A STUDY ON THE IMPACT OF ORGANIZATIONAL INNOVATION CLIMATE AND PROFESSIONAL IDENTITY ON EMPLOYEE INNOVATIVE BEHAVIOR IN THE LIVE STREAMING E-COMMERCE INDUSTRY

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With the rapid development of the digital economy, live streaming e-commerce has become a new format and trend in e-commerce. However, the live streaming e-commerce industry is becoming more homogeneous, and companies urgently need to enhance their competitiveness through employee innovation. This article aims to explore the factors that influence the innovative behavior of employees in live-streaming e-commerce companies and provide a theoretical basis and practical guidance for companies to implement innovation-driven development strategies. Based on social identity theory and motivation theory, this study constructed a research model on "the impact of live broadcast e-commerce organizational innovation atmosphere and professional identity on employee innovative behavior".

Sample data were collected through questionnaires, and statistical analysis methods were used to test the research hypotheses. The research found that: 1) organizational innovation climate positively affects employee innovative behavior, and work motivation plays a partial mediating role between the two; 2) professional identity positively affects employee innovative behavior, and organizational identification plays a partial mediating role between the two; and 3) employees with different personal characteristics have significant differences in their innovative behaviors.

Keywords: live e-commerce; organizational innovation atmosphere; professional identity; innovative behavior

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Introduction

"Innovation is the heart of a nation's progress and the inexhaustible driving force for its prosperity." Innovation is also the internal driving force for enterprises to continuously advance. In today's highly competitive global economy, innovation has become an important factor in achieving corporate competitiveness and performance growth. Innovation not only refers to technological innovation but also includes business model innovation, management innovation, cultural innovation, etc.

The innovation ability of an enterprise is determined by a variety of factors, including its employees' education level, the enterprise's investment in innovation, the external business environment, and the enterprise's internal cultural atmosphere. Only by continuously promoting innovation can we continuously improve the performance and economic benefits of enterprises and help them stand out from fierce competition. Companies in the current market attach great importance to innovation awareness, especially in the highly homogeneous live broadcast e-commerce industry. Every live broadcast e-commerce company wants to have its own innovative marketing model and methods, so how can we improve corporate employee innovation? Live streaming e-commerce currently faces a capacity problem.

The internal environment of the company inherently influences the work of live broadcast e-commerce employees. They will inevitably interact with leaders and colleagues in their daily work, and their attitudes and behaviors towards work will be affected by the entire work organizational environment, according to the main concerns of social identity theory. In terms of problems, this theory primarily focuses on the interaction between organizational groups, profoundly explains the important role of organizations in group behavior, and proposes that group behavior is based on the individual's identification with the group, which also indicates whether the individual organizational identification will affect their perceptions, attitudes, and behaviors; in fact, in addition to being affected by the work organizational environment, live broadcast e-commerce employees are also affected by the motivation of employees' own work cognition.

According to McClelland's motivation theory, employees' work motivation stems not only from physiological needs but also from psychological and social needs; physiological needs are primarily a driving force in life, while psychological and social needs are more derived from the organization. Leaders and colleagues pursue personal development and self-realization.

The main subjects of this study are employees of live streaming e-commerce companies. Based on the fact that the ultimate goal of live streaming e-commerce companies is to improve their sales performance and increase corporate profits, the study of the influencing factors of their employees' innovative behavior should start from the perspective of technological innovation (sales capabilities, Innovative thinking, etc.) combined with institutional innovation (corporate reward and punishment system or welfare system, etc.) to analyze, plus various personal factors and external factors (support from leaders or colleagues) of live broadcast e-commerce employees, and obtain sample data through measurement questionnaires to verify Whether the influencing factor model constructed is valid, so as to explore the relevant factors that affect the innovative behavior of employees in live broadcast e-commerce companies, and provide a reference basis for formulating
practical strategies to improve the innovative behavior of employees in live broadcast e-commerce companies.

**Objectives**

1) This study builds a theoretical model of "Research on the Impact of Livestreaming E-commerce Organizational Innovation Climate and Professional Identity on Employee Innovative Behavior." It then uses measurement questionnaires to get sample data to see if the model works and to look at the data and the model itself. How well the models fit with each other.

