat”, the differences in the answers to these questions could be due to either the presence of a relevant time policy or just the mere perception of the participants. For example, an organisation might allow its employees to have a 2-hour lunch break every working day. If a participant answered these questions based on the organisation’s official policy, the answer could have been “strongly agree” to both questions. However, if the participant happened to be busy for the past few days when s/he answered the survey, and would hence tend to take a much shorter lunch break than usual so s/he would have more time to work, the participant might indicate “neutral” or even “disagree” or “strongly disagree” as his/her responses to the survey.
To see how the participants might have perceived the items to be associated, I conducted an additional EFA analysis. The four proposed factors should be related as they are all dimensions of organisational food culture. Hence I used promax rotation. Taking into account of the relationships between the items and dimensions, the structure matrix of the results of the analysis is shown below.

Table 11: Structure Matrix of Analysis

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<tbody>
<tr>
<td>Q5</td>
<td></td>
<td>0.585</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Q10</td>
<td></td>
<td>0.699</td>
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<td>Q11</td>
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<td>Q12</td>
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<td></td>
<td>0.723</td>
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<td>Q13</td>
<td>0.776</td>
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<td>Q14</td>
<td>0.671</td>
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<td>Q15</td>
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<td>Q16</td>
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<td>Q20</td>
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<td>-0.597</td>
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</table>
The analysis shows that the data of the 16 questions can be grouped into 5 main factors. The function of EFA is to group survey items according to patterns that were observed in the data. It is purely data driven, and does not take into account of the theory behind the items. That is, items may appear in places where it should not appear. For example, based on the results of this EFA analysis, question 9 (there are food vending machines near the place I work) from the accessibility of food policy dimension was grouped with question 20 (at my workplace, employees can decide by themselves when to take the lunch break or coffee breaks) from the time policy dimension. This confirms the reservation that the literature has on the use of both CFA and EFA on a single research.

Nevertheless, if we take a close look on the matrix, we can see that those two dimensions that were accepted in this research have most, or all, of its items grouped together, while those dimensions that were rejected have more than 30% of its items grouped with questions from the other dimensions. This means that the participants may perceive these items to be closely related. However, the reason why the participants may perceive these items to be closely related is not clear.

For example, why question 20 is grouped with question 9? In companies that has a lot, or no, food vending machines, employees will have more or less freedom to choose when they would go for lunch? Future research should be mindful of these “troublesome” items if the researcher would want to include similar items in their survey.

Nevertheless, this analysis supports the view that the rejection of the two food culture dimensions might be due to the perception of the employees.

It should be noted that proposition 2 and 4 were not rejected because they made the general construct of organisational food culture invalid when they were included.
They were rejected because their exclusion improved the validity of the general construct. That is, it is unlikely that accessibility policy and time policy had no effect on the employees’ food practices. However, the effect of these policies and how the participants perceive these policies can only be known in future researches.

Nevertheless, as the focus of my survey research is essentially on employees’ perception of their organisations’ food cultures, such perception issues could not be completely avoided, and there are also not enough objective data from the participants’ organisations to help me discern which of the two above mentioned potential reasons was the potential cause behind the dissimilar responses of the participants. Future research could be conducted to find out the answer to this issue.

Next, during the confirmatory factor analyses that were conducted on the data, similar to the findings of the reliability analyses, it was found that the exclusion of the time policy and accessibility of food policy dimensions improved the goodness-of-fit statistics of the model significantly. That is, the parsimonious empirical construct of organisational food culture is more valid without the inclusion of the time policy and accessibility of food policy dimensions in the model. Although the literature has emphasised that the reliability and validity of a construct are not the same thing, and that sometimes a construct may be reliable but not valid, or vice-versa, the analyses of the reliability and validity of the current proposed empirical construct gave the same answer: the construct is more reliable and valid without the inclusion of the time policy dimension and accessibility of food policy dimension. At this point of the research, it is clear that while Proposition 1 and Proposition 3 are supported by the data, Proposition 2 and Proposition 4 are not.
Given that provision of food and organisational function policy and hierarchical policy are two valid and reliable dimensions of organisational food culture, organisations may be characterised by its score on each of these two dimensions.

