Effects of Change Leadership on Corporate Efficiency and Employee Burnout

HONG JIANG¹, YULIN HUANG²

¹Lyceum of the Philippines University,
Manila,
PHILIPPINES

²Xingyi Normal College for Nationalities, Guizhou province, CHINA

Abstract: - This article is to examine the mechanisms by which Change Leadership affects corporate efficiency and employee burnout in the hospitality and tourism industry and the regulation mechanism of organizing citizenship behavior and employee empowerment in this process. Using quantitative research,moderating model, the data onto questionnaires of 372 individuals that are employees in the hospitality and tourism industry. Respondents reported their data on Change Leadership, employee burnout, organizing citizenship behavior, and employee empowerment. The authors found that Change Leadership has a very positive effect on corporate efficiency and organizational citizenship behavior. There is a significant regulatory effect of employee empowerment on the relationship between Change Leadership and employee burnout, and also between Change Leadership and corporate efficiency. There is still a gap between the research on the influence of organizing citizenship behavior on employee burnout, the role of organizing citizenship behavior and employee empowerment between Change Leadership and employee burnout, and the influence of Change Leadership on organizing citizenship behavior. This study is just to fill this gap between the basis of predecessors. It provides a reference value for enterprises to use Change Leadership to reduce employee burnout and improve corporate efficiency in the hospitality and tourism industry.

Key-Words: - Change Leadership, Corporate efficiency, Organizing citizenship behavior, Employee empowerment, Employee burnout

Received: April 29, 2023. Revised: September 7, 2023. Accepted: September 15, 2023. Published: September 29, 2023.

1 Introduction

The hospitality and tourism industry was hit hard during the new coronavirus epidemic, and after the epidemic, the question of how to rejuvenate employees and organizations through Change Leadership to bring the industry back to life is a current issue to be addressed. The hospitality and tourism industry belongs to the service industry and

employee burnout will undoubtedly hinder the development success of the and business. Employees' enthusiasm for their work is an important factor in the vitality of the business, so this article conducts a study on the mechanisms of Leadership's impact business Change performance and employee burnout based on the current status of the industry. To provide a realistic reference and reference for the leadership of the industry.

Books related to this study: Burn first proposed the concept of Change Leadership, [1], [2], [3], developed the concept, and, [4], proposed ways to measure Change Leadership. With the development of concepts and measurement methods, research on leadership has gradually increased. The study, [5], first proposed the term "organizational citizenship behavior" and gave a detailed explanation of the concept. In, [6], the authors elaborated on the significance of "employee empowerment" in their book and also provided an effective method of measuring the role of employee empowerment in enterprises.

Research on Change Leadership has gradually increased in recent years, but not much research has been conducted on the relationship between Change Leadership and corporate benefits, especially on the effects of these variables employee empowerment and organizing citizenship behavior. By searching the research results of Change Leadership in the past five years, the relationship Change Leadership between and corporate performance, Change Leadership and employee burnout, employee authorization, and organizing citizenship behavior. The main relevant studies are the following.

Change Leadership provides positive moral support to reduce nurse burnout and turnover, [7]. Change Leadership relieves teacher burnout and its action process, [8]. The relationship between the role of Change Leadership on employee knowledge sharing and creativity, [9]. Change Leadership plays an important role in promoting engagement, satisfaction, and performance in service teams, [10]. As an intervention variable, how organizational justice affects the relationship between leadership practice and organizing citizenship behavior, [11]. Examining the role of Change Leadership in reducing the risk of burnout among hospital employees, [12]. The effect of Change Leadership on nurse leader satisfaction and burnout, [13]. The effect of work characteristics on the relationship between Change Leadership and employee

well-being: this study argues that Change Leadership leads to changes in well-being indicators of employees, [14]. The effect of Change Leadership on employee performance mediated by organizing citizenship behavior. The study results are that Change Leadership and employee participation affect employee performance, and Change Leadership affects organizational citizenship behavior, [15].

