A STUDY ON GENDER DIFFERENCES IN THE PERFORMANCE OF LEADERSHIP TRAITS IN CHINESE INTERNET PROMOTION SERVICE INDUSTRY

Ling Yao – Jingjing Wu – Ildikó Rudnák

Abstract

Today, with the rapid development of China's economy, leadership is an important factor in promoting the progress of enterprises. And leadership traits accompanied by the complexity of gender differences further affect organizational climate and business performance. In the traditional concept, men are more inclined to be leaders because they have some stereotyped leadership traits that people think leaders should have, but with the advance of modernization in open innovation, this stereotyped impression has gradually changed. Many modern scholars with open and innovative thinking believe that the characteristics of masculinity are no longer applicable to the contemporary market and working environment, but feminization and neutralization are more welcomed by most employees. The purpose of this survey is to clarify the performance of leadership traits reflected in gender differences among personnel in the Internet promotion service industry in Guangdong Province, China. This includes comparing the leadership traits of the physiological and psychological gender self-assessment of all participants (leaders and non-leaders) and all leaders. Here, Independent-Samples T-Test and One-Way ANOVA in SPSS are implemented in data analysis. The results show that about 1/3 of the 34 leadership traits were significantly different in physiological gender, but few traits were significantly different in psychological gender.

Keywords: *leadership traits, gender difference, psychological gender, enterprises*
JEL: *J16, M120*

Introduction

According to the (Schwab, 2019), 36% of senior private sector managers and public sector officials are women. For corporate boards and senior business leaders, only 18.2% of companies are led by women globally; in OECD countries, an average of 22.3 of board members are women, while the proportion of women in emerging economies is even lower, such as 9.7% in China and 13.8% in India(Forum, 2020). The region with the highest percentage of women in senior management positions is Africa, at about 38%. In contrast, the Asia-Pacific region has the lowest rate, at 27% (Francesca and Kim, 2020). Although women have made progress in leadership, "broken rung" has remained a major obstacle to the first step to manager promotion over the past year. For every 100 men promoted to manager, the number of women promoted is 85. At the beginning of 2020, men still significantly outnumbered women at the manager level – they accounted for only 38% of manager positions, compared with 62% for men (McKinsey & Company and LeanIn.Org, 2021). Furthermore, (Huang and Aaltio, 2014), propose that previous studies have identified a series of sociocultural barriers that may explain the underrepresentation of women in leadership, including male-dominated networks, social stereotypes, gender discrimination in promotion, and overburdened women with work and family responsibilities. The role congruity theory that discriminates against female leaders shows that the inconsistency between women's gender roles and leadership roles means that women are not evaluated as well as men in leadership positions (Eagly and Karau,

2002). This stereotype of leadership creates double standards that reduce the chances of women in leadership positions (Lyness and Heilman, 2006; Kireyeva et al, 2023) In addition, as many as 2 million women are considering asking for absence or simply leaving the workplace because of the challenges posed by the COVID-19 crisis, leading to signs that the turnover rate of women is higher than that of men. There will be fewer women in leadership positions, resulting in far fewer women becoming future leaders if they feel forced to leave the workplace (McKinsey & Company and LeanIn.Org, 2021; Bujdosó et al., 2016).

(Rodríguez-Fernández, Sánchez-Teba and Herrera-Ballesteros, 2021) 's result show that gender and leadership is an emerging scientific field that has not yet been fully developed. The concept of a "glass ceiling" is seen as a sign that obtaining leadership positions poses a risk to women. "Glass ceiling" refers to the invisible obstacles faced by women in promoting senior positions within the organization based on gender but not related to qualifications or achievements (Powell and Butterfield, 1994; Inman, 1998). Through the study of the literature, we summarized 34 representative leadership traits on this basis. In other words, this paper will investigate the participants' self-assessment of these 34 leadership traits in the form of an electronic questionnaire.

