

# CHALMERS



## **A Study of Quality Based Service Design for Wedding Photography Services**

*Master of Science Thesis in the Master's Program Management and Economics of Innovation*

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*Division of Service Management*

CHALMERS UNIVERSITY OF TECHNOLOGY

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## **ABSTRACT**

Wedding photography has changed dramatically from the early film generation to the current digital times. Hence, an updated service design of wedding photography services is important for the success of its business. The purpose of this study is to refine the design and quality aspects of wedding photography services, and meanwhile testing whether the quality measure model “SERVQUAL” is relevant in the context of wedding photography services.

Online survey was the main research method for this study. Simple random sampling was first used to select target respondents, and finally 200 customers, who have purchased wedding photography services from the wedding photography firms/studios in China in the last five years, were chosen as a valid sample for this research. A questionnaire containing a number of service quality statements of wedding photography services was designed based on the SERVQUAL model, to investigate customers’ expectations on wedding photography services and post-purchasing perceptions of the actual services. After that, factor analysis was employed to identify the quality dimensions under the context of wedding photography services, and to discuss whether there were any differences from the five quality dimensions of the SERVQUAL model. Finally, a multiple regression analysis was conducted to find which quality dimension of wedding photography services had significant impact on overall service quality.

The results of the survey revealed that customers expected highly on some aspects of the services like the photographers’ guidance and the quality of the photos. In addition, an adapted construct, based on 18 quality statements of wedding photography services, was established with three quality dimensions --- “service delivery process and service product”, “physical conditions” and “empathy”. They were different from the five dimensions of the SERVQUAL model, and only “empathy” was the same as the one dimension included in the SERVQUAL model. The new dimension “service delivery process and service product” had the biggest influence on the perception of the overall quality of wedding photography services, followed by “physical conditions” and “empathy”. These findings could help wedding photography firms/studios reallocate their resources and highlight the important quality aspects which could significantly improve overall service quality. Furthermore, the findings also demonstrated that the SERVQUAL model should be adapted under specific service contexts.

**Key words:** *Wedding Photography Services; Service Design; Service Quality; SERVQUAL*

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# 1 INTRODUCTION

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*The background about wedding photography services is introduced in this chapter with the reasons why it is interesting to study it. Then the purpose of this study is presented followed by the delimitation and the disposition of the thesis.*

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## 1.1 Background

Wedding photography is generally referred to photographs of the couple before marriage as well as coverage of the wedding. With development of the technology from early film era to current digital times, wedding photography has evolved from a luxury to a necessity of a wedding (Gentry, 2012; McEwen, 2012).

Wedding photography services were chosen as the research area for some reasons. First, there were hardly any academic researches on wedding photography services before. The author of this thesis thought it would be interesting to do research on this service area, and would be helpful for the theoretical advancement on wedding photography services as well. Moreover, the author has personal experiences on wedding photography services, especially the services in China, which would be also valuable for this research. Although wedding photography services are generally regarded as small business or artistic business that is beyond the mainstream business world, this service area is still worth more attention.

As the competition of the Chinese wedding photography market is increasingly fierce, the importance of service quality is paid much more attention by both wedding photography firms/studios and their customers. According to the report of “Chinese wedding industry development”, which was released on March of 2011 by the survey centre of Chinese wedding industry, there were around 450,000 wedding photo studios, photography firms, photo agency and photography studios. However, the number of couples married every year in China is around 10 million (Wenku Baidu, 2011). Hence, it is learned that the market of wedding photography services in China is huge but really competitive. Therefore, for those photography firms/studios, improving the quality of wedding photography services could be one effective way to attract more customers and survive in this business.

Naturally, one of the most commonly used instruments for evaluating service quality is referred to. It is the SERVQUAL model (Zeithaml, Parasuraman & Berry, 1988). It suggests that perceived service quality could be measured by the differences between customers’ expectations about the performance of service providers and their assessment of the actual performance. Since the SERVQUAL model was developed in the 80’s and 90’s, its application context was unlike the current digital photography Age. Parasuraman et al. (1988) claimed that the SERVQUAL model could apply in various

service contexts, but its five-dimensional structure was not relevant in many previous researches on different service areas (Ladhari, 2009). Therefore, it is interesting to investigate whether the five-dimension SERVQUAL model is relevant in this new context, since the SERVQUAL model has never been applied to wedding photography services before. In addition, the significant quality aspects of wedding photography services could also be identified through investigation and analysis.

## **1.2 Purpose**

The purpose of this study is to improve the quality of wedding photography services, and meanwhile to investigate whether the five-dimension SERVQUAL model is relevant in this new context. Therefore, to achieve this purpose, three research questions have been formulated:

- (1) What are customers' expectations and post-purchasing perceptions on the quality aspects of wedding photography services?
- (2) To what extent would the SERVQUAL model apply in the new context of wedding photography services?
- (3) How important is each quality dimension of wedding photography services for the customers?

## **1.3 Delimitation**

This research does not aim for generalization but extended insights of quality-based service design in one particular service area. The selected sample is limited to 200 customers who have ever purchased wedding photography services in the last five years in China. Since the empirical data were collected in China, cultural differences might impact the results. The service quality statements were developed mainly according to the situation of the Chinese wedding photography services, which might have some differences from other countries' wedding photography services.

## **1.4 Disposition**

This thesis consists of six chapters as following:

**Chapter 1**           The introduction describes background briefly with the purpose of this study including delimitation.

**Chapter 2**           The literature reviews cover the theory of service design, service quality and the SERVQUAL model. Then, a summary is given as a link between the theory and the empirical research.

**Chapter 3**           The methodology explains how this study was conducted and how the

results were analyzed. The test on validity and reliability of this research is also discussed.

**Chapter 4** In this chapter the most important findings are presented. The results of the survey and the statistical analysis are presented with tables.

**Chapter 5** The discussion contains the analysis of the important findings, and also responds to the three research questions.

**Chapter 6** This chapter is about conclusions and implications for future study.

## 2 LITERATURE REVIEW

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*This chapter presents a theoretical foundation for the thesis. The topics “service design”, “service quality” and “the SERVQUAL model” are selected purposely to provide a theoretical foundation for a quality-based service design of wedding photography services. Finally, a summary is given as a bridge between the theoretical foundation and the following empirical research.*

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### 2.1 Service design

#### 2.1.1 Overview of service design

Historically, business innovators and researchers focus on physical product design, which has brought a long tradition of excellent work in marketing, technology, and industrial engineering (Ostrom et al., 2010). However, with the boom of service economy, the increasing focuses on the unique aspects of service design have begun to be heard. Since the market is full of products and highly competitive, organizations need to find new ways of competing and to offer new values for customers. This trend leads to considerable attentions on service design, which could help to create a new relationship between organizations and customers (Moritz, 2005).

Generally, services include different components such as space, products, people, facilities, etc (Moritz, 2005). The total service experience that clients have is made up from different encounters with these components. Every encounter is called a touch-point (Zomerdijk & Voss, 2010). Unlike products, services are intangible, and supplying and consuming services mostly occur at the same time. Following these features, it could be generalized that services are complex experiences happening over time and across some touch-points. Therefore, an organization providing services needs to address development in a different way compared to that of product design (Moritz, 2005).

Ostrom et al. (2010) pointed out that service design was a systematic approach that orchestrated service elements such as physical environment, people (customers and employees), and service delivery process to help customers co-create their desired experiences. Similarly, Zomerdijk and Voss (2010) proposed six service design principles as well that covered designing elements of physical environment, service encounters and cues, customers, employees and frontline & backstage supports. As such, service design is no longer limited to the design of tangible products only but the design of complex and interactive experiences, processes, and systems by placing customers at the heart of the process (Trischler & Zehrer, 2012). Consequently, the offered services will be user-friendly and competitive for customers.

### **2.1.2 Design considerations on wedding photography services**

With a clear understanding on the type of services researched, it could facilitate service design and evaluation of service quality (Kellogg & Chase, 1995). There are many different service classification schemes, from the early classification focusing on the definition of services to the recent view of classification with the service product & process elements orientation (Cook, Goh & Chung, 1999). As to the wedding photography services studied in this thesis, it could be classified as the type of services combining the attributes of “direct customer contact”, “close interaction with service workers”, “fluid process” and “processing of information/images”, the classification scheme of which was proposed by Wemmerlöv (1990).

Since the customers of wedding photography services have to be physically present during the service delivery process and would have a sensory perception of the services through eye contact, hearing, touching, etc., it is apparent that customers would interact closely with service providers. For “fluid process”, it is identified according to the degree of routinization of the service process, which is relatively uncertain for wedding photography services. In general, wedding photography services have many uncertainties in the process, since environmental conditions, customers’ performance and even the performance of photographers would influence the serving process and consequently affect the quality of photos. As to the object of the service process, “photos” (information/images) are the purpose of wedding photography services. An example of a similar service type as wedding photography services was given as “portrait painting” by Wemmerlöv (1990) in his paper, which confirms the reasonable classification of wedding photography services.

For the type of services as wedding photography services, some design considerations have been suggested (Wemmerlöv, 1990). First of all, service facility must be catered to customers’ needs, which specifically means that the design of site location, layout and atmosphere should be attractive to customers. The professional equipment for processing information/images is required. The design of service delivery process must also be customer-oriented. Furthermore, strong interpersonal skills, a neat appearance, knowledge of procedures, technical skills and expertise are required from service providers, especially the photographers under the context of wedding photography services since they interact with customers closely. In addition, frequent exchanges of information between customers and service providers are necessary for reducing any serious consequences. “Information/images” as the product of service process should be paid enough attention. All of these design considerations above could be helpful for understanding the design and quality aspects of wedding photography services in the next chapter.

For wedding photography services, one special attribute that has to be mentioned is that it is generally a one-off service, and would rather attract new customers than rely on customer loyalty. The service providers of wedding photography services cannot fail to serve the customers, since they hardly have the second chance to make it better. Therefore, service providers should learn to understand customers' needs and expectations well before serving them, minimizing the possibilities to fail (Bowen, 1990).

