

Is SERVQUAL Reliable and Valid? A Review from the Perspective of Dimensions in Different Typical Service Industries

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Abstract. SERVQUAL is the best known and most commonly used scale measuring service quality in a wide variety of service environments. But several researchers have identified potential difficulties with the reliability and validity of the scale when it is used in a specific service environment. The purpose of this study is to review the scales measuring service quality in researches, comparing with SERVQUAL from the perspective of research method and dimensionality, and to investigate whether SERVQUAL are still suitable for measuring quality of typical service industries. We chose four well-studied service industries as key domains, and reviewed related researches about developing scales of measuring service quality in those four domains in the past 30 years. The four industries are retail banking, transportation, higher education and online shopping. Results showed that, even though the quality of most typical service industries of scales in typical industries are associated to SERVQUAL's five dimensionalities of scales in typical industries are associated to SERVQUAL's five dimensions. SERVQUAL is still valuable for service quality scale development.

Keywords: Perceived service quality \cdot Dimensionality \cdot Research method \cdot Typical service industry \cdot SERVQUAL

1 Introduction

Over the past three decades, a great deal of studies has researched various aspects of service quality. In much of these studies, researchers were devoted to developing reliable and valid scales for measuring the service quality. Some of the scales can be applied to the whole service industries, and the best known and most commonly used instruments now is called "SERVQUAL" scale, which was originally developed by Parasuraman et al. (1985) and Parasuraman et al. (1988). The SERVQUAL scale was originally applied in five service domains. Later on, it has been used to measure service quality in a wide variety of service industries.

While SERVQUAL has been widely applied into specific service fields, such as banking, hotel, website service and education, and valued by scholars and service managers alike, many researchers have identified potential difficulties with the conceptual foundation and empirical operationalization of the scale. In particular, researchers have questioned whether the five dimensions of the scale, and its psychometric properties, are generically applicable in all service industries (Ladhari 2009). As a result, many researches adapted SERVQUAL for measuring service quality in specific industries, while others were willing to develop brand new scales for different domains. Researches began to use several research methods rather than just use SERVQUAL during development in order to ensure the reliability and validity of their instruments.

Against this background, the aim of ours study is to provide a review of service quality scales development in different typical service industries. We summarized the research methods of those scales and compared their dimensions with SERVQUAL to study the similarities between the scales. Sequentially, we can get a simple understanding about SERVQUAL's application and reliability and validity in typical industries.

2 The SERVQUAL Scale

Parasuraman et al. (1985) considered that service quality was subjectively perceived by customers, and it was the gap between customer expectations and service performance. They chose retail banking, credit card, securities brokerage, and product repair and maintenance as investigated service industries, conducted several focus groups and indepth interviews as research method, and built a multidimensional service quality model with ten dimensions. Sequentially, Parasuraman et al. (1988) developed the SERVQUAL scale which consists of 22 items representing following five dimensions:

- Tangibles (measured by four items): the appearance of physical facilities, equipment, and personnel;
- Reliability (five items): the ability to perform the promised service dependably and accurately;
- Responsiveness (four items): the willingness to help customers and provide prompt service;
- Assurance (four items): the knowledge and courtesy of employees and their ability to inspire trust and confidence; and
- Empathy (five items): the level of caring and individualized attention the firm provides to its customers.

SERVQUAL has been used widely to measure service quality in a variety of service industries and applied in several countries (Ladhari 2009), while there have been debates about various aspects of the scale, including:

1. Reliability and validity problem in specific service environment. Ladhari (2009) reviewed twenty years of SERVQUAL research and considered that the applicability of SERVQUAL in different culture context and different service settings were debated in the reliability, convergent validity, discriminant validity and predictive validity by both service managers and academics;

- 2. The applicability of SERVQUAL to the online environment. Parasuraman et al. (2005) claimed that the development of the Internet deeply changed service industrial in both environments and service mode, thus the SERVQUAL scale were hard to be used to measure the service quality related to the Internet;
- 3. The uncertainty of detailed target to which the dimensions point. Brady and Cronin (2001) considered that if service quality perceptions represent a latent variable, something specific must be reliable, responsive, empathetic, assured, and tangible. And they suggested that identifying "something" was critical in the literature.