Furthermore, (Paustian-Underdahl, Walker and Woehr, 2014)'s research shows that through self-assessment, men will think that they are consistent with most leadership contexts, while women may think that they are inconsistent with many leadership contexts. This gender stereotype will psychologically undermine women's confidence in their leadership (Cárdenas *et al.*, 2014). Therefore, in order to make up for the low score of self-evaluation of leadership traits caused by lack of self-confidence, this paper makes a further study from the perspective of psychological gender. As the current research on the performance of leadership traits based on psychological gender is still limited in the literature, it is necessary to further explore it.

This paper studies the performance of the leadership traits of personnel in the Internet advertising service industry in Guangdong, China, which is of representative significance and practical value to the management and leadership of enterprises. The research results of this paper can help Internet service companies to understand more clearly and thoroughly the different performance of leadership traits caused by gender differences, to improve and optimize the working conditions and roles of male and female leaders and employees more openly and innovatively both in thought and in action, thereby promoting the development of the organization. In addition, the research results also provide meaningful reference value for enterprise personnel recruitment and promotion.

Literature Review

Gender differences in leadership positions

Not limited to specific countries or cultures and whether descriptive or prescriptive, gender stereotypes seem to play an important role in assessing the performance of male and female, as well as more specifically in obtaining corporate leadership positions (Eagly and Johannesen-Schmidt, 2001; Baker, 2014; Denise, 2020). The more traditional "masculinity" of leadership positions means that individuals are expected to adopt a narrow leadership style when they are promoted to a higher level of power and this narrow concept of leadership in a work environment may reward male more than female, that is, female tend to face a narrower leadership path in the workplace (Ely, Ibarra and Kolb, 2011; Kolpakov and Boyer, 2021; Li et al., 2021). Moreover, research shows that

the concept of "think about leaders, think about men" exists unexpectedly, and nowadays the stereotype still holds that successful leaders will be men rather than women (Koenig et al., 2011). Even women with excellent qualifications have to overcome doubts that they are not qualified as leaders (Lyness and Heilman, 2006).

Propose that different expectations of female leadership are the representative characteristics of women in leadership positions (Kolpakov and Boyer, 2021). Women generally need to meet higher expectations than men. (Foschi, 2000)also argue that when a woman holds the top leadership position or a male-dominated position, others in the organization will think that she must be very capable to hold such a high position and challenging leadership role. Therefore, (Eagly and Karau, 2002)point out the inconsistency between women's own characteristics and the requirements of leaders' roles is the main reason for the prejudice against female leaders. In addition, gender stereotypes may make women biased against themselves as leaders and psychologically weaken women's confidence in their leadership abilities (Cárdenas *et al.*, 2014). As a result, women are less interested in becoming group leaders, but more willing to be followers (Davies, Spencer and Steele, 2005; Gergely et al., 2016). What's more, for women with family responsibilities, it is difficult to achieve a balance between work and family because traditional gender roles require them to assume the primary responsibility of taking care of the family (Jogulu and Wood, 2011). Not only that， Due to the unique physical features of women, expectant mothers often face discrimination and a lack of self-confidence in the workplace, posing significant challenges to their job performance(Tumpek and Kendefi, 2022). Labor legislation can safeguard workers' rights and indirectly impact a company's labor management. However, career counseling can bridge the gap between women's specific needs and employers' requirements, facilitating a mutually beneficial agreement that upholds women's rights(Szőke, Tóth and Vanó, 2022; Tumpek and Kendefi, 2022).

Although there is evidence that men are generally considered more suitable and effective than women in leadership positions, there has recently been a debate in the popular press and academic literature about the potential advantages of female leadership (Paustian-Underdahl, Walker and Woehr, 2014), as gender roles may influence their choice of leadership style (Kolpakov and Boyer, 2021). A meta-analysis of the masculinity of leadership stereotypes shows that leadership has become more androgynous, which is achieved by incorporating cultural female relationship skills (Koenig *et al.*, 2011). And as a result of this shift to an androgynous leader, the leadership role is generally becoming more female-friendly (Cárdenas *et al.*, 2014).