2) Test the model fit and assumptions, and then explore and analyze the factors that influence the innovative behavior of employees of live broadcast e-commerce companies; the innovative behaviors of employees of live broadcast e-commerce companies with different genders, ages, education levels, and professional titles at work Is there any difference?

3) Verify whether work motivation plays a mediating role between organizational innovation climate and employees' innovative behavior in live-streaming e-commerce companies; organizational identification plays a mediating role between professional identity and the innovative behaviors of employees in live-streaming e-commerce companies.

**Conceptual framework**

**Work motivation and innovative behavior hypotheses**

Motivation is an important part of the individual dynamic system, the driving force of behavior, and the direct driving force of behavior. Work motivation is a psychological state that refers to a series of internal and external forces that stimulate work performance-related behaviors and determine their form, direction, intensity, and duration.

We can also refer to this "internal and external force" as intrinsic and extrinsic motivation. Internal motivating factors such as personal interest, risk-taking tendencies, challenging work, etc. provide intrinsic motivation. Motivation occurs when it is stimulated by external motivational factors that come from individuals or other than work, such as money, position, or power. It can be summarized as:

Pursuit of work goals: Employees of live broadcast e-commerce companies may set their own work goals, such as improving their sales performance, stimulating employees' work enthusiasm, etc., so as to make themselves more motivated at work.

Identification of profession: Employees of live broadcast e-commerce companies may regard their profession as part of themselves and feel proud and satisfied with it. This sense of professional identity may make them more engaged at work and continuously improve their work capabilities.

Pursuit of work challenges: Employees of live broadcast e-commerce companies may pursue work challenges, look for better working methods and strategies, or try to solve problems encountered at work, thereby enhancing their work motivation.

Obtaining work feedback: Employees of live broadcast e-commerce companies may receive work feedback from customers, colleagues, or superiors, such as employees' work performance, customer recognition, superiors' recognition, etc. This feedback may make them more motivated and engaged in their work.
Pursuit of career development: Employees of live broadcast e-commerce companies may pursue career development, such as improving their work skills, obtaining higher positions, etc., thereby enhancing their motivation for career development.

In short, the work motivation of employees in each live broadcast e-commerce company is different and is affected by many factors, such as personal personality, professional experience, working environment, etc.

Some research points out that increased motivation leads to more people engaging in innovative behaviors (Atwater & Carmeli, 2009). In the study, some researchers found that intrinsic motivation in work plays a partial mediating role between autonomous work in the organizational innovation atmosphere and employee innovative behavior and plays a partial mediating role between team collaboration and employee innovative behavior (Wang & Chang, 2017).

Other studies have pointed out that intrinsic motivation and extrinsic motivation in work motivation play a partial mediating role between organizational incentives and employee innovative behaviors in organizational innovation climate (Xia, 2019; Jiang et al., 2017).

This study examines the two perspectives of intrinsic motivation and extrinsic motivation among employees of live broadcast e-commerce companies; with the aim of revealing the mechanisms of work motivation that drive innovative behavior. Consequently, we propose the following hypothesis:

H1: Employees’ work motivation in live streaming e-commerce has a positive impact on their innovative behavior.

HZ1: In live broadcast e-commerce companies, work motivation plays a mediating role between organizational innovation climate and employee innovative behavior.

**Organizational innovation atmosphere and innovative behavior Hypothesis**

The organizational innovation climate was first proposed by Payne & Pugh (1976). It refers to the perceptual description of the degree of creativity and innovation of organizational members in their work environment, which will affect their attitudes, beliefs, motivations, values, and innovative behaviors. Reflected in:

- Encourage employees to freely express their thoughts and opinions, and make them feel that their voices are heard and valued.
- Organizational leaders should encourage employees to try new things, including new ways of working, new working methods, new technology applications, etc.
- Provide necessary training and support to help employees adapt to the new working environment and requirements.
- Organizational leaders should provide abundant innovation resources, including human resources, technical resources, financial resources, etc., to provide sufficient support for employee innovation.

