Predicting Customer Orientation Using the Theory of Planned Behavior: A Case of the Iranian Gas Industry

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ABSTRACT

The purpose of this research was to predict customer orientation in the Iranian gas industry using the theory of planned behavior (TBH). The population of this quantitative survey consisted of gas industry employees, and a sample size of 384 was calculated using Cochran’s formula for infinite population. Data was collected using a questionnaire. The content validity of the instrument was verified by a panel of experts, and its construct validity and reliability were confirmed through confirmatory factor analysis and Cronbach’s alpha. Data was analyzed using confirmatory factor analysis and structural equations modeling. The results showed that discipline, knowledge, moral norms, subjective norms, and perceived behavioral control have a significant positive effect on customer orientation. Moreover, planned behavior was significantly associated with customer orientation in the gas industry. Therefore, TBH can be used for predicting customer orientation in the gas industry.

Keywords: Behavior Prediction; Theory of Planned Behavior; Customer Orientation; Gas Industry.

RESUMEN

El propósito de esta investigación fue predecir la orientación al cliente en la industria del gas iraní utilizando la teoría del comportamiento planificado (TBH). La población de esta encuesta cuantitativa estuvo compuesta por empleados de la industria del gas y se calculó un tamaño de muestra de 384 utilizando la fórmula de Cochran para población infinita. Los datos se recogieron mediante un cuestionario. La validez de contenido del instrumento fue verificada por un panel de expertos, y su validez de constructo y confiabilidad fueron confirmadas mediante análisis factorial confirmatorio y alfa de Cronbach. Los datos se analizaron mediante análisis factorial confirmatorio y modelado de ecuaciones estructurales. Los resultados mostraron que la disciplina, el conocimiento, las normas morales, las normas subjetivas y el control conductual percibido tienen un efecto positivo significativo en la orientación al cliente. Además, el comportamiento planificado estuvo significativamente asociado con la orientación al cliente en la industria del gas. Por lo tanto, TBH se puede utilizar para predecir la orientación del cliente en la industria del gas.
Predicting customer orientation is one of the main concerns of industrial companies, including those operating in the energy sector. Today, the business world is centered around customer orientation and customer satisfaction, as these are key to organizational performance and success. Meanwhile, as customer sophistication and knowledge increases and information technology advances, customers become more astute and their expectations increase. Therefore, it is necessary for organizations to be able to respond to and manage the needs and demands of customers. Effective communication is crucial to building customer satisfaction and ensuring the success of the company.

The Theory of Planned Behavior (TPB) is one of the ways of predicting customer orientation. This theory links beliefs to behavior and holds that three core components shape individual behavioral intentions, i.e., attitude, subjective norms, and perceived behavioral control (Fishbein, 1966; Ajzen, 2001). Today, TPB is one of the most popular theories for understanding and predicting human behavior (Madden, Allen, & Ajzen, 1992; Fishbein & Ajzen, 2010). Therefore, the present research aims to investigate whether TPB can be used to predict customer orientation in the Iranian gas industry.

1.1. Theoretical Framework

- Planned Behavior and Behavioral Intention

TPB is an extension of the theory of reasoned action (TRA) that incorporates a third construct, i.e., perceived behavioral control, to explain behaviors that are not fully under volitional control (Madden, Ellen & Ajzen, 1992; Armitage and Konner, 2001; Ajzen, 2002; Fishbein & Ajzen, 2010).

According to Ajzen (1991), TPB is open to the inclusion of additional predictors provided that they can account for a significant proportion of the variance in intention or behavior. In fact, TPB has been criticized for its poor predictive power, especially with regards to the use of an insufficient number of variables to explain the drivers of a given behavior. This has led many scholars to modify the original theoretical model by incorporating additional variables such as “past behavior”, “moral norms”, “discipline”, “knowledge”, etc. (Tommasetti, Singer, Troisi & Maione, 2018; Pérez & Egea, 2019)

In Iran, various studies have employed TPB to explain or predict a wide range of behaviors (e.g., Zand Hesami & Parvinci, 2014; Ashugh et al., 2013; Akhavan Kharazian & Mesbah Jahromi, 2014; Abbasi, Yadollahi & Beigi, 2018; Shah Tahmasebi & Bagheri, 2019; Sarikhani, Izadinia & Karimzadeh, 2019). However, to our knowledge, there has been no study that uses TPB to predict customer orientation. Therefore, the present research seeks to fill this gap in the literature using a localized model of planned behavior in the Iranian gas industry as one of the most dynamic industries in the country.

