The impact of financial services quality and fairness on customer satisfaction

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Abstract
Purpose – Customer satisfaction in the banking industry has long been measured as a function of service quality by using a variation of the SERVQUAL instrument. The purpose of this paper is to build a broader understanding of the determinants of customer satisfaction throughout the financial services industry by incorporating the perceptions of fairness in service delivery (FAIRSERV) and outlining why and how FAIRSERV is important to customer satisfaction.
Design/methodology/approach – The authors conduct a cross-sectional questionnaire survey, including samples of 420 customers from the financial services industry in Taiwan. PLS-Graph is used to evaluate the measures of reliability as well as validities, and to test the hypotheses.
Findings – The results show that fair service not only has a significant impact on customer satisfaction, but also plays a role equivalent to service quality in determining customers’ trust and perceived value, which in turn lead to customer satisfaction.
Research limitations/implications – The impact of FAIRSERV on customer satisfaction should be emphasized. Future studies examining the impact of service quality on customer satisfaction should incorporate the concept or instruments of fair service as a major contributor.
Practical implications – The results imply that financial institutions must carefully implement policies and practices to ensure that perceptions of fairness are propagated throughout the organization.
Originality/value – The paper proposes a complementary component to service quality in determining the perceived value and satisfaction. The paper emphasizes the significance of fairness on service, and provides additional insights into the impacts of FAIRSERV on customer satisfaction.
Keywords Taiwan, Financial services, Service quality, Trust, SERVQUAL, Service fairness, Customer satisfaction, Perceived value
Paper type Research paper

1. Introduction
Service quality, customer value, and satisfaction are some of the most important factors of business competition for manufacturers and service providers alike (Zeithaml et al., 1996; Parasuraman et al., 1988; McDougall and Levesque, 2000). With the increasingly intense competition for customers in today’s service industry, these factors are high management priorities (Parasuraman, 1997; Wang et al., 2004;
Olorunniwo and Hsu, 2006). Researchers generally agree that service quality leads to higher levels of customer perceived value and customer satisfaction. Financial executives and banking strategies are becoming more focussed on service quality to increase customer satisfaction and business success in the financial services industry (Arasli et al., 2005; Al-Hawari et al., 2009). Until recently, no study has challenged the assumption that service quality dominates the determination of customer satisfaction in the provision of services.

Carr (2007) argued that managers cannot simply create services, provide them at high-quality levels, and hope for the best; instead, he argued that service evaluations result from a comparison of services against the norms of fairness and the treatment of similar customers, a fairness of service consideration. The FAIRSERV construct, which is a derivative of that claim, was developed from the insight that consumer reactions to services are, at least in part, based on equity theory (Adams, 1965). This means that consumers are interested in equitable and favorable treatment. For example, the reactions of bank customers to loan officer decisions on their loan applications are affected by their perceptions of whether they have been treated fairly by the organization (Kulik and Holbrook, 2000). Thus, consumer evaluations of service fairness and service quality influence their reactions to service. The relationship of service fairness, service quality, customer perceived value, and customer satisfaction has recently appeared in tourism research (Huang and Su, 2010). However, the conjecture about the relationship has not been empirically tested in a financial services context. Furthermore, prior studies have not examined the relationship between fair service and the crucial factor of trust. Considering that customers entrust their money and property to the financial sector, customer trust should play a critical role in service fairness models of customer satisfaction in the financial services industry.

The objective of this study is to build an understanding of how service fairness perceptions, as measured by FAIRSERV, fit into the nomological net of service quality. Specifically, in addition to the direct link between perceived service fairness and consumer satisfaction, this study first argues that fair service perceptions lead to higher levels of trust and consumer perceived value, which in turn affect consumer satisfaction. Second, this study argues that fair service has a positive effect on consumer-perceived service quality, as measured by the common metric of SERVQUAL. The former argument indicates that trust and consumer perceived value are mediators of fair service to customer satisfaction, and the latter emphasizes that fair service is an antecedent of perceived service quality. The survey responses of 420 customers of financial service institutions support the hypotheses that fair service perceptions have a positive effect on individuals’ perceptions of service quality, trust, customer perceived value, and satisfaction. Specifically, fair service plays a role equivalent to service quality in determining customer perceived value and attitudes in the financial industry. These results suggest that future studies examining the effects of service quality on customer satisfaction should incorporate the concept or instruments of fair service as a major contributor.

2. Background

2.1 Equity theory and FAIRSERV

Equity theory argues that people are motivated by comparing the ratio of their inputs to received outcomes with that of others (Adams, 1965). Two different types of inequity, undervalued outcomes, and overvalued outcomes, cause distress that people strive to reduce (Walster et al., 1978). People’s perceptions of equal distribution have a
significant effect on their relationship with service providers (Chebata and Slusarczyk, 2005). People seldom attempt to obtain the best services, but instead seek fair services and consistent treatment. Unfair treatment is a crucial factor leading to customer complaints (Ambrose et al., 2007). Perceived fairness influences customer loyalty to vendors in service recovery situations (Chebata and Slusarczyk, 2005). This suggests that consumers are more satisfied if they receive a service similar to what other customers receive. Based on equity theory, Carr (2007) proposed a new construct called FAIRSERV to the quality evaluation process of customers’ service.