## **2.2 Service quality**

Service design is the very first opportunity the service providers have to influence service quality (Gummesson, 1990). It is also one reason that why this study focuses on a quality-based service design on wedding photography services. Generally, service quality is recognized as a critical success factor in a firm's endeavors to differentiate itself from its competitors (Ladhari, 2009). Slightly different definitions of service quality are given by researchers, but their emphases on customers are all the same (Yoo & Park, 2007). For example, Parasuram et al. (1990) defined service quality as the extent of discrepancy between the customers' expectations and their perceptions, and other researchers as Dabholkar et al. (2000) viewed service quality as a set of dimensions such as reliability and responsiveness that precede customer satisfaction. It is apparent that the needs of customers are always put in the first place.

Service quality involves both the process and the outcomes of service production, delivery and consumption (Parasuram et al., 1985), which is developed through the general procedure of service design. Researchers have demonstrated that good service quality leads to the retention of existing customers and the attraction of new ones, reduced costs, an enhanced corporate image, positive words of mouth, and, ultimately, enhanced profitability (Ladhari, 2009). In particular, the relationship between service quality and customer satisfaction and word of mouth is testified in many studies. Overall service quality has a positive influence on customer satisfaction, and customer satisfaction positively affects words of mouth (Bitner et al., 1990; Cho, 2009; Lloyd & Luk, 2011).

## **2.3 SERVQUAL model**

Much research effort regarding service quality has been devoted to the development of reliable and replicable instruments for measuring the construct. One of the most commonly used instruments is the SERVQUAL model (Parasuram et al., 1985; 1988; 1991), which suggests that service quality could be measured through the differences between customers' expectations about the performance of service providers and their assessment of the actual performance results in perceptions of service quality.

Parasuraman et al. (1985) concluded that consumers evaluated service quality by comparing expectations with perceptions on ten dimensions - tangibles, reliability, responsiveness, understanding/knowing customers, access, communication, credibility, security, competence, courtesy. These ten dimensions were subsequently collapsed into five dimensions by Parasuraman et al. (1988), as follows:

- (1) Tangibles – Physical facilities, equipment, and appearance of personnel;
- (2) Reliability – Ability to perform the promised service dependably and accurately;
- (3) Responsiveness – Willingness to help customers and provide prompt service;
- (4) Assurance – Knowledge and courtesy of employees and their ability to inspire trust and confidence;
- (5) Empathy – Caring, individualized attention the firm provides its customers.

These five dimensions are assessed by a total of 22 service quality items. Each item is measured on the basis of responses to two statements that measure 1) the general expectations of customers concerning a service; and 2) the perceptions of customers regarding the levels of service actually provided by the company within that service category (Ladhari, 2009).

The SERVQUAL instrument was originally applied in five different service areas: retail banking, credit card services, repair and maintenance of electrical appliances, long-distance telephone services, and title brokerage. Subsequently, the instrument has been used to measure service quality across a wide variety of service areas, since Parasuraman et al. (1988) believed that the SERVQUAL model could be adapted or supplemented to fit specific research needs of a particular organization. However, several researchers have identified potential difficulties with the conceptual foundation and empirical operation of the model. In particular, critics have questioned whether the five dimensions of the model, and its psychometric properties, are generically applicable in all service contexts. As a result, adaptations and/or replacements of the SERVQUAL model have been suggested for various service contexts in many empirical studies (Ladhari, 2009).

#### **2.4 Summary of Literature Review**

The introduction on service design, service quality and the SERVQUAL model, established a theoretical foundation for studying a quality-based service design on wedding photography services. The differences existing between products and services lead to a unique way of service design that strengthens not only the tangible things like physical environment and service products, but also people involved and the service delivery process. Furthermore, knowing the classification and attributes of wedding

photography services help to facilitate the design process and service quality improvement. The way to measure service quality was studied and the SERVQUAL model for evaluating service quality was found interesting to be further investigated. Based on this theoretical foundation, the way how to do this research will be introduced in detail in the next chapter.



### 3 METHODOLOGY

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*The chapter explains how the whole of this thesis was conducted and what approaches were employed for collecting and analyzing data. The test on validity and reliability of this research is also discussed.*

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#### 3.1 Data collection

##### 3.1.1 Design of the questionnaire

Online survey was used as the main research method. According to *“Introduction to Using Online Surveys”* (Ritter & Sue, 2007), online survey works best in a situation where a list of potential respondents is known to have emails and Internet access, and it is especially useful when the target respondents are geographically dispersed. Given a relatively large sampling size, online survey is more economical than other research methods like face-to-face interview or telephone survey. However, online survey has its limitations. Respondents might abandon to finish the questionnaire if it is too complicated and takes much time. Hence, it is better to ask a variety of closed-ended questions which are relatively easy to answer. The length of the questionnaire should not be too long. The instruction of the questionnaire should be clearly formulated so that the respondents could understand the questionnaire well without guidance from researchers. Another problem that cannot be avoided is that respondents of the online survey might have a bias on the group of potential respondents who do not use Internet properly. When designing the questionnaire for this research, the advantages and disadvantages of online survey research method were carefully taken into consideration.

Based on the theoretical foundation and informal interviews with professional wedding photographers, 26 service quality statements associated with wedding photography services were developed, using the SERVQUAL model as a source of inspiration. These service quality statements are key components of the survey. The following Table 3.1 shows how these quality statements for wedding photography services were formulated based on the 22 service quality items of the SERVQUAL model.

To improve the likelihood of response, the questionnaire was formulated with easy to understand close-ended questions that would take five to ten minutes on average to complete. It was divided into three parts. The first part, containing 26 service quality statements, was designed to measure the respondents' expectations on the quality aspects of wedding photography services before purchasing. The second part, composed of the same 26 statements, was to measure the respondents' perceptions regarding the quality of services actually received; apart from that, a number of outcome variables, which included customers' perceptions of overall service quality, customer satisfaction and word of mouth, were included in the second part as well. A five-point Likert scale was applied not only for evaluating each of the 26 service quality statements in the first

and second part respectively, but the variables associated with the overall service quality, customer satisfaction and word of mouth as well. The last part was designed to collect respondents' demographic information. Since the target respondents were customers of wedding photography services in China, the questionnaire was translated into Chinese, and its wording and meaning was checked carefully.

**Table 3.1** Formulating the 26 quality statements for wedding photography services

SERVQUAL's 22 service quality items	Wedding photography services' 26 quality statements
<p><b>Tangibles</b></p> <ol style="list-style-type: none"> <li>1. They have up-to-date equipment.</li> <li>2. Their physical facilities are visually appealing.</li> <li>3. Their employees are well dressed and appear neat.</li> <li>4. The appearance of the physical facilities of these firms is in keeping with the type of services provided.</li> </ol>	<p><b>Tangibles</b></p> <ol style="list-style-type: none"> <li>1. High-end gear is equipped.</li> <li>2. The studio/firm has visually appealing decoration and facilities.</li> <li>3. The atmosphere of studio/firm is comfortable.</li> <li>4. Employees are properly dressed in offices or when shooting.</li> <li>5. The location of the studio/firm is convenient for visiting.</li> </ol>
<p><b>Reliability</b></p> <ol style="list-style-type: none"> <li>5. When these firms promise to do something by a certain time, they do so.</li> <li>6. When customers have problems, these firms are sympathetic and reassuring.</li> <li>7. These firms are dependable.</li> <li>8. They provide their services at the time they promise to do so.</li> <li>9. They keep their records accurately.</li> </ol>	<p><b>Reliability</b></p> <ol style="list-style-type: none"> <li>6. Photographers provide guidance to you that make you perfect in the photos.</li> <li>7. Photographers could inspire your confidence when shooting.</li> <li>8. The studio/firm provides supportive services, such as make-up, stylizing, etc.</li> <li>9. The studio/firm provides multiple service packages and price options.</li> <li>10. The final product is finished in time.</li> <li>11. The photos you get finally are in good quality.</li> <li>12. The final product (album, photo books, DVD...) is in good quality.</li> </ol>
<p><b>Responsiveness</b></p> <ol style="list-style-type: none"> <li>10. They tell customers exactly when services will be performed.</li> <li>11. You receive prompt service from employees of these firms.</li> <li>12. Employees are always willing to help customers.</li> <li>13. Employees respond to customer requests promptly.</li> </ol>	<p><b>Responsiveness</b></p> <ol style="list-style-type: none"> <li>13. Photographers always respond to your inquiries promptly.</li> <li>14. It is easy to contact with the studio/firm (via phone calls, email, msn, QQ, etc.).</li> <li>15. Employees (except photographers) deliver warm service.</li> <li>16. Photographers are always friendly.</li> </ol>
<p><b>Assurance</b></p> <ol style="list-style-type: none"> <li>14. You can trust employees of the firms.</li> <li>15. You feel safe in your transactions with the firms' employees.</li> <li>16. Employees are polite.</li> <li>17. Employees get adequate support from their firms to do the jobs well.</li> </ol>	<p><b>Assurance</b></p> <ol style="list-style-type: none"> <li>17. The interactions between you and photographers are comfortable.</li> <li>18. The studio/firm provides post-purchase service.</li> <li>19. Photographers have assistants.</li> </ol>
<p><b>Empathy</b></p> <ol style="list-style-type: none"> <li>18. The firms give you individual attention.</li> <li>19. Employees give you personal attention.</li> <li>20. Employees know what your needs are.</li> <li>21. The firms have your best interests at heart.</li> <li>22. The firms have operating hours convenient to all their customers.</li> </ol>	<p><b>Empathy</b></p> <ol style="list-style-type: none"> <li>20. Photographers put extra efforts on your specific needs.</li> <li>21. The studio/firm has a well-managed website.</li> <li>22. The studio provides online viewing of proofs after shooting.</li> <li>23. The studio/firm offers delivery service regarding the final product.</li> <li>24. Photographers pay attention to your friends and family when shooting.</li> <li>25. Photographers could clearly understand your specific needs, especially the abstract ones such as style, aesthetics, etc.</li> <li>26. The studio/firm has a flexible working schedule convenient for you.</li> </ol>

### **3.1.2 Pilot test**

A pilot test was conducted first to evaluate the reliability of the initial set of quality statements of wedding photography services, and to ensure that the wording of the questionnaire was clear enough. Twelve questionnaires were completed by respondents who were selected randomly by the author from a pool of population having bought wedding photography services in recent years. After that, the feedbacks, especially about the design of the questionnaire and the wording as well as the sequence of the 26 service quality statements, were collected from the respondents. Furthermore, by studying the results of pilot test, re-phrasing on some statements was made to avoid confusion, especially the wording of some service quality statements to make them more applicable to the context of wedding photography services. For example, the statement “high-end gear is equipped” was revised to “professional gear is equipped”, since “professional” is a relative general term than “high-end”. “A well-managed website” was changed to “a website with updated portfolio” in order to make the meaning clear. In addition, some service quality statements were deleted or merged mainly because of 1) repetition of similar meaning in different statements, 2) low importance of the statement from respondents’ points of view. Finally, 18 service quality statements were left and arranged in a sequence of the general workflow of wedding photography services. Table 3.2 presents the service quality statements before and after pilot test respectively. The final version of the questionnaire is presented in Appendix 1.