3 Methodology

According to the development of studies in measuring service quality in different service industries, we summarized four types of service industries: (1) traditional industries that are investigated during the development of the SERVQUAL scale; (2) traditional industries but are not the sample industries for developing SERVQUAL; (3) complex industries which are ignored by researchers in early stage; (4) industries directly related to the Internet. We respectively chose retail banking, transportation, higher education and online shopping as four typical service industries, and reviewed the relative studies about developing scales of measuring service quality in these four service industries.

We use "service quality", "measure", and each industry as keywords, searching the keywords on Google scholar. Studies in recent thirty years and focusing on developing a complete instrument for measuring service quality are included and are subjected to a comprehensive in-depth content. 31 literature including a complete instrument developing procedure and a final scale were reviewed in this study.

We then integrated the research method used in scale development and final dimensions of scales, comparing with SERVQUAL to understand the applicability of SERVQUAL in different typical service industries.

4 SERVQUAL and Other Scales in Retail Banking

Retail banking service is one of the sample services for developing SERVQUAL. There are two tendency of service domains when researchers study the quality measurement in retail banking. One is traditional offline retail banking service, and the other is online banking service. SERVQUAL are widely used in both offline banking and online banking. We reviewed eight studies related to retail banking, including 4 studies about offline banking and 4 studies about online banking. Table 1 shows the details of reviewed studies about retail banking. Each dimension in the final scale and its related dimensions in SERVQUAL are also listed in the table.

Study	Domains of measurement	Research methods for identify dimensions	Final number of dimensions and items	Final dimensions (* refers the dimension is the same as it in SERVQUAL)	Related dimensions in SERVQUAL
Kemal Avkiran (1994)	Retail banking	Adapted from SERVQUAL	4 dimensions with 17 items	Staff conduct Credibility Communication Access to teller services	Reliability/Responsiveness/ Assurance/Empathy Reliability/Assurance Responsiveness Tangibles/Reliability/Responsiveness
Bahia and Nantel (2016)	Retail banking	Adapted from SERVQUAL	6 dimensions with 31 items	Effectiveness and assurance Access Price *Tangible service Portfolio *Reliability	Reliability/Assurance Tangibles/Reliability/Responsiveness Assurance Tangibles Tangibles/Empathy Reliability
Aldlaigan and Buttle (2002)	Retail banking	According to technical and functional quality (Grönroos 1984)	4 dimensions with 21 items	System quality Behavioral service quality Service transactional accuracy Machine service quality	Tangibles/Reliability/Responsiveness Reliability/Responsiveness/Empathy Reliability/Assurance Reliability/Responsiveness/Assurance
Jabnoun and Hassan Al- Tamimi (2003)	Retail banking	Adapted from SERVQUAL	3 dimensions with 22 items	Human skills *Tangibles *Empathy	Reliability/Responsiveness/Assurance Tangibles Empathy
Jayawardhena (2004)	Online banking	Adapted from SERVQUAL	5 dimensions with 21 items	Access Website interface Trust Attention Credibility	Tangibles/Reliability/Responsiveness Tangibles Assurance Responsiveness Reliability
Yang et al. (2004)	Online banking	Adapted from SERVQUAL	6 dimensions with 20 items	*Reliability *Responsiveness Competence Ease of use Security Product portfolio	Reliability Responsiveness Assurance Tangibles/Responsiveness Reliability Tangibles/Empathy
Sohn and Tadisina (2008)	Online banking	Adapted from SERVQUAL	6 dimensions with 25 items	Trust Customised communications Ease of use Website content and functionality *Reliability Speed of delivery	Reliability/Assurance Empathy Tangibles/Responsiveness Tangibles/Responsiveness Reliability Responsiveness
Ho and Lin (2010)	Online banking	Literature and user interview	5 dimensions with 17 items	Customer service Web design *Assurance Preferential treatment Information provision	Reliability/Responsiveness/Assurance Tangibles Assurance Tangibles Tangibles

Table 1.	Selected studies	on service a	uality scale of	development i	n retail banking.
I uble II	Selected Studies	on bervice q	addity beare	de relopment i	in return building.

From research method aspect, there are six in eight studies adapted SERVQUAL to a new scale. When studying offline banking, researchers add few dimensions and modify many items. When it comes to online banking, dimensionality of SERVQUAL is not enough, and researchers tend to add more dimensions and items to adapt SERVQUAL.