If organizations and organizational leaders can provide the resources required for innovative behavior, including information, time, and support, employees will be dependent on the organization, and their work results will also depend on the organization's support (Reiter-Palmon & Illies, 2004). It can also be understood that when employees receive support from their leaders, they will gain more autonomy and freedom to engage in innovative behaviors (Foss et al., 2013).
The three dimensions of organizational innovation climate (autonomous work, team collaboration, and organizational motivation) all have a significant positive impact on employee innovative behavior (Wang & Chang, 2017); organizational members directly or indirectly perceive a group of people in the work environment. Organizational characteristics that can be measured and affect the performance of employees’ innovative behaviors include environmental freedom, organizational support, teamwork, learning and growth, ability development, etc. (Gu, 2019); after many verification studies, scholars have shown that an innovative atmosphere has a positive impact on employees' innovative behavior. The impact of innovative behavior is significant (Zhao & Zhang, 2020; Cui et al., 2023).

Some studies have pointed out that if organizational leaders support and encourage employees to innovate, share information with employees, and listen to employees’ ideas, employees’ creativity can be improved; at the same time, information sharing and harmonious relationships among colleagues will also promote employees’ innovative behavior. This can effectively reduce employees' fear when innovating, improve their psychological safety, and thereby improve their creativity. Resource sharing between organizational leaders and colleagues is the basis for employees' innovative work, which will increase employees' enthusiasm at work and thereby enhance employees' creative abilities (Catherine & Ulrich, 2000).

The organizational innovation climate in this study refers to the perception of employees of live-streaming e-commerce companies engaged in live-streaming e-commerce of the company's innovation support. A positive organizational innovation climate can help to improve employees' innovation motivation. Therefore, we propose the following hypothesis.

H2: Live streaming e-commerce companies' organizational innovation atmosphere has a positive impact on work motivation.

H3: The organizational innovation atmosphere of live streaming e-commerce has a positive impact on individual innovation behavior.

Organizational identity and innovative behavior Hypothesis

Ashforth and Meal's definition of organizational identification covers both aspects. It is widely recognized and used in most studies.

Organizational identification can be seen from two angles. On the one hand, it is the individual's sense of belonging in the organization; on the other hand, organizational identification is related to self-concept; the sense of belonging is a psychological attachment to and belonging to the organization that employees experience. It is the organizational members' trust in the organizational values and their identity as members of the organization.

This leads to a feeling of satisfaction (Ashforth & Mael, 1989).

In 2013, Tan Daolun took employees in the financial services industry as research subjects and verified that organizational identification has a significant impact on employee innovative behavior (Tan, 2011). When researcher Pan Yang studied the innovative behavior of college teachers, he found that college teachers’ identification with their profession positively affects their organizational identification and innovative behavior, and that organizational identification plays a partial mediating role between professional identification and individual innovative behavior (Pan, 2014).

Employees of live streaming e-commerce companies typically reflect their organizational identity in the following ways:
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1) Identity: At work, employees of live broadcast e-commerce companies will gradually identify with their company, department, team, and other organizational identities and regard them as part of themselves.

2) Cultural identity: Employees of live broadcast e-commerce companies identify with the organizational culture, including recognition of organizational values, beliefs, behavioral norms, behavioral styles, etc. This is also the basis for employees of live-broadcast e-commerce companies to form a common understanding and mutual cooperation at work.

3) Goal identification: The degree to which employees of live broadcast e-commerce companies identify with the organizational goals, including recognition of the organizational mission, vision, strategic goals, etc. This is also the motivation for employees of live-broadcast e-commerce companies to strive for organizational development.

4) Work identification: Employees of live broadcast e-commerce companies identify with their work tasks, including their content, requirements, and environment. This is also the key for employees of live broadcast e-commerce companies to have a high degree of investment and contribution to organizational work.

5) Team identification: Employees of live broadcast e-commerce companies identify with their teams, including team culture, goals, values, etc. This is also the key for employees of live broadcast e-commerce companies to form close cooperation and mutual support within the team.

6) Leadership recognition: the degree to which employees of live broadcast e-commerce companies identify with their leaders, including recognition of leadership style, management capabilities, work attitudes, etc. This is also the key for employees of live-broadcast e-commerce companies to have confidence and support in organizational management.