Gender differences in leadership traits

The concept of leadership is formed by a set of beliefs shared by individuals in the common culture, so the cultural strength of the country or region where the leader is located leads to different attributes, behavior, status and influence of the leader (Xie, 2018). It is widely believed that women excel in communal qualities such as enthusiasm, friendliness and niceness, while leaders excel in agentic qualities such as competitiveness, ambition and assertiveness. Here, agentic quality is considered to be typical of men, so these views lead to a greater preference for men to become leaders (Cárdenas *et al.*, 2014). (Eagly and Johannesen-Schmidt, 2001)have the same point of view that agentic leadership refers to leadership traits that are initiative, assertive, goal-oriented and dominant. These traits are usually related to men because gender norms constructed by society usually align masculinity with these roles. On the contrary, communal leadership includes more concern for the well-being of others, including more affectionate, helpful, kind, interpersonal sensitive, compassionate, and more focused on maintaining relationships. These characteristics are more related to

women (Eagly and Johannesen-Schmidt, 2001). Because of gender identity, marital status, working years(Wu, Yao and Rudnák, 2021), and whether or not to take care of the elderly, women's leadership style in positions of authority will be affected.

Although agentic and masculine characteristics are traditionally regarded as the characteristics of leadership roles, nowadays, communal traits and behavior are increasingly becoming important leadership characteristics (Rosette and Tost, 2010). (Park, 2012)'s research shows that today's workers need more relational and consensus-based leadership styles, which are classified as "feminized" because they are consistent with common social definitions of gender roles. Accordingly, (Koenig et al., 2011)'s study also shows that leaders seem to integrate more feminine relational qualities nowadays, such as sensitivity, warmth and understanding than past. And because of the contemporary emphasis on a team-based and less hierarchical working environment, interpersonal characteristics such as empathy, interpersonal understanding and interpersonal relationships are required to be displayed by leaders (Kolpakov and Boyer, 2021). Moreover, due to women relatively think of themselves as interdependent with others, while men are more independent of others (Howard, Gardner and Thompson, 2007), feminine is more likely to have interpersonal skills than masculinity (Post, Latu and Belkin, 2019). (Kahn, Barton and Fellows, 2013) state that female leaders have more potential advantages in dealing with the organizational crisis, because relationship skills help to build and restore trust, so that improving the effectiveness of crisis response. Therefore, women and men who want to be seen as effective leaders need to mix "feminine" and "masculine" behaviors, especially when women play leadership roles(Kark, Waismel-Manor and Shamir, 2012). This mixture of masculinity and femininity can be traced back to the concept of psychological androgyny put forward by (Bem, 1974). He believes that masculinity and femininity are different and independent dimensions of gender cognition, and that psychological androgyny is the balance between masculinity and femininity in individual self-description.

Material and method

The data of the study came from staff of first-tier, second-and third-tier agents of Internet advertising services in Guangdong Province, China. And we collected the responses of 338 staff from about 20 enterprises in the form of electronic questionnaire. Among them, the response from the first-tier mainstream media agents account for about 40% of the total, and the response from the second-and third- tier mainstream media agents account for about 60%. This study is based on the leadership trait theory proposed by many previous scholars and combined with the purpose and hypothesis to design it. Here, the respondents were asked to rate 34 representative leadership traits, with each trait being measured by a five-point Likert scale (1, totally disagree; 2, disagree; 3, neutral; 4, agree; 5, totally agree).

In this study, SPSS (version 26.0, IBM Corp., Armonk, NY, USA, 2019) software was applied to analyze the data and the data analysis was divided into four steps. The first step is to describe the basic information of all respondents. Here, Descriptive Statistics was used to describe the personal attributes of all respondents (including age, physiological gender, psychological gender, position level and so on). Then, the second step is to assume that there are significant differences in the performance of leadership traits between all male and female (physiological gender) participants, so we used Independent-Samples T-Test tool to check the assumptions. After that, the third step is to assume that there are significant differences between male and female (physiological gender) leaders in the performance of leadership traits, Independent-Samples T-Test tool was used

again to check them. Lastly, the fourth step is to assume that there are significant differences among psychological gender of all leaders in the performance of leadership traits. Due to the psychological gender was set to five options, we chose One-Way ANOVA tool to test the assumptions.