- Customer Orientation

Customer orientation refers to employees’ tendency or predisposition to meet customer needs in an on-the-job context. Customer orientation in the service industry consists of two dimensions: need and enjoyment. The needs dimension represents employees’ beliefs about their ability to satisfy customer needs. The enjoyment dimension represents the degree to which interacting with and serving customers is inherently enjoyable for an employee (Brown et al, 2002; Dehghani, 2012).

In another study customer orientation, four dimensions are proposed for customer orientation in the financial services industry: (1) pampering customers; (2) accurately reading customers’ needs; (3)
developing a personal relationship with customers; and (4) delivering quality service to solve customers’ problems employees (Donavan, Brown, & Mowen, 2004).

Based on their empirical evidence in the U.K. financial services industry (banks, insurance companies, and building societies), Egan and Shipley (1995) proposed seven elements for customer orientation: (1) service systems, (2) customer contact, (3) image/reputation, (4) service delivery, (5) customers' performance, (6) communications, and (7) customer base.

The present research adopts the four-dimensional model of Donavan et al. (2004) to measure customer orientation in the Iranian gas industry.

- Components of TPB

TPB adds perceived behavioral control to the two components of TRA, namely, attitude and subjective norms (Ajzen, 1991). Perceived behavioral control in turn is a function of control beliefs weighted by the power of control factors (Fishbein & Ajzen, 2010). Following prior research (e.g., Tommassetti et al., 2018; Pérez & Egea, 2019), the present study adds knowledge, moral norms, and discipline to this framework.

**Attitude toward behavior:** This refers to the degree to which an individual has a favorable or unfavorable evaluation of the behavior of interest, and entails a consideration of the outcomes of performing the behavior. Attitude evolves from the individual’s positive or negative experiences with the behavior and is a function of behavioral beliefs and outcome evaluations (Ajzen, 2001). Accordingly, the first hypothesis is developed as follows:

**H1:** Attitude toward behavior has a significant effect on customer orientation.

**Subjective norms:** This reflects an individual’s beliefs about whether peers and people of importance to the individual think he or she should engage in the behavior. This construct is influenced by perceived social pressure, i.e., normative beliefs, and its intensity depends on the individual’s predisposition to meet the expectations of others (Ajzen, 2001). Accordingly, the second hypothesis is developed as follows:

**H2:** Subjective norms have a significant effect on customer orientation.

**Perceived behavioral control:** According to TPB, not all behaviors are completely under the individual’s volitional control. Perceived behavioral control is the individual’s perception of the ease or difficulty of performing a behavior. If an individual has a strong control belief about the presence of the facilitators of a behavior, he or she will have a high perceived control over that behavior. Control beliefs can stem from past experiences as well as anticipated impediments and obstacles. Perceived behavioral control is determined by two factors: control beliefs and perceived power (Ajzen, 2001). Accordingly, the third hypothesis is developed as follows:

**H3:** Perceived behavioral control has a significant effect on customer orientation.

**Knowledge:** This construct consists of general knowledge, behavior-related knowledge, and education (Pérez & Egea, 2019). In addition to the literature review, interviews with experts also revealed employee knowledge as a key factor in predicting customer orientation. Accordingly, the fourth hypothesis is developed as follows:

**H4:** Knowledge has a significant effect on customer orientation.

**Moral norms:** Moral norms are a function of moral obligation, personal moral norms, and refusal skill (Tommassetti et al., 2018; Pérez & Egea, 2019). This organizing construct was also identified from the literature review and expert interviews. Accordingly, the fifth hypothesis is developed as follows:
**H5:** Moral norms have a significant effect on customer orientation.