From final scale aspect, the final number of dimensions (M = 4.9, SD = 1.1) and items (M = 21.8, SD = 4.3) in the scales are both close to that in SERVOUAL. As we can see in Table 1, dimensions in offline and online banking have several properties. Dimensions in offline banking are more similar to dimensions of SERVOUAL, which proved the fitness of SERVQUAL in offline banking service. Tangibles, reliability and assurance are frequently contained in the scales, and refer to the demands from customers. However, since SERVQUAL did not claim "something" must be tangible, reliable, and assured, the items classification in new scales are not consistent as SERVOUAL in factor analysis, and consequently the name of dimensions in final scales are different from each other. For example, staff (Aldlaigan and Buttle 2002; Jabnoun and Hassan Al-Tamimi 2003; Kemal Avkiran 1994) is an independent dimension, which actually identify the "something". Dimensions in online banking are modified on the basis of SERVQUAL, and many dimensions and items are changed. Because of offering similar service as offline banking, online banking also focuses on tangibles, reliability and assurance, and dimensions tend to identify what they describe. However, because of the differences in procedure of service, the describing objects are different between offline and online banking. For example, new dimensions in online banking are web design (Ho and Lin 2010; Jayawardhena 2004; Sohn and Tadisina 2008) and ease of use (Sohn and Tadisina 2008; Yang et al. 2004), which can be classified into tangibles as website is the tangible equipment; Security and competence (Yang et al. 2004) is similar as reliability and assurance. These conditions stated that customers pay attention to the security of online banking, and proved the applicability of SERVQUAL in online banking.

In reviewed studies, there are a number of scales adapted from SERVQUAL, and the final scales are similar in both size and dimensionality to SERVQUAL, which proved the applicability of SERVQUAL in retail banking. When the describing objects are identified in SERVQUAL, the scale do better. Both offline and online banking focus on tangibles, reliability and assurance, but the objects are little different because of procedure difference.

5 SERVQUAL and Other Scales in Transportations

Transportations is an old service industry. Even if SERVQUAL was not based on transportations, SERVQUAL is used in a variety of domains of the industry. We reviewed ten studies about measuring service quality of airline, railway, city bus and so on. Table 2 shows the details of reviewed studies about transportations.

Study	Domains of measurement	Research methods for identify dimensions	Final number of dimensions and items	Final dimensions (* refers the dimension is the same as it in SERVQUAL)	Related dimensions in SERVQUAL
Hu and Jen (2006)	City buses	Adapted from SERVQUAL	4 dimensions with 20 items	Interaction with passengers *Tangible service equipment Convenience of service Operational management support	Reliability/Responsiveness Tangibles Reliability/Responsiveness Reliability/Assurance/Empathy
Liou et al. (2007)	Airline service	Expert research	6 dimensions with 12 items	Employee's service Safety and reliability On board service Schedule On time performance Frequent flyer program	Reliability/Responsiveness Reliability/Assurance Reliability/Responsiveness/ Assurance/Empathy Assurance Reliability Assurance
Sánchez Pérezet al. (2007)	Public-sector transport	Adapted from SERVQUAL	5 dimensions with 21 items	*Tangibility *Reliability Receptivity *Assurance *Empathy	Tangibles Reliability Responsiveness Assurance Empathy
Pakdil and Aydın (2007)	Airline service	Adapted from SERVQUAL	8 dimensions with 34 items	Employees *Tangibles *Responsiveness *Reliability and assurance Flight patterns Availability Image *Empathy	Reliability/Responsiveness/ Assurance Tangibles Responsiveness Reliability/Assurance Reliability/Responsiveness/ Assurance/Empathy Responsiveness Reliability Empathy
Prasad et al. (2010)	Railways	Adapted from SERVQUAL	7 dimensions with 26 items	Comfort Convenience *Tangibility *Reliability *Assurance *Responsiveness *Empathy	Tangibles Reliability/Responsiveness Tangibles Reliability Responsiveness Assurance Empathy
Mishra (2013)	Public transportation services	Adapted from SERVQUAL	6 dimensions with 24 items	Security *Tangibility *Reliability *Responsiveness *Assurances *Empathy	Reliability Tangibles Reliability Responsiveness Assurance Empathy
Randheer et al. (2011)	Public transportation services	Adapted from SERVQUAL	5 dimensions with 23 items	Culture *Reliability *Responsiveness *Assurances *Empathy	Tangibles Reliability Responsiveness Assurance Empathy

Table 2. Selected studies on service quality scale development in transportations.