Results of Research

Reliability of the data

Before analyzing the hypotheses, Cronbach's alpha test was used to check the reliability of the scale. The ideal value of the Cronbach alpha coefficient of a scale is more than 0.7 (DeVellis, 2016). Here, the reliability coefficient of the Cronbach's alpha of the whole construct is 0.945 as shown in Table 1, so the data meet the criteria for further study.

Table 1. Cronbach's Alpha of Reliability

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.945	0.952	34

Source: own construction

Demographic Analysis of the Sample

Through the descriptive analysis of SPSS, the following figures reflect the basic information about the respondents' physiological gender, psychological gender and position level.

Physiological gender of all participants: Of the 336 participants, 160 are male (47.6%) and 176 are female (52.4%). There is no significant difference in physiological gender.

Psychological gender of all participants: As shown in figure 1, 115 participants (34.2%) are psychologically very masculine, accounting for the largest proportion, while the remaining four psychological genders are not very different, that is, 45 (13.4%) are a bit masculine, 50 (14.9%) are neutral, 60 (17.9%) are a bit feminine and 66 (19.6%) are very feminine.

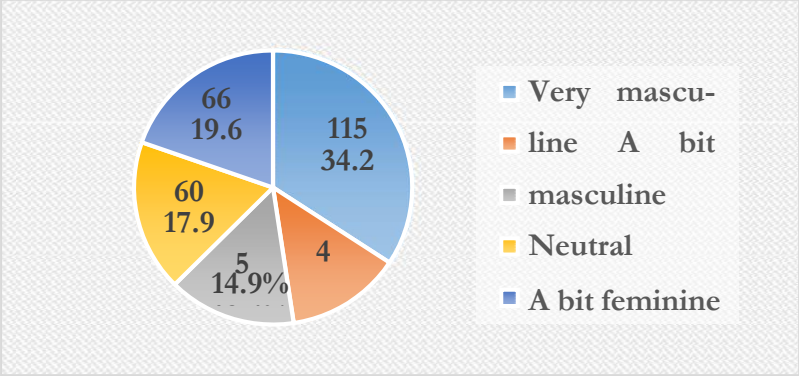

Figure 1. Sample characteristic of psychological gender

Source: own construction

Position level of all participants: In terms of position level, the number of respondents in management is three times that of ordinary employees, with 84 ordinary employees accounting for 25.0% and 252 managers accounting for 75%, of which grass-roots managers (35%) account for the highest proportion.

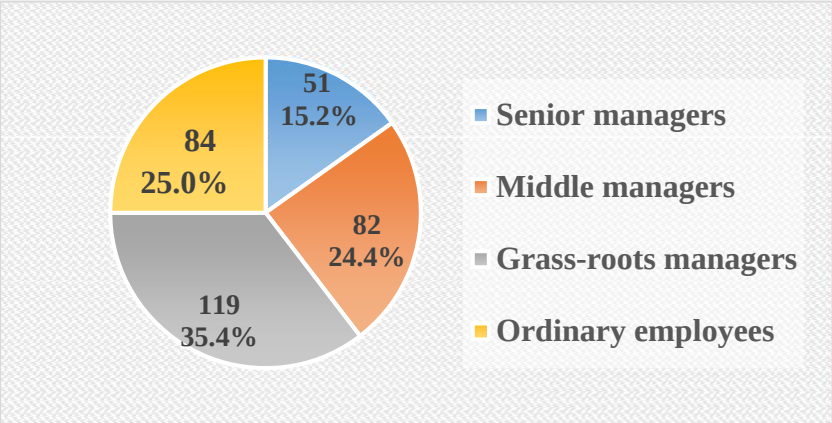

Figure 2. Sample characteristic of position level

Source: own construction

Physiological gender of all leaders: Among the 252 leaders surveyed, there is no significant difference in the proportion of physical gender among all leaders, of which male leaders account for 51.6% and female leaders account for 48.4%.

Psychological gender of all leaders: Figure 3 shows that the largest number of leaders are psychologically very masculine (35.7%), followed by very feminine (19.0%), while neutral (14.3%) and a bit masculine (13.1%) are low and similar.