To summarize the aforementioned research results, there are papers on the impact of Change Leadership on employee burnout in the education and healthcare industries: there are also research results on the impact of Change Leadership on organizational citizenship behavior in the manufacturing industry, but in the hospitality and tourism industries, there are no relevant research results, and the research on the mechanism of the effect of Change Leadership on management employee burnout through performance and organizational citizenship behavior and employee empowerment is still a blank research area. This study hopes to build on the previous work and make some innovations in these studies.

2 Theories and Hypotheses

Initially, [1], conducted a study and concluded that transformational leaders can create an atmosphere of mutual trust in the organization, make employees realize the significance of their work, stimulate their own potential, and work together for team goals.

In, [2], the author argues that Change Leadership is demonstrated in the relationship between leaders and staff. The relationship is one of mutual benefit, where the leader expresses to the employee a sense of purpose for the work by portraying a good vision so that the employee can belong and can be happily engaged in the work.

In, [4], the authors refined the theory and measurement of Change Leadership, which consists of four components:

(1) Individualized Consideration. "When a leader shows individualized consideration they are

also aware of the unique talents that each follower brings to the workplace and support them in developing and demonstrating these key skills and behaviors. This leads the follower to aspire to develop further and they show intrinsic motivation when performing their work."

- (2) Inspirational Motivation "is the degree to which a leader articulates an appealing vision that inspires and motivates others to perform beyond expectations. Team spirit is usually enhanced by this kind of leadership."
- (3) Idealized Influence. "Transformational leaders that show idealized influence are role models for their followers because they engage in high standards of ethical behavior. They are deeply respected by followers, who usually place a great deal of trust in them. They provide followers with a sense of vision and mission."
- (4) Intellectual Simulation. "It is the extent to which transformational leaders challenge assumptions, take risks and solicit followers' ideas. The leader encourages followers to think things out on their own and encourages followers to think independently so that followers become autonomous."

The study, [3], specified the 7 principles of Change Leadership as follows:

- (1)Principle of Simplification.
- (2)Principle of Motivation.
- (3)Principle of Facilitation.
- (4)Principle of Innovation.
- (5)Principle of Mobilization.
- (6)Principle of Preparation.
- (7)Principle of Determination.

According to [4], research from the four dimensions, Change Leadership cares about employees' individual needs, attaches importance to developing employees' working and thinking skills, motivates subordinates to propose solutions to existing work situations, encourages subordinates to innovate in their work, and shares ideas, opinions and information among employees, which improves employees' team consciousness and creativity, creates a positive spirit, enhances the effectiveness

of leadership, and ultimately eliminates the negative working condition of employees and promotes the healthy and harmonious development of employees and enterprises. Based on the above theory and analysis, [10], I propose hypothesis one.

H1: Change Leadership has a positive effect on corporate efficiency

In, [5], the author first introduced the word "organizing citizenship behavior". He said organizing citizenship behavior as individual behavior that is not explicitly and directly linked to the normal reward system and can make organizations operate more effectively.

According to, [5], organizing citizenship behavior should be composed of five factors, altruistic due namely behavior, diligence, sportsmanship, humility, and civic ethics. Altruistic behavior refers to the willingness of employees to spend time to help colleagues to complete tasks or to prevent mistakes that may occur in the work of colleagues; due diligence refers to the employee's performance exceeds the basic requirements of the organization, he is able to plan his work early and set a time to complete the work; sportsmanship refers the employee in an undesirable environment, but still positive to face the job. The individual will sacrifice his own interests for the benefit of the work-group to which he belongs; humility and courtesy mean that the employee treats others with respect; Civic ethics refers to employees taking the initiative to care for and participate in various affairs within the organization, such as actively reading internal documents and making suggestions for the organization. Employees with such behavior show that they have regarded themselves as a member of the organization.

According to, [5], organizing citizenship behaviors can improve enterprise performance as they accumulate over time. Specifically, organizing citizenship behavior makes the team more positive, the working environment pleasanter, and the organization more adaptable to environmental changes. In such an environment, employee productivity and performance will be further

improved.

Based on the above theory and, [11], the following hypotheses were formulated.