(continued)

Study	Domains of	Research	Final number	Final dimensions (* refers	Related dimensions in
	measurement	methods for	of dimensions	the dimension is the same	SERVQUAL
		identify	and items	as it in SERVQUAL)	
		dimensions			
Irfan et al.	Rail transport	Adapted from	8 dimensions	*Tangible	Tangibles
(2012)		SERVQUAL	with 29 items	*Empathy	Empathy
				*Assurance	Assurance
				Safety	Reliability
				Information	Tangibles
				Food	Tangibles
				*Responsiveness	Responsiveness
				Timeliness	Assurance
Barabino	Urban bus	Adapted from	4 dimensions	*Tangible	Tangibles
et al.	transport	SERVQUAL	with 15 items	*Reliability	Reliability
(2012)				*Assurance	Responsiveness
				*Responsiveness	Assurance
Bakti and	Public land	Survey	4 dimensions	Comfort	Tangibles
Sumaedi	transport		with 18 items	*Tangible	Tangibles
(2015)				Personnel	Reliability/Responsiveness
				*Reliability	Reliability

 Table 2. (continued)

From research method aspect, there are eight in ten studies adapted SERVQUAL to a new scale. And in seven studies, researchers use only dimensions of SERVQUAL but not items, and then add items according to other literatures. While the only different one is the study of Sánchez Pérez et al. (2007) about public-sector transport. They used only items but not dimensions of SERVQUAL, and then divided items into new dimensions by factor analysis.

From final scale aspect, the final number of dimensions (M = 5.7, SD = 1.5) and items (M = 22.2, SD = 6.2) in the scales are mostly close to that in SERVQUAL, and the name of dimensions are similar to the name in SERVQUAL. More than half of dimensions in eight studies are the same as dimension of SERVQUAL. Specifically, Sánchez Pérez et al. (2007) use only items, and the dimensions of final scale is still similar to SERVQUAL dimension. Moreover, Bakti and Sumaedi (2015) did not consider SERVQUAL in their research methods, but the final scale is also similar to SERVQUAL. These cases proved the applicability of SERVQUAL in transportation industry. As we can see in Table 2, eight in ten final scales contained reliability dimension. The most important goal of transportation service is sending customers to destination according to the schedule, consequently, reliability dimension is important in transportation.

In reviewed studies, there are a number of scales adapted from SERVQUAL, and the final scales followed the name of SERVQUAL dimension, and the scales not adapted from SERVQUAL are also similar to SERVQUAL, which proved the applicability of SERVQUAL in retail banking. Reliability is important in transportation service.

6 SERVQUAL and Other Scales in Higher Education

Even though higher education is an old service, it is complex and ignored by researchers in early stage. Research about measuring higher education service quality were conducted a little late. We review eight related studies between year 1996 and year 2010. Five in eight studies finished a whole procedure of scale development, one studies directly use SERVQUAL to measure higher education quality, and other two studies did a comparison between different higher education quality scales. Table 3 shows the details of five reviewed studies about developing higher education quality scales.

Study	Domains of measurement	Research methods for	Final number of	Final dimensions (* refers the dimension	Related dimensions in SERVQUAL
		identify dimensions	dimensions and items	is the same as it in SERVQUAL)	
Soutar and McNeil (1996)	Higher education	Adapted from SERVQUAL	2 dimensions, 14 sub- dimensions with 52 items	1. Academic aspects: *Reliability *Tangibles *Responsiveness *Assurance *Empathy Knowledge Communication 2. Non-academic aspects: *Reliability *Tangibles *Responsiveness *Assurance *Empathy Communication Systems	1. Academic aspects: Tangibles Reliability Responsiveness Assurance Empathy NONE NONE NON-academic aspects: Tangibles Reliability Responsiveness Assurance Empathy NONE Reliability Responsiveness Assurance Empathy NONE Reliability/Responsiveness/Assurance
Abdullah (2006a)	Higher education	Focus group	HEdPERF 6 dimensions with 45 items	Non-academic aspects Academic aspects Reputation Access Programme issues Understanding	Reliability/Responsiveness/Assurance Reliability/Responsiveness/Assurance Reliability NONE Reliability/Assurance Empathy
Nadiri et al. (2009)	Higher education	Adapted from SERVQUAL	2 dimensions with 22 items	Intangibles Tangibles	Reliability/Responsiveness/ Assurance/Empathy Tangibles

Table 3.	Selected	studies on	service	quality	scale	develop	ment in	higher	education.

