Difference of Employee Customer Orientation between Service and Production Departments and Its Effects on Job Outcomes

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Abstract. The current research aims to reveal how frontline employees working in both service and production departments differ in their customer orientation, and further to explore the effect of customer orientation on job effort and job performance of all employees. Based on the survey data of 828 frontline employees from 81 teams in a large technical service company, multilevel analysis showed that: a) compared with employees in production departments, those in service departments had stronger customer orientation, were rated by their immediate supervisors as with a higher level of job effort and better job performance; and b) customer orientation mediated the effects of department function on job effort and job performance. This study contributed to the customer orientation research by demonstrating how customer orientation could help increase employee’s effort and job performance in service or production department, and by cross validating the positive effect of employee customer orientation in the technical service organization—a relatively new context. Moreover, the findings also had practical implications for companies in implementing the customer-oriented strategy.

Introduction

In the increasingly competitive climate, focusing on and understanding customers' needs are the key points for an enterprise to keep a foothold, adapt to the environment and achieve significant development, which can be integrated into an enterprise’s marketing strategy, culture and employees’ behaviors to continuously create values for customers [1, 2]. It has been proven through a large number of studies that customer orientation has positive impact on enterprises from different perspectives. As for employees, customer orientation helps relieve working pressure [3], improve the work behavior and attitude of employee [4, 5] and thus enhance job performance [6, 7]. As for enterprises, customer-oriented strategy helps improve customer satisfaction and loyalty [8, 9] as well as promote enterprise innovation [10, 11] to further enhance performance [6, 12].

While, there are obvious limitations in the existing studies. Most of the studies focused only on the frontline employees in service industries, such as hotel service staff [10, 13], catering service staff [14], frontline salesman [15, 16] and customer service staff [7] etc.. The core job characteristic for this group is the need for direct interaction with customers, which is to create benefits for enterprises through direct provision of high-quality services for customers. However, it is far from enough if enterprises implement customer-oriented strategy only to establish and motivate the customer-oriented awareness and behavior of frontline service employees [17]. To rely on the high-quality work of employees in production, research and development to provide products and services for customers is also needed by enterprises. Different from the frontline employees, those in above-mentioned areas need no direct interactions with customers in most cases. Can customer
orientation of non-service employees impact their work attitude and performance? How does it impact them? At present, no study has been conducted in this regard.

Therefore, with employees from departments of various natures outside the traditional service industries as the subjects, the differences of customer-oriented awareness among employees from different departments and the impacts of different department natures on work behavior, attitude and performance of employees are discussed in this study. Meanwhile, the role of customer orientation in department nature and work behavior as well as performance of employees is further explored. Results of the study are expected to provide a theoretical basis and practical guidance for enterprises to promote the implementation of the customer-oriented strategy.

Literature Review and Hypotheses

Antecedents and Outcomes of Employee Customer Orientation

Customer orientation refers to a series of continuous attitudes and behaviors of employees understanding and satisfying the demands and expectations of customers, so as to achieve customers’ satisfaction and loyalty to the organization [18]. Customer-oriented awareness shall be built not only for frontline employees in service and marketing but also for employees in production and R&D departments [12, 19].

The antecedents and outcomes of customer orientation have been the focus of previous studies. It has been shown that customer-oriented awareness of employees is influenced by factors at various levels such as individual personality, leadership and organizations. Individual personality is closely related to customer orientation, where employees with high agreeableness [14], strong sense of responsibility [20] and learning orientation rather than performance orientation [21] will have a stronger customer-oriented awareness and show more customer-oriented behaviors in their work. Leadership behavior is also an important factor influencing employee’s customer orientation, where ethical leadership can improve the customer-oriented awareness of subordinates [16]. Leaders with strong customer-oriented awareness will promote a relatively stronger customer-oriented awareness in their subordinates accordingly [17]. At the organizational level, employees tend to show more customer-oriented behaviors in interaction with customers when they sense a stronger customer-oriented atmosphere in the organization [19].