H2: Change Leadership has a positive effect on organizing citizenship behavior

H3: Organizing citizenship behavior plays a moderating role in the relationship between Change Leadership and employee burnout

In another study, the authors viewed employee empowerment as a process to increase employees' intrinsic motivation, [6]. The two scholars believed that we should start from four aspects to increase employees' intrinsic motivation: (1) Job meaning: A highly meaningful job can lead to a high level of organizational commitment and work engagement.

- (2) Self-efficacy: reflects employees' subjective evaluation and judgment of their abilities.
- (3) Job impact: employees' perception of the extent to which their work can have a positive impact on organizational strategy and business performance.
- (4) Self-determination: reflects employees' autonomy at work and is a necessary factor in intrinsic motivation. triggering These four dimensions reflect positive work role experiences. Therefore, applying these four dimensions to practice, it is possible to find that an employee is said to be empowered when the organization member feels that (1) my work is meaningful, (2) I am capable of performing my work, (3) I can choose how to perform my work, and (4) my work behavior can impact organizational effectiveness.

In, [6], the authors argued that employees that have an empowering experience are more motivated, proactive, and energetic at work, which leads to higher satisfaction and organizational commitment. Accordingly, I propose the following hypothesis.

H4: Employee empowerment moderates the effect of Change Leadership on employee burnout

H5: Employee empowerment moderates the effect of Change Leadership on corporate efficiency.

3 Methodology

In this article, the authors collect data on 372

employees in the hospitality and tourism industry, 208 (55.91%) males and 164 (44.09%) females, with 59.62% of employees working in this industry for less than 3 years, 23.08% for 4-6 years, 7.69% for 7-9 years, and 9.62% for more than 10 years. The percentage of employees from private enterprises is 69.23%, and the percentage of employees from state-owned enterprises is 30.77%. Questionnaires were sent and filled out via the Internet.

For a Change Leadership (independent variable X), we measured four dimensions, and the mean of the data onto each of these four dimensions was taken as the independent variables X1, X2, X3 and X4. Employee burnout and corporate efficiency were taken as the mean of the data for the dependent variables Y1 and Y2 respectively. Organizing citizenship behavior was taken as the mean of the data by moderator M, and employee empowerment was taken as the mean of the data by moderator Z.

3.1 Research Model

The moderating model was used in this article. Studying the influence of Change Leadership X on employee burnout Y1 and corporate efficiency Y2, whether it will be disturbed by the moderating variable employee empowerment Z and organizing citizenship behavior M. That is, whether the influence amplitude when the employee is authorized obviously different from that when the employee is not authorized.

Step 1: Identify data categories of X and M, and select appropriate research methods.

The regulation effect needs to be realized by corresponding research methods when conducting specific research; When analyzing the moderating effect, Y1 and Y2 must be quantitative data. In general, X is quantitative data, and the moderating variable Z and M can be categorical or quantitative data.

Step 2: Adjustment effect test

The moderating effect is usually studied using hierarchical regression, if X, Z and M are categorical data, using a multivariate analysis of

variance (usually a two-way analysis of variance).

4 Results and Discussion

Our findings provide a better understanding of how Change Leadership and its dimensions affect corporate efficiency and organizing citizenship behavior by capturing data on Change Leadership and corporate efficiency. The authors found Change Leadership has a significant positive effect on corporate efficiency and organizational citizenship behavior. There is a significant regulatory effect of employee empowerment on the impact relationship between Change Leadership and employee burnout and between Change Leadership and corporate efficiency.

In Table 1 (appendix) regression analysis is used to measure the effect of Change leadership (independent variables X1, X2, X3, X4) on corporate efficiency (dependent variable Y2) separately.

As can be seen from Table 1 (appendix), when X1, X2, X3, and X4 affect Y2, the standardized path coefficient values are all less than zero, and the path is significant at the level of 0.01, indicating that X1, X2, X3, X4 have a significant positive influence on Y2. The results of data analysis are consistent with hypothesis 1 and can prove that hypothesis 1 holds.

From Table 2 (appendix), the effect of Change Leadership on organizing citizenship behavior was analyzed. Regression analysis was adopted to measure the effects of Change Leadership (independent variables X1, X2, X3, X4) on organizing citizenship behavior (moderating variable M) separately.