For example, for organisations that score high on the dimension of provision of food and organisational function policy, it might indicate that employees from the organisation believes that social interaction is an important aspect of business. It might also indicate that the employees of that organisation enjoy eating good food. On the contrary, if an organisation scores low on this dimension, it might indicate that the organisation might have a greater emphasis on other aspects of business, such as quality of product and efficiency of service delivery. Future research can be conducted to test these potential linkage between an organisation’s food culture with its values and beliefs.

For example, a researcher can correlate the score on this dimension of the employees with the scores of their traits, such as extraversion and agreeableness, to test whether the score on this dimension is a reflection of the organisation having more or less emphasis on social interaction as a part of business. A researcher can also correlate the score on this dimension of an employee with his/her body-mass-index to see if the score on this dimension is a reflection that the employee enjoys eating good food.

On the other hand, for organisations that score high on the dimension of hierarchical policy, it might indicate that it has a stronger emphasis on the power assertion between employees. Future research can be conducted to test the potential linkage between an organisation’s food culture with its values and beliefs that are associated with power assertion.
For example, a researcher can correlate the score on this dimension of an employee with the scores of his/her cultural measures, such as power distance.

Organisational food culture is a subset of an organisation’s culture. It behaves as per other cultural measures: the score of an organisation on a certain dimension reflects its more or less emphasis on the items of the dimension in relative to the other organisations. When an organisation scores high on a certain dimension, it reflects the organisation’s relative more emphasis on it. On the contrary, if an organisation scores low on a certain dimension, its food culture is characterised by the organisation’s relative less emphasis on it.

That is, if the extreme event in which an organisation disagrees that the organisation should wine and dine with the clients or celebrate with food, and if there is no difference with regards to the provision of food at different levels of the organisation is observed, it just means that the organisation’s food culture is characterised by its relative lack of emphasis on these two dimensions. It does not indicate that it do not have a food culture.

Moreover, it should be noted that the current research is a preliminary investigation to the topic of organisational food culture. That is, the proposed empirical construct of this research is not yet the “final form” of the construct that can be used to measure an organisation’s food culture. The current proposed dimensions can be further refined in future research, and more dimensions can be proposed and added to the current construct.

Hence, even if the extreme case of an organisation not having any of the items from the dimension of provision of food and organisational function policy and the dimension of hierarchical policy is observed, it does not mean that it does not have a
food culture. It might mean either that its food culture is characterised by its relative less emphasis on these items, or the current dimension needs further refinement in future research to be more inclusive of other factors that are not considered in the current research.

5.2 The contributions of the research

This research makes two contributions to the current base of scientific knowledge: a theoretical contribution, and a methodological contribution.

The first contribution of this study is a theoretical one. This research has been conducted on issues such as the environmental effects on individual food practice, the influence of individual food practice on health, and the effect of organisational culture on individual behaviour, etc. However, until this current research, there has been a lack of research focusing on the effect of organisational food cultures on individual food practices, and hence the effect of organisational food cultures on individual health.

Building upon the existing literature, this paper has proposed a preliminary theory of organisational food culture and a parsimonious empirical construct of organisational food culture. Although this model is unlikely to be complete, given its preliminary status, it should serve as a good basis for future research to be conducted.

The main intention of conducting this research is to contribute a preliminary theory of organisational food culture and a parsimonious empirical construct of organisational food culture. These were achieved in the research.

First, in this paper, we proposed a theory of how organisational policies can be related to the food practices of employees, which can potentially influence the health of the employees. As there is a lack of such theory in the current literature, this is the first contribution of this research.
Second, based on the theory developed, a parsimonious empirical construct of organisational food culture was proposed in this paper. At the end of the research, two out of the four proposed dimensions of organisational food culture were rejected. However, this does not diminish the contributions of this research.