Customer orientation is encouraged in many organizations mostly because customer-oriented awareness of employees can bring benefits from many aspects, such as improving customers’ satisfaction [6] and loyalty [8], as well as the reputation of enterprises [10, 13], so as to enhance the performance [12]. Customer-oriented awareness of employees is also conducive to improving innovation in products and services for enterprises [10, 11, 22]. More importantly, customer orientation helps push up sales volume of product without increasing the cost for enterprises, which results in an increase in profit margin [6]. Meanwhile, employees with customer-oriented awareness show a higher level of organizational commitment, less turnover intention [5, 23], and delivers better performance [6, 7], all of which improve the human resource management efficiency for the enterprise.

Customer orientation also has a positive impact on employees. Employees with high customer orientation show a higher satisfaction to their jobs [4] and lower role conflict and confusion [5]. Employees with high customer orientation may also better cope with and relieve harmful pressure sources such as unfair treatment of customers and negative effects caused by job burnout [3, 24].

Department Nature and Employee Customer Orientation

As mentioned above, studies on customer orientation focused mostly on the frontline employees in service industries. Recent studies have shown that customer orientation not only promotes product and service innovation for service enterprises, but also plays an important role in promoting the same for manufacturing enterprises [22]. The key for an enterprise to successfully implement the customer-oriented strategy is that the frontline employees [4], not limited to those in frontline
service posts, but all the employees in the enterprise [17] can really implement customer-oriented strategy.

In organizational structure of enterprises, all departments can be divided into 3 types. The first is service department, such as customer service, marketing and sales etc.. Such departments interact directly with external customers to obtain customer information, understand and satisfy customer demands, and thus, create profits for the enterprise. The service quality of such departments directly impacts the customers' acknowledgement and evaluation on products and services of enterprises. The second is production department, such as departments of R&D and product design, as well as manufacturing department etc.. Such departments indirectly provide service for external customers through production and improvement of product quality. Employees in such departments obtain customer demands or related information through indirect means to manufacture and provide products or services meeting customers' requirements. The third is the support department, including human resources department, administrative department and financial department etc.. Such departments generally do not interact directly with external customers, but provide supports for the above mentioned two types of departments. The first two types of departments are discussed in this study as support departments provide services mainly for internal customers rather than external customers.

In our view, there are differences in customer orientation between employees from service department and production department for the following reasons: First, the work content is different. The customer-oriented awareness of employees is closely associated with their awareness of responsibilities [25]. They are required to fully understand customer demands and carry out tasks accordingly at any time due to their work contents. In contrast, employees in production department work on the products. They normally follow relatively fixed process and rarely make immediate adjustment on their work content according to the dynamic demands of customers. Second, the opportunities for direct contact with customers are different. Compared with employees in production departments, the frequency and depth of direct contact with customer is far greater for employees in service departments. As said by Grant [26, 27], the employees directly contacting with customers will be more willing to think from the customers' perspective, which is conducive to the establishment of customer-oriented awareness. Third, the performance evaluation indicator is different. For employees in service departments, the key performance indicators are their attitude, effectiveness and efficiency of service provided for customers, such as customer satisfaction, complaint rate and sales volume etc.. They are more willing to improve their service level to obtain the recognition and reward from the company. But for employees in production departments, it is required to taken into account whether the product is welcomed by end customers, however it is not a direct evaluation indicator. The direct key performance indicators for them are the technical indicators focusing on products such as quality, production cost or efficiency and innovation etc..

In conclusion, different work contents and performance evaluation indicators give more opportunities for employees in service department to directly contact with customers, enabling them to understand customer demands more accurately. Thinking and performing from a customer’s perspective allows them to be more responsive with customers. As noted in previous studies [17], this study expects that there are differences in customer orientation among employees in departments of different nature.

Hypothesis 1: Employees in service department will have a higher level of customer orientation than their counterparts in the production department.

**Department Nature and Employee Job Behavior**

We expect that the nature of the department will further impact the performance of employees, that is, employees in service department may deliver better performance. First, as found by Grant [28], employees with opportunities to directly contact with customers will work harder and perform better than their associates in contact with customers through an indirect channel or without customer contact. This is because employees can vividly realize how their work may benefit customers by maintaining direct interactions with customers, which strengthens the value of their
work [28-30]. As indicated by a classic job characteristics model, the value of the work and feedback can enhance the work motivation of employees to improve job performance [31]. Second, in the eyes of employees in service department, customers are real, rather than abstract entities. So the employees will involve more emotions in their work with a stronger working impetus [26]. Third, employees get a deeper understanding and are able to realize the rationality of customer demands through direct interactions with customers, so as to make more efforts to satisfy customer demands [32]. On the contrary, employees in production department rarely receive direct feedback from customers, therefore it is hard for them to see how their work may positively impact customers and to understand the meaning and value of their work from a higher level, which results in difficulty in maintaining their passion for work, and is not helpful for them to engaging in their work. Therefore, we further assume that department nature impacts the effort and job performance of employees.