Organizational identification is defined as employees’ sense of belonging and loyalty to the organization to which they belong. If employees of live streaming e-commerce companies have a strong sense of identity with their profession, they may believe that the work they do is consistent with the values and goals of the organization, thereby enhancing their sense of identification and loyalty to the organization. Such a sense of identity may also promote communication and cooperation between employees and the organization, further strengthening its cohesion and stability.

Generally speaking, the organizational identification of employees of live broadcast e-commerce companies refers to the recognition and acceptance of the values, culture, goals, rules, etc. of the organization to which they belong. It is founded on a sense of belonging between the organization and its employees’ recognition and loyalty.

The organizational identification in this study refers to the sense of belonging, loyalty, and pride that employees of live broadcast e-commerce companies who are engaged in live broadcast e-commerce have towards their unit. Consequently, we propose the following hypothesis:

H4: The organizational identification of live broadcast e-commerce employees has a positive impact on individual innovative behavior.

HZ2: Organizational identification plays a mediating role between professional identification and the innovative behavior of employees in live broadcast e-commerce companies.
Professional identity and innovative behavior

Scholars have found that professional identity is dynamic and will change over time through related people, events, and experiences. At the same time, professional identity can also be characterized by related characteristics of the profession (Beijaard, 1995).

The more an individual identifies with a group, the more his or her behavior will tend to comply with the group's behavioral norms (Stryker, 1980). At the same time, it can provide individuals with a sense of security and superiority, as well as help with self-reinforcement (Pratt, 1998). To summarize, the professional identity of live broadcast e-commerce company employees is reflected in the following aspects:

1) Personal values and beliefs: Employees in the workplace generally believe that their career goal is to contribute to the company's development. Such values and beliefs reflect their sense of identity with their profession. Understanding and support for careers: Employees of the company demonstrate their recognition of their careers through their understanding and support for them. They may view their work as a meaningful cause rather than just a job.

2) Knowledge and skills: The relevant knowledge and skills possessed by enterprise employees reflect their professional identity. They may take pride in having unique expertise and the ability to provide exceptional customer service to their clients.

3) Social role: Corporate employees perceive their professional identity as a social role that mirrors their own. They may feel proud that they play an important role in society and can make a positive contribution to the company and society.

4) Career development: Corporate employees' expectations for their career development reflect their professional identity. They may believe that with further training and professional development, they can improve their careers and better serve the company.

An individual's sense of identity with their chosen occupation is known as occupational identity. They believe that their occupation is a part of themselves, and they are proud and satisfied with it. The professional identity of employees in live streaming e-commerce companies may stem from the awareness of the mastery of their own professional knowledge, their impact on company growth, and their contribution to society.

Some studies have pointed out that innovative behavior is not a behavior that must be required and achieved within the role, but rather a spontaneous behavior that is relatively recognized by the organization. Therefore, employees with high professional identity perceptions may be more engaged in work, pay more attention to improving work efficiency and performance, improve bad working conditions, optimize work processes, improve products and their own services, etc., and consciously adopt proactive and innovative behaviors (Zhu & Ma, 2022).

This study refers to the employees of live broadcast e-commerce companies who gradually form part of the work process, recognize the concept and significance of the work they are engaged in in live broadcast e-commerce companies, and consciously and voluntarily adopt specific behaviors required by this profession.

A career is equivalent to an individual's self-defined label. Under normal circumstances, most corporate employees with a high sense of professional identity will be dedicated to their jobs and diligent in their studies. On the basis of adhering to professional standards and professional ethics, they will try their best to maintain professional ethics. Defend professional honor and strive to use your abilities and roles at work.
The unique nature of the live broadcast e-commerce industry necessitates the active innovation of company employees. Therefore, a professional identity will foster the development of unique organizational identities and individual innovative behaviors. Therefore, the hypothesis is as follows:

H5: The professional identity of employees at live streaming e-commerce companies has a positive impact on organizational identity.
H6: The professional identity of employees at live streaming e-commerce companies has a positive impact on their innovative behaviour.

Methodology

This study employs statistical analysis tools for the statistical analysis of empirical data. We adopt various analysis methods based on the research hypothesis's requirements.