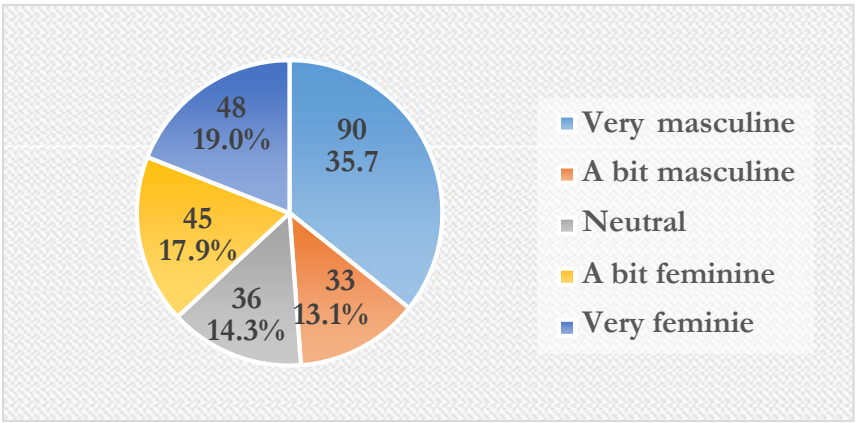

Figure 3. Sample characteristic of psychological gender of all leaders

Source: own construction

Gender (physiological and psychological) differences in leadership traits of all participants

All the participants, including leaders and non-leaders, here, we regard them as a general assessment of the leadership traits of all staff in the entire industry of Internet promotion services in Guangdong. The differences in leadership traits between all male and female participants were analyzed

by Independent- Samples T-test. However, the psychological gender of all participants is divided into five groups, so the One- Way ANOVA was used to analyze the differences in leadership traits among the five groups' psychological gender of them. The result confirms that there is significant physiological difference between male and female respondents of the study.

Differences in leadership traits between physiological gender of all participants: Here, the Independent-Samples T-Test was used to analyze the differences of physiological gender in the performance of leadership traits among all 336 respondents, because the Independent-Samples T-Test is used to compare the mean scores of two groups of different participants on a continuous variable(Pallant, 2011). Therefore, it meets the requirements of comparison between men and women. Moreover, if the significance level of Levene's test is larger than 0.05, this means that the data do not violate the assumption of equal variance, then Equal variances assumed should be used. And, as Sig. (2-tailed) are significant at 5% level of significance ($p<0.05$), then, there is significant difference between the two groups (Pallant, 2011). The result of variables used as a proxy as to measure leadership traits between physiological gender of all participants confirms the existence of leadership traits between physiological gender of all participants.

Differences in leadership traits among psychological gender of all participants

Here, One-Way ANOVA was used to analyze the differences of leadership traits of all participants in five psychological gender dimensions. There are two leadership traits with a p-value of less than 0.05, which are having a strong foresight and enjoying sharing successful experiences with subordinates. This means that the psychological gender (very masculine, a bit masculine, neutral, a bit feminine and very feminine) of all participants have significant difference in the performance of these two leadership traits.

The result confirms that, in terms of having a strong foresight, all participants whose psychological gender is a bit feminine are significant different from those who are very feminine and neutral respectively ($p < 0.05$). And, there is also a difference between very masculine and neutral, with a p-value of less than 0.05. What's more, all the participants whose psychological gender is very feminine and very masculine have great differences with a bit feminine and a bit masculine, respectively, in enjoying sharing successful experience with their subordinates.

Gender (physiological and psychological) differences in leadership traits of all leaders

According to the sample characteristics of the position, the number of all participants is 336, of which 84 participants are ordinary employees and 252 participants are in leadership positions (including 51 senior managers, 82 middle managers and 119 junior managers). Here, the participants in the leadership position are the objects to be analyzed, and the number is 252.

Like the above analysis method for all participants, Independent-Sample T-test and One-way ANOVA were implemented for differences analysis of all leaders. That is, the Independent-Sample T-test analyzed differences between the physiological genders, and One-way ANOVA analyzed differences among the physiological gender, and confirms the existence of physiological and psychological differences in leadership traits of all leaders.