Hypothesis 2: Employees in the service department will have higher job effort (H2a) and better job performance (H2b) than those in production department.

Plenty of studies have shown that customer orientation is positively related to the effort and job performance of employees. Donavan et al. [23] have found that customer orientation helps improve the feeling of job matching, work satisfaction and organizational commitment level. It has been proven by meta-analysis by Zablah et al. [5] that customer orientation can improve work satisfaction of employee and organizational commitment, and reduce turnover intention. It is foreseeable that employees will be more willing to work when they are positive about their work and their organization. A series of studies have shown that customer orientation does help improve the engagement [33] and job performance of employees [5-7, 34]. Based on these and the logical relationship between Hypothesis 1 and 2, we expect that customer orientation mediates the effects of department nature on effort and job performance.

Hypothesis 3: customer orientation mediates the effects of department nature on effort and job performance.

Methods

Participants and Procedures

This study is conducted in a technical service-oriented company providing product quality testing and certification services for export-oriented enterprises, with sales department, customer service department and laboratory being its main departments. The three main departments are separated but closely related. The sales department receives customer orders and describes their demands to the customer service department. The customer service department interprets the demands into specific testing requirements to the laboratory. The laboratory performs testing accordingly, and prepares a report to be submitted to the customer service department who provides the report to a customer finally. The three departments are all devoted to providing high quality service for customers, so as to create values for the enterprise. While throughout the whole process, there are obvious differences in customer contact opportunities among the three departments. The sales and customer service departments directly interact with customers, while the lab is responsible for technical jobs and only indirectly receive information regarding customer demands through the former two departments. Therefore, the enterprise is suitable to be the subject of this study.

Totally 952 frontline employees in 89 teams from all the three departments were invited to participate in this study. A total of 864 employees completed the questionnaires with a response rate of 90.8%. To reduce common variance, the team leaders were invited to assess the job behavior and performance of frontline employees. 828 employees in 81 teams had matched self-report and supervisor-rated data, thus were included in the final dataset for further analysis.

Among 828 employees, 517 are from the production department, accounting for 62.4%; 653 are female, accounting for 40.6%; 336 are with an associate degree or below, accounting for 40.6%, while 492 with a bachelor degree or above, accounting for 59.4%. The mean age is 28.8, with standard deviation of 4.8 years and the average employment time is 4.2 years with standard
deviation of 3.4. For employees in service and production departments, there are no significant differences in age and employment time as well as education background ($\chi^2(1) = 3.72$, ns). Like most enterprises, female percentage (87.8%) in service department is higher than that (73.5%) in production department ($\chi^2(1) = 23.76$, p<.01).

Measures

**Department Nature.** The customer service and sales departments create values for enterprises through direct interaction with customers, therefore they are service department; while the lab is a production department for it creates value for the enterprise by completing the testing required by customers and does not directly interact with customers in their work. With reference to previous studies [17], dummy variables were established to reflect department nature (1= service department, 0=production department).

**Customer Orientation.** Employee customer orientation was measured on the five-item scale developed by Liao and Subramony [17]. Employees responded on the five-point scale. The coefficient alpha was .88.

**Effort.** Job effort was usually reflected by two dimensions, work time length and work intensity, respectively [35]. However, like most of other companies, a fixed time schedule was adopted in the company where the current study was conducted. Therefore, only work intensity was measured as the indicator of job effort. Team leaders were invited to rate each employee under his/her supervision on the three-item scale proposed by Brown and Leigh [35], coefficient alpha of .91.

**Job Performance.** The team leaders were again asked to rate employee’s job performance on four items from the scale developed by Williams and Anderson [36]. The coefficient alpha was .89.