FAIRSERV consists of four dimensions: distributive fairness, procedural fairness, interpersonal fairness, and informational fairness. Distributive fairness represents cognitive, affective, and behavioral reactions to outcome distributions from a source (Cohen-Charash and Spector, 2001). When customers perceive a particular outcome to be unfair, their emotions, cognitions, and ultimately their behavior are negatively affected. The perceptions of distributive fairness influence employee attitudes to their supervisors and organizations (Aryee et al., 2002; Ramaswami and Singh, 2003). Procedural fairness describes the fairness of the policies and processes that contribute to outcomes embodying normatively acceptable principles (Lind and Tyler, 1988). For example, no customer is allowed to skip to the head of the queue when waiting for services. The perception of procedural fairness helps maintain long-term relationships between exchange parties (Maxham and Netemeyer, 2002). Interpersonal fairness relates to the showing of concern for people regarding the manner in which outcomes are distributed (Greenberg, 1993). All customers should be treated with the same level of sincerity, respect, and courtesy. Informational fairness is providing information/knowledge on procedures that demonstrate regard for customer concerns (Greenberg, 1993). For example, making brochures describing services or explaining services in detail are equally viable methods.

Consumers evaluate services not only using personal standards (i.e. tangibles, reliability, responsiveness, assurance, and empathy), but also through principles of distributive, procedural, interpersonal, and informational fairness (Carr, 2007). Some researchers suggest that individual judgments of a firm’s service-related outcomes should increase as the firm achieves higher levels of fairness (Smith et al., 1999; Ambrose et al., 2007). Prior research has shown that suppliers’ fairness mediates the relationship between supplier performance and reseller satisfaction (Yilmaz et al., 2004). Both fairness and system success factors influence user satisfaction and continuance intention on web-based learning systems (Chiu et al., 2007). Fair treatment received from the exchanging party also influences the customer satisfaction and loyalty intentions of online shoppers (Chiu et al., 2009). Carr (2007) also argued that customer perceptions of the level of service fairness have a positive effect on their perceptions of service quality. In other words, service fairness is directly related to customer satisfaction and there is a positive association between perceived service fairness and service quality (Figure 1). The FAIRSERV measure adopted in this study consists of 16 items (four items for each fairness dimension) (Carr, 2007).

2.2 Trust
Trust has been widely discussed in marketing literature, and is part of many behavioral models, including models of buyer-seller relationships and consumer markets, as a key mediator between an organization and customers (Nooteboom et al., 1997; Kumar, 1996). Trust is also regarded as the willingness of a party to be vulnerable to the actions of another party based on the expectation that the trustee will
perform a particular action of importance to the trustor, irrespective of the ability to monitor or control the other party (Mayer et al., 1995). Previous studies have shown that transaction complexity and transaction cost can be reduced significantly if buyers trust sellers (Gefen, 2000). Trust is a central construct for determining customer attitudes and behaviors (Verhoef et al., 2002). Customer perceptions of trust affect customer satisfaction (Harris and Goode, 2004), the customer evaluations of a retailer, and ultimately, repurchase intentions (Zboja and Voorhees, 2006). A trusting person believes that a trusted person or party is more likely to act in an upright manner (Kulik and Holbrook, 2000), which is particularly important when the services required are related to money transaction or management. Because business functions in the financial sector involve customer property, retirement funds, insurance, or life savings, customers are more susceptible and longing to trust for financial service. Chenet et al. (2010) demonstrated that customers differentiate between service providers in financial sectors based on trust.

Trust is also an essential factor that enables people to build relationships under the condition of uncertainty and risk of fraud (Pavlou et al., 2007). For example, under conditions of limited or asymmetric information, customer intentions to purchase products online depend on their trust (Lee et al., 2011). Considering the possibility of selling fake or defective products, buyers have stronger intentions to complete transactions under uncertain or complex conditions with whom they trust in online retailing (Grabner-Kräuter, 2002) or auctions (Pavlou and Gefen, 2005). Hennig-Thurau et al. (2002) found that the psychological benefit of trust is more important than social benefits in consumer relationships with service firms. In other words, in addition to service quality, customer satisfaction is determined by trust and customer perceived value (Harris and Goode, 2004).

2.3 Customer value
Understanding a customer’s value is important to improve customer relationships in service delivery (Sigala, 2006b; Kang et al., 2007). Perceived value is the customers’ perspective or assessment of the product attributes and performance in the purchase procedure or use situation (Woodruff, 1997; Eggert et al., 2006). Dodds et al. (1991) argued that perceived customer value is the customer’s overall assessment of the utility of a product or service based on the perception of what is received and what is given up (price and non-monetary cost). This subjective perception is formed from a personal evaluation of product attributes and performance, consequences in use situations, and the customers’ goal achievement (Zeithaml et al., 2006; Sigala, 2010). Regardless of the definition of perceived value, research consistently suggests that perceived value is a
more powerful predictor than perceived service quality in service evaluation (Bolton and James, 1991; Naumann, 1995; Cronin et al., 1997). Many marketing researchers have argued that creating superior customer value should be the primary goal of marketing-driven firms (Slater, 1997; Eggert et al., 2006). The capacity of offering new and superior customer value determines a firm’s success (Sigala, 2006b; Kang et al., 2007). Much research has indicated that perceived value has a strong, direct effect on customer trust and satisfaction (Anderson et al., 1994; Mohr and Bitner, 1995; McDougall and Levesque, 2000). Customer value perception increases customer satisfaction and loyalty to the business (Lam et al., 2004), which in turn increases customer purchase intention (Eggert and Ulaga, 2002).

