Determination of Factors Associated with Public Service Quality Measurement in the Government Sector based on Customer Psychology

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Abstract: Objective: Customer satisfaction and influencing factors are one of the most important factors in determining the success of organizations. This study, therefore, aimed to determine factors associated with public service quality measurement in the government sector based on customer psychology. Methods: In this descriptive survey, the population consisted of the first group of experts familiar with theories of service quality, and the second group included the employees (n = 29,687) of the Agriculture-Jihad Organizations (AJOs) in the Iranian provinces. Data were collected by questionnaires of factors related to service delivery process, general service quality, and customer psychology with validities of 0.91.5, 0.94.9, 0.93.1, and reliabilities of 0.95, 0.97.1, and 0.92.2, respectively. Data were analyzed using confirmatory factor analysis with LISREL 8.8 software. Findings: The presence of a mediator variable increased its influence and its mediator role was confirmed in all the cases according to a t-statistic (1.96) greater than the critical t-value at 5% error level and due to higher indirect effects than direct paths. Conclusion: There were significant relationships between service delivery processes and information technology, job satisfaction, organizational agility, staff empowerment, organizational intelligence, organizational commitment, leadership style, and organizational structure, all of which were based on customer psychology. Keywords: Public service quality, Customer psychology, Service delivery process, Agriculture-Jihad Organizations.

Introduction

In the current competitive and environment, those organizations are more successful in the field of competition that outperform other competitors in meeting the demands and needs of their customers. The customer-centric philosophy focuses on customers and considers issues from the customers’ points of view. Today, the word “customer satisfaction” has become one of the common terms used in the business world (Mohammadi et al, 2012).
Customer psychology is one of the most popular psychology disciplines that increasingly seeks to identify and analyze consumption-related behaviors. One of the most important fields of study in this discipline is to examine such issues as customers' expectations, styles, and desires. The use of this science helps to identify underlying factors influencing customer’s attitudes and beliefs in choosing the service or product brand through a review of customer behavior, as well as socio-cultural factors affecting the customer decision-making process (Iranshahi et al, 2014).

On the other hand, quality service provision requires the ability to control quality at all times and to solve specific problems that may emerge, resulting in increased efficiency and satisfaction of clients and dropped costs of organizations. Service quality is the major problem facing service organizations, hence all organizations, particularly service providers, should seek to improve the quality of their services. Assessment of service recipients’ perceptions has such advantages as unique information about service effectiveness, and continued communication with service providers, which enables policymakers to improve the quality of service (QoS) by appropriate allocation of resources (Natalia Pariza, 2014).

The importance of QoS and its relationship with customer satisfaction have been emphasized in related literature. Researchers have stated that QoS is an introduction to customer satisfaction. Understanding the concept and endeavoring to improve QoS will lead to quality service provision, and improved customer satisfaction can be expected through better QoS levels. QoS is known as a key determinant of organizational success in the present competitive environment, and any decline in customer satisfaction caused by poor QoS is of concern (Mokhlis Safiek et al, 2014). QoS is generally defined as customer’s perception and expectations of provided services. Many organizations today signify the maximum value creation level of their enterprise in the satisfaction of their clients and formulate strategic plans, mission statements, and organizational policies accordingly (Vazifedoost et al, 2014). The great effort being made currently by researchers, experts, and managers of organizations to improve the performance management tools and expand customer-centric attitudes reveals that customer satisfaction is now one of the most important factors in determining organizational success. Public sector organizations realize the importance of quality issue and the need for its evaluation, but the problem is that such organizations are not properly aware of different dimensions and factors affecting QoS. Service sector managers are always trying to prove customer centricity in their organizations (Matobi & Talebi, 2015). The application of quality management activities by the industry and service sectors is expanding progressively. As such, quality is recognized as the most important competitive advantage of organizations in some cases, being more evident in the government sector. Customers who receive services cannot see the results before they receive services. Customers expect such organizations to fulfill their promises on the accurate delivery of services to the intended recipient in the due time (Mohtasham & Kobra Sorallahi, 2015). On the other hand, it should be borne in mind that the improvement process of services begins with the improvement of ideas among all personnel of an organization. Positive thoughts can be reinforced through coordinated programs that are based on the responsibility of individual employees for the improvement of quality service provision (Jahanshahi & Khojasteh, 2015).