1) Descriptive statistics: This study uses descriptive statistical analysis to briefly describe the structure of the research sample and observe the demographic structure of tourists.
2) Reliability analysis: Use Cronbach’s α method to analyze whether the measured conformation is consistent.
3) Validity analysis: We divide validity into four categories: logical validity, construct validity, convergent validity, and discriminant validity. This article uses exploratory factor analysis in SPSS to test the construct validity of each scale.
4) Correlation analysis: Use Pearson correlation analysis to determine the correlation between professional identity, organizational identity, work motivation, organizational innovation climate, and innovative behavior, and initially verify the research hypothesis.
5) Regression analysis: To test the research hypothesis, this study uses data statistical analysis tools to conduct regression analysis on the relationship between professional identity, organizational identity, work motivation, and organizational innovation climate.
6) Mediation effect test: This study uses SPSS version 24 software to test whether work motivation and organizational identification have a certain mediating effect on the relationship.

Results

Verification of a hypothetical path

Tab. 1 shows the key results of the path analysis. This analysis takes innovative behavior (IB) as the dependent variable and examines work motivation (WM), professional identity (PI), organizational identification (OI), organizational innovation climate (OIC), and other self-related factors. The influence of variables.

First, the constant in the regression equation is 0.712, the standard error is 0.391, the t-value is 1.823, and the significance level is 0.039. When we hold other independent variables constant, this term provides the basic level of innovative behavior.

It was found that work motivation (WM) has a positive and significant effect on innovative behavior (IB), with an unstandardized coefficient of 0.148, a standardized coefficient of 0.057, a t value of 2.573, and a significance level of 0.010. This means that hypothesis H1 is true.
With an unstandardized coefficient of 0.301, a standardized coefficient of 0.053, a t value of 5.686, and a significance level of 0.000, professional identity (PI) also significantly positively impacts innovative behavior (IB), establishing hypothesis H6. With a t value of 1.808 and a significance level of 0.071, the impact of organizational identification (OI) on innovative behavior (IB) fails to reach a significant level, negating the establishment of hypothesis H4.

### Table 1 - Path analysis table (Innovative Behavior IB)
(results of author’s calculation)

<table>
<thead>
<tr>
<th>dependent variable</th>
<th>independent variable</th>
<th>Not standardized coefficient</th>
<th>Standardized coefficient</th>
<th>t</th>
<th>Significance</th>
<th>95.0% of B confidence interval</th>
<th>collinearity statistics</th>
<th>R2</th>
</tr>
</thead>
<tbody>
<tr>
<td>IB</td>
<td>(constant)</td>
<td>.712</td>
<td>.391</td>
<td>1.823</td>
<td>.039</td>
<td>- .056 to 1.481</td>
<td>.412</td>
<td></td>
</tr>
<tr>
<td>IB</td>
<td>WM</td>
<td>.148</td>
<td>.057</td>
<td>.112</td>
<td>2.573</td>
<td>.010 to 2.60</td>
<td>.035</td>
<td>1.244</td>
</tr>
<tr>
<td>IB</td>
<td>PI</td>
<td>.301</td>
<td>.053</td>
<td>.291</td>
<td>5.686</td>
<td>.000 to .197</td>
<td>.405</td>
<td>1.730</td>
</tr>
<tr>
<td>IB</td>
<td>OI</td>
<td>.101</td>
<td>.056</td>
<td>.086</td>
<td>1.808</td>
<td>.071 to .009</td>
<td>.211</td>
<td>1.495</td>
</tr>
<tr>
<td>IB</td>
<td>OIC</td>
<td>.621</td>
<td>.085</td>
<td>.406</td>
<td>7.334</td>
<td>.000 to .454</td>
<td>.787</td>
<td>2.019</td>
</tr>
</tbody>
</table>

Work motivation (WM), professional identity (PI), organizational identification (OI), organizational innovation climate (OIC), innovative behavior (IB)

With an unstandardized coefficient of 0.621, a standardized coefficient of 0.085, a t value of 7.334, and a significance level of 0.000, the study establishes hypothesis H3. This shows that, under the influence of other factors, improving the organizational innovation climate significantly promotes the occurrence of innovative employee behaviors.