**Discipline:** This organizing construct consists of organization, order, and streamlining. It was extracted from the interviews with experts. That is, disciplined managers and employees are more likely to exhibit customer-oriented behavior. Therefore, the sixth hypothesis is developed as follows:

**H6:** Discipline has a significant effect on customer orientation.

- **Conceptual Model**

In TPB, Ajzen considers attitude, subjective norms, and perceived behavioral control as the three components that shape individual behavior, but in recent years, various studies have suggested additional component to improve the efficiency and predictive power of this model. Similarly, the present research proposes a TPB model with additional components to predict customer orientation in the Iranian gas industry.

![Conceptual Model](image)

**Fig 1.** Conceptual model.

**1.2. Literature Review**

Table 1 provides a summary of the reviewed literature.
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
<th>Result</th>
<th>Design/Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zand Hesami &amp; Parvinci (2014)</td>
<td>Applying the theory of planned behavior to consumers’ green purchase intentions</td>
<td>The results showed that attitude toward environmental issues was the most important predictor of behavior. Also, attitude and subjective norms had a significant effect on green purchase intentions, which was significantly associated with green behavior.</td>
<td>Quantitative, survey, SEM</td>
</tr>
<tr>
<td>Ashugh et al. (2013)</td>
<td>Using the theory of planned behavior to predict safe driving behaviors in truck drivers</td>
<td>Drivers with a more positive attitude and higher perceived behavioral control were more likely to engage in safe driving behaviors. The intention to perform safe driving behaviors and perceived behavioral control were significant predictors of safe driving behaviors.</td>
<td>Quantitative, survey, multivariate regression</td>
</tr>
<tr>
<td>Akhavan Kharazian &amp; Mesbahi Jahromi (2014)</td>
<td>Investigating the effect of planned behavior on online shopping behavior</td>
<td>Positive attitude toward online shopping and subjective norms were significant predictors of online shopping intention, but the effect of perceived behavioral control was not significant.</td>
<td>Quantitative, survey, SEM</td>
</tr>
<tr>
<td>Pakpour Haji and Safari (2012)</td>
<td>Applying the theory of planned behavior in predicting tooth brushing behavior of Qazvin high school students</td>
<td>The results of the confirmatory factor analysis confirmed the validity of the constructs, i.e., attitude, subjective norms, perceived behavioral control, behavioral intention, planning for action, and coping. Moreover, the two constructs added to the original TPB model (planning for action and coping) were found to be effective in reducing the intention-behaviour gap.</td>
<td>Quantitative, survey, SEM</td>
</tr>
<tr>
<td>Bashirian et al. (2012)</td>
<td>Using the theory of planned behavior to predict substance abuse in adolescents</td>
<td>The results showed that using health education theories can help predict high-risk behaviors, and the theory of planned behavior can be effectively used for planning and intervention to prevent substance abuse in adolescents.</td>
<td>Quantitative, survey, regression</td>
</tr>
<tr>
<td>Roostai Shalmaii et al. (2016)</td>
<td>The effect of education based on the theory of planned behavior on preventive behaviors of aggression</td>
<td>Perceived behavioral control was the strongest predictor of the preventive behaviors of aggression.</td>
<td>Quantitative, Survey, Regression</td>
</tr>
<tr>
<td>Abbasi et al. (2018)</td>
<td>Investigating consumer intention to buy green products using the theory of planned behavior, environmental concerns, and environmental knowledge</td>