In summary, the literature suggests that perceived value is a critical mediator between the product or service consumed and customer attitudes and behaviors such as trust and satisfaction. Customer value is inherent in, or linked through use to, certain products or services. Customer value is something perceived by customers rather than objectively determined by sellers or other stakeholders, and these perception processes often involve the total package received from the sellers or service providers. Therefore, perceived value is not only influenced by the service quality perceived by customers, as suggested in existing literature, but also the fairness of service provided by service providers (Carr, 2007).

2.4 Customer satisfaction
Customer satisfaction has long been recognized as a central concept and a critical goal of all business activities (Yi, 1990; Morgan et al., 2005). A preponderance of evidence supports the significant relationship between a company’s financial performance and the satisfaction of its customers (Morgan et al., 2005). Customer satisfaction increases favorable behavioral intention regarding the service providing units. For example, research shows that satisfied customers stick with some specific firms (Zeithaml et al., 1996), and are more willing to provide feedback (Olorunniwo and Hsu, 2006) and make recommendations (word of mouth) (Gray, 2006). Customer satisfaction is often defined as a judgment based on one or a series of consumer service interactions (Yi, 1990). Oliver (1981) argued that satisfaction is based on comparison with pre-consumption standards. Recent research into the parameters that influence levels of consumer satisfaction and retention in financial services often focuses on service quality (Arasli et al., 2005; Al-Hawari et al., 2009). The service quality literature also suggests that perceived service quality performance is the most powerful predictor of customer satisfaction (Dabholkar et al., 2000; Santouridis et al., 2009). Conversely, Oliver and Swan (1989) suggested that perceived justice should be considered in capturing consumer satisfaction. Equity or fairness has been suggested as a standard for measuring employee satisfaction (Carr, 2007). Thus, this study assumes that simply escalating service quality may not be the best approach to strengthen consumer satisfaction. Instead, fairness and the association customer attitude might be a major influence on consumer satisfaction.

2.5 Service quality
Service quality is the most important factor in deciding whether customers patronize a financial institution on a long-term basis (Lymperopoulos et al., 2006). Consequently, the banking strategies of small and large banks in the USA are becoming more customer focussed, with an emphasis on service quality (Tallon, 2010). Services in the financial sector can be associated with specific banking products or essentially
be a type of banking products (e.g., balance inquiry and credit certification). The service literature views service quality as an overall assessment of product or service attributes (Parasuraman et al., 1988), of which the SERVQUAL metric is a principle measuring device. Literature on the validity of the SERVQUAL measure is substantial (Brown et al., 1993; Teas, 1993; Kettinger and Lee, 2005; Jiang et al., 2002). SERVQUAL is a second-order construct that measures the gap between customer expectations and customer perception of delivery in five components: tangibility, reliability, responsiveness, assurance, and empathy. Researchers generally agree that service quality leads to perceived value, trust, and customer satisfaction (Harris and Goode, 2004; Verhoef et al., 2002; Olorunniwo and Hsu, 2006).

Some researchers suggested different measuring or delivering approaches of service quality for different industries, cultures, or countries (Jabnoun and Khalifa, 2005; Glaveli et al., 2006; Sigala, 2006a). Olorunniwo and Hsu (2006) claimed that the dimensions of service quality for retail banking are responsiveness, tangibility, reliability, knowledge, and accessibility. Glaveli et al. (2006) applied different dimensions of service quality to the bank customers of five Balkan countries. Klein et al. (2009) emphasized different effects of dimensions of service quality on user satisfaction in different contexts. Previous research suggested that SERVQUAL with only four dimensions is a useful diagnostic tool for service quality of information system, and demonstrated the significant link between SERVQUAL score and user information satisfaction (Jiang et al., 2000). Although no standard instrument for measuring service quality exists in the banking sector, most banking industry studies have adopted SERVQUAL as the fundamental measure of service quality (Arasli et al., 2005; Olorunniwo and Hsu, 2006; Kumar et al., 2009).

The SERVQUAL framework also reveals the existence of a gap between the practice of service providers and perception of service receivers. Therefore, it is important to know how to increase service perceptions in addition to placing effort and money into raising service quality. Previous literature suggests that customer perceptions alone can better predict customer satisfaction than does the gap between perception and expectation (Brady et al., 2002; Glaveli et al., 2006). The model proposed in this study adopts customer perception, called “perceived service quality,” as the measure of service quality.

3. Integrated research model

FAIRSERV posits an important set of service evaluations. Service customers are interested in procedures employed to distribute service resources. This means they want the procedures to be unbiased and consistently applied, not unduly favoring any individual or group. Unfortunately, this explicit evaluation of the equity of service encounters has not been well incorporated into the consumers’ reactions toward the measurement of service quality. Of critical concern to this study is the effect of FAIRSERV on the existing measurement framework of service quality. Based on this discussion, Figure 2 shows the proposed research model, in which dotted lines represent the well-established links in existing literature. This study argues that FAIRSERV not only has a direct effect on customer satisfaction but also casts an indirect influence through customers’ perceived service quality, trust, and customer value. The dotted lines in the proposed model are neither hypothesized nor tested because they are not the focus of this study (meaning that they are not directly related to FAIRSERV). Nevertheless, to enhance the external validity of this study, they are retained for control purposes. The following discussion provides more detailed
hypotheses. The defined hypotheses imply the mediation effect of trust and customer value between fair service and customer satisfaction.