As can be seen from Table 2 (appendix), when X1, X2, X3, and X4 affect M, the standardized path coefficient values are all less than zero, and the path is significant at the level of 0.01, indicating that X1, X2, X3, X4 have a significant positive influence on M.The results of data analysis are consistent with hypothesis 2 and can prove that hypothesis 2 holds.

Through the moderating effect analysis, the moderating effect model of organizing citizenship

behavior (moderating variable M), Change Leadership (independent variable X), and employee burnout (dependent variable Y1) was developed.

From Table 3 (appendix), the independent variable (X)showed significance (t=2.382.p=0.019<0.05). It means that Change Leadership X has a significant effect on employee burnout Y1. The interaction terms between X and M show significance (t=-2.318, p=0.023<0.05). Meaning that X has an obvious difference in the different levels of the moderating variable (M) when it comes to the influence of Y1, so organizing citizenship behavior(moderating variable M) has a significant moderating role on the influence relationship between Change Leadership X and employee burnout Y1, so hypothesis 3 holds.

The author analyzed the moderating effect of employee empowerment in the relationship between Change Leadership and employee burnout. Through the moderating effect analysis, the moderating effect model of employee empowerment (moderating variable Z), Change Leadership (X), and employee burnout (Y1) were developed.

In Table 4 (appendix), the variable (X) showed significance (t=2.382, p=0.019<0.05). It means that Change Leadership X has a significant effect on employee burnout Y1. The interaction between X and Z shows significance (t=-3.474, p=0.001<0.05). It shows that the influence of X on Y1 at different levels has a significant difference in the size of the moderating variable Z, so employee empowerment Z has a significant moderating role on the influence relationship between Change Leadership X and employee burnout Y1, so hypothesis 4 holds.

The author analyzed the moderating effect of employee empowerment in the relationship between Change Leadership and corporate efficiency. Through the moderating effect analysis, the moderating effect model of employee empowerment (moderating variable Z), Change Leadership (X), and corporate efficiency (Y2) were developed.

In Table 5 (appendix), for model 1, the purpose is to investigate the effect of the independent

variable (X) on the dependent variable (Y2) when the interference of the moderating variable (Z) is not considered, the independent variable (X) shows significance (t=8.412, p=0.000<0.05). It means that X has a significant influence relationship to Y2.

The interaction terms between X and Z in model 3 are significant (t=-4.267, p=0.000<0.05). This indicates that there is a significant difference in the magnitude of the effect of X on the moderating variable (Z) when the effect of Y2 is at different levels, i.e. indicating a moderating effect. The difference in the magnitude (slope) of the effect of X on Y2 when Z is employed at different levels is specific to the moderating effect. Therefore, hypothesis 5 holds.

5 Implications and Limitations

Based on the hospitality and tourism industry, this article fills the academic gap in the research on the relationship between Change Leadership, enterprise performance, and employee burnout in this industry. This article studies the important moderating role of organizational citizenship behavior and employee empowerment in this influencing mechanism and makes theoretical innovations and explores new research perspectives based on previous studies. Meanwhile, this article provides a reference value for enterprises to use Change Leadership to manage employee burnout and improve corporate efficiency, especially in the hospitality and tourism industry.It gives us a deeper understanding of the positive meaning of Change Leadership and the significant moderating effect of employee empowerment and organizing citizenship behavior.

Limitations of this research include collecting data from a single source, only in the hospitality and tourism industry, there are limitations on the representativeness and generalizability of the sample. In addition, since respondents fill in the questionnaire by answering questions online, they have not received training for leadership knowledge, and they may not have a deep understanding of the professional content of the questionnaire. Although

the measurements of this article have minimized errors,self-reported measurements still have limitations that may lead to bias, and future studies should try to adopt multiple sources of data to avoid these problems.

6 Conclusion and Future Directions

This article demonstrates that Change Leadership has a positive effect on corporate efficiency and a negative effect on employee burnout through a study of the hospitality and tourism industry data. In this mechanism of action, organizational citizenship behavior and employee empowerment can play an important positive moderating role, so companies should pay attention to the important role of organizational citizenship behavior and employee empowerment in the management process to promote the improvement of corporate performance. Future research will expand the study to more industries, especially those with current and future development potential, in anticipation of bringing useful references to the development of the industry in management theory and practice.