Differences in leadership traits between physiological gender of all leaders： As shown in Table 2, there are significant differences in the performance of seven leadership traits between all

male and female leaders ($p < 0.05$). as well as delegate authority to subordinates. What's more, comparing the mean values of male and female in Table 3, we can state that men have a stronger sense of identity than women in the performance of these seven leadership traits.

Table 2. Independent-Samples T-Test of leadership traits between physiological gender of all leaders

Independent Samples Test						
		Levene's Test for Equality of Variances		t-test for Equality of Means		
Leadership traits	**Variances**	**F**	**Sig.**	**t**	**df**	**Sig (2-tailed)**
Have a strong foresight	Equal variances assumed	2.259	0.134	2.294	250	0.023
	Equal variances not assumed			2.287	243.575	0.023
Have professional knowledge for your current leadership positions	Equal variances assumed	1.640	0.202	2.217	250	0.028
	Equal variances not assumed			2.216	248.296	0.028
Have professional skills for your current leadership positions	Equal variances assumed	0.447	0.504	2.328	250	0.021
	Equal variances not assumed			2.322	245.385	0.021
Have a strong intuition	Equal variances assumed	1.962	0.163	1.995	250	0.047
	Equal variances not assumed			1.993	247.835	0.047
Can bear great pressure	Equal variances assumed	3.649	0.057	2.866	250	0.005
	Equal variances not assumed			2.860	245.485	0.005
Can control your behavior	Equal variances assumed	0.002	0.963	2.351	250	0.020
	Equal variances not assumed			2.337	236.415	0.020
Delegate authority to subordinates	Equal variances assumed	1.656	0.199	2.223	250	0.027
	Equal variances not assumed			2.216	243.102	0.028

Source: own construction

Table 3. Group Statistics of leadership traits between physiological gender of all leaders

Mean		Mean difference	Leadership traits
Male			**> Female (Physiology Gender)**
4.08	3.86	0.22	Have a strong foresight
4.16	3.93	0.23	Have professional knowledge for the current leadership positions
4.10	3.86	0.24	Have professional skills for the current leadership positions
4.17	3.98	0.19	Have a strong intuition
4.24	3.98	0.26	Can bear great pressure
4.19	3.96	0.23	Can control behavior
4.05	3.80	0.25	Delegate authority to subordinates

Source: own construction

Differences in leadership traits between psychological gender of all leaders： Here, One-Way ANOVA was used to analyze the differences of leadership traits of 252 leaders in five psychological gender dimensions. Table 4 shows that there are three leadership traits that have significant differences among five psychological genders ($p<0.05$), that is, they are passionate about working, can bear a lot of pressure and enjoy sharing successful experiences with subordinates. In addition, the multiple comparisons in Table 5 shows which specific psychological gender groups among the

five psychological genders are significantly different from each other. Among the three leadership traits, there are significant differences between 8 groups of psychological genders whose p-value is less than 0.05.

Table 4. One-way ANOVA of leadership traits between psychological gender of all leaders

ANOVA						
Leadership traits	**Grouping**	**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
Be passionate about working	Between Groups	6.241	4	1.560	2.443	0.047
	Within Groups	157.759	247	0.639		
	Total	164.000	251			
Can bear great pressure	Between Groups	5.152	4	1.288	2.415	0.049
	Within Groups	131.737	247	0.533		
	Total	136.889	251			
Enjoy sharing successful experiences with subordinates	Between Groups	37.923	4	9.481	3.959	0.004
	Within Groups	591.549	247	2.395		
	Total	629.472	251			

Source: own construction

Table 5. Multiple comparison of leadership traits between psychological gender of all leaders

Multiple Comparisons			
Leadership traits	**Dependent Variable**		**Sig.**
Be passionate about working	Very masculine	Very feminine	0.023
	A bit feminine	Very feminine	0.005
Can bear great pressure	Very masculine	Neutral	0.035
		Very feminine	0.006
Enjoy sharing successful experiences with subordinates	Very masculine	A bit masculine	0.005
		A bit feminine	0.003
	Very feminine	A bit masculine	0.012
		A bit feminine	0.010

Source: own construction

Specifically, Table 6 shows that in terms of the leadership trait of passion for work, the mean values of a bit feminine and very masculine leaders are relatively high, at 4.22 and 4.08, respectively, while the mean value for very feminine leaders is the lowest, at 3.75.