Overall, the R-square of the regression equation is 0.406, which means that the model explains 40.6% of the variation in innovative behavior. Simultaneously, the collinearity statistics reveal that the VIF value falls within a reasonable range, suggesting no significant collinearity issue among the independent variables in the model.

In summary, the path analysis results support the positive impact of employee work motivation (WM), professional identity (PI), and organizational innovation climate (OIC) in the e-commerce industry on employee innovative behavior. Therefore, we establish hypotheses H1, H3, and H6. Hypothesis H4 is not established.

### Table 2 - Path analysis table (work motivation WM)
(results of author’s calculation)

<table>
<thead>
<tr>
<th>dependent variable</th>
<th>independent variable</th>
<th>Not standardized coefficient</th>
<th>Standardized coefficient</th>
<th>t</th>
<th>Significance</th>
<th>95.0% of B confidence interval</th>
<th>collinearity statistics</th>
<th>R2</th>
</tr>
</thead>
<tbody>
<tr>
<td>WM</td>
<td>(constant)</td>
<td>3.44</td>
<td>.309</td>
<td>11.15</td>
<td>.000</td>
<td>2.839 to 4.055</td>
<td>.128</td>
<td></td>
</tr>
<tr>
<td>WM</td>
<td>OIC</td>
<td>.414</td>
<td>.055</td>
<td>.357</td>
<td>7.564</td>
<td>.000 to .306</td>
<td>.521</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Work Motivation (WM) and Organizational Innovation Climate (OIC)
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Tab. 2 describes the path analysis results with work motivation (WM) as the dependent variable and organizational innovation climate (OIC) as the independent variable.

First, the constant in the regression equation is 3.447, the standard error is 0.309, the t-value is 11.151, and the significance level is 0.000. Holding other independent variables constant, this item provides the base level of work motivation. We observe a significant positive effect of the independent variable organizational innovation climate (OIC) on work motivation (WM). The unstandardized coefficient is 0.414, the standardized coefficient is 0.055, and the t-value is 7.564. The significance level is 0.000. This demonstrates that, when other factors are in control, enhancing the organizational innovation climate significantly boosts employees' work motivation level, thereby establishing hypothesis H2.

Finally, the R-square of the regression equation is 0.357, which means that the model explains 35.7% of the variation in work motivation. Simultaneously, the collinearity statistics reveal a VIF value of 1.000, signifying the absence of any significant collinearity issues among the independent variables in the model.

Taken together, the path analysis results in Table 2 support the positive impact of organizational innovation climate on work motivation and provide important clues to the impact of organizational innovation climate and professional identity on employee innovative behavior in the e-commerce industry.

Table 3 - Path analysis table (Organizational Identification, OI)
(results of author’s calculation)

<table>
<thead>
<tr>
<th>dependent variable</th>
<th>independent variable</th>
<th>Not standardized coefficient</th>
<th>Standardized coefficient</th>
<th>t</th>
<th>Significance</th>
<th>95.0% of B confidence interval</th>
<th>collinearity statistics</th>
<th>R2</th>
</tr>
</thead>
<tbody>
<tr>
<td>OI</td>
<td>(constant)</td>
<td>3.7</td>
<td>.226</td>
<td>16.38</td>
<td>.000</td>
<td>3.259</td>
<td>4.148</td>
<td>.156</td>
</tr>
<tr>
<td></td>
<td>PI</td>
<td>.348</td>
<td>.041</td>
<td>.395</td>
<td>8.507</td>
<td>.000</td>
<td>.267</td>
<td>.428</td>
</tr>
</tbody>
</table>

Professional Identity (PI) and Organizational Identity (OI)

Tab. 3 describes the path analysis results with organizational identification (OI) as the dependent variable and professional identification (PI) as the independent variable.

First, the constant in the regression equation is 3.704, the standard error is 0.226, the t-value is 16.384, and the significance level is 0.000. This term provides the base level of organizational identification, holding other independent variables constant. Examining the impact of the independent variable professional identification (PI) on organizational identification (OI) reveals a significant positive effect.

The unstandardized coefficient is 0.348, the standardized coefficient is 0.041, the t-value is 8.507, and the significance level is 0.000. This demonstrates that the enhancement of professional identity significantly boosts employees' organizational identification level, thereby establishing hypothesis H5.