There is a current lack of literature on the topic of organisational food culture. The two accepted dimensions of organisational food culture can serve as a starting point for future related research. Future researchers can even consider to use the items of these two accepted dimensions in their surveys straight away as these measures were proved to be adequate by its high validity and reliability. On the other hand, the two rejected dimensions of organisational food culture can serve as a form of precautionary advice to future researchers. If they going to conduct similar research, they should keep in mind that the items proposed in the two dimensions were rejected in this research. Even if future researchers are interested in retesting the validity and reliability of these two rejected dimensions in another context, such as in another country, they can also use the items of these two dimensions as a form of reference for the design of their own research. This can potentially help to save the resources of future researchers.

The contribution of this research to the industry, however, is not as direct at this stage of research. The results of this research indicates that an organisation’s provision of food and organisational function policies and hierarchical policies were found to be valid and reliable dimensions of an organisation’s food culture. However, it does not tell managers how it can be manipulated to influence the food practices of employees, and hence influence their health. That is, as a preliminary study to the topic, this paper has established the link between organisational food culture and employees’ food practices. However, the interactions between an organisation’s food
culture and employees’ food practices, and the interactions between employees’ food practices and their health is not yet answered in this research. Future business researchers should liaise with professional health researchers, such as medical doctors and nutritionists, to study these relationships.

The second contribution of this study is a methodological one. Correlation analysis was developed a long time ago, and the use of it is common in scientific research. From it, we know that the highest value that a correlation can get is 1.0, but to achieve such an extreme value, the two sets of data analysed in the process must be identical. However, given that no two individuals behave in exactly the same way, it is unlikely for this value of 1.0 to be achievable in real world behavioural science research. That is, such an extreme value had almost no practical usage at all.

Nevertheless, in this research, I utilised the requirement for two sets of data to be identical for the value of 1.0 to be achievable, and used it to ensure the accuracy of data encoding. This method was found to be useful in terms of ensuring the accuracy of the data keyed into the computer system. For researchers who face resource limitations, this method can be a cost-efficient way for them to ensure the accuracy of their data encoding process.

5.3 The limitations of the research and future directions for research

Despite the contributions made by this research, it has faced several limitations.

Firstly, the aim of this research is to propose a preliminary theory and a parsimonious empirical construct of organisational food culture. Given its preliminary status, it was anticipated that the theory and construct proposed will not be complete.

For example, as proposed in Chapter 2, the literature review chapter of this report, the food culture of an organisation is made up of three levels: the policy level,
the norm level, and the individual level. Due to resource constraints and the preliminary status of the research, this research focused on the policy level of organisations, specifically, it focused on employees’ perceptions of organisational food policies. However, what about the norm and individual levels of organisational food culture? These were not addressed.

Future research should be first conducted on these two other levels of organisational food culture. When the theory is developed for the norm and individual levels of organisational food culture, and the empirical constructs of these two levels proposed and tested, then researchers can consider conducting a general study involving all three levels of organisational food culture. For example, a potential way this general study can be conducted could involve the use of multi-level modelling.

Future research should be conducted to ensure the theory and construct’s completeness.

Secondly, as this research focused on the participants’ perceptions of their organisation’s food policies, the data are subjective in nature. Future research can consider using more objective data, such as the relevant written organisational policies, to confirm the findings of this research. In addition, researchers can also consider collecting both subjective and objective data, and then investigate the potential relationships and interactions that may exist between these two types of data.