Table 6. Mean value of leadership traits between psychological gender of all leaders

Mean					Leadership traits
A bit feminine > Very masculine > A bit masculine > Very feminine > Neutral					Have a strong foresight
4.1	3.97	3.91	3.79	3.68	
Very feminine > Very masculine > Neutral > A bi masculine > A bit feminine					Enjoy sharing successful experiences with subordinates
3.59	3.46	3.26	2.87	2.72	

Source: own construction

Discussion

This study used Independent-Sample T-test and One-way ANOVA to analyze the data and test whether the above hypotheses are valid. For the analysis of physiological gender, we used Independent-Sample T-test to check whether H1 and H3 are supported, while One-way ANOVA was used to test psychological gender and the hypotheses put forward by H2 and H4.

We could conclude that there are great differences in the performance of a considerable number of leadership traits between men and women, so H1 is supported. Furthermore, reduce the scope of the object to focus on analyzing the leadership traits of all leaders. That there are seven leadership traits that differ significantly between men and women, so H3 is supported as well. In conclusion, we point out that there are great differences between men and women in the performance of leadership traits in the Internet promotion service industry in Guangdong, whether it is based on all staff as a whole or only focused on leaders. This conclusion is consistent with the view of (Kolpakov and Boyer, 2021) that there are great differences between male and female leaders in leadership behavior.

In addition to the above results of physiological gender, we also make a further analysis of psychological gender. we judge that the performance of most leadership traits is not great different among different psychological genders, that is, H2 is not supported. Similarly, Table 10 only shows that there are significant differences among the three leadership traits in different psychological genders, Most leadership traits do not vary greatly among the five psychological genders, so H4 is not supported either.

By comparing all the participants as a whole and all leaders, the agreement of male leaders is significantly stronger than that of female leaders in the seven leadership traits. It includes that male are more likely to agree that they have a strong foresight and intuition, can control their behavior and bear great pressure, have professional knowledge and skills for the current leadership position, as well as delegate authority to subordinates. (Kolpakov and Boyer, 2021) also pointed out that male leaders are more likely to focus on foresight and goals are usually achieved in a cost-effective way. In addition to these common characteristics, all male participants have a higher sense of identity that they can better control their emotions and set a good example for the team as well. (McKenna, Webb and Weinberg, 2020) proposed that when guiding the thoughts and actions of others, considering the understanding and use of our own emotions and those of others, this will undoubtedly affect the efficiency of practitioners. Yet, the previous literature is not consistent with the view of this paper, that is, women are usually better at controlling their emotions than men (Hall and Schmid Mast, 2008; Tsaousis and Kazi, 2013). Moreover, (Yaffe and Kark, 2011) pointed

out that leaders can establish role models that lead by example for expected behaviors, which is then imitated and adopted by the followers, thus promoting their better performance. In addition, there is an only one trait of leadership that all female participants are in stronger agreement than male, that is, they believe that women can do the same as men.

Although most of the leadership traits do not have significant differences in psychological gender, a few leadership traits derived from this study can also be used as a reference factor, that is, whether all participants as a whole or all leaders, people who are very feminine and very masculine are more willing to share their successful experiences with their subordinates. Compared with all participants of other genders, neutral participants had a lower sense of agreement with the trait of foresight. As leaders, neutral and very feminine people are less likely to be passionate about their work than other psychological genders and they do not tend to bear great pressure either. From this, we can further draw the conclusion that people who have no passion for work are more likely to be unable to withstand great pressure. Furthermore, all the participants as a whole detected that ten leadership traits varied greatly because of gender differences, but when the scope of the study is reduced to all leaders, the number of leadership trait differences decreased from ten to seven. It shows that the similarities of leadership traits increase among male and female leaders. That is, female leaders are more able to control emotions and are more willing to set role models for the team than all female participants, but female leaders relatively lack the belief that they can do the same as men. What's more, the two leadership trait differences among all participants due to different psychological genders turned into three differences because of the decrease the scope of object for all leaders. Specifically, leaders with different psychological genders are different in whether they can bear more pressure.