Results

Table 1 shows the descriptive statistics for the main variables.

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<td>1. Job performance</td>
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<td>2. Effort</td>
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<td>3. Customer orientation</td>
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<td>4. Department nature a</td>
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<td>7. Age</td>
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<td>0.07</td>
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<td>0.10**</td>
<td>-0.06</td>
<td>-0.12**</td>
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<td>8. Organizational tenure</td>
<td>0.10**</td>
<td>0.07*</td>
<td>-0.02</td>
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<td>-0.06</td>
<td>-0.14**</td>
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<tr>
<td>Mean</td>
<td>5.38</td>
<td>5.16</td>
<td>3.92</td>
<td>0.38</td>
<td>0.21</td>
<td>0.59</td>
<td>28.80</td>
<td>4.24</td>
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<td>Standard deviation</td>
<td>0.85</td>
<td>0.96</td>
<td>0.67</td>
<td>0.48</td>
<td>0.41</td>
<td>0.49</td>
<td>4.82</td>
<td>3.43</td>
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Note: N=828. *p < .05, **p < .01. The numbers in the diagonal are the coefficient alpha. a. department nature (1 = service department, 0 = production department); b. gender (male = 1, female = 0); c. education (1= bachelor degree or above, 0=associate degree or below).

Hypothesis 1 and 2 predict that there are differences in work attitude and behavior of employees from department with different natures. Analysis of covariance (ANCOVA) was applied to test these two hypotheses with all demographic variables as the covariates. Results have shown that the customer orientation level (M = 4.10) of employees in service departments is significantly higher than that (M = 3.82) of employees in the production department (F(1,827) = 25.34, p < .001, partial $\eta^2$=0.03). Also, job effort of employees in service departments (M = 5.42) is significantly higher.
than that of employees in the production department (M=5.00) \( (F(1,827) = 33.39, p < .001, \text{partial } \eta^2 = 0.04) \); The job performance of the former (M = 5.54) is significantly better than that of the latter with M = 5.28), \( F(1,827) = 13.11, p < .001, \text{partial } \eta^2 = 0.02 \). Therefore, Hypothesis 1, 2a and 2b are supported.

Hypothesis 3 predicts that customer orientation mediates the effect of department nature on employee behavior and performance, which is tested using Mplus 7.0 for path analysis. Since one team leader evaluated a number of employees, the data were nested. The results of null model have shown that both effort (\( \tau_{00} = 0.54, t = 6.02, p<.001 \)) and job performance (\( \tau_{00} = 0.38, t=5.40, p<.001 \)) have significant variance at team level, with ICC(1) being 0.53 and 0.47 respectively. Thus, multilevel analysis is needed. The independent variable i.e. department nature is a high-level variable and the mediating and result variables are at low level, which are multilevel mediating model of 2-1-1 mode. Therefore, procedure proposed by Preacher et al. [37] is used to estimate the multilevel mediating effect. In brief, the relationship of two variables at high and low levels are estimated in one model, and the indirect effect of department nature impacting variables only exists in high level, the 95% confidence interval of indirect effect of which is calculated to test its significance.

The hypothesis model is constructed according to the hypotheses, that is, department nature impacts effort and job performance. Results show that the of hypothesis model fits well (\( \chi^2(2) = 3.33, p>.05, \text{CFI}=.99, \text{TLI} = .99, \text{RMSEA} = .028, \text{SRMR}_w = .002, \text{SRMR}_b = .035 \)). At the low level, customer orientation significantly impacts effort (b = 0.10, t = 2.19, p < .05) and job performance (b = 0.09, t = 2.24, p < .05). At the high level, department nature significantly impacts customer orientation (b=0.28, t = 4.87, p < .001), where customer orientation in turn significantly impacts effort (b = 1.65, t = 2.78, p<.001) and job performance (b = 1.10, t = 2.13, p < .05). Customer orientation significantly mediates department nature to impact effort (indirect effect = 0.458, t = 2.77, p < .01, 95% CI = [0.134,0.781]) and job performance (indirect effect = 0.305, t = 2.26, p < .05, 95% CI = [0.041,0.570]). Therefore, Hypothesis 3 is verified. The partial mediation model is built based on the hypothesis model, that is, to add a direct path for department nature to impact effort and job performance to examine the partial mediation effect of customer orientation. Results show that the two direct paths through which department nature impacts effort (b = 0.03, t = 0.09, ns) and job performance (b = -0.33, t = -0.86, ns) are not significant, indicating that customer orientation fully mediates the effects.