Some researchers have argued that the level of service fairness has a positive effect on perceived outcomes (Seiders and Berry, 1998). For example, Smith et al. (1999) documented that distributive fairness is positively related to customer satisfaction. Distributive justice also affects customer attitudes on performance evaluation (Ambrose et al., 2007). Maxham and Netemeyer (2002) demonstrated that perceived justice has a significant influence on customer satisfaction with service encounters or complaint handling. Oliver and Swan (1989) proposed that perceived justice is an important factor in predicting consumer satisfaction that is not explained by the expectancy disconfirmation paradigm of measuring service quality. Justice perception of an institution affects customers' reactions to the products or services provided by the institution (Ambrose et al., 2007). These studies suggest that the perceptions of procedural fairness also enhance customer satisfaction (Seiders and Berry, 1998; Ruiz et al., 2008). Blodgett et al. (1997) argued that interaction and information fairness are positively related to a customer's perceived outcomes. Based on equity theory and the literature, this study proposes the following hypothesis:

**H1.** Service fairness is positively associated with customer satisfaction.

Carr (2007) argued that people take fairness into consideration when assessing the overall service quality of an organization. Equity theory suggests that individual consumers want a “fair” level of service quality which, in turn, increases the individuals’ perceived levels of service quality. When consumers perceive unbiased and consistent service as the operative norm of a service provider, they feel greater levels of satisfaction. Empirical evidence from Carr (2007) supports the notion of a positive link between service fairness and the customer perceived service quality in a specific information system context. Based on this discussion, this study hypothesizes the following:

**H2.** Service fairness is positively associated with customer perceived service quality.

Trust is a key element in the emergence and maintenance of various social exchange relationships, including the consumer-organization relationship (Konovsky and Pugh, 1994)
and financial business relationship (Chenet et al., 2010). As a result, many researchers have examined how trust emerges in the individual-organization relationship. Researchers in related fields have identified the outcomes of organizational justice as a major source leading to trust (Lind and Tyler, 1988; Pearce et al., 1994). Procedural and distributive justice also influences people's trust and decision making (Folger and Konovsky, 1989). Much effort has been devoted to the relationship between justice and trust in the domain of organizational management (Konovsky and Pugh, 1994). It is generally believed that fair treatment leads to the development of trust, based on the underlying equity theory. Despite substantial evidence for the link between fairness and trust in organizational management, there is no such evidence in the domain of service evaluation. In service industries, customers' trust in a party can be captured by their willingness to rely on that party (Mayer et al., 1995) and their belief in the quality and reliability of the services or products offered by that party (Henning-Thurau et al., 2002).

The services/products of financial sectors involve customers' belongings and property, such as mortgages, insurance, stock transfer, and trust funds. Thus, customers should be more sensitive to service fairness in this context, and heavily weigh the equity of each procedure or final funding decision. When perceiving lack of fairness, customers should lower their willingness to rely on the institution and lower their confidence in the reliability of the products and services offered by the institution. Therefore, perceptions of fairness have a significant effect on customer trust in financial sectors. Customer trust toward an organization is strongly related to service justice (Ambrose et al., 2007). Although there is little empirical evidence in the marketing literature, the empirical evidence in other areas and the functional characteristics of financial service supports a positive link between customer perceived fairness and trust toward the provider organizations. Therefore, this study proposes the following hypothesis:

\[ H3. \text{ Service fairness is positively associated with customer trust.} \]

Relatively few studies have investigated the relationship between service fairness and the customer's perceived value of the service. However, how employees react to organizational justice is one of the most actively researched areas in the literature of human resource management (Greenberg, 1987; Colquitt et al., 2001; Aryee et al., 2002). Reactive content theories are conceptual approaches to justify how people respond to unfair treatment (Adams, 1965; Walster et al., 1978). These theories state that people respond to unfair relationships with negative emotions (anger and a lack of trust). They are then motivated to escape the situation through an act to redress the experienced inequity. These negative states motivate behavioral changes on the part of the employees involved (Greenberg, 1984; Ramaswami and Singh, 2003). Employees perceiving an inequitable state may react behaviorally by altering their performance levels, or cognitively by attempting to justify the outcomes received (Walster et al., 1978). In a business context, customers' perceived fairness on price plays a significant role in determining customer perceived value (Hanzaee and Yazd, 2010). Unfair treatment leads to customer complaints and negative reactions (Ambrose et al., 2007). When the level of perceived fairness increases, individual judgments of the service outcome should increase (Ambrose et al., 2007). Customer assessments of product attributes or service delivery reflect customer value (Sigala, 2006b). Based on this discussion, this study proposes the following hypothesis:

\[ H4. \text{ Service fairness is positively associated with the customers' perceived value.} \]
4. Research methods

4.1 Sample
We conducted a cross-sectional questionnaire survey on the customers from the financial industry in Taiwan to test our framework. The financial industry includes the institutions involved with money, such as banks, security traders, financial planners, post offices, and insurance companies. Their major business scope includes money management service, such as saving, loaning, investing, insuring, and security trading services. The post offices in Taiwan also provide some business services related to finance, for example, money saving and saving insurance. The data were collected from customers in the financial sectors by handing out the questionnaires to customers as they entered the institutions. Respondents were assured of confidentiality. Of the 550 customers inquired, 432 customers immediately agreed to respond. Of the 432 responses, 12 questionnaires were discarded due to missing observation. Therefore, a total of 420 valid responses were obtained, yielding a response rate of over 76 percent. Table I shows the demographics of the final sample.