References:

- [1] Bass B.M. (1985). Leadership and Performance beyond Expectations[M]. New York: Free Press.
- [2] Wilmore Thomas. (2001) Meeting the need for employees' development in the 21st century [J]. SAM Advanced Management Journal, Vol. 66, Issue 2, pp.27-35.
- [3] Blane H. (2017). 7 Principles of Transformational Leadership: Create a Mindset of Passion, Innovation and Gronth. Brilliance Publishing Inc.
- [4] Bass B. M., Avolio B. (1994). Improving organizational effectiveness through transformational leadership. Sage Publications Inc.
- [5] Organ D. W. (1983). Organizational Citizenship Behavior: The good soldier

- syndrome [M]. Lexington, MA: Lexington Books.
- [6] Thomas K. W., Velthouse B. A. (1990). Cognitive elements of empowerment:An interpretive model of intrinsic task motivation. Academy of Management Review, Vol. 15, No. 4, DOI: https://doi.org/10.5465/amr.1990.4310926.
- [7] Wu X., Hayter M., Lee A. J., Yuan Y., Li S., Bi Y., Zhang L., Cao C., Gong W., Zhang Y., (2020), "Positive spiritual climate supports transformational leadership as means to reduce nursing burnout and intent to leave", Journal of nursing management, 2020, Vol. 28, Vol.4, pp.804-813, DOI: 10.1111/jonm.12994
- [8] Tian Y., Guo Y. G. (2022), "How Does Transformational Leadership Relieve Teacher Burnout: The Role of Self-Efficacy and Emotional Intelligence", Psychological reports, Published online: 16 September 2022 https://doi.org/10.1177/00332941221125773
- [9] Żywiołek J., Tucmeanu E. R., Tucmeanu A. I., Isac N., Yousaf Z.. Nexus of Transformational Leadership, Employee Adaptiveness, Knowledge Sharing, and Employee Creativity. Sustainability. 2022; 14 (18), 11607. DOI: https://doi.org/10.3390/su141811607
- [10] Cavazotte F., Moreno V., Chehab Lasmar L. C., (2020) Enabling customer satisfaction in call center teams: the role of transformational leadership in the service-profit chain, The Service Industries Journal, Vol. 40, Issues 5-6, pp.380-393,
 - DOI: 10.1080/02642069.2018.1481955.
- [11] Dalgin T., Talsak S. (2015), "The Effects of Managers Leadership Practices on Organizational Citizenship Behaviors and Intervening Role of Organizational Justice: Sample of Accommodation Sector in Mugla", Gaziantep University Journal of Social Sciences, 2016, Volume 15, Issue 2, pp.359-393,
 - DOI: https://doi.org/10.21547/jss.256719.
- [12] Chen J., Ghardallou W., Comite U., Ahmad N.,

- Ryu H. B., Ariza-Montes .A, Han H., Managing Hospital Employees' Burnout through Transformational Leadership: The Role of Resilience, Role Clarity, and Intrinsic Motivation. Int. J. Environ Res Public Health. 2022 Sep 1; 19 (17):10941.
- [13] Sheila A. B. (2022), "The impact of transformational leadership on nurse faculty satisfaction and burnout during the COVID-19 pandemic: A moderated mediated analysis", Journal of advanced nursing, Sep 2022, pp.99-e112, 2665-3068,

DOI: 10.3390/ijerph191710941.

- DOI: https://doi.org/10.1111/jan.15198.
- [14] Teetzen F., Bürkner P. C., Gregersen S., Vincent-Höper S., The Mediating Effects of Work Characteristics on the Relationship between Transformational Leadership and Employee Well-Being: A Meta-Analytic Investigation. Int J Environ Res Public Health. 2022 Mar 7; 19 (5): 3133.