<td>Attitude and perceived behavioral control had a positive effect on green purchase intentions. However, the effect of subjective norms was not significant. Moreover, environmental concerns and environmental knowledge were positive predictors of green purchase intentions.</td>
<td>Quantitative, survey, SEM</td>
</tr>
<tr>
<td>Shah Tahmasebi and Bagheri (2019)</td>
<td>The planned behavior model and local food purchase intentions: A case of honey products</td>
<td>The dimensions of the planned behavior model (attitude, subjective norms, and perceived behavioral control) had a positive effect on local food purchase intentions. Moreover, price sensitivity moderated the relationship between attitude and purchase intentions. However, ethnocentrism, self-interpretation, and price sensitivity had no significant moderating effect.</td>
<td>Quantitative, survey, SEM</td>
</tr>
<tr>
<td>Authors</td>
<td>Title</td>
<td>Methods</td>
<td></td>
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<tr>
<td>------------------</td>
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<td>------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Sarikhani et al. (2019)</td>
<td>Examining fraud reporting intentions using the theory of planned behavior: The moderating role of moral intensity</td>
<td>Perceived behavioral control, subjective norms, attitude toward fraud reporting, moral obligation, and professional commitment had a positive effect on fraud reporting intentions, and moral intensity had a significant moderated effect.</td>
<td>Quantitative, survey, SEM</td>
</tr>
<tr>
<td>Alizadeh and Rajabzadeh (2019)</td>
<td>Investigating the factors affecting customers’ online shopping behavior using the theory of planned behavior</td>
<td>The results indicated the significant effect of favorable outcomes, ease, cost savings, and trust on the intention of online shopping. In addition, attitude, subjective norms, and perceived behavioral control were significant predictors of online purchasing behavior. However, the effect of price was not significant.</td>
<td>Quantitative, survey, SEM</td>
</tr>
<tr>
<td>Liao and Fang (2019)</td>
<td>Applying an extended theory of planned behavior for sustaining a landscape restaurant</td>
<td>Landscape perception and preference, attitude, subjective norms, and perceived behavior control had positive impacts on consumer behavioral intention. Landscape perception and preference was the strongest predictor of behavioral intention.</td>
<td>Quantitative, survey, SEM</td>
</tr>
<tr>
<td>Al Hasan et al. (2019)</td>
<td>Using the theory of planned behavior to understand factors influencing South Asian consumers’ intention to seek pharmacist-provided medication therapy management services</td>
<td>Attitude and perceived behavioral control were significant predictors of intention, while this was not the case for subjective norms. None of the socio-demographic variables employed were significant predictors of intention.</td>
<td>Quantitative, survey, regression</td>
</tr>
<tr>
<td>Pardana et al. (2019)</td>
<td>Attitude analysis in the theory of planned behavior: green marketing against the intention to buy environmentally friendly products</td>
<td>Attitudes, subjective norms, and perceived behavioral control were significantly associated with the intention to purchase environmentally friendly products.</td>
<td>Quantitative, survey, regression</td>
</tr>
<tr>
<td>Mousavi et al. (2019)</td>
<td>Using the theory of planned behavior to explain intent to consume sugar-sweetened beverages among secondary school students</td>
<td>Attitude and perceived behavioral control were significant predictors of students’ intention to consume sugar-sweetened beverages.</td>
<td>Quantitative, survey, regression</td>
</tr>
</tbody>
</table>