### **3.1.3 Sample selection**

After pilot test, the formal survey was conducted with the support of five wedding photography firms/studios in China in July of 2012. The targeted sample of the survey was all customers who have ever purchased wedding photography services in the last five years at one of the following regions –Beijing, Shanghai, Zhejiang, Jiangsu and Guangdong Province. Compared to other regions in China, those regions are more developed and people there are relatively more open-minded and willing to spend money on wedding photography services. Regarding the location of those five regions, they are crossing China from north (Beijing) to east area (Shanghai, Zhejiang and Jiangsu) then to south area (Guangdong). Given the timeframe that was measured from the date of purchasing wedding photography services till now, five years were specified as the maximum, since the restriction on the context of wedding photography services within recent five years was necessary to improve the reliability and validity of the survey.

A list of the contacts of the targeted sample was attainable in advance. A simple random sampling approach was employed, and around 400 links of the survey online were distributed by email to the potential respondents. The sample size was predefined as 200. When the valid questionnaires received were up to 200, the survey was stopped

**Table 3.2** Service quality statements before and after pilot test

26 quality statements before pilot test	18 quality statements after pilot test
<p><b>Tangibles</b></p> <ol style="list-style-type: none"> <li>1. High-end gear is equipped.</li> <li><del>2. The studio/firm has visually appealing decoration and facilities.</del></li> <li>3. The atmosphere of studio/firm is comfortable.</li> <li><del>4. Employees are properly dressed in offices or when shooting.</del></li> <li>5. The location of the studio/firm is convenient for visiting.</li> </ol>	<p><b>Tangibles</b></p> <ol style="list-style-type: none"> <li>1. Professional gear is equipped.</li> <li>2. The atmosphere of studio/firm is comfortable.</li> <li>3. Getting touch with the studio/firm is easy.</li> </ol>
<p><b>Reliability</b></p> <ol style="list-style-type: none"> <li>6. Photographers provide guidance to you that make you perfect in the photos.</li> <li><del>7. Photographers could inspire your confidence when shooting.</del></li> <li>8. The studio/firm provides supportive services, such as make-up, stylizing, etc.</li> <li>9. The studio/firm provides multiple service packages and price options.</li> <li>10. The final product is finished in time.</li> <li>11. The photos you get finally are in good quality.</li> <li>12. The final product (album, photo books, DVD...) is in good quality.</li> </ol>	<p><b>Reliability</b></p> <ol style="list-style-type: none"> <li>4. Photographers guide you how to look perfect in the photos.</li> <li>5. The studio/firm provides supportive services, such as make-up, stylizing, etc.</li> <li>6. The studio/firm provides multiple service packages and price options.</li> <li>7. The final products are finished in time.</li> <li>8. The photos you get in the end are in good quality.</li> <li>9. The final products (album, photo books, DVD...) are in good quality.</li> </ol>
<p><b>Responsiveness</b></p> <ol style="list-style-type: none"> <li>13. Photographers always respond to your inquiries promptly.</li> <li><del>14. It is easy to contact with the studio/firm (via phone calls, email, msn, QQ, etc.).</del></li> <li>15. Employees (except photographers) deliver warm service.</li> <li>16. Photographers are always friendly.</li> </ol>	<p><b>Responsiveness</b></p> <ol style="list-style-type: none"> <li>10. Photographers respond to your inquiries promptly.</li> <li>11. Employees (photographers and frontline workers) are friendly.</li> </ol>
<p><b>Assurance</b></p> <ol style="list-style-type: none"> <li>17. The interactions between you and photographers are comfortable.</li> <li><del>18. The studio/firm provides post-purchase service.</del></li> <li><del>19. Photographers have assistants.</del></li> </ol>	<p><b>Assurance</b></p> <ol style="list-style-type: none"> <li>12. The interactions between you and photographers are comfortable.</li> </ol>
<p><b>Empathy</b></p> <ol style="list-style-type: none"> <li>20. Photographers put extra efforts on your specific needs.</li> <li>21. The studio/firm has a well-managed website.</li> <li>22. The studio provides online viewing of proofs after shooting.</li> <li><del>23. The studio/firm offers delivery service regarding the final product.</del></li> <li>24. Photographers pay attention to your friends and family when shooting.</li> <li>25. Photographers could clearly understand your specific needs, especially the abstract ones such as style, aesthetics, etc.</li> <li>26. The studio/firm has a flexible working schedule convenient for you.</li> </ol>	<p><b>Empathy</b></p> <ol style="list-style-type: none"> <li>13. In the shooting, photographers put extra efforts on your needs.</li> <li>14. The studio/firm has a website including updated portfolios.</li> <li>15. The studio provides online viewing of proofs after shooting.</li> <li>16. In the shooting, photographers take photos for your friends and family as well.</li> <li>17. Photographers clearly understand your needs, especially the abstract ones such as style, aesthetics, etc.</li> <li>18. The studio/firm has a flexible working schedule convenient for you.</li> </ol>

intentionally. Actually, a total of 248 questionnaires were received during the session of investigation, but 48 were not included in the analysis because that 1) unreasonable data was contained in the answers; or 2) the timeframe from purchasing the wedding photography services till now was more than five years; one question included in the questionnaire was especially designed to collect the information for rejecting the invalid results, from which the respondents were known that they bought the wedding photography services before five years. Finally, the data of the 200 questionnaires was collected and usable for further analysis.

There are two rules of thumb regarding the sample size for factor analysis and multiple regression analysis that two methods would be applied later, that 1) maintaining statistical power at 0.8 requires a minimum sample size of 50 and preferably 100 for most research situations, and 2) the minimum ratio of observations to variables is 5:1, but the preferred ratio is 15:1 or 20:1 or even 40:1 (Hair et al., 2011, p. 102&176 ). Given this research, the sample size of 200 meets the guidelines for the minimum ratio of respondents to variables (5:1) with an actual ratio of 11:1 (200 observations with 18 variables). Therefore, the sample size of 200 falls within acceptable limits for this research.

## **3.2 Data analysis**

### **3.2.1 Descriptive statistics analysis**

Statistical Package for the Social Sciences (SPSS) is one of the most widely used programs for statistical analysis in social science (Muijs, 2004). For this research, the IBM SPSS version 19.0 was used to analyze the data. All the data collected was carefully coded before being subject to statistical analysis in the SPSS.

Descriptive statistics analysis, one function included in the software that quantitatively describing the main features of a collection of data (Greasley, 2008, p. 33), was used to summarize the results of respondents' expectations and post-purchasing perceptions on the quality aspects of wedding photography services. Furthermore, paired samples t-test (Archambault, 2000) was carried out to test the significant difference between two groups of the means of expectation scores and post-purchasing perception scores on each service statement.

### **3.2.2 Method of factor analysis**

To explore the dimensions of the eighteen service statements, exploratory factor analysis was employed. Factor analysis (Hair et al., 2011, p. 16) is a statistical approach that can be used to analyze the interrelationships among a number of variables and to explain these variables in terms of their common underlying factors. Generally, the objective of exploratory factor analysis is to condense the information contained in a number of

original variables into a smaller set of factors with a minimal loss of information. Principal component analysis and Varimax rotation (Hair et al., 2011, pp. 107-115) were chosen in the factor analysis to compute the information contained in the eighteen service statements into several new dimensions.

### **3.2.3 Method of multiple regression analysis**

Based on the new dimensions derived from the factor analysis, a multiple regression analysis (Hair et al., 2011, p. 16) was used to identify the relative importance of the dimensions in predicting the overall service quality of wedding photography services. In general, multiple regression analysis is appropriate when the research problem involves a single metric dependent variable presumed to be related to two or more metric independent variables. According to these principles, the dependent variable in this case was the overall service quality, while the independent variables were the newly summarized quality dimensions from the eighteen service quality statements. One thing needed to mention is that multicollinearity, which refers to the correlation among the independent variables, would reduce the predictive accuracy of the regression model (Hair et al., 2011, pp. 164-165). It is suggested to have independent variables that are in low multicollinearity with the other independent variables but also have high correlations with the dependent variable. Actually, factor analysis applied before the multiple regression analysis in this research helped to reduce the multicollinearity to a low level.

### **3.3 Quality Criteria**

To confirm the adequacy of the measures, a series of validity and reliability analyses were performed. Reliability is an assessment of the degree of consistency between multiple measurements of a variable, while validity is the extent to which a set of measures accurately represents the particular concept to be measured (Bryman & Bell, 2003).