The government sector is the part of the economy that provides basic government services. The composition of government sector varies depending on every country, consisting of a hierarchical and formal organizational structure, organizational charts, clear and predefined goals, established rules and regulations, goal-setting planning, performance appraisal systems, and arrangement of intraorganizational situations to achieve goals. Similar to the private sector, the government sector sometimes deals with commercial and manufacturing activities, such as the activities of state-owned bank firms and insurance.
companies. The service or product provided by governments is most often monopoly or semi-monopoly; however, this may not be the case in all countries and organizations (Momeni Yane-Seri M, 2019).

The activities of AJO in the developed provinces of Iran are within the legal framework as for other government agencies and more than those of private organizations. The increasing importance of client satisfaction and respect in AJOs of Iranian developed provinces has necessitated the identification and removal of barriers to provide quality service provision and improve service delivery processes so that client satisfaction is regarded as one of the important factors in these organizations (Nick Zat et al, 2014). Customer or client dissatisfaction arising from the discrepancy between customer expectations and the performance of AJOs is created as customer perceptions in the developed provinces of Iran. Accordingly, the ultimate goal of this research was to improve service delivery processes by the AJOs in the developed provinces of Iran. In this regard, the service quality measurement model, which is one of the most common and valid models, has been used to improve the service delivery processes (Behravesh et al, 2015).

According to the above, this research sought to answer this question: What are factors related to public service quality measurement in the government sector based on customer psychology in the AJOs of Iranian provinces depending on the degree of development.

Methods

This was a descriptive-correlational study with an applied and developmental objective, in which data were collected through survey method. The statistical population consisted of two groups, viz. an unknown number of experts familiar with the public service quality in the government sector, and the second group included all the staff of the AJOs in Iranian provinces. An appropriate sample of experts and university professors was selected through purposive non-probability sampling method. Accordingly, 15 individuals were selected as the appropriate sample from the community of experts and university professors who met the required criteria. Since the AJOs comprise a total of 29,687 employees in the provinces of Iran, a sample size of 380 employees was determined as the study sample using Cochran’s formula calculated through stratified random sampling proportional to stratum size, as presented below.

\[
 n = \frac{\left(\frac{Z^2_{1-\alpha} \times p \times q}{d^2}\right)}{1 + \left[\frac{1}{N}\left(\frac{Z^2_{1-\alpha} \times p \times q}{d^2}\right) - 1\right]} \Rightarrow n = \frac{(1/96)^2 \times (0.5 \times 0.5)}{(0.05)^2} \times \frac{1}{29687 (1/96)^2 \times (0.5 \times 0.5) - 1} \approx 380
\]

The provinces were selected based on rankings proposed in a study on the distribution of economic development indices in the Iranian provinces with 25 economic indices to determine the level of economic development and ranking of Iranian provinces. The level of economic development and ranking the provinces were measured by factor analysis. Iranian provinces were divided into four distinct categories of developed, relatively developed, less developed, and deprived based on their rankings of economic development (Table 1).
In (Table 2), Required data were collected by a questionnaire consisting of 35 5-option questions (completely appropriate to completely inappropriate) on information technology (four questions) job satisfaction (five questions), organizational agility (four questions), staff empowerment (five questions), organizational intelligence (seven questions), organizational commitment (three questions), leadership style (four questions), and organizational structure (three questions). After obtaining expert opinions, the number of items in the questionnaires of factors related to service delivery process measurement, public service quality, and customer psychology were changed to 91, 21, and 17 items, respectively (Table 3) and (Table 4).

Table 2. Characteristics of the public service quality questionnaire in the government sector
The research questionnaires were first evaluated and approved for formal and conceptual validity by 15 experts, and the content validity was assessed by the content validity ratio (CVR). The closer the CVR to one, the greater the number of respondents who found the item to be appropriate, which was calculated by the following formula:

\[
CVR = 1 - \frac{n}{N^2} 
\]

The validities of questionnaires for factors related to service delivery processes, public service quality, and customer psychology were 0.915, 0.949, and 0.931, respectively. According to the calculations, Cronbach's alpha values of 0.95, 0.971, and 0.922 were obtained for the reliability of questionnaires for service delivery processes, quality of public services,
and customer psychology, respectively, which were acceptable (greater than 0.7). Data were analyzed using confirmatory factor analysis using LISREL 8.8 software.

Findings

The final structural equation model was used to assess the relationships between factors associated with public service quality measurement in the government sector and service delivery processes by considering the mediating role of customer psychology. The final model is presented in Figure 1.

Figure 1. Results of the final model confirmation for the relationship between factors related to public service quality measurement and public service processes in the government sector by considering the mediating role of customer psychology

Results of the significance measurement of the model data are presented in (Figure 2).
Figure 2. The t-value statistic values of the final model confirmation for the relationship between factors related to public service quality measurement and public service processes in the government sector by considering the mediating role of customer psychology.