The review of the literature revealed that there have been no studies that use the theory of planned behavior to predict customer orientation, especially in the gas industry. Therefore, the results of the present research can be relevant to managers, employees, and investors.

**2. MATERIALS AND METHODS**

The present research employed a descriptive survey design and was the qualitative part of a mixed-methods doctoral dissertation. Through a review of the literature and interviews with experts, a questionnaire was developed to collect the required data. The population consisted of all the employees working in the Iranian gas industry. Using Cochran’s formula for infinite population, a sample size of 384 was obtained and cluster sampling was used to select the participants. The sample size formula is as follows:
\[ n = \frac{z^2pq}{e^2} \]

where \( n \) is sample size, \( p \) is the prevalence of the attribute in the population (0.05), \( q \) is equal to \( 1 - p \) (0.05), \( e^2 \) is the error level (0.05), and \( z^2 \) is 1.96 at the 95\% confidence interval (CI).

The content validity of the instrument was verified by a panel of experts, and its construct validity and reliability were confirmed through confirmatory factor analysis and Cronbach’s alpha (above 70\%).

Table 2. Reliability of the instrument

<table>
<thead>
<tr>
<th>Subscales</th>
<th>Number of Items</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discipline</td>
<td>8</td>
<td>0.871</td>
</tr>
<tr>
<td>Knowledge</td>
<td>8</td>
<td>0.876</td>
</tr>
<tr>
<td>Attitude</td>
<td>6</td>
<td>0.821</td>
</tr>
<tr>
<td>Subjective Norms</td>
<td>8</td>
<td>0.850</td>
</tr>
<tr>
<td>Moral Norms</td>
<td>7</td>
<td>0.784</td>
</tr>
<tr>
<td>Perceived Behavioral Control</td>
<td>10</td>
<td>0.829</td>
</tr>
<tr>
<td>Customer Orientation</td>
<td>13</td>
<td>0.874</td>
</tr>
</tbody>
</table>

Due to the non-normal distribution of the data, SmartPLS was used for data analysis.

### 3. RESULTS AND DISCUSSION

#### 3.1. Descriptive Statistics

The demographic data show that, among the 384 respondents, 283 (73.7\%) are male and 101 (26.3\%) are female. 21 respondents (5.5\%) have a high-school diploma, 41 (10.7\%) have an associate degree, 128 (33.3\%) have a bachelor’s degree, 174 (45.3\%) have a master’s degree, and 20 (5.2\%) have a PhD. As for the age of the respondents, the results show that 17 (4.4\%) are below 30, 40 (10.4\%) are between 31 and 35, 112 (29.2\%) are between 36 and 40, 77 (20.1\%) are between 41 and 45, 74 (19.3\%) are between 46 and 50, and 64 (16.7\%) are over 51.

#### 3.2. Inferential Statistics

To validate the instrument, first the Kaiser-Meyer-Olkin (KMO) test of sampling adequacy is used to determine whether the number of samples is sufficient for factor analysis. The value of KMO is 0.86, and given that the p-value of Bartlett’s sphericity test is lower than the 0.05 error level, the sample size is adequate. In addition, due to the non-normal distribution of the data, SmartPLS is used for confirmatory factor analysis.

Next, the effect of the components of the planned behavior model on customer orientation in the gas industry is investigated.
Fig. 2. Effect of the components of the planned behavior model with standardized coefficients.

Fig. 3. Effect of the components of the planned behavior model with $t$-values.

Fig. 4. Effect of planned behavior with standardized coefficients.
Based on the data in Figures 4 and 5, it can be said that planned behavior has a significant positive effect on customer orientation in the gas industry.

4. SUMMARY

Table 3. Effect of the components of the planned behavior model on customer orientation

<table>
<thead>
<tr>
<th>Component</th>
<th>Std. Coefficient</th>
<th>t-value</th>
<th>p-value</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discipline → Customer Orientation</td>
<td>0.238</td>
<td>3.750</td>
<td>0.000</td>
<td>Significant</td>
</tr>
<tr>
<td>Knowledge → Customer Orientation</td>
<td>0.193</td>
<td>3.359</td>
<td>0.001</td>
<td>Significant</td>
</tr>
<tr>
<td>Attitude → Customer Orientation</td>
<td>0.057</td>
<td>1.117</td>
<td>2.265</td>
<td>Not significant</td>
</tr>
<tr>
<td>Moral Norms → Customer Orientation</td>
<td>0.144</td>
<td>2.555</td>
<td>0.011</td>
<td>Significant</td>
</tr>
<tr>
<td>Subjective Norms → Customer Orientation</td>
<td>0.146</td>
<td>2.536</td>
<td>0.012</td>
<td>Significant</td>
</tr>
<tr>
<td>PBC → Customer Orientation</td>
<td>0.056</td>
<td>0.785</td>
<td>0.433</td>
<td>Significant</td>
</tr>
</tbody>
</table>

The results of hypothesis tests show that:
- Discipline has a significant positive effect on customer orientation.
- Knowledge has a significant positive effect on customer orientation.
- Attitude does not have a significant effect on customer orientation.
- Moral norms have a significant positive effect on customer orientation.
- Subjective norms have a significant positive effect on customer orientation.
- Perceived behavioral control has a significant positive effect on customer orientation.