(continued)

Study	Domains of measurement	Research methods for identify dimensions	Final number of dimensions and items	Final dimensions (* refers the dimension is the same as it in SERVQUAL)	Related dimensions in SERVQUAL
Lagrosen et al. (2004)	Higher education	Adapted from SERVQUAL	11 dimensions with 31 items	Corporate collaboration Information and responsiveness Courses offered *Campus facilities Teaching practices Internal evaluations External evaluations Computer facilities Collaboration and comparisons Post-study factors Library resources	NONE Responsiveness Tangibles/Reliability/Empathy Tangibles Reliability Reliability NONE Tangibles Credibility NONE Tangibles
De Jager and Gbadamosi (2010)	Higher education	Literature	13 dimensions with 48 items	Internationalisation Marketing and support Access and approachableness of service International students and staff Academic reputation Student focused Academic quality Variety and reach Location and logistics Accommodation and scholarship Sports reputation and facilities Safety and Security Parking	Empathy Tangibles Tangibles Tangibles Reliability Tangibles
Tsinidou et al. (2010)	Higher education	Survey	7 dimensions with 40 items	Academic staff Administration service Library's service Curriculum structure Location Facilities Career prospects	NONE Reliability Tangibles Tangibles Tangibles Reliability

 Table 3. (continued)

From research method aspect, there are two in five studies adapted SERVQUAL to a new scale. And other three studies chose to develop completely new scales with no referring to SERVQUAL. Since higher education is a big and complex service, in order to better understanding the service quality of the industry, in scale developing stage, researchers tend to obtain a huge number of dimensions and items about higher education through many research methods such as literature reviews and interviews. Among these studies, Abdullah (2006a) developed a scale called HEdPERF without referring SERVQUAL, which had a profound impact on higher education service quality measurement. In the two studies based on SERVQUAL, researchers still added many dimensions and items to the new scales. These facts show that researchers widely believed the dimensions and items can not totally cover the service quality model of higher education.

From final scale aspect, the final number of dimensions (M = 10.2, SD = 3.2) and items (M = 43.2, SD = 7.2) in the scales are much more than the number in SERVQUAL. As we can see in Table 3, the dimensions of scales in studies based on SERVQUAL kept several properties of SERVQUAL, while the dimensions in studies without SERVQUAL have no properties in common with dimensions of SERVQUAL. According to researches, SERVQUAL performed worse in practice compared with HEdPERF (Abdullah 2006a; Brochado 2009). Due to the complex and big system of higher education, the dimensions of SERVQUAL can not cover the whole service quality, but they can still represent a small part of quality. Among the final dimensions, reputation (Abdullah 2006b; De Jager and Gbadamosi 2010), internal evaluations (Lagrosen et al. 2004) and career prospects (Tsinidou et al. 2010) are all related to the reliability dimension, while library's service (Lagrosen et al. 2004; Tsinidou et al. 2010), facilities (De Jager and Gbadamosi 2010; Lagrosen et al. 2004; Tsinidou et al. 2010), and accommodation and scholarship (De Jager and Gbadamosi 2010) are related to the tangibles dimension.

In reviewed studies, because of the complex system of higher education, the content of final scales is commonly much more than SERVQUAL. SERVQUAL cannot measure the complete service quality in higher education, but the dimensions of SERVQUAL can still represent part of quality, among which reliability and tangibles are important. In studies about measuring higher education quality, SERVQUAL can be part of reference for researchers, but cannot be the main theoretical model. Researchers need to conducted surveys to collect more dimensions and items for modify the scale.

7 SERVQUAL and Other Scales in Online Shopping

As a completely new service industry based on the Internet, online shopping services have already created a huge market and played an important role in the whole service industry. We reviewed five representative studies about measuring online shopping service quality. Four in five studies finished a whole procedure of scale development, and the other study did a comparison between different higher education quality scales. Table 4 shows the details of four reviewed studies about developing online shopping quality scales.