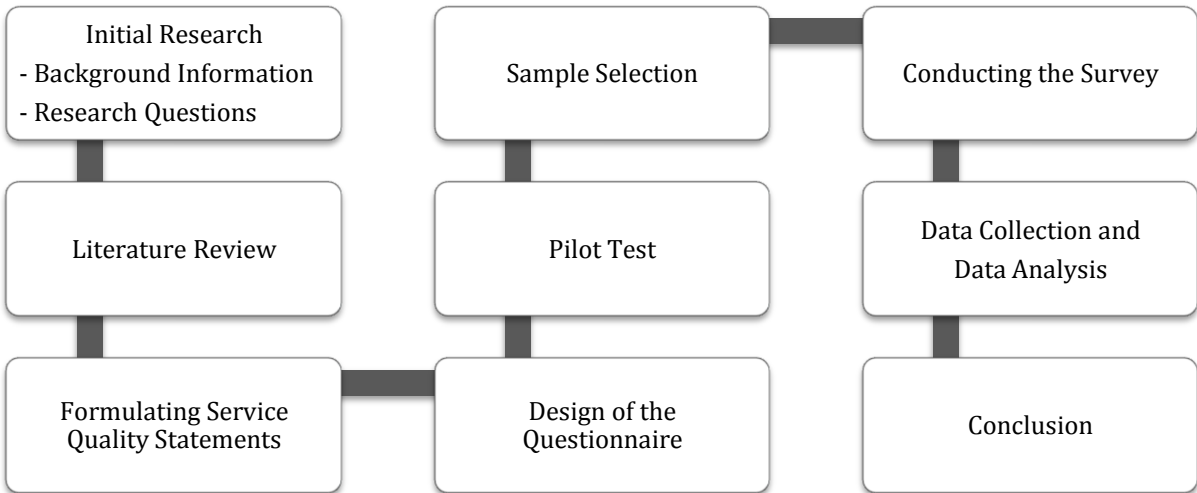
Firstly, when designing the questionnaire, the format and the content were carefully checked by the author and the professionals. The eighteen service quality statements were established through a long period of investigation, discussion, and refinement. All these activities aimed for improving the reliability and content validity of the survey. Secondly, internal consistency, one common form of reliability, was applied for testing the consistency 1) among all the eighteen service quality statements, 2) among the variables in the modified scale by factor analysis. Generally, Cronbach's alpha is used to measure the reliability, with a threshold of 0.7 or even possibly decreasing to 0.6 in an exploratory research (Hair et al., 2011, p. 125). The high alpha value indicates good internal consistency among the items, and the high alpha value for the overall scale

indicates that the convergent validity of the questionnaire met (Parasuraman et al., 1991). The results showed that the Cronbach’s alpha for all the eighteen quality statements measuring customers’ expectations and perceptions in this research, ranging from 0.872 to 0.904, were high enough to claim that all the statements were internally consistent and reliable. As to the reliability of the modified scale developed by factor analysis, the results will be given later in the following chapter. Thirdly, construct validity that refers to the extent to which what is to be measured is actually measured, could be examined by “variance extracted” in factor analysis (Peterson, 2000). The higher the variance extracted, the more valid is the measure.

**3.4 Workflow**

The following flowchart presents how the investigation was conducted and what approaches were employed for collecting and analyzing data.

**Figure 3.1** The process of the investigation





## 4 RESULTS

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*In this chapter, the results of the survey are summarized including customers' expectations and post-purchasing perceptions of wedding photography services. In addition, the important findings regarding the factor analysis and the multiple regression analysis are presented.*

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### 4.1 Results of the survey

#### 4.1.1 Sample profile

Table 4.1 shows the demographics of the respondents. Of the 200 respondents, the majority (28.5%) is from Guangdong Province, while the minority (11.5%) is from Beijing. The number of female respondents is almost twice the number of male ones. Most of the respondents are in the age of 20 to 35, only ten respondents over 35 years old. In terms of their occupation, a significant majority of the respondents (70.5%) are white collars, and more than 80% of the respondents are above junior college level. As to the specific services that the respondents bought from wedding photography firms/studios, an overwhelming majority (93.5%) choose the photographic service of "pre-wedding portraits", and almost 50% choose "wedding documentary" service. These results reflect the general market situation of wedding photography services in China nowadays. Among the 200 respondents, 85% of them purchased wedding photography services within the last three years, and no one who purchased wedding photography services long before 5 years is included in the sample. Regarding the channels by which the respondents knew the wedding photography firms/studios, "friend/relative referral" is selected by a majority part (73.5%) of the respondents, followed with the channel of "aware of the physical store" (58%) and "website search" (45.5%) respectively. Compared to other channels, the channel of "social network as blog, micro-blog, etc." has a relatively low proportion (19.5%).

**Table 4.1** The demographics of the respondents (n=200)

Variables	Items	Frequency	Percentage
Geographical Distribution	Guangdong Province	57	28.5%
	Shanghai	53	26.5%
	Zhejiang Province	36	18%
	Jiangsu Province	31	15.5%
	Beijing	23	11.5%
Gender	Male	68	34%
	Female	132	66%
Age	20~27	93	46.5%
	28~35	97	48.5%
	Over 35	10	5%
Occupation	Executive/Manager	36	18%
	Self-employed	11	5.5%
	White collar	141	70.5%
	Blue collar	8	4%
	Student	4	2%
Education	At or below the high school level	4	2%
	Junior college level	33	16.5%
	Bachelor Degree	147	73.5%
	At or above Master degree	16	8%
Specific services bought	Pre-wedding portraits	187	93.5%
	Wedding documentary	96	48%
	Engagement shooting	58	29%
	Others	3	1.5%
Length of time from buying wedding photography services till now	Less than 1 year	57	28.5%
	1~3 years	113	56.5%
	3~5 years	30	15%
The channels by which the respondents knew the wedding photography firms/studios	Friend/relative referral	147	73.5%
	Got contacts when attending friends/relatives' wedding	82	41%
	Vendor referral	56	28%
	Aware of the physical store	116	58%
	Website search	91	45.5%
	Social network as blog, micro-blog, etc.	39	19.5%
	Bridal magazine	49	24.5%
	Others	1	0.5%

#### 4.1.2 Respondents' expectations before purchasing

Table 4.2 shows the results of respondents' expectations on wedding photography services before purchasing. The importance of these eighteen service quality statements were rated by 200 respondents using a five-point scale from "1 Very low" to "5 Very high".

The figures on the left side in each cell indicate the number of the respondents who believe that one specific quality statement is important to some degree (from “1 Very low” to “5 Very high”), while the percentages in the right of each cell are the ratios between the number and the total 200 respondents.

**Table 4.2** The results of respondents’ expectations on the wedding photography services

Scale Statements	Frequency (percentage*)	1 Very low	2 Low	3 Moderate	4 High	5 Very high
1. The atmosphere of studio/firm is comfortable.		0 (0%)	0 (0%)	35 (17.5%)	<b>128 (64%)</b>	37 (18.5%)
2. Getting touch with the studio/firm is easy.		1 (0.5%)	2 (1%)	26 (13%)	<b>117 (58.5%)</b>	54 (27%)
3. The studio/firm has a website including updated portfolios.		<b>1 (0.5%)</b>	<b>12 (6%)</b>	64 (32%)	96 (48%)	27 (13.5%)
4. Professional gear is equipped.		0 (0%)	1 (0.5%)	39 (19.5%)	95 (47.5%)	65 (32.5%)
5. The studio/firm provides multiple service packages and price options.		2 (1%)	1 (0.5%)	27 (13.5%)	97 (48.5%)	73 (36.5%)
6. The studio/firm has a flexible working schedule convenient for you.		0 (0%)	5 (2.5%)	33 (16.5%)	88 (44%)	74 (37%)
7. The studio/firm provides supportive services, such as make-up, stylizing, etc.		0 (0%)	2 (1%)	24 (12%)	98 (49%)	76 (38%)
8. Employees (photographers and frontline workers) are friendly.		0 (0%)	0 (0%)	23 (11.5%)	108 (54%)	69 (34.5%)
9. Photographers respond to your inquiries promptly.		0 (0%)	4 (2%)	26 (13%)	107 (53.5%)	63 (31.5%)
10. Photographers clearly understand your needs, especially the abstract ones such as style, aesthetics, etc.		0 (0%)	1 (0.5%)	27 (13.5%)	115 (57.5%)	57 (28.5%)
11. In the shooting, photographers put extra efforts on your needs.		0 (0%)	5 (2.5%)	40 (20%)	101 (50.5%)	54 (27%)
12. Photographers guide you how to look perfect in the photos.		0 (0%)	2 (1%)	25 (12.5%)	78 (39%)	<b>95 (47.5%)</b>
13. In the shooting, photographers take photos for your friends and family as well.		<b>4 (2%)</b>	<b>19 (9.5%)</b>	74 (37%)	83 (41.5%)	20 (10%)
14. The interactions between you and photographers are comfortable.		0 (0%)	1 (0.5%)	28 (14%)	<b>121 (60.5%)</b>	50 (25%)
15. The studio provides online viewing of proofs after shooting.		<b>1 (0.5%)</b>	<b>9 (4.5%)</b>	41 (20.5%)	108 (54%)	41 (20.5%)
16. The final products are finished in time.		1 (0.5%)	3 (1.5%)	35 (17.5%)	109 (54.5%)	52 (26%)
17. The photos you get in the end are in good quality.		0 (0%)	2 (1%)	35 (17.5%)	83 (41.5%)	<b>80 (40%)</b>
18. The final products (album, photo books, DVD...) are in good quality.		0 (0%)	0 (0%)	21 (10.5%)	96 (48%)	<b>83 (41.5%)</b>

Looking at the last vertical column of Table 4.2, it is obvious that No.12 statement “*Photographers guide you how to look perfect in the photos*” (47.5%) is given the most

attention at the degree of “5 Very high”, followed by No.18 statement *“The final products (album, photo books, DVD...) are in good quality”* (41.5%) and No. 17 statement *“The photos you get in the end are in good quality”* (40%). As to the degree of “4 High”, No. 1 statement *“The atmosphere of studio/firm is comfortable”* (64%) has a larger percentage compared to the percentages of other seventeen service statements, and the importance of No.14 statement *“The interactions between you and photographers are comfortable”* (60.5%) is in the second place. However, according to the figures at the degree of “1 Very low” and “2 Low”, No.13 statement *“In the shooting, photographers take photos for your friends and family as well”* (2%+9.5%) is the least important one among all the eighteen statements.

#### **4.1.3 Respondents’ perceptions after purchasing**

Table 4.3 shows the results of respondents’ perceptions of wedding photography services after purchasing. The quality level of each service quality statement was evaluated on the five-point scale as well. Similar to Table 4.2, the figures on the left in each cell indicate the number of respondents who evaluated the post-purchasing quality of each service statement to one particular degree (from “1 Very low” to “5 Very high”), and the percentages in the right of each cell are the ratios between the number and the total 200 respondents.

Compared to other seventeen service statements, the quality level of No.13 statement *“In the shooting, photographers take photos for your friends and family as well”* (3%+14%) is lower at the degree of “1 Very low” and “2 Low”, followed by No.15 statement *“The studio provides online viewing of proofs after shooting”* (1%+8%) and No.3 statement *“The studio/firm has a website including updated portfolios”* (2%+4%) respectively. In other words, No.13, 15 and 3 service quality statements are relatively at a low quality level through respondents’ evaluation on its actual wedding photography services.