4.2 Constructs
The proposed research model includes five constructs. All constructs were adopted from the literature, as described, and translated into Chinese. Translations were checked in a pilot study of 60 MBA students. The pilot test resulted in only minor edits. The FAIRSERV construct was adopted from Carr (2007). FAIRSERV consists of four dimensions, including interpersonal fairness, information fairness, procedural fairness, and distributive fairness. The SERVQUAL construct was adopted from Carr (2007), consisting of five dimensions, including tangibles, reliability, responsiveness, assurance, and empathy. Appendix lists the measuring items. Each item was scored using a five-point Likert-type scale. Participants were asked to indicate their level of agreement with each statement/item, from 1 (total disagreement) to 5 (total agreement).

Customer perceived value was measured using questionnaire items of Harris and Goode (2004) in this study. Many scholars have identified customer perceived value as a comparison between total benefit and total sacrifice (Dodds et al., 1991). In the adopted metric, customer perceived value is an overall assessment of service utility based on what is exchanged (Dodds et al., 1991).

Trust is viewed as the willingness of a party to be vulnerable to the actions of another party based on the expectation that the trustee performs a particular action important to the trustor, regardless of the trustor's ability to monitor or control that other party (Mayer et al., 1995). In this study, the construct of trust was adopted from Harris and Goode (2004). This measurement has proven applicable to studies on company brands and faith in the integrity, service, and brands of the company (Harris and Goode, 2004).

Satisfaction has multiple definitions in the literature. Yi (1990) regarded satisfaction as an attitude-like judgment based on customer interactions with service providers. Consumers compare pre-consumption expectations and then evaluate how they feel about the services provided. This study measured satisfaction by adopting the questionnaire items of Carr (2007).

4.3 Partial least squares (PLS)
The measurement and structural models were analyzed using PLS analysis (Chin et al., 2003), a regression-based structural equation modeling (SEM) technique widely used in
PLS was adopted in this study because of its flexibility for distributional assumptions and its strength in handling complex predictive models and constructs with few items (Hair et al., 2011). The PLS assesses the measurement model by estimating the loadings of indicators on constructs and then iteratively estimating the causal relationships among constructs.

This study uses PLS Graph version 3.01 to test the measures and the hypotheses (Chin, 2003). The PLS tool applies a bootstrap approach to estimate the significance ($t$-values) of the items (Chin et al., 2003). The reliability and validity of the constructs can be demonstrated through measures of internal reliability, convergent validity, and

<table>
<thead>
<tr>
<th>Items</th>
<th>Choices</th>
<th>Number</th>
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<tbody>
<tr>
<td>Types of financial institutions</td>
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<td>Post offices</td>
<td>110</td>
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<tr>
<td></td>
<td>Credit unions</td>
<td>60</td>
<td>14.3</td>
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<td></td>
<td>Security trader</td>
<td>61</td>
<td>14.5</td>
</tr>
<tr>
<td></td>
<td>Insurance companies</td>
<td>15</td>
<td>3.6</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>12</td>
<td>2.9</td>
</tr>
<tr>
<td>Gender</td>
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<tr>
<td></td>
<td>Female</td>
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<td>Age</td>
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<td>21-25</td>
<td>112</td>
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<td>26-30</td>
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<td>31-40</td>
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<td>41-50</td>
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<td></td>
<td>51-65</td>
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<td>Above 65</td>
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<td>0.2</td>
</tr>
<tr>
<td></td>
<td>No response</td>
<td>2</td>
<td>0.5</td>
</tr>
<tr>
<td>Education</td>
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<td>Senior high school</td>
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<td>Master</td>
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<td>Marriage</td>
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<td>Housewife</td>
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<td>Un-employee</td>
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<td>Frequency of visiting the institution</td>
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<td>Several times/week</td>
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<td>One time/week</td>
<td>104</td>
<td>24.8</td>
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<tr>
<td></td>
<td>One time/two weeks</td>
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<tr>
<td></td>
<td>One time/month</td>
<td>66</td>
<td>15.7</td>
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<tr>
<td></td>
<td>One time/two months</td>
<td>9</td>
<td>2.1</td>
</tr>
<tr>
<td></td>
<td>One time/three to six months</td>
<td>25</td>
<td>6.0</td>
</tr>
<tr>
<td></td>
<td>One time/above six months</td>
<td>16</td>
<td>3.8</td>
</tr>
<tr>
<td></td>
<td>No response</td>
<td>5</td>
<td>1.2</td>
</tr>
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</table>

Table I. Demographics ($n = 420$)
discriminant validity (Hair et al., 2011). The convergent validity of a construct can be examined by construct reliability, composite reliability (CR), and average variance extracted (AVE) by constructs. Construct reliability can be verified by Cronbach’s $\alpha$ (>0.7 recommended). Internal reliability can be examined by estimating CR (>0.7 recommended) (Hair et al., 2011). The AVE reflects the variance captured by indicators, and a value >0.5 is recommended (Hair et al., 2011). Discriminant validity, the degree to which the measures of two constructs are empirically distinct, can be verified with no particularly high bivariate correlation (>0.8) and with the square root of AVE being greater than the correlations of the constructs (Hair et al., 2011).