Study	Domains of measurement	Research methods for identify dimensions	Final number of dimensions and items	Final dimensions (* refers the dimension is the same as it in SERVQUAL)	Related dimensions in SERVQUAL
Lee and Lin (2005)	Online shopping	Adapted from SERVQUAL	4 dimensions with 12 items	Web site design *Reliability *Responsiveness Personalization	Tangibles Reliability Responsiveness Assurance/Empathy
Yoo and Donthu (2001)	Online shopping	Survey	SITEQUAL 4 dimensions with 18 items	Ease of use Aesthetic design Processing speed Security	Tangibles/Responsiveness Tangibles Responsiveness Reliability
Feng et al. (2007)	Online shopping	Survey	6 dimensions with 24 items	Timeliness Personal contact quality Order quality Order discrepancy handling Order condition Convenience	Reliability/Responsiveness Reliability Reliability Assurance Tangibles Reliability/Responsiveness
Ananthanarayanan Parasuraman et al. (2005)	Online shopping	Survey	E-S-QUAL: 4 dimensions with 22 items; E-RecS-QUAL (salient only to customers who had nonroutine encounters with the sites): 3 dimensions with 11 items	2. E-RecS-	1. E-S-QUAL量表: Reliability Assurance Tangibles/Responsiveness Reliability 2. E-RecS-QUAL量表 Responsiveness Tangibles/Assurance Responsiveness

Table 4. Selected studies on service quality scale development in online shopping

From research method aspect, there are one in four studies adapted SERVQUAL to a new scale. And other three studies chose to develop completely new scales with no referring to SERVQUAL. The authors of SERVQUAL referred in their later studies the impact on service industry brought by the development of the Internet, and the necessity of developing a replacement of SERVQUAL to adapt online environments (Parasuraman et al. 2005). Even though there still exist researches trying to adapt SEVQUAL to measure the service quality of online shopping, other two scales without referring SERVQUAL influence more hardly on the quality measurement: the SITEQUAL scale (Yoo and Donthu 2001) and the E-S-QUAL scale (Parasuraman et al. 2005). Most researchers tend to develop completely new scales for measuring online shopping service quality.

From final scale aspect, when we just consider the quality of online shopping platform, the final number of dimensions (M = 4.5, SD = 0.9) and items (M = 19.0, SD = 4.6) in the scales are a little less than the number in SERVQUAL. As we can see in Table 4, the dimensions of scales in studies based on SERVQUAL are close to the

dimensions of SERVQUAL (Lee and Lin 2005), and the dimensions in studies without SERVQUAL have several properties in common with dimensions of SERVQUAL. For example, ease of use with tangibles, processing speed with responsiveness, security with reliability in SITEQUAL (Yoo and Donthu 2001), and efficiency and privacy with reliability, fulfillment with assurance, system availability with tangibles in E-S-QUAL (Parasuraman et al. 2005). Although the dimensions are not the same in these two significant scales, they more or less contained part of the items of SERVQUAL. Similar to the dimensions in online banking, dimensions in online shopping, such as website design (Lee and Lin 2005), privacy (Parasuraman et al. 2005) and security (Yoo and Donthu 2001), reflected the demand of website usability and security from customer, which are tangibles and reliability in SERVQUAL.

In reviewed studies, most of researchers chose to develop a completely new scale replacing the SERVQUAL scale. However, although online shopping is different from traditional offline service, after adaptation, the dimensions of SERVUQAL are still suitable for measuring part of online shopping service quality. But SERVQUAL cannot cover all the service quality. In studies about measuring online shopping quality, website can be seen as tangibles in SERVQUAL, and items of SERVQUAL can be adapted to describing online shopping service, but researchers still need to add new dimensions and items to develop a complete scale rather than directly use SERVQUAL.

8 Conclusion

As the best known and most commonly used scale for measuring service quality, SERVQUAL was used widely in a variety of service industries. However, the applicability of SERVQUAL in different industries are not the same. In traditional offline service industries, such as retail banking service and transportation service, the applicability of SERVQUAL is great, although the lack of object identification cause the name of dimensions are different in different studies. When it comes to complex and big service domain, such as higher education, the dimensions of SERVQUAL can just represent part of service quality. Even if researchers try to adapt SERVQUAL to a new scale, they need to add much more new dimensions and items, the content of final scales is much more than that of SERVQUAL. Consequently, it is inadvisable to use SERVQUAL as a main theoretical basis to develop scales. In the online service, such as online banking and online shopping, when identifying the objects of every dimension, researchers can adapt SERVQUAL to measure part of service quality, while they need to use some other research method to obtain new dimensions and items to develop a complete scale.

In summary, SERVQUAL can be used to measuring the complete or part of service quality in specific service industry. It is still the necessary reference in developing a new service quality measuring scale. When conducting a new study for measuring service quality, researchers need to refer the dimensions of SERVUQAL, identify describing objects of each dimension, and use other research methods to obtain new dimensions and items, thus they can get a reliable and valid service quality model.

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