Thirdly, although the combined purposive and snowball sampling method allowed the data to be collected efficiently, the data collected are not random in nature. This means the findings of this study may have limited generalisability. Future researchers can consider replicating the findings of this study using a random sample to test for its generalisability.
Finally, although the final model of organisational food culture was found to have relatively good reliability and validity, the figures are only around 0.7 and 0.9 respectively. This might be due to the diversified backgrounds of the participants. If the participants are from the same industry, the results might be different, and might be even more reliable and valid. Hence, future researchers can consider limiting their sampling to certain industries. If this is done, future researchers can also compare the data obtained, and see if there are any differences in organisations’ food cultures across different industries. If differences are observed, researchers can also potentially see how such differences could potentially influence the food practices and health of individuals.

5.4 Conclusion

With the aim to contributing to the current gap in the research on organisational food culture, a theory of the concept was developed upon the existing literature, and a parsimonious empirical construct of organisational food culture was proposed in this research.

In conclusion, out of the four dimensions that were proposed to be part of the empirical construct of organisational food culture, only the dimension of the provision of food and organisational function policy, and the dimension of hierarchical policy were found to be supported by the data. The dimension of time policy and the dimension of the accessibility of food policy were not found to be supported by the data.

Despite being a preliminary study, this research should be able to provide sufficient groundwork for future researchers to conduct their research on the topic of
organisational food culture. This study has several important implications to future scientific research.

5.4.1 Academic implications

Firstly, although we know that environmental factors influence individual food practices, and that such food practices in turn influence individual health, we are not as sure in the present moment about the effect that organisational food policies may have on individual food practices and individual health. For example, will a certain hierarchical policy be more effective in bringing about positive change in comparison to another hierarchical policy? Will there be an interactive effect if a certain set of policies are implemented simultaneously? Hence, future research should be conducted by professional nutritionists, or medical researchers, to study the effect that organisational food policies can have on individual food practices and individual health, and to recommend to industry the “best practices” that should be adopted by organisations.

Secondly, it is well known that there is much talk about work–life balance. One thing implied in such talk is that work and life are at the two ends of a continuum. Potentially, if you work harder, then the organisation gains and you lose out; and if you work less hard, then the organisation loses out while you gain. Hence, you need a balance between work and life to make it fair to both the employer and employee.

However, something implied in my research is that an organisation and its employees can in fact achieve a win–win situation via the use of organisational food culture. For example, an organisation can implement a series of organisational food policies to improve the health of its employees. This will definitely contribute to the welfare of employees. When the employees’ health is improved, it is likely that the
organisation will also receive benefits such as decrease in health insurance costs, lower absenteeism rate, better employee performance, and so on.

Given the current emphasis that society has on corporate social responsibility, it is likely that policies that are beneficial to employees will have a positive influence on an organisation’s corporate image. Hence, future industrial relations research should also be carried out to study the effects that organisational food policies could have on employee–employer relationships and on corporate image.

Finally, it should be noted that my research data were collected in the Republic of Singapore, an Asian country. Although I will not go as far as claiming that my proposed theory and parsimonious empirical construct of organisational food culture is an Asian theory, there is a concern as to whether similar findings could be replicated if similar research is done in the Western World. For example, will the dimension of hierarchical policy still be as valid and reliable if a Western sample is used instead? Hence, future cross-cultural studies should also be conducted to further confirm the generalisability of my research’s findings insofar as possible.

On the other hand, although organisations should be able to benefit from the management of their organisational food cultures and the implementation of relevant organisational food policies, there are still a few questions that must be pondered upon by business managers, and a few things that must be experimented with by industry, before the full benefits of organisational food culture management can be realised by organisations.

5.4.2 Industrial / managerial implications
Firstly, given that organisational food culture should be able to influence individual food practices, and hence an individual’s health, organisations that implement a set of
appropriate organisational food policies should be able to benefit from the attainment of better employee health. For example, a decreased absenteeism rate, an improved corporate image, and improved efficiency and performance of employees are some of the potential benefits to be obtained by organisations.

Although these benefits are all desirable from an academic perspective, managers have two more concerns: who should bear the cost, and does the benefit justify the cost?