No.1 statement *“The atmosphere of studio/firm is comfortable”* was rated by a majority of the respondents (66%) at the level of “4 High”, followed by No.14 statement *“The interactions between you and photographers are comfortable”* (65.5%). According to the figures of the last vertical column in Table 4.3, the wedding photography firms/studios by which those respondents were served, generally did quite well in No.7 statement *“The studio/firm provides supportive services, such as make-up, stylizing, etc”* (25% at the degree of “5 Very high”), followed by No.5 *“The studio/firm provides multiple service packages and price options”* (24.5%) and No.17 statement *“The photos you get in the end are in good quality”* (22.5%).

**Table 4.3** The results of post-purchasing perceptions on the wedding photography services

Statements	Scale Frequency (percentage)				
	1 Very low	2 Low	3 Moderate	4 High	5 Very high
1. The atmosphere of studio/firm is comfortable.	0 (0%)	0 (0%)	37 (18.5%)	<b>132 (66%)</b>	31 (15.5%)
2. Getting touch with the studio/firm is easy.	0 (0%)	1 (0.5%)	27 (13.5%)	<b>128 (64%)</b>	44 (22%)
3. The studio/firm has a website including updated portfolios.	<b>4 (2%)</b>	<b>8 (4%)</b>	70 (35%)	93 (46.5%)	25 (12.5%)
4. Professional gear is equipped.	0 (0%)	1 (0.5%)	42 (21%)	114 (57%)	43 (21.5%)
5. The studio/firm provides multiple service packages and price options.	0 (0%)	5 (2.5%)	34 (17%)	112 (56%)	<b>49 (24.5%)</b>
6. The studio/firm has a flexible working schedule convenient for you.	0 (0%)	4 (2%)	55 (27.5%)	98 (49%)	43 (21.5%)
7. The studio/firm provides supportive services, such as make-up, stylizing, etc.	0 (0%)	0 (0%)	30 (15%)	120 (60%)	<b>50 (25%)</b>
8. Employees (photographers and frontline workers) are friendly.	0 (0%)	5 (2.5%)	35 (17.5%)	118 (59%)	42 (21%)
9. Photographers respond to your inquiries promptly.	0 (0%)	5 (2.5%)	42 (21%)	116 (58%)	37 (18.5%)
10. Photographers clearly understand your needs, especially the abstract ones such as style, aesthetics, etc.	0 (0%)	5 (2.5%)	50 (25%)	117 (58.5%)	28 (14%)
11. In the shooting, photographers put extra efforts on your needs.	0 (0%)	9 (4.5%)	67 (33.5%)	91 (45.5%)	33 (16.5%)
12. Photographers guide you how to look perfect in the photos.	0 (0%)	2 (1%)	42 (21%)	112 (56%)	44 (22%)
13. In the shooting, photographers take photos for your friends and family as well.	<b>6 (3%)</b>	<b>28 (14%)</b>	81 (40.5%)	65 (32.5%)	20 (10%)
14. The interactions between you and photographers are comfortable.	0 (0%)	3 (1.5%)	41 (20.5%)	<b>131 (65.5%)</b>	25 (12.5%)
15. The studio provides online viewing of proofs after shooting.	<b>2 (1%)</b>	<b>16 (8%)</b>	55 (27.5%)	88 (44%)	39 (19.5%)
16. The final products are finished in time.	0 (0%)	4 (2%)	31 (15.5%)	121 (60.5%)	44 (22%)
17. The photos you get in the end are in good quality.	0 (0%)	1 (0.5%)	48 (24%)	106 (53%)	<b>45 (22.5%)</b>
18. The final products (album, photo books, DVD...) are in good quality.	0 (0%)	0 (0%)	39 (19.5%)	118 (59%)	43 (21.5%)

#### 4.1.4 Overall evaluation of the services

Table 4.4 shows the results of three questions asking for respondents' perceptions of the overall wedding photography services after purchasing. The measurement of each question was made on a five-point scale here as well, from "1 Very low" to "5 Very high". Similar to Table 4.3, the figures on the left side in each cell indicate the number of respondents and the percentages beside are the ratios between the number and the total 200 respondents.

The first question is to collect information about the respondents' perceptions on the overall service quality after purchasing wedding photography services. 64.5% of the respondents thought that the quality of services received from the wedding studios/firms was at the level of "4 High", but only 4% of the respondents thought it at the level of "5 Very high". The second question is about "customer satisfaction". There are 62% of the respondents falling into the level of "4 High", while 8% of the respondents fall into the level of "5 Very high". As to the third question, it is to ask for the possibility of recommending the wedding photography studios/firms to others. 53.5% of the respondents thought that it would be highly possible for them to recommend the studios/firms to others, and even 17.5% of the respondents fall into the highest level of "5 Very high", which means that they would be extremely likely to recommend the studios/firms to others.

**Table 4.4** The results of respondents' perceptions of the overall wedding photography services

Statements	Scale Frequency (percentage)				
	1 Very low	2 Low	3 Moderate	4 High	5 Very high
Overall, how would you rate the quality of services you received from the wedding studio/firm?	0 (0%)	2 (1%)	61 (30.5%)	129 (64.5%)	8 (4%)
Overall, how would you rate the level of your satisfaction regarding the service you received?	0 (0%)	1 (0.5%)	59 (29.5%)	124 (62%)	16 (8%)
To what extent would you recommend the wedding studio/firm to others?	1 (0.5%)	14 (7%)	43 (21.5%)	107 (53.5%)	35 (17.5%)

## 4.2 Results of the statistical analysis

### 4.2.1 Descriptive statistics

Descriptive statistical methods in SPSS were used to research respondents' expectations and post-purchasing perceptions on wedding photography services. The results are presented in Table 4.5. The means of expectations (E), perceptions (P) and gap (P-E), another gap subtracting means of expectations (EM) from means of perceptions (PM), standard deviations (SD) and the paired samples t-test values were computed for each service quality statement.

The means were calculated by adding up the scores allocated by respondents for each statement and dividing all the 200 respondents. As shown in Table 4.5, the highest means of expectations is 4.33 referred to No.12 statement "*Photographers guide you how to look perfect in the photos*", while the highest mean of post-purchasing perceptions on the wedding photography services is 4.1 referred to No.7 statement "*The studio/firm provides supportive services, such as make-up, stylizing, etc.*" The gap scores (PM-EM) for

the eighteen statements are all negative scores. According to the previous researches on service quality (Parasuraman et al., 1988; Akababa, 2006), positive gap scores (PM-EM) imply that the quality of services in reality are better than expected, while negative gap scores imply poor quality. Therefore, regarding all the eighteen service quality statements, the wedding photography services studied are in poor service quality.

The standard deviations (Bryman & Bell, 2003) were estimated measuring the average amount of variations around the means. And a low standard deviation indicates that the different data collected tends to be very close to the mean, whereas high standard deviation indicates large variation among the data. The standard deviations of expectations and perceptions, ranging respectively from 0.601 to 0.874 and from 0.584 to 0.940, are all in low variations. However, it is noticeable from Table 4.5 that standard deviations of the gaps (P-E) are all much greater than their means, which indicates that the gaps (P-E) are unreliable. As a result, the “perception-minus-expectation gap scores” would be close to nonsense for the following factor analysis.

There are two values – t value and significance value – listed as the results of the paired samples t-test for post-purchasing perceptions and pre-purchasing expectations in Table 4.5. If the significance value is less than 0.05, there is a significant difference between the mean of expectation and perception of its service quality statement. On the contrary, if the significance value is greater than 0.05, there is no significant difference (Archambault, 2000). The results of paired samples t-test reflect that most of the 18 quality statements have significantly different means before and after purchasing, except the quality statements of No.1, 2, 3 and 16.

**Table 4.5** Descriptive statistics of the eighteen service statements (n=200)

Statements	Items	Expectations (E)		Perceptions (P)		Gap Scores	Gap (P-E)		Paired Samples
		Means	SD	Means	SD	PM-EM	Means	SD	T-Test (sig.)
1.	The atmosphere of studio/firm is comfortable.	4.01	0.601	3.97	0.584	-0.04	-0.040	0.608	0.930 (.354)
2.	Getting touch with the studio/firm is easy.	4.10	0.690	4.08	0.609	-0.02	-0.030	0.687	0.618 (.537)
3.	The studio/firm has a website including updated portfolios.	3.68	0.801	3.64	0.828	-0.04	-0.045	0.791	0.804 (.422)
4.	Professional gear is equipped.	4.12	0.727	4.00	0.669	-0.12	-0.125	0.820	2.155 (.032)
5.	The studio/firm provides multiple service packages and price options.	4.19	0.759	4.03	0.719	-0.16	-0.165	0.831	2.807 (.006)
6.	The studio/firm has a flexible working schedule convenient for you.	4.16	0.784	3.90	0.750	-0.26	-0.255	0.902	3.997 (.000)
7.	The studio/firm provides supportive services, such as make-up, stylizing, etc.	4.24	0.696	<b>4.10</b>	0.626	-0.14	-0.140	0.716	2.764 (.006)
8.	Employees (photographers and frontline workers) are friendly.	4.23	0.640	3.99	0.698	-0.24	-0.245	0.780	4.443 (.000)
9.	Photographers respond to your inquiries promptly.	4.15	0.712	3.92	0.701	-0.23	-0.220	0.758	4.105 (.000)
10.	Photographers clearly understand your needs, especially the abstract ones such as style, aesthetics, etc.	4.14	0.650	3.84	0.683	-0.3	-0.300	0.808	5.249 (.000)
11.	In the shooting, photographers put extra efforts on your needs.	4.02	0.757	3.74	0.785	-0.28	-0.280	0.973	4.071 (.000)
12.	Photographers guide you how to look perfect in the photos.	<b>4.33</b>	0.731	3.99	0.687	-0.34	-0.340	0.865	5.559 (.000)
13.	In the shooting, photographers take photos for your friends and family as well.	<b>3.48</b>	0.874	<b>3.33</b>	0.940	-0.15	-0.155	0.897	2.443 (.015)
14.	The interactions between you and photographers are comfortable.	4.10	0.634	3.89	0.616	-0.21	-0.210	0.720	4.124 (.000)
15.	The studio provides online viewing of proofs after shooting.	3.90	0.792	3.73	0.901	-0.17	-0.165	0.923	2.528 (.012)
16.	The final products are finished in time.	4.04	0.736	4.03	0.676	-0.01	-0.015	0.760	0.279 (.780)
17.	The photos you get in the end are in good quality.	4.20	0.759	3.97	0.698	-0.23	-0.230	0.748	4.347 (.000)
18.	The final products (album, photo books, DVD...) are in good quality.	4.31	0.653	4.02	0.642	-0.29	-0.290	0.662	6.196 (.000)