The LISREL software output also showed the suitability of the proposed research model, with a root mean square error of approximation (RMSEA) of 0.084, a standardized chi-squared value (CMIN/DF) of 2.093, and a goodness of fit index (GFI) of 0.95. Other indices for fitting the proposed research model are presented in (Table 5).

<table>
<thead>
<tr>
<th>Index</th>
<th>Reported value</th>
<th>Acceptable range</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMSEA</td>
<td>0.084</td>
<td>≤ 1</td>
</tr>
<tr>
<td>CMIN/DF</td>
<td>2.093</td>
<td>≤ 3</td>
</tr>
<tr>
<td>GFI</td>
<td>0.97</td>
<td>≥ 0.9</td>
</tr>
<tr>
<td>Adjusted goodness of fit index (AGFI)</td>
<td>0.96</td>
<td>≥ 0.9</td>
</tr>
<tr>
<td>Confirmatory fit index (CFI)</td>
<td>0.94</td>
<td>≥ 0.9</td>
</tr>
<tr>
<td>Normed fit index NFI</td>
<td>0.98</td>
<td>≥ 0.9</td>
</tr>
<tr>
<td>Tucker-Lewis index (TLI)</td>
<td>0.98</td>
<td>≥ 0.9</td>
</tr>
<tr>
<td>Incremental fit index (IFI)</td>
<td>0.97</td>
<td>≥ 0.9</td>
</tr>
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Based on Figures 1 and 2, the research questions have been discussed below, in which the presence of mediator variable increased the effect due to the greater amount of indirect effect than the direct path, confirming the role of mediator in all cases.

Main research question: Is there a relationship between factors associated with public service quality measurement in the government sector and service delivery processes considering the mediating role of customer psychology?

In the present hypothesis, the direct effect was 0.37 in the direct path. If the mediator variable was present, then the indirect effect would equal to:

\[ 0.84 \times 0.64 = 0.537 \]

Subsidiary question 1. Is there a relationship between information technology and public service quality measurement in the government sector considering the mediating role of customer psychology?

In the present hypothesis, the direct effect was 0.51 in the direct path. If the mediator variable was present, then the indirect effect would equal to:

\[ 0.89 \times 0.92 = 0.818 \]

Subsidiary question 2. Is there a relationship between job satisfaction and public service quality measurement in the government sector considering the mediating role of customer psychology?

In the present hypothesis, the direct effect was 0.45 in the direct path. If the mediator variable was present, then the indirect effect would equal to:

\[ 0.80 \times 0.92 = 0.736 \]

Subsidiary question 3. Is there a relationship between organization agility and public service quality measurement in the government sector considering the mediating role of customer psychology?

In the present hypothesis, the direct effect was 0.35 in the direct direction. If the mediator variable was present, then the indirect effect would equal to:

\[ 0.78 \times 0.92 = 0.717 \]

Subsidiary question 4. Is there a relationship between staff empowerment and public service quality measurement considering the mediating role of customer psychology?

In the present hypothesis, the direct effect was 0.33 in the direct direction. If the mediator variable was present, then the indirect effect would equal to:

\[ 0.72 \times 0.92 = 0.662 \]

Subsidiary question 5. Is there a relationship between organizational intelligence and public service quality measurement in the government sector considering the mediating role of customer psychology?

In the present hypothesis, the direct effect was 0.31 in the direct path. If the mediator variable was present, then the indirect effect would equal to:

\[ 0.95 \times 0.92 = 0.874 \]

Subsidiary question 6. Is there a relationship between organizational commitment and public service quality measurement considering the mediating role of customer psychology?

In the present hypothesis, the direct effect was 0.42 in the direct path. If the mediator variable was present, then the indirect effect would equal to:

\[ 0.83 \times 0.92 = 0.763 \]

Subsidiary question 7. Is there a relationship between leadership style and public service quality measurement considering the mediating role of customer psychology?
In the present hypothesis, the direct effect was 0.38 in the direct path. If the mediator variable was present, then the indirect effect would equal to:

\[ 0.85 \times 0.92 = 0.782 \]

Subsidiary question 8. Is there a relationship between organizational structure and public service quality measurement considering the mediating role of customer psychology?

In the present hypothesis, the direct effect was 0.32 in the direct path. If the mediator variable was present, then the indirect effect would equal to:

\[ 0.76 \times 0.92 = 0.699 \]

Discussion

There were relationships between the factors associated with public service quality measurement in the government sector and service delivery processes considering the mediating role of customer psychology. These results were in line with those of Shahin and (Shahin & Abolhasani, 2010), who showed a significant relationship between service quality and service delivery in Iran Insurance Company, Isfahan province. In the field of global economic activity, customer centricity and customer-centric attitudes are considered as the main principles of business. If products and services fulfill customer's expectations, he or she will feel satisfied and help the survival of the company by repurchasing and encouraging others to buy.