For the first problem, managers should be concerned about who should bear the cost of the implementation of such food policies. Since employees are the direct beneficiaries of the policies, should they be the ones who bear the cost? Since governments are always concerned about issues such as the deteriorating health status of the public and raising national healthcare costs, should governments be made to bear the cost? Regardless, since an organisation will benefit from the improved health conditions of its employees ultimately, should organisations be made to bear the cost?

Next, no matter who is going to bear the cost, it is unlikely that an organisation will bear zero cost at all from such policy implementations. Given this, the next question will be: does the benefit justify the cost? For some entrepreneurs, they believe more in controlling cost than performance improvement. This is because from their perspective, whenever $1 more revenue is earned, the actual profit earned is only a percentage of the $1. However, if $1 more cost is saved; the profit margin line of the organisation will improve by $1: a 100% improvement. To these individuals, they will be very concerned about the justification of the costs that will be incurred by the implementation of such organisational food policies.

Hence, the first industrial implication of this research is: given that organisational food culture policies can potentially bring benefits to employees and
organisations, how can we implement them to obtain the benefits in a cost-justifiable way? In addition, how should the cost of these policies be distributed amongst the relevant stakeholders to make it fair?

Secondly, although organisations can potentially attract and retain talent using their organisational food culture, how can organisations be sure that those who are attracted and retained by such culture are really the type of talents that the organisations want? For example, what type of personnel will be attracted to and/or stay in an organisation because of its food culture? How different are these personnel from the other employees? How can they uniquely contribute to the employing organisation? Can organisations attract their targeted group of talents with their food cultures, just by manipulating some elements of them? The answers to these questions do not seem straightforward enough for them to be answerable by purely academic research at this point of time. Rather, these questions also require the efforts of the industry to implement food-related organisational policies for the answers to be known in the long term.

Thirdly, whenever a system or a policy is implemented in an organisation, some personnel, or a department, must be appointed to be responsible for overseeing the implemented policy or system to make sure that it runs smoothly. Given this, if organisational food policies are implemented, who should be responsible for this new “account”? For example, can one say that since food policies involve the diet of employees, and hence involve the human resources of the organisation, they should be overseen by human resource departments? Or can one say that since food policies may involve the provision of food to employees, and hence involve non-sale items used internally in the organisation, they should be overseen as part of the duty of a logistics
department? Or since we cannot really determine which department should oversee the running of organisational food policies, we should open a new department that specialises in such affairs, similar to the legal departments and corporate ethics departments that some organisations may have? What type of training should be given to the employees of this department if we are really going to open a new department? What should their career tracks look like? How should their compensation packages be designed? How should they be related to the other employees of the organisation in the corporate structure?

Again, these questions can only be answered by the industry in the long term after they have tried implementing organisational food policies to assist their employees to have healthier food practices and improved health.

Fourthly, it is known in human resources management literature that organisations must make sure that benefits are seen as “benefits”, and not “entitlements”, for them to have the motivational effect that they should have (Stone 2010). Although the literature is clear about this point, however, what should organisational food policies look like in reality? The expertise and “real-battle” experience of managers from industry are needed for this question to be answered.

Fifthly, based on personal experience, if an organisation decides to implement food policies such as those that provide free food to its employees, one issue that must be faced by the organisation will be how to make sure that employees will not get tired of the daily food menu? In my opinion, if a person eats exactly the same thing over and over again over a prolonged period of time, it is likely that they will get sick and tired of it even if it is the most expensive haute cuisine in the world. If this is the case, how can organisations ensure that their employees will not get tired of the food provided by them while keeping it in budget? If they don’t, will employees start to
“run away” from the lunch provided by an organisation, and start to buy their own food from external vendors again? This will cause the money spent by the organisation to be wasted, and hence defeats the purpose of implementing such food policies. Or will it just decrease the morale of the workforce in general because employees are forced to eat something that they don’t really want to eat any longer? Again, this is likely to require the expertise and experience of industry practitioners.