Results of the additional explorative analysis found that slopes of which customer orientation predicts effort and job performance do not have significant team-level variances (0.006 and 0.017 respectively, ns). This indicates that the effects of customer orientation are not moderated by department nature. That is, customer orientation plays similar role for employees in the service and production departments.

**Discussion**

With a sample consisted of employees in a technical service enterprise, this paper discusses how department nature impacts customer orientation and job performance of employees. The results are in line with the hypotheses that employees in service department directly contacting customer have a stronger customer-oriented awareness, higher effort and better job performance compared with those in the production department not directly contacting with customers; and department nature impacts effort and job performance through the mediation effect of customer orientation.

The results of this study are consistent with those of previous studies. However, in contrast to the studies on employees in service industries, for the first-time Liao and Subramony [18] had the frontline employees in a manufacture enterprise as subjects. They discovered that the customer orientation of employees is impacted by department nature and the customer-oriented awareness of employees in service department is stronger than that of those in production department. This study provides further evidence for the above conclusion. In addition, this study has made progress in the following two aspects.
On one hand, this study has expanded the depth of customer orientation studies. How department nature impacts the customer orientation of employees was discussed in the study by Liao and Subramony [17], which this study is based upon. This study included the work behavior and performance into the model and discovered that department nature could further impact the work behavior and performance of employees through the mediation effect of customer orientation. Studies and practices often emphasize that an enterprise must motivate all the employees in order to successfully implement the customer-oriented strategy, but not just the employees in frontline service groups [12, 19]. This study provides direct data support for this opinion. Customer orientation has a positive effect on both service and production departments, where employees with a stronger customer-oriented awareness will be more diligent in their work and deliver better job performance. This result and Grant's results [26, 29] corroborate each other that helping employees to establish customer-oriented awareness will directly improve not only the customer service quality for the enterprise but also the work enthusiasm and performance of the employees themselves, resulting in a win-win situation for both the enterprises and employees.

On the other hand, this study expanded the customer orientation study into a new situation of technical service enterprises, and discovered that such enterprise could also benefit from developing employees' customer-oriented awareness. Technical service enterprises are also in the service industry; however, they are different from traditional service industries such as hospitality, retail and customer service etc., the core business of technical service enterprises is to provide professional technical service for customers. Technical service enterprises need service innovation, where technology and product innovations are also the core competitiveness of such enterprises [22]. Since employees in production departments are best equipped to achieve technology and product innovations, it is expected a new study will be conducted to explore how customer orientation impacts their creativity and innovation.

How to implement the customer-oriented strategy has always been a problem faced by many enterprises, on which this study provides some inspiration. (1) Reexamination of department function settings. Opportunities to establish direct contact with customers for employees in different departments through a redesign of business process to enable them to know the impact of their work on customers. Employees' sense of work value, engagement, job performance and creativity can be improved without changing core work content [38]. (2) Customer-orientation can be taken as important indicators for personnel selection, promotion, compensation and benefits, especially for a manager in production department. A department manager with customer-oriented awareness should focus on creating an atmosphere of customer orientation in the department and play a positive role in guiding employees [19].

There are also limitations in this study to be discussed in follow-up studies. First, data in this study obtained from two sources of team leaders and employees effectively avoids impacts of common variance, but this cross-sectional study with variables measurement at the same timing cannot reveal the causality between variables. In the follow-up studies, longitudinal study should be performed to better identify causality. On the other hand, the work effort and performance of employees are evaluated by team leaders. Although the relationship between the two variables is not a concern of this study, variable measurement data (such as objective evaluation data) obtained from more sources can be considered in follow-up studies.

Summary

With a sample consisted of employees in a technical service enterprise, this study shows that department nature impacts customer orientation and job performance of employees. Employees in service department directly contacting customer have a stronger customer-oriented awareness, higher effort and better job performance compared with those in the production department not directly contacting with customers; and department nature impacts effort and job performance through the mediation effect of customer orientation.
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