Finally, the R-square of the regression equation is 0.395, which means that the model explains 39.5% of the variation in organizational identification. Simultaneously, the collinearity statistics reveal a VIF value of 1.000, signifying the absence of any significant collinearity issues among the independent variables in the model.
Taken together, the path analysis results in Tab. 4 support the positive impact of occupational identity on organizational identification and provide important clues to the impact of organizational innovation climate and occupational identity on employee innovative behavior in the e-commerce industry.

**The mediating effect test**

This section investigates the validity of the intermediary hypothesis. Organizational identification has an effect on occupational identity and live broadcast e-commerce, but not on individuals' innovative behavior (H4; not proven). This means that HZ2 (organizational identification plays a role in occupational identity and live broadcast e-commerce) is no longer valid. The hypothesis HZ2 now serves as a mediator between the innovative behaviors of employees of commercial enterprises.

Only the mediation hypothesis HZ1 (work motivation plays a mediating role between organizational innovation climate and employee innovative behavior in live broadcast e-commerce companies) was tested. Does work motivation have a mediating effect? Tab. 4 displays the results. The confidence interval values do not include 0. As shown in Tab. 5, the confidence intervals for the significant indirect effects are (0.297, 0.487). The interval range does not include 0, indicating support for work. Motivation partially mediates the effect.

### Table 4 - Direct effects (results of author’s calculation)

<table>
<thead>
<tr>
<th>DV</th>
<th>IV</th>
<th>Coeff</th>
<th>Se</th>
<th>T</th>
<th>p</th>
<th>LLCI</th>
<th>ULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>WM</td>
<td>constant</td>
<td>1.596</td>
<td>.213</td>
<td>7.500</td>
<td>.000</td>
<td>1.177</td>
<td>2.015</td>
</tr>
<tr>
<td></td>
<td>OIC</td>
<td>.733</td>
<td>.039</td>
<td>18.585</td>
<td>.000</td>
<td>.655</td>
<td>.811</td>
</tr>
<tr>
<td>BI</td>
<td>constant</td>
<td>.498</td>
<td>.194</td>
<td>2.566</td>
<td>.011</td>
<td>.116</td>
<td>.880</td>
</tr>
<tr>
<td></td>
<td>WM</td>
<td>.528</td>
<td>.048</td>
<td>11.081</td>
<td>.000</td>
<td>.434</td>
<td>.622</td>
</tr>
<tr>
<td></td>
<td>OIC</td>
<td>.369</td>
<td>.048</td>
<td>7.676</td>
<td>.000</td>
<td>.275</td>
<td>.464</td>
</tr>
<tr>
<td>BI</td>
<td>constant</td>
<td>1.341</td>
<td>.211</td>
<td>6.362</td>
<td>.000</td>
<td>.926</td>
<td>1.756</td>
</tr>
<tr>
<td></td>
<td>OIC</td>
<td>.757</td>
<td>.039</td>
<td>19.367</td>
<td>.000</td>
<td>.680</td>
<td>.833</td>
</tr>
</tbody>
</table>

### Table 5 - Total impact (results of author’s calculation)

<table>
<thead>
<tr>
<th></th>
<th>Effect</th>
<th>SE</th>
<th>t</th>
<th>p</th>
<th>LLCI</th>
<th>ULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>.757</td>
<td>.039</td>
<td>19.367</td>
<td>.000</td>
<td>.680</td>
<td>.833</td>
</tr>
<tr>
<td>Direct</td>
<td>.369</td>
<td>.048</td>
<td>7.676</td>
<td>.000</td>
<td>.275</td>
<td>.464</td>
</tr>
<tr>
<td>Indirect</td>
<td>.387</td>
<td>.049</td>
<td>7.898</td>
<td>.000</td>
<td>.297</td>
<td>.487</td>
</tr>
</tbody>
</table>

Verification of the partial mediating effect of work motivation shows that the organizational innovation climate indirectly influences innovative behavior through work motivation; in other words, the organizational innovation climate influences employees' innovative behavior by influencing their work motivation.