#### 4.2.2 Factor analysis

A factor analysis was performed to reduce the eighteen service quality statements to a meaningful set of factors. The 18 service statements were factor analyzed in relation to their perception scores, since these better reflected the service quality compared to both the perception-minus-expectation gap scores and the expectation-only scores on wedding photography services. Actually, some previous studies (Babakus and Boller, 1992; Cronin and Taylor, 1992; Brady et al., 2002) also supported the use of perception-only scores, which were evident to have superior reliability and convergent validity for measuring service quality in some cases. The reason that the perception-minus-expectation gap scores are unsuitable for factor analysis is explained above, while the expectation-only scores are not suitable for factor analysis because customers' expectations on wedding photography services might not well reflect the service quality. The customers of wedding photography services, in general, are not experienced purchasers, since most of them probably purchase this service only once in their life. Hence, customers' expectations before purchasing are inadequate for evaluating the service quality of wedding photography services. Finally, the perception-only scores were employed for factor analysis.

Before conducting factor analysis, the test of Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity were established, which measure sampling adequacy and the correlations among the variables of the factor analysis respectively (UCLA: Academic Technology Services). These two tests provide a minimum standard which should be passed before a factor analysis conducted. From the results in Table 4.6, the value of KMO is 0.919, which is over the suggested minimum of 0.6 and indicates a good sampling adequacy for a satisfactory factor analysis. And the significance value of Bartlett's Test of Sphericity is 0.000 (sig. < 0.05), which indicates that sufficient correlations exist among the variables to proceed with factor analysis.

Then, factors with eigenvalues equal to or greater than 1 were chosen for interpretation. As a result, three factors were extracted and associated statistics are presented in Table 4.6. According to the guideline that the factor loading values considered significant at the sample size of 200 should be equal to or greater than 0.40 (Hair et al., 2011, p. 117), the eighteen variables with factor loading values ranging from 0.402 to 0.769 are all included in the analysis. However, the three initially extracted factors are quite different from the five quality dimensions of the SERVQUAL model. Hence, to find the best structure of service quality dimensions on wedding photography services, factor analyses on four and five factors to be extracted respectively were conducted as well. The results of four- and five-factor analysis are presented in Table 4.7 and Table 4.8.

**Table 4.6** Results of three-factor analysis

Statements	Factor loading	Eigen value	% of variance	Cumulative %	Cronbach's alpha
<b>Factor 1</b>		7.097	39.427	39.427	0.886
17. The photos you get in the end are in good quality.	0.769	<b>Label of Factor 1:</b> <b>Service delivery process and Service product</b>			
6. The studio/firm has a flexible working schedule convenient for you.	0.688				
18. The final products (album, photo books, DVD...) are in good quality.	0.660				
7.The studio/firm provides supportive services, such as make-up, stylizing, etc.	0.616				
8. Employees (photographers and frontline workers) are friendly.	0.608				
16. The final products are finished in time.	0.605				
12. Photographers guide you how to look perfect in the photos.	0.572				
9. Photographers respond to your inquiries promptly.	0.552				
5. The studio/firm provides multiple service packages and price options.	0.539				
14. The interactions between you and photographers are comfortable.	0.402				
<b>Factor 2</b>		1.408	7.823	47.250	0.549
1. The atmosphere of studio/firm is comfortable.	0.642	<b>Label of Factor 2:</b> <b>Physical conditions</b>			
4. Professional gear is equipped.	0.628				
2. Getting touch with the studio/firm is easy.	0.482				
<b>Factor 3</b>		1.041	5.784	53.034	0.764
13. In the shooting, photographers take photos for your friends and family as well.	0.758	<b>Label of Factor 3:</b> <b>Empathy</b>			
3. The studio/firm has a website including updated portfolios.	0.693				
15. The studio provides online viewing of proofs after shooting.	0.636				
11. In the shooting, photographers put extra efforts on your needs.	0.603				
10. Photographers clearly understand your needs, especially the abstract ones such as style, aesthetics, etc.	0.488				
<b>Notes:</b> KMO (Kaiser-Meyer-Olkin Measure of Sampling Adequacy)=0.919; Bartlett's Test of Sphericity=1388.281(sig.=0.000); Overall Cronbach's alpha=0.903; Rotation converged in 7 iterations.					

By comparison of the results of three-, four- and five-factor solutions, it is found that the three-factor solution is more acceptable since it has superior reliability than the other two solutions. Compared to the three-factor analysis, “Factor 2” of the four-factor analysis is related to “Factor 3” of the three-factor analysis. Additionally, “Factor 2” containing No.1, 2 and 4 three quality statements in the three-factor analysis, changes to “Factor 3” containing No.1, 2 and 14 three statements in the four-factor analysis. It is obvious that “Factor 2” of the three-factor analysis belonging to the category of the physical conditions of wedding photography studios/firms, has better explanatory power than “Factor 3” of the four-factor analysis, since No.14 quality statement is not in the same category with No.1 and 2 service quality statements. Furthermore, the results

reveal that two factors of the four-factor analysis have low Cronbach's alpha as 0.630 and 0.564. As to the five-factor analysis, although it explains more of the total variance (62.7%) than three- and four-factor analysis, its overall reliability and power of empirical explanation decrease to a lower level. Three of its five factors have the Cronbach's alpha lower than 0.7, and each factor could not be clearly defined because of varied quality attributes included in a single factor. Therefore, among the three-, four- and five-factor analysis, the results of the three-factor analysis is better both according to statistical criteria and empirical explanation, and finally chosen for further analysis.

**Table 4.7** Results of four-factor analysis

Statements	Factor loading	Eigen value	% of variance	Cumulative %	Cronbach's alpha
<b>Factor 1</b>		7.097	39.427	39.427	0.881
17. The photos you get in the end are in good quality.	0.805	<b>Factor 1</b>			
18. The final products (album, photo books, DVD...) are in good quality.	0.701				
9. Photographers respond to your inquiries promptly.	0.678				
7.The studio/firm provides supportive services, such as make-up, stylizing, etc.	0.672				
8. Employees (photographers and frontline workers) are friendly.	0.635				
6. The studio/firm has a flexible working schedule convenient for you.	0.619				
12. Photographers guide you how to look perfect in the photos.	0.543				
5. The studio/firm provides multiple service packages and price options.	0.536				
16. The final products are finished in time.	0.500				
<b>Factor 2</b>		1.40	7.823	47.250	0.630
13. In the shooting, photographers take photos for your friends and family as well.	0.749	<b>Factor 2</b>			
15. The studio provides online viewing of proofs after shooting.	0.723				
<b>Factor 3</b>		1.01	5.784	53.034	0.564
2. Getting touch with the studio/firm is easy.	0.738	<b>Factor 3</b>			
1. The atmosphere of studio/firm is comfortable.	0.688				
14. The interactions between you and photographers are comfortable.	0.414				
<b>Factor 4</b>		0.902	5.009	58.043	0.706
3. The studio/firm has a website including updated portfolios.	0.777	<b>Factor 4</b>			
10. Photographers clearly understand your needs, especially the abstract ones such as style, aesthetics, etc.	0.554				
4. Professional gear is equipped.	0.547				
11. In the shooting, photographers put extra efforts on your needs.	0.467				
<b>Notes:</b> KMO (Kaiser-Meyer-Olkin Measure of Sampling Adequacy)=0.919; Bartlett's Test of Sphericity=1388.281(sig.=0.000); Overall Cronbach's alpha=0.903; Rotation converged in 13 iterations.					

**Table 4.8** Results of five-factor analysis

Statements	Factor loading	Eigen value	% of variance	Cumulative %	Cronbach's alpha
<b>Factor 1</b>		7.097	39.427	39.427	0.882
17. The photos you get in the end are in good quality.	0.787	<b>Factor 1</b>			
9. Photographers respond to your inquiries promptly.	0.694				
18. The final products (album, photo books, DVD...) are in good quality.	0.689				
7. The studio/firm provides supportive services, such as make-up, stylizing, etc.	0.651				
8. Employees (photographers and frontline workers) are friendly.	0.609				
6. The studio/firm has a flexible working schedule convenient for you.	0.568				
4. Professional gear is equipped.	0.547				
5. The studio/firm provides multiple service packages and price options.	0.510				
12. Photographers guide you how to look perfect in the photos.	0.503				
<b>Factor 2</b>		1.40	7.823	47.250	0.631
15. The studio provides online viewing of proofs after shooting.	0.745	<b>Factor 2</b>			
13. In the shooting, photographers take photos for your friends and family as well.	0.717				
16. The final products are finished in time.	0.520				
<b>Factor 3</b>		1.01	5.784	53.034	0.703
3. The studio/firm has a website including updated portfolios.	0.838	<b>Factor 3</b>			
10. Photographers clearly understand your needs, especially the abstract ones such as style, aesthetics, etc.	0.541				
11. In the shooting, photographers put extra efforts on your needs.	0.509				
<b>Factor 4</b>		0.902	5.009	58.043	0.526
2. Getting touch with the studio/firm is easy.	0.779	<b>Factor 4</b>			
14. The interactions between you and photographers are comfortable.	0.593				
<b>Factor 5</b>		0.841	4.675	62.718	None
1. The atmosphere of studio/firm is comfortable.	0.869	<b>Factor 5</b>			
<p><b>Notes:</b> KMO (Kaiser-Meyer-Olkin Measure of Sampling Adequacy)=0.919; Bartlett's Test of Sphericity=1388.281(sig.=0.000); Overall Cronbach's alpha=0.903; Rotation converged in 12 iterations.</p>					

As presented in Table 4.6, the extracted three dimensions of the factor analysis explain 53.0% of the total variance, which is close to the values (around 56% ~ 70%) produced by Parasuraman et al. (1988, 1991) works. And the internal consistency reliability test conducted for each dimension indicates that the Cronbach's alpha for the three dimensions are respectively at 0.886, 0.549 and 0.764, the second factor of which does not exceed the recommended significant level of 0.70. From theoretical viewpoint, the factor with 0.549 Cronbach's alpha value does not have a good internal consistency among the statements, but from the empirical view, the three statements included in that

dimension could be clearly categorized as “physical conditions” of wedding photography studios/firms. Furthermore, the threshold of Cronbach’s alpha could possibly decrease to 0.6 in exploratory research (Hair et al., 2011, p. 125), so that the Cronbach’s alpha 0.549 should be regarded as acceptable for the exploratory research on wedding photography services.