The PLS-SEM algorithm optimizes measurement model parameters before estimating the path coefficients in the structural model. Hair et al. (2011) indicates that if researchers first examine the measurement model and modify the measurement model to an acceptable fit, the PLS-SEM findings should be similar to the CB-SEM findings. Simulation studies also show that the differences between CB-SEM and PLS-SEM estimates are at very low levels (Hair et al., 2011)[1].

5. Conclusion and managerial implications
5.1 Data analysis results
Table II shows the descriptive statistics, reliability, and correlation coefficients of major variables. For each variable, values of mean and standard deviation are provided to illustrate their central tendency and diversity of dependence. The correlation coefficient presents the association between two measured constructs. A high bivariate correlation (>0.8) between two predictive constructs indicates the possibility of a multicollinearity problem. The correlation matrix in Table II shows that all bivariate correlations, ranked from 0.54 to 0.62 (at $p<0.01$), are <0.8 and less than the square root of AVE (in the diagonal of the correlation matrix) of each corresponding construct. This indicates an acceptable level of discriminant validity (Hair et al., 2011).

All item loadings are above 0.70 with statistical significance (see Figure 3), except the fifth indicator (T5) of trust. This indicates our measurement achieved a high reliability. Items with extremely low loading factor (<0.4) should be eliminated before further analysis. After eliminating indicator T5, the AVE of all constructs ranged from 0.6 to 0.84, exceeding the threshold of 0.5. The CR of each construct ranged from 0.92 to 0.95, exceeding the threshold of 0.7. The statistical results in Table II confirm that the constructs adopted in this study had acceptable convergent validity, and the indicators are applicable to the context of financial service industry.

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Mean</th>
<th>SD</th>
<th>CR</th>
<th>AVE</th>
<th>$\alpha$</th>
<th>FS</th>
<th>SQ</th>
<th>TRU</th>
<th>CPV</th>
<th>SAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fair service (FS)</td>
<td>3.64</td>
<td>0.70</td>
<td>0.96</td>
<td>0.84</td>
<td>0.94</td>
<td>0.92</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived service quality (SQ)</td>
<td>3.64</td>
<td>0.64</td>
<td>0.95</td>
<td>0.79</td>
<td>0.93</td>
<td>0.52*</td>
<td>0.89</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trust (TRU)</td>
<td>3.60</td>
<td>0.66</td>
<td>0.92</td>
<td>0.60</td>
<td>0.89</td>
<td>0.54*</td>
<td>0.52*</td>
<td>0.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer perceived value (CPV)</td>
<td>3.50</td>
<td>0.72</td>
<td>0.92</td>
<td>0.75</td>
<td>0.89</td>
<td>0.54*</td>
<td>0.52*</td>
<td>0.60*</td>
<td>0.87</td>
<td></td>
</tr>
<tr>
<td>Satisfaction (SAT)</td>
<td>3.74</td>
<td>0.73</td>
<td>0.95</td>
<td>0.81</td>
<td>0.92</td>
<td>0.62*</td>
<td>0.53*</td>
<td>0.58*</td>
<td>0.59*</td>
<td>0.90</td>
</tr>
</tbody>
</table>

Notes: CR, composite reliability; AVE, average variance extracted; $\alpha$, Cronbach’s alpha. The italic entries on the diagonal are the square root of AVE. All correlations are significant at *$p<0.01$ (using Kendall $\tau$ coefficient)
Figure 3 shows the results of hypotheses testing. The path coefficient indicates the strengths of the relationships between the independent and dependent variables. The $R^2$ value represents the amount of variance in a variable that can be explained by its independent variables, indicating the predict power of the model (Chin and Newsted, 1999). These results provide support for the hypothesized influence of service fairness on customer satisfaction (coefficient $= 0.43$, $p$-value $< 0.001$), customer perceived level of service quality (coefficient $= 0.70$, $p$-value $< 0.001$), customer trust toward the organization (coefficient $= 0.24$, $p$-value $< 0.001$), and customer perceived value of the organization’s services (coefficient $= 0.46$, $p$-value $< 0.001$). Therefore, the results of the study support all the proposed hypotheses. The perceived service quality is also positively associated with a higher level of customer trust (coefficient $= 0.25$, $p$-value $< 0.001$), customer perceived value (coefficient $= 0.38$, $p$-value $< 0.001$), and customer satisfaction (coefficient $= 0.14$, $p$-value $< 0.01$).

The $R^2$ values in Figure 3 show that service fairness and perceived service quality together explain more than 59 percent of the variance in customer perceived value. These two variables, together with customer perceived value, explain more than 66 percent of the variance in customer trust. The considered antecedent variables combined explain more than 71 percent of the variance in customer satisfaction. Even without considering the effect through perceived service quality, the total effect (0.59) of service fairness on customer satisfaction is substantially higher than the total effect (0.28) of perceived service quality on customer satisfaction. The total effects of service fairness on trust and customer perceived value (0.43 and 0.46, respectively) are higher than the total effects of perceived service quality on trust and customer perceived value (0.41 and 0.38, respectively). Table III summarizes the strength of the relationship among various constructs in the structural model, and describes the prediction of endogenous latent variables based on rules of thumb for model evaluation – $R^2$ values of 0.75, 0.50, or 0.25 for endogenous variables in the structural model can be described as substantial, moderate, or weak, respectively (Hair et al., 2011).
5.2 Theoretical and practical implications