From the list of academic and industrial implications detailed above, we can see that this preliminary research has not merely contributed another theory and construct to the current business research literature, but has also opened up a lot of possibilities in terms of actions that can be taken by organisations and also research that can be conducted in the future. As such, let us look forward and contribute towards both science and the benefit of the industry by continuing our research on organisational food culture.
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APPENDIX A – INFORMATION SHEET

Organisational Food Culture: A Theoretical and Empirical Construct

Researcher
I am Ng Choon Yeong, Jhony, previously graduated from the National University of Singapore (NUS), and the recipient of the 2011 NUS Furama Gold Medal and Ministry of Manpower National HR Book Prize. I am currently a Doctor of Business Administration (DBA) candidate in the Southern Cross University, Australia.

Aim of Research
The current research on the topic of organisational food culture aims to come up with a theoretical and empirical construct of organisational food culture. This survey is conducted in the effort of building an empirical construct of organisational food culture.

Participants
Participants of this survey will need to spend about 15 minutes of their time at most to complete a 20 questions survey form. There will not be any risk, inconvenience, or discomfort that is likely to be experienced by the participants. Participation in this research is absolutely voluntary, and participants may withdraw at any time during the conduct of the survey without any negative consequence.

The information that is obtained from this survey will be used mainly for the writing of the Doctorate Thesis of the researcher. It may also be presented in professional scientific conferences, or be published in professional scientific journals, in the future. And the information collected will be kept for 7 years at the university.

Nevertheless, at any instance, the anonymity and confidentiality of any information that is provided by the participants will be strictly protected by the researcher. That is, no identifying information that can be associated with any individual participant will be reported in the final report. Hence, there is no need to write personal information such as name and contact number in the survey.

Although there will be no compensation for participants to complete this survey, any participant of this survey can make a request for a copy of the final report of this research at no cost after it is completed.

Complaint
If any participant wishes to make a complaint against the conduct of this survey, s/he can contact the researcher’s supervisor using the contact that is provided below.

Approval Number: ECN-12-213

Contacts
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APPENDIX B – SURVEY FORM

Organisational Food Culture

Organisational Food Culture: A Theoretical and Empirical Construct

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Organisational Food Culture

1. Gender
   - Male
   - Female

2. Age
   - 20 and below
   - 21-30
   - 31-40
   - 41-50
   - 50 and above

3. Industry

4. Number of Years in the current organisation
   Years
Organisational Food Culture

**5. Events are celebrated at my organization with generous portions of food and drink.**
- Strong Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

**6. Business contracts and connections are made while eating and drinking in my organization.**
- Strong Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

**7. People have fixed schedules for meals in my workplace.**
- Strong Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

**8. In my organization, business issues are often discussed over the dining table.**
- Strong Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree
**Organisational Food Culture**

**9. There are food vending machines near the place I work.**
- Strong Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

**10. In my company, we frequently celebrate successes with lunch or dinner parties.**
- Strong Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

**11. Many external food sellers are located near my workplace.**
- Strong Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

**12. Employees of my organization tend to take very short breaks for lunch.**
- Strong Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

**13. My organization provides different foods for people holding different official positions.**
- Strong Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree
Organisational Food Culture

*14. Business meal reimbursement scheme is different according to an employee’s status in the organization.

- Strong Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

*15. There is a pantry in my workplace for employee use.

- Strong Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

*16. People working here spend little time to eat.

- Strong Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

*17. People in my organization often eat without stopping their work

- Strong Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

*18. In my company, we “wine and dine” our customers regularly.

- Strong Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree
Organisational Food Culture

19. There are dining places in my organization exclusively for managers and/or executives.
   - Strong Disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly Agree

20. At my workplace, employees can decide by themselves when to take the lunch break or coffee breaks.
   - Strong Disagree
   - Disagree
   - Neutral
   - Agree
   - Strongly Agree

Thank You For Your Participation!