Through studying the statements within each factor, new labels are established for each factor as “Service delivery process and service product”, “Physical conditions” and “Empathy”. The naming of these three factors is based on Parasuraman et al. (1988) SERVQUAL structure and Rust & Oliver’s (1994) three-component service quality model as well. Rust & Oliver proposed three service quality components as service delivery (functional quality), service product (technical quality), and service environment. Similarly, Parasuraman et al. (1991) summarized that service quality evaluation could consist of two parts - the nature of the core (outcome) and the relational constructs (process). For the factor “Service delivery process and service product”, No.17 quality statement “The photos you get in the end are in good quality” and No.18 “The final products (album, photo books, DVD...) are in good quality” refer to “service product”; and other quality statements as Nos.5, 6, 7, 8, 9, 12, 14 and 16 together are associated with “service delivery process”.

Based on the results of three-factor analysis, factor 1 “Service delivery process and service product”, appears to contribute most to service quality evaluation in the context of wedding photography services. As seen in Table 6, factor 1, containing 10 of the 18 service statements, accounts for 39.4% of the total variance, while “Physical conditions” and “Empathy” have relatively lower percentages of the total variance with 7.8% and 5.8% respectively.

#### **4.2.3 Multiple regression analysis**

To further investigate the relative importance of the three factors in predicting overall service quality of wedding photography services, a multiple regression analysis was applied. Table 4.9 shows the results of regression analysis in which the three service quality factors are used as independent variables and the overall service quality evaluation as dependent variable.

**Table 4.9** Results of Multiple Regression Analysis

Independent variables	Unstandardized		Standardized	t	Sig.	Collinearity
	Coefficients		Coefficients			Statistics
	B	Std. Error	Beta			Tolerance
(Constant)	3.715	0.029		128.732	0.000	
Factor 1	0.247	0.029	0.448	8.550	0.000	1.000
Factor 2	0.228	0.029	0.412	7.878	0.000	1.000
Factor 3	0.168	0.029	0.304	5.796	0.000	1.000

**Notes:** Adjusted R<sup>2</sup>=0.454; F=56.253; Significant F=0.000; Significant at p<0.05 level.

According to Hair et al. (2011, p209), R<sup>2</sup> indicates the proportion of the variance in the dependent variable which is accounted for by the set of independent variables, whereas adjusted R<sup>2</sup> value, taking into account the number of variables in the model and the number of respondents, gives a better measure of the prediction of the regression model. As shown in Table 4.9, the three factors together account for 45.4% (Adjusted R<sup>2</sup>=0.454) of the variance in the measure of the overall service quality, which is acceptable and above the minimum level of R<sup>2</sup> (0.06-0.08) under the situation of three independent variables employed in the model with a sample size of 200 and a statistically significant level of 0.05 specified with a statistical power of 0.8 (Hair et al., 2011, p174). The significant values of three factors are all lower than the preset significant level of 0.05, which mean that all three factors positively affect the evaluation of the overall service quality. The F value of 56.253 with a significant level of 0.000 indicates that the overall model fit is good. Consequently, the regression model could be deemed statistically significant.

The tolerance values, varying between 0 and 1, are a measure of the correlation between the independent variables (Brace et al., 2000, pp. 205-212). The closer to zero the tolerance value is for a variable, the stronger the relationship between two variables. As presented in Table 4.9, the tolerance value “1” in this research means no correlation between any two service quality factors. Hence, there is no problem of multicollinearity in this regression model.

The standardized coefficients give a measure of the contribution of each variable to the model. A large value indicates that a unit change in this independent variable has a large effect on the dependent variable (Brace et al., 2000, pp. 205-220). The standardized coefficients of three factors are 0.448, 0.412 and 0.304 respectively, which indicate that “factor 1” has slightly bigger effect on the overall service quality, followed by “factor 2” and then “factor 3”. The t and significant (p) values give a rough indication of the impact of each independent variable – a big absolute t value with a small p value suggests that an independent variable has a large impact on the dependent variable (Brace et al., 2000,

pp. 205-220). From Table 4.9, t values for the three factors again prove that “factor 1” has the biggest influence on the overall quality of the investigated wedding photography services, followed by “factor 2” and “factor 3”. Hence, the t and significant values support the interpretation of the standardized coefficients.

## 5 DISCUSSION

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*This chapter provides the discussion in response to the research questions. The findings are interpreted and reflected on, using the theoretical foundation established in Chapter 2.*

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The results of the survey have given information about customers' buying habits on wedding photography services, their expectations on the quality aspects of services before purchasing and perceptions of the actual services after purchasing. These results provide service providers with useful knowledge for improving the design and quality aspects of their services effectively. In the following sections, suggestions for improving the design and service quality in wedding photography services will be given, as well as the answers responding to the three research questions.

Learnt from the survey, "friends/relative referral" was the main channel by which the customers knew wedding photography studios/firms. This means that positive words of mouth were of great importance for wedding photography services. Given the fact that wedding photography services are special one-off services, they hardly have repurchasing behavior from the old customers but rely much on attracting new customers. This fact again strengthens the importance of positive words of mouth for wedding photography services.

"Aware of the physical store", rated as the second main channel for customers knowing the wedding photography studios/firms, proves that the location of the physical store is essential for attracting potential customers. Hence, it is suggested that a good location for wedding photography studios/firms is where potential customers usually congregate or pass by. Moreover, it is better to have attractive window display and decoration for the physical store. These findings also support Wemmerlöv's (1990) service design considerations stated in the literature review that the design of site location, layout and atmosphere should be attractive to customers for the type of services that wedding photography services belong to.

Another issue worth mentioning is having a well-designed and updated website for a wedding photography studio/firm. It is advised that each studio/firm should have its website with updated portfolios and information. The website could be regarded as the studio's/firm's virtual store on the Internet. Based on the survey results, "website search" was on the third place among all the channels by which the customers knew the wedding photography studios/firms, although the customers had low expectations on the studio's/firm's website. It seems these results are conflicting, but the importance of a website cannot be questioned in an age of digital information. Moreover, some successful wedding photographers (Becker; Jasmine Star; Zach & Jody; Cliff Mautne) in western countries especially the USA strengthen the importance of their websites for attracting



new customers and promoting their businesses. They believe it is efficient to market wedding photography business through the Internet, and also convenient for customers to learn more about the specific services provided. Hence, it is suggested for each wedding photography studio/firm to have a well-designed and updated website.

The first research question is about investigating customers' expectations and post-purchasing perceptions of the quality aspects of wedding photography services. From the results of customers' expectations on wedding photography services, it is noticeable that customers regard the guidance of photographers in the shooting as important. And they also strongly would like to have other supportive services such as make-up and stylizing provided by the wedding photography firms/studios. In addition, the outcome (photos and albums, etc.) of the photography services are important for the customers as well. Furthermore, customers think that the interaction between the photographers and them is essential for the smooth delivery of the services. All these findings support Wemmerlöv's (1990) design considerations again, which refer to strong interpersonal skills, knowledge of procedures, technical skills and expertise from service providers, and frequent exchanges of information between customers and service providers as well. However, whether or not the photographers are taking photos for customers' friends/relatives would not impact much on the overall service quality. Therefore, wedding photography studios/firms could put relatively more resources and energy on the quality aspects that customers have higher expectations on.

From the results of customers' post-purchasing perceptions of the actual services, it is found that the service quality statements with high perception scores are almost the same statements expected as important by the customers before purchasing. For example, No.1 statement "*The atmosphere of studio/firm is comfortable*" was rated up to 64% (highest at the "4 High" degree) regarding customers' expectations and 66% regarding customers' perceptions of its actual service quality. It is similar for No.14 statement "*The interactions between you and photographers are comfortable*" and No.7 statement "*The studio/firm provides supportive services, such as make-up, stylizing, etc.*" as well. To some degree, the investigated wedding photography firms/studios did well in some quality aspects that customers had high expectations on.

The second research question is to investigate whether the application of the SERVQUAL model is relevant under the context of wedding photography services. As mentioned in Chapter 2, the SERVQUAL model used perception-minus-expectation gap scores to measure service quality. However, for this research, the perception-only scores outperform the gap scores in evaluating the quality for wedding photography services. Actually, some critics have questioned the extent to which the gap scores used in the SERVQUAL model empirically reflect the overall service quality. Additionally, some of the

previous studies support the use of perception-only scores which have a good predictive validity in some cases (Brown et al., 1993; Durvasula et al., 1999).

Apart from that, the five-dimension structure of the SERVQUAL model is not confirmed in this research. From the results of factor analysis, three factors are established, with factor 1 - "service delivery process and service product", factor 2 - "physical conditions" and factor 3 - "empathy". Only one factor "empathy" included in the five-dimension SERVQUAL structure is identified as basically the same factor in the investigated wedding photography services, while other four dimensions as "reliability", "tangibles", "responsiveness" and "assurance" included in the SERVQUAL model are combined or changed to new forms of quality dimensions under the context of wedding photography services.