This conclusion shows that innovation is not just a single behavior, but is influenced by multiple factors. In addition to personal intrinsic motivation, the organizational innovation climate can also have an impact on employees' work motivation and promote innovative
behaviour. Positive attitudes from leaders and colleagues at work can significantly influence employees' work motivation, which in turn influences their innovative behavior.

In practical applications, this conclusion can provide some guidance for organizations, such as strengthening the construction of organizational innovation culture and improving employees' work motivation to promote the organization's innovation capabilities and competitiveness.

**Conclusion**

The study constructed five potential variables based on social identity theory and achievement motivation theory, namely: work motivation, career identity, organizational identity, organizational innovation climate, and innovative behavior, and constructed an influencing relationship model of employee innovative behavior in the e-commerce industry. From the path analysis data in the study, it can be concluded that among the six hypotheses, H4 is not established; H1, H2, H3, H5, and H6 are established.

Hypothesis H4 is not correct. This contradicts the hypothesis proposed by researchers Wang & Chang (2017), who studied the impact of organizational identification on employee innovative behavior. It is possible that e-commerce Employees in the industry will be more inclined to plan their personal careers for the motivation of work innovation, while the organizational platform will play more of a supporting role. The e-commerce industry's organizational identification of employees has no direct impact on individual innovative behavior. In other words, whether a person identifies with their organization will not directly affect their innovative behavior.

Assuming that H1, H2, and H6 are established, it means that employees in the e-commerce industry care about the meaning, value, and accomplishment of their work, which is closely related to whether they have positive innovative behaviors at work. At work, we will pay great attention to the working environment, such as whether colleagues can effectively communicate and coordinate work, whether colleagues help and care for each other, and whether they have a positive and harmonious working atmosphere. Another important point is that when faced with difficulties at work, leaders will provide ideological and material support, such as encouragement and praise, as well as increase the reasonable payment of teaching resources. In summary, they encourage everyone to collaborate in finding solutions to work-related problems and difficulties, method to solve it.

Assuming that H3 is established, it means that employees in the e-commerce industry themselves understand that they coexist with the company's honor, so professional identity will affect organizational identity.

Stryker (1980) made a similar point. If an individual expresses greater identification with a certain group, then their behavior will be more inclined to comply with and obey the group's behavioral norms.

Assuming the establishment of H6, in line with Payne's perspective, the perceived level of creativity and innovation in an organization's work environment influences the motivations, values, and innovative behaviors of its members; this is known as the organizational innovation climate. It is an organization in which employees are encouraged to think and try new ideas and methods, and there is a positive, innovation-supportive culture.
If a company creates such an atmosphere, employees are more likely to feel that their jobs are more meaningful and challenging, and they are more likely to try new ways to solve problems, thereby increasing their work motivation.

In addition, an organizational innovation climate can also improve employees' sense of participation and autonomy. Employees' motivation to pursue work goals may increase when they perceive their innovative ideas as valued and have the potential to become reality.

However, it should also be noted that each employee has different motivations and may be affected by different factors. Therefore, the positive impact of a company's establishment of an innovative atmosphere on work motivation is not certain. The specific situation depends on the company's culture, employee needs, etc. It depends on factors.

In this research scenario, employees' work motivation can be said to refer to their sense of value at work, so their perception of the work environment is inseparable, such as the company's incentive mechanism, leadership support, resource security, and information security.

**Recommendation**

Longitudinal tracking research: Future research can adopt a longitudinal tracking design to gain a more comprehensive understanding of the development trends of employee innovative behavior in live streaming e-commerce companies through long-term tracking and observation. Such a design can reveal the evolutionary process of innovative behavior, providing additional information for developing more precise intervention strategies.

Diverse sample research: In order to improve the external validity of the research results, future research can expand the scope of the sample to include employees of live streaming e-commerce companies of different sizes, natures, and regions. Comparing the innovative behaviors of different groups helps to gain a deeper understanding of the diversity and universality of influencing factors.

In-depth exploration of influencing factors: This study focuses on the impact of factors such as work motivation, professional identity, organizational identification, and organizational innovation climate on innovative behavior. To build a more complete impact model of innovative behavior, future research can explore other potential influencing factors, such as individual innovation ability, leadership style, and so on. This contributes to the richness and explanatory power of the theoretical framework.

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