Conclusions, Recommendations, Limitations and Future research

This paper examines the differences in the performance of leadership traits in terms of physiological gender and psychological gender respectively. The results show that there are significant differences in physiological gender, but there is no significant difference in psychological gender. Therefore, the difference between psychological gender and physiological gender analysis results reflects that individual leadership traits can not only be determined based on physiological gender, but also consider the internal psychological characteristics of the individual. Leaders with different psychological genders have the similar performance in leadership traits. And these similarities will gradually make up for the differences in leadership traits brought about by physiological gender. Through the study of the literature, (Koenig *et al.*, 2011) suggested that the masculine feature of stereotypes may not be effective and influential leadership, but may require androgyny, which is a cultural mix of female and male behavior. It can bring greater flexibility and advantage to women and men as leaders. Therefore, male and female leaders can make up for the deficiency of physical gender by cultivating their own psychological characteristics. For example, female leaders should learn from men's more optimistic attitude towards things, constantly learn professional skills, enhance their confidence, delegate more work to subordinates, learn to relieve their stress and so on. On the other hand, male leaders should pay more attention to the emotional needs of their subordinates and establish a better relationship with their subordinates and partners. After then, continuously meet the requirements of androgyny in the leadership position, thus showing the most effective leadership ability.

Likewise, in addition to the integration of male and female leadership traits, the diversified characteristics of enterprises will also be conducive to open innovation. Here, (Svirina, Zabbarova and Oganisjana, 2016) proposed a similar view that social enterprises created by open innovation need to integrate gender and other diversity characteristics into the enterprise's board of directors and management team. Moreover, (Rodríguez-Fernández, Sánchez-Teba and Herrera-Ballesteros, 2021) believed that the study of gender and its organizational structure in enterprises should not be the result of specific social trends or needs but should be part of the challenge of achieving a more balanced society. That is, enterprises can innovate the organization structure and task allocation mechanism in a more open and inclusive manner. In that case, enterprises can select personnel according to the characteristics of different projects or tasks, considering the gender characteristics and gender balance of leaders and employees. This can not only improve the work efficiency of the enterprise, but also maximize the advantages of leaders and employees, stimulate their potential, performance and engagement.

In addition, enterprises can open an innovative promotion mechanism, that is, to promote employees according to their leadership traits. Ordinary employees also have leadership characteristics, so in order to expand the selection of corresponding leadership positions, enterprises could focus on promoting employees with strong leadership traits based on combining personal attributes, psychological gender, working ability and performance. This will help companies to screen suitable leaders more effectively.

There are limitations in this paper. On the one hand, the data source of this study is based on the self- assessment results of the participants, which leads to the one-sidedness of the survey results, so that the data is subjectively. Therefore, in order to make up for this subjectivity, future studies will also collect other people's assessments of the participant, that is, to determine the leadership traits of the participant or leader from the perspective of self-evaluation and others' evaluation. On the other hand, when analyzing the leadership characteristics of all the participants as a whole, it includes most of the leaders, which will lead to the failure to highlight some of the leadership traits of non-leaders. Therefore, the future research will collect a similar number of non-leaders and leaders, analyze and compare the two groups, so as to highlight the differences in the leadership traits between the two groups.

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Authors

Yao Ling
Doctoral School of Economic and Regional Sciences
Student
Hungarian University of Agriculture and Life Sciences, Gödöllő Campus
Yaoling422@gmail.com

Jingjing Wu
Doctoral School of Economic and Regional Sciences
Student
Hungarian University of Agriculture and Life Sciences, Gödöllő Campus
jingjing.wu.jj@gmail.com

Ildikó Rudnák
Institute of Agriculture and Food Economics Hungarian University of Agriculture and Life Sciences, 2100 Gödöllő, Hungary;
Rudnak.Ildiko@uni-mate.hu