According to Rust & Oliver's (1994) perspective on service quality, which consists of functional quality (service delivery), technical quality (service product) and the service environment, the factor "service delivery process and service product" in wedding photography services could be regarded as combining the functional quality of the services with the technical quality together. When looking into Parasuraman's et al. (1991) view on the quality dimensions of the SERVQUAL model, the dimension "reliability", concerned more with the service outcome, and "responsiveness" with "assurance", concerned relatively more with the service process, are combined into one dimension "service delivery process and service product" under the context of wedding photography services. The service products such as photos or albums, etc. are the main forms of the presentation of wedding photography services, so that it is understandable that "service product" plays a significant role in determining the overall quality of wedding photography services. These findings also support Wemmerlöv's (1990) suggestion on service design that "information/images" as the product of a service process should be paid attentions on.

As to the factor "physical conditions", it is similar to the "tangibles" dimension in the SERVQUAL model that usually refers to the appearance of physical facilities, equipment, and personnel. The "physical conditions" in this investigation refers to the location and atmosphere of wedding photography firms/studios and the professional equipment for shooting. The importance of these conditions was stressed by Wemmerlöv (1990), and they appear as necessary for improving the design and quality of wedding photography services.

For the factor "empathy", it refers to service providers' caring behavior and individualized attention to customers. The empathetic behavior such as photographers' understanding and extra efforts on customers' needs, and the facilities for customers' convenience such as a well-designed and updated website and the software for online

viewing of proofs after shooting, would be all helpful for bringing a feeling of concern and care to customers. These caring behaviors and activities are especially important for wedding photography services, which have the attributes of “direct customer contact” and “close interaction with service workers” (Wemmerlöv, 1990). When designing the services, wedding photography studios/firms should not underestimate the “empathy” dimension.

The third research question of this study is about identifying the level of importance of each quality dimension for determining the overall quality of wedding photography services. The results of multiple regression analysis in this research imply that “service delivery process and service product” is the most influential factor on the overall quality of wedding photography services, followed by “physical conditions” and “empathy”. Given these three service quality dimensions, it is found that not only that the basic activities around the shooting process are paid adequate attention to, but the service outcome, such as the quality of photos and albums, is regarded as very important as well. In addition, a location convenient for customers, comfortable atmosphere of wedding photography firms/studios, and all the caring and empathetic behaviors towards customers are considered helpful for service quality improvement.

Since the positive relationships between service quality, customer satisfaction and word of mouth has been proved in previous research (Bitner et al., 1990; Cho, 2009; Lloyd & Luk, 2011), it is probable that the positive relationship among them is also applicable under the context of wedding photography services. According to the results of the survey (Table 4.4), there seems to be a positive relationship between service quality, customer satisfaction and word of mouth in wedding photography services, although no attempt to use “propensity to recommend” as the dependent variable in multiple regression here. However, to pinpoint their relationship in wedding photography services, it should be further studied in future research. Meanwhile, the aspects that significantly increase positive words of mouth could be investigated, since they are of great importance for wedding photography services.

## 6 CONCLUSION AND IMPLICATIONS

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*The chapter presents the major findings and the reflections on the purpose of the thesis. To be specific, it summarizes the answers to research questions and provides proposals for further research in the related areas.*

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This study has identified the specific expectations of customers on wedding photography services, the quality dimensions extracted through customers' perceptions of the performance of the services, and the importance of these quality dimensions for predicting the overall service quality. Learning from the findings, the service providers could know how to design or improve the design of their services to meet customers' needs, and know how to improve service quality effectively through the key service quality aspects.

This study has contributed to the theoretical advancement of the design and service quality issues around wedding photography services. First of all, this research develops eighteen service quality statements for wedding photography services, which are all significant aspects for the general workflow of wedding photography services. Customers' expectations on these 18 quality statements are studied, and consequently valuable considerations for the design of wedding photography services are summarized as follows. The design of the studio's/firm's location, layout and atmosphere are suggested to match customers' needs; professional gear is necessary; service providers' communicating skills, knowledge of operational procedures and photographers' expertise and interpersonal skills are given high customer expectations, and could significantly influence the overall service process; service products such as photos and albums, etc. need considerable attention and effort, since customers expected much from them and they also play an important role in determining the overall service quality.

As to the theoretical advancement on the evaluation of service quality, this study identifies three quality dimensions as "service delivery process and service product", "physical condition" and "empathy" through the method of factor analysis using perception-only scores (instead of perception-minus-expectation scores). The perception-only scores are to be better to measure the overall service quality than the perception-minus-expectation scores for this study, which differs from Parasuraman's et al. (1985; 1988; 1990) opinions on the measure of service quality. The three quality dimensions for wedding photography services differ from the five dimensions of the SERVQUAL model. The findings indicate that the most influential factor on the overall service quality of wedding photography services was "service delivery process and service quality", followed by "physical condition" and "empathy" respectively. The findings also demonstrate that the SERVQUAL model should be adapted to develop other measures when applying it to different service contexts, and the number of service

quality dimensions is dependent on the particular service being offered (Babakus and Boller, 1992; Carman, 1990).

Some limitations existing in this study should be addressed. The investigation conducted was on the Chinese wedding photography services, which might have slight differences from other countries' wedding photography services. Additionally, the service quality statements identified might omit some important items, although they were checked carefully by the author and the experienced wedding photographers. Future studies could try to investigate some other countries' wedding photography services, to identify or adapt the quality statements based on the ones established in this research, and to find out whether the findings of this research are valid in other countries. Another limitation is that deeper analysis could have been made of the relation between customer satisfaction and word of mouth, which are closely related to the improvement of the design and quality aspects for wedding photography services. Future studies could specially work on exploring the relationship between service quality, customer satisfaction and word of mouth under the context of wedding photography services, and learn how to improve customer satisfaction and increase positive referrals. Finally, regarding that there are different sizes of wedding photography studios/firms co-existing in China, from couple-run studio to hundred-employee firm, it is interesting to identify the advantages and disadvantages of different sizes of studios/firms. Furthermore, from a strategic perspective, to investigate what is the optimal size for wedding photography studios/firms is meaningful and suggested for future research.

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## APPENDIX 1: Questionnaire for the survey

Dear participant,

The survey is to investigate what you think is important for a wedding photography service, and then your perception about the service you have received. The purpose is to improve the quality of wedding photography service. It will take approximately 5 minutes. Thank you very much for your cooperation!

**Part 1 “Before choosing a wedding photography studio/firm, how important are the following elements for you?”** Please select the number which indicates your judgment on importance from “1” very low to “5” very high.

	Very low	Low	Moderate	High	Very high
The atmosphere of studio/firm is comfortable.	1	2	3	4	5
Getting touch with the studio/firm is easy.	1	2	3	4	5
The studio/firm has a website including updated portfolios.	1	2	3	4	5
Professional gear is equipped.	1	2	3	4	5
The studio/firm provides multiple service packages and price options.	1	2	3	4	5
The studio/firm has a flexible working schedule convenient for you.	1	2	3	4	5
The studio/firm provides supportive services, such as make-up, stylizing, etc.	1	2	3	4	5
Employees (photographers and frontline workers) are friendly.	1	2	3	4	5
Photographers respond to your inquiries promptly.	1	2	3	4	5
Photographers clearly understand your needs, especially the abstract ones such as style, aesthetics, etc.	1	2	3	4	5
In the shooting, photographers put extra efforts on your needs.	1	2	3	4	5
Photographers guide you how to look perfect in the photos.	1	2	3	4	5
In the shooting, photographers take photos for your friends and family as well.	1	2	3	4	5
The interactions between you and photographers are comfortable.	1	2	3	4	5
The studio provides online viewing of proofs after shooting.	1	2	3	4	5
The final products are finished in time.	1	2	3	4	5
The photos you get in the end are in good quality.	1	2	3	4	5
The final products (album, photo books, DVD...) are in good quality.	1	2	3	4	5

**Part 2 “After you received the service from the wedding photography studio/firm, how would you evaluate the level of the following service elements?”** Please select the number which indicates your judgment from “1” very low to “5” very high.

	Very low	Low	Moderate	High	Very high
The atmosphere of studio/firm is comfortable.	1	2	3	4	5
Getting touch with the studio/firm is easy.	1	2	3	4	5
The studio/firm has a website including updated portfolios.	1	2	3	4	5
Professional gear is equipped.	1	2	3	4	5
The studio/firm provides multiple service packages and price options.	1	2	3	4	5
The studio/firm has a flexible working schedule convenient for you.	1	2	3	4	5
The studio/firm provides supportive services, such as make-up, stylizing, etc.	1	2	3	4	5
Employees (photographers and frontline workers) are friendly.	1	2	3	4	5
Photographers respond to your inquiries promptly.	1	2	3	4	5

Photographers clearly understand your needs, especially the abstract ones such as style, aesthetics, etc.	1	2	3	4	5
In the shooting, photographers put extra efforts on your needs.	1	2	3	4	5
Photographers guide you how to look perfect in the photos.	1	2	3	4	5
In the shooting, photographers take photos for your friends and family as well.	1	2	3	4	5
The interactions between you and photographers are comfortable.	1	2	3	4	5
The studio provides online viewing of proofs after shooting.	1	2	3	4	5
The final products are finished in time.	1	2	3	4	5
The photos you get in the end are in good quality.	1	2	3	4	5
The final products (album, photo books, DVD...) are in good quality.	1	2	3	4	5

<b>Overall evaluation</b>	Very low	Low	Moderate	High	Very high
-Overall, how would you rate the quality of service you received from the wedding studio/firm?	1	2	3	4	5
-Overall, how would you rate the level of your satisfaction regarding the service you received?	1	2	3	4	5
-To what extent would you recommend the wedding studio/firm to others?	1	2	3	4	5

### Part 3 Basic information

1. You are:

Female       Male

2. Your age:

20-27       28-35       over 35

3. Your occupation:

Executive/Manager       Self-employed       White collar       Blue collar       Student

4. The level of education you received:

At or below the high school level       Junior college level       Bachelor Degree       At or above Master degree

5. The specific service you had: (possible to select more than one)

Pre-wedding portraits       Wedding documentary       Engagement shooting       Others, please specify\_\_\_\_\_

6. How long has it been since you purchased the wedding photography services?

Less than 1 year       1~3 years       3~5 years       More than 5 years

7. You knew the wedding photography firm/studio by: (possible to select more than one)

Friend/relative referral       Got contact when attending friend/relative's wedding  
 Vendor referral       Aware of the physical store       Website search  
 Social network as blog, micro-blog, etc       Bridal magazine       Others, please specify\_\_\_\_\_