Although previous literature has provided a fundamental understanding of the significance of fairness based on equity theory, the customer attitude resulting from service fairness remains unclear. The findings of this study have several implications for researchers. First, service fairness (coefficient = 0.43) has a direct effect on customer satisfaction with the control of the perceived service quality variable (coefficient = 0.70). Consumers are pleased with service of equity as well as quality. Therefore, future studies attempting to examine the effects of service quality on customer satisfaction should incorporate the concept of service fairness as a major contributor. Second, FAIRSERV has an indirect effect on customer satisfaction through trust, customer perceived value, and perceived service quality. These findings provide additional insights into the effects of FAIRSERV on customer satisfaction, and indicate that Carr’s (2007) study may have underestimated the eventual magnitude of the effect of FAIRSERV on customer satisfaction. FAIRSERV not only has a significant effect on final customer satisfaction, but also plays a critical role in determining customer trust and perceived value, which in turn lead to other customer behaviors and satisfaction. Third, although service quality can increase customer satisfaction both directly and indirectly as service fairness can, service fairness has a substantially stronger effect on customer satisfaction in the financial services industry when considering service quality and service fairness together. Fourth, this study confirms the established relationships in the literature, adding to a comprehensive model rather than detracting from it.

This study has three practical implications for managers of financial sectors. First, to elicit customer satisfaction, managers must not only provide high service quality but also service fairness. The results of this study show an almost equal role of these two factors in the financial services context. Managers must ensure not only that quality service is provided, but also that this provision is equal for all customers. Considering that service fairness has a substantially stronger direct effect on customer satisfaction than service quality, financial service managers should not chase the escalation of service quality onto front desk employees or high-cost equipment. In other words, managers must develop operations strategies that focus on fairness to enhance customer satisfaction. For example, organizations could structure the initial service encounter to enhance perceptions of fairness.

Second, all four dimensions of fair service add to the determination of fair service. This result provides four categories of treatment that management can target in
financial sectors. Service resources need to be distributed in a fashion that is perceived
to be equitable. Special treatment of any particular segment or group would lead to
unfavorable consideration from the customers. Policies and procedures should also be
visible and well communicated. Deviations from practice can result in ill perceptions.
Information needs to be equally available to all customers. Materials and functions
designed to assist the customer should be readily present and accessible. Lastly,
personal treatment of customers must appear to be equal. These factors all indicate
that employees should be trained to improve their interpersonal skills. In other words,
practitioners should provide training to their employees to enhance the customer
perceptions of the dimensions of FAIRSERV. For example, when employees must
decline customers’ applications for mortgage loans, they should treat customers
with dignity, show how fairly cases are processed, and provide sufficient information
for the decision. These suggestions highlight the need for managers to monitor the
performance of delivering service fairness.

Third, similar to service quality, the effect of fairness on customer satisfaction is
partially mediated by trust and customer perceived value. Therefore, practitioners
should focus on good policy for building a trustworthy image of the financial sector
and delivering customer value to effectively increase satisfaction. For example, a
financial organization could raise perceived value by offering a higher interest rate or
lower transfer fees to customers with higher savings or more frequent business
contact, instead of adopting a low-profit policy (high interest rate or low transfer fee to
all customers) to attract customers from other organizations. Additionally, financial
companies could release information about the company to enhance customer trust,
especially where some financial institutions have failed.

5.3 Conclusion
One major contribution of this work is that it is the first study to examine Carr’s fair
service relationships in the financial industry. In addition to examining the direct link
between fair service and consumer satisfaction, this study identifies two important
constructs that partially mediate the effect of fair service on satisfaction. Until recently,
no researcher has proposed a complementary component to service quality in
determining the customer’s perceived value and satisfaction. Carr (2007) claimed that
consumers’ reactions to services are, at least in part, based on the equity theory.
This means that consumers are interested in equitable as well as favorable treatment.
This study examines the relationships implied by the claim in a network of existing
relationships established in prior research. More specifically, in addition to a direct link
between the metric of service fairness and consumer satisfaction, this study tests the
relationship between service fairness and trust and perceived value. The findings of
this study partially explain how service fairness increases customer satisfaction.
The results also imply that fair service leads to the perception of service quality, rather
than the gap between perception and expectation of service quality.

Based on a survey of 420 customers of financial institutions in Taiwan, the analysis
results support our hypotheses that fair service has a positive, direct influence on
customer satisfaction (H1), customer perceived level of service quality (H2), customer
trust toward the organization (H3), and customer perceived value of the organization’s
service (H4). These results highlight the following contribution of this study. First, in
addition to the effect of service fairness on customer satisfaction, this study proposes
and confirms two variables (customer trust and customer perceived value) partially
mediate service fairness to customer satisfaction. Second, for service quality research,
compared to service quality, service fairness has a stronger effect on these mediators and customer satisfaction when the service quality has reached an acceptable level. Third, the analysis results confirm the following well-established relationships suggested in previous research: service quality and customer satisfaction, service quality and trust, service quality and customer perceived values, trust and customer satisfaction, and customer perceived value and customer satisfaction. This confirmation enhances the validity of the existing studies and the external validity of the findings of this study.