5. CONCLUSION

The results showed that attitude towards behavior has no significant effect on customer orientation in the Iranian gas industry. Attitude is the degree to which an individual has a favorable or unfavorable evaluation of the behavior of interest, and entails a consideration of the outcomes of performing the behavior. As such, attitude evolves from the individual’s positive or negative experiences with the behavior, i.e., the
pleasantness or unpleasantness of the behavior, and is a function of behavioral beliefs and outcome evaluations. Therefore, when employees have a positive attitude toward customer orientation, they are more likely to exhibit this behavior across the organization. Fostering such an attitude requires the involvement of the top management. In the present research, however, this hypothesis was not confirmed.

This reflects an individual’s beliefs about whether peers and people of importance to the individual think he or she should engage in the behavior. This construct is influenced by perceived social pressure, i.e., normative beliefs, and its intensity depends on the individual’s predisposition to meet the expectations of others.

In contrast, the results indicated the significant positive effect of subjective norms on customer orientation. Subjective norms are an individual’s beliefs about whether peers and people of importance to the individual think he or she should engage in the behavior. In other words, subjective norms are influenced by perceived social pressure. Acceptance or rejection of the behavior, negative or positive view of the behavior, and persuasion and encouragement by friends, family, and/or society can shape subjective norms. Therefore, the existence of subjective norms can encourage or discourage customer orientation by managers and employees, because positive or negative reinforcement of a behavior by others affects the occurrence of the behavior.

Perceived behavioral control had a significant positive effect on customer orientation in the gas industry. According to TPB, not all behaviors are completely under the individual’s volitional control. Therefore, TPB incorporates perceived behavioral control to account for these kinds of behaviors. Perceived behavioral control is the individual’s perception of the ease or difficulty of performing a behavior. If an individual has a strong control belief about the presence of the facilitators of a behavior, he or she will have a high perceived control over that behavior. Control beliefs can stem from past experiences as well as anticipated impediments and obstacles. Perceived behavioral control is determined by two factors: control beliefs and perceived power (Fishbein and Ajzen, 2010). Therefore, the more managers and employees have a strong perceived behavioral control over customer orientation, the more likely they are to exhibit this behavior, which will lead to higher customer satisfaction.

The knowledge of employees had a significant positive effect on customer orientation in the gas industry. This construct refers to the possession of general knowledge, behavior-related knowledge, and education. A knowledgeable individual is more likely to make the right decision to perform or not perform the behavior. Having knowledgeable managers and employees can lead to greater awareness and more attention to customer orientation in organizations.

The results also showed that moral norms have a significant positive effect on customer orientation in the gas industry. Moral norms are a function of moral obligation (feeling of personal responsibility or duty to perform a given behavior), personal moral norms (e.g., honesty, integrity, fairness, trustworthiness, and benevolence), and refusal skill (ability to resist peer pressure). Individuals with these characteristics can make better decisions regarding the behavior of interest. Therefore, moral norms can promote customer orientation in organizations.

Discipline had a significant positive effect on customer orientation in the gas industry. Discipline in this context consists of three elements: organization (formulating goals, changing goals and objectives, developing a personal vision for work, setting long-term goals, identifying horizons), order in the workplace (proper placement of objects, improving productivity by eliminating the time wasted searching for objects, returning everything to its place, standardized archiving procedures, determining the position of objects, maintaining order in equipment and storage items), and streamlining (defining responsibilities and tasks in the workplace, identifying and eliminating deficiencies and breakdowns, identifying sources of debris, maintaining a clean workplace, removing dust and debris, cleaning hidden areas). When managers and employees have work discipline, it reflects their attention to and respect for the customers. Discipline in the workplace makes work processes more efficient and effective, which will also increase customer satisfaction. Therefore, having discipline can promote customer-oriented behavior.
Based on the results of the present research, the following recommendations are offered in line with the theory of planned behavior:

- It is recommended that managers focus on both employee performance and service quality.
- It is recommended organizations align their functions with their macro strategy in order to address customers’ needs and demands, show commitment to customers, and achieve customer satisfaction.
- Customer orientation should be given a higher position in the organization’s priority pyramid.
- It is recommended to pay attention to improving service quality in the gas industry and make every effort to achieve customer satisfaction in all areas of service and support.

REFERENCES