There was a relationship between information technology and public service quality measurement in the government sector considering the mediating role of customer psychology. This finding was consistent with that of (Fazel & Harmandir, 2016), who obtained a relationship between information technology and academic service quality as well as between their components. Information technology could play a key role in the quality orientation of government agencies and obtaining customer satisfaction.

There was a relationship between job satisfaction and public service quality measurement in the government sector considering the mediating role of customer psychology. This result was in line with that of (Afghanpour & Aghapour, 2013), who showed that five dimensions of service quality had significant impacts on staff’s job satisfaction. Organizations that utilize the needs, opinions, and reactions of their clients gain important advantages in a competitive environment. Thus, they need to have hard-working staff to provide high quality customer services and gain competitive advantage, if they are satisfied with their jobs.

There was a relationship between organizational agility and public service quality measurement in the government sector considering the mediating role of customer psychology. This observation was in line with that of (Ghayyoumi et al, 2014), who demonstrated positive and significant relationships between organizational agility with service quality and its dimensions. Rapid changes in competition, demand, technology, and regulations have made "the adaptability and rapid response to changes" an essential component of organizations. Decreased stability in the business environment increases the likelihood of change to create organizational agility and organizations moving toward agility will be more successful in customer service delivery.

There was a relationship between staff empowerment and public service quality measurement in the government sector considering the mediating role of customer psychology. This result corresponded to that of (Afjeh et al, 2010). Who presented evidence of a significant relationship between employees' psychological empowerment and service quality, both directly and through the mediator variables of "employees' senses of wellbeing and freedom of action". There are many factors that affect productivity in an organization.
Over the years, employee empowerment has created a sense of ownership within organizations. Empowered employees are happier and more active than most other employees present in the company. They welcome changes made in their company, which can be useful in more quality service delivery.

There was a relationship between organizational intelligence and public service quality measurement in the government sector considering the mediating role of customer psychology, which was consistent with that of (Boroumand Alipour & Takafi, 2014). Organizational intelligence empowers employees to make decisions on all factors affecting the organization and companies and enables them to provide the customer with better quality service and play a striking role in customer repurchase.

There was a relationship between organizational commitment and public service quality measurement in the government sector considering the mediating role of customer psychology. This finding was in line with that of who showed a good linear association between employees' organizational commitment and the quality of services provided by them. Current study’s finding was also consistent with that of (Omrani et al, 2016), who found that normative commitment had statistically significant relationships with service quality and its two dimensions, namely assurance and reliability. Business leaders have been able to guide employees by understanding their psychological characteristics, emotions, and expectations, and by responding to their needs in such a way that both the employer and employee would benefit. Organizational commitment of employees is guaranteed, and business goals are achieved through following this approach.

There was a relationship between leadership style and public service quality measurement in the government sector considering the mediating role of customer psychology. This agreed with that of, who reported a gap between all five dimensions of expected service quality, which was provided to customers by the Shahid Rajaee Container Terminal. In terms of weight importance of each dimension, the physical dimension was the most important one, followed by dependability, reliability, accountability, and empathy. In addition, the highest and lowest gaps were found between expectations and perceptions in the physical dimension, and in empathy, respectively, which were concordant with current study’s results. Leadership style is fundamental for all organizations and plays a key role in quality service delivery and customer satisfaction.

There was a relationship between organizational structure and public service quality measurement in the government sector considering the mediating role of customer psychology. This corresponds to a significantly positive correlation of organizational structure and perceived quality of services in Tehran health insurance reported by Sanaei (Sanaei Dashti, 2015). Their findings also indicated high levels of formalism, complexity, and concentration in the study population with a mechanical organizational structure dominated therein being significantly different from the desired situation. Their results of perceived service quality in the health insurance of Tehran province revealed a relatively desirable status. The quality of bank service influences customer satisfaction, which in turn affects their loyalty, as was reported by (Miguel-Dávila et al, 2010). Organizational structure depends largely on its goals and strategy on achieving those goals. Organizational chart is a visual representation of organizational structure. This structure should clearly determine to report relationships and authorization flow, as this will establish good communication and leads to efficient and effective workflow. Accordingly, the presence of an appropriate organizational structure can enhance the quality of customer service delivery and ensure the profitability and survival of the organization.
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