5.4 Limitations and future research
A potential limitation of this study is that all of the items included in the paper were measured using a five-point Likert-type scale. The use of only one type of measure for all concepts might introduce a mono-method bias, and thus decrease the evidence of this empirical study. Another possible limitation is that our sample was obtained from a survey of financial service institutions in Taiwan. People in different cultures may pay less attention to fairness. Consequently, if the findings and the managerial implications of this result are to be used in other regions with different cultures, additional surveys must be completed to validate the consistency of these research results. Moreover, the results coming from the financial service industry might not be applicable to other service businesses. In other service fields, building a broader understanding of the effect of fairness service on the factors related to customer satisfaction should create new possibilities in terms of understanding how to increase satisfaction. We believe that this study opens new avenues for further research of these issues. Finally, this study is a positivist research, which is commonly implemented by testing with quantitative analysis and surveys. Interviews could be used to follow up in determining the reasons behind these relationships.

Following the addition to a comprehensive model to both of service quality and service fairness perceptions, future research should examine how to promote both important aspects. Furthermore, it could be interesting to further empirically investigate the effect of service fairness on service quality, customer relationship, or other mediators in the setting of health care service or some other professional services. Another future direction is to adopt the multigroup analysis with demographic characteristics of the respondent to the proposed model. For example, it might be interesting to inspect whether the model holds equally well for men vs women, less educated vs better educated respondents, and discuss reasons for any difference observed.

Note
1. We also adopted AMOS 19.0 to measure the goodness of fit (GFI) for the measurement model. Despite GFI being (0.88) slightly below the recommended level of 0.9, all other fit indexes meet the recommended levels (Gefen et al., 2000) in that $\chi^2/df = 2.72$ (<3), AGFI = 0.85 (>0.8), NFI = 0.93 (>0.9), NNFI = 0.95 (>0.9), CFI = 0.95 (>0.9), and RMSEA = 0.06 (<0.08). The results display an acceptable fit, and no modification was made to the measurement model.

References


Chin, W.W. (2003), *PLS-Graph Manual*, version 3.01 University of Calgary, Calgary, AB.


**Further reading**


Appendix

Please based on the service you received from the financial unit to answer the ensuing questions: from “total disagreement” (1) to “total agreement” (5)

Section 1-1. Service Fairness

Interpersonal Fairness
1. Employees in the financial unit are polite
2. Employees in the financial unit are respectful
3. Employees in the financial unit treat customers with dignity
4. Employees in the financial unit are courteous

Informational Fairness
5. Employees in the financial unit give timely and specific explanations
6. Employees in the financial unit give thorough explanations
7. Employees in the financial unit provide reasonable explanations
8. Employees in the financial unit tailor their explanations to customer needs

Procedural Fairness
9. The Process of wording with employees in the financial unit is generally fair
10. The activities of the employees in the financial unit are conducted without bias
11. The processes involving employees in the financial unit attempt to meet all customer needs
12. The procedures used by employees in the financial unit are consistent across customers

Distributive Fairness
13. Employees in the financial unit help all customers get the outcomes they need without favoring any one group
14. Employees in the financial unit produce desired results for all customers without bias of any kind
15. Employees in the financial unit deliver good outcomes for all customers regardless of who they are
16. In general, employees in the financial unit deliver reasonable results for all customers

Section 1-2. Satisfaction, Trust, and Perceived Customer Value

Satisfaction
1. I am satisfied with my interactions with employees in the financial unit
2. My encounters with employees in the financial unit have satisfied me
3. I am satisfied with assistance I have received from employees in the financial unit
4. The level of support I receive from employees in the financial unit is satisfactory to me

Perceived customer value
5. Products of this financial unit are excellent value for money
6. Services of this financial unit are excellent value
7. I am happy with the value for money I get at this financial unit
8. The goods I purchase from this financial unit are worth every cent

Trust
9. This financial unit is interested in more than just selling me goods and making a profit
10. There are no limits to how far this financial unit will go to solve a service problem I may have
11. This financial unit is genuinely committed to my satisfaction
12. Most of what this financial unit says about its products is true
13. I think some of this financial unit claims about its service are exaggerated
14. If this financial unit makes a claim or promise about its product, it’s probably true
Section 2. Service Quality

(2) Please based on the image you perceive from the financial unit to answer the “expected service” questions and the “actual perception questions”: (note to reader, two columns provided for responses)

1. This financial unit has up-to-date equipment
2. The physical facilities of this financial unit are visually appealing
3. Service providers in this financial unit are visually appealing
4. This financial unit has operating hours convenient to all customers
5. When this financial unit promises to do something by a certain time, it does so
6. When you have a problem, this financial unit shows a sincere interest in solving it
7. This financial unit performs the service right the first time
8. This financial unit provides their services at the time they promise to do so
9. Employees in this financial unit tell customers exactly when services will be performed
10. Employees in this financial unit give prompt service to customers
11. Employees in this financial unit are always willing to help customers
12. Employees in this financial unit are never too busy to respond to customers’ requests
13. The behavior of employees in this financial unit instills confidence in customers
14. Customers feel safe in their transactions with this financial unit
15. Employees in this financial unit are consistently courteous with customers
16. Employees in this financial unit have the knowledge to answer customers’ questions
17. This financial unit gives customers individual attention
18. The employees of this financial unit understand the specific needs of customers
19. This financial unit has customers’ best interests at heart

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