 DOI: 10.3390/ijerph19053133.
- M. (2022), "The Effect [15] Rohmah Transformational Leadership and Employee Engagement on Employee Performance Mediated by Organizational Citizenship Behavior (A Study at the State Bank of Indonesia Tulungagung)",International Journal of Sciences: Basic and Applied Research (IJSBAR).

Contribution of Individual Authors to the Creation of a Scientific Article (Ghostwriting Policy)

The authors equally contributed to the present research, at all stages from the formulation of the problem to the final findings and solution.

Sources of Funding for Research Presented in a Scientific Article or Scientific Article Itself

No funding was received for conducting this study.

Conflict of Interest

The authors have no conflicts of interest to declare that are relevant to the content of this article.

Creative Commons Attribution License 4.0 (Attribution 4.0 International, CC BY 4.0)

This article is published under the terms of the Creative Commons Attribution License 4.0 https://creativecommons.org/licenses/by/4.0/deed.en_US

E-ISSN: 2224-2899 2117 Volume 20, 2023

Appendix

Table 1. Summary of regression coefficients

Regre	ssion coe	efficients								
	N	lon-normalized path coefficient		SE (CR)		p Normalized path coefficient				
				0.0	7.8	0.0	0.615			
1	2	0.716	92	09	00		0.013			
				0.0	8.7	0.0	0.657			
2	2	0.757	87	23	00		0.037			
				0.1	6.7	0.0	0.560			
3	2	0.682	01	58	00		0.500			
				0.1	6.6	0.0	0.555			
4	2	0.689	03	67	00		0.555			

Table 2. Summary of regression coefficients

R	Regression coefficients					
	Non-normalized path coefficient	S	E (CR)	Z	р	Normalized path coefficient
1	0.677	0 081	9	8.32	0.	0.644
2	0.735	0 075	3	9.86	0.	0.706
3	0.909	0 063	67	14.4 000	0.	0.825
4	0.941	0 062	65	15.1 000	0.	0.837

E-ISSN: 2224-2899 2118 Volume 20, 2023

Table 3. Results of moderating effect analysis

Results of moderating effect analysis (n=100) Model 2 Model 1 Model 3 Standard Standard Standard β β b b t β error error error 2.993 0.120 25.046 25.100 0.000** -0.000** constant 2.993 0.119 3.130 0.131 23.948 2.382 0.019* 0.234 0.703 0.298 2.358 0.020* 0.651 0.293 0.029* Χ 0.415 0.174 0.397 2.224 0.367 -0.304 0.255 0.256 -1.191 0.237 -0.200 -0.169 -0.660 0.511 -0.111 Μ X*M -0.305 0.132 -2.318 0.023* -0.232 0.055 R 2 0.068 0.118 Adjust 0.045 0.049 0.090 R 2 F (2,97)=3.557,p=0.032 F (1,98)=5.672,p=0.019 F (3,96)=4.269,p=0.007 f ∆R 2 0.055 0.014 0.049 Δf F (1,98)=5.672,p=0.019 F (1,97)=1.417,p=0.237 F (1,96)=5.372,p=0.023

dependent variable: Y1

^{*} p<0.05 ** p<0.01

Table 4. Results of moderating effect analysis

Results of moderating effect analysis (n=100)

	mod	lel1				model	2				model3					
	b	Standar d error	t	р	β	b	Stand ard error	t	р	β	b	Stand ard error	t	р	β	
constar	n .993	0.120	25.046	0.000**	-	2.993	0.117	25.529	0.000**	-	3.175	0.123	25.853	0.000**	-	
X	.415	0.174	2.382	0.019*	0.234	-0.075	0.281	-0.267	0.790	-0.042	-0.115	0.267	-0.430	0.668	-0.06	
<u> </u>						0.541	0.247	2.194	0.031*	0.348	0.668	0.236	2.827	0.006**	0.430	
<*Z											-0.427	0.123	-3.474	0.001**	-0.32	
R 2		0.055				0	.099				0	.200				
Adjust R 2		0.045				0	0.081				0	.175				
		F (1,98		F	(2,97)	=5.353,p	=0.006	F (3,96)=7.998,p=0.000								
∆R 2		0.055		0	0.045				0.101							
7 f		F (1,98)=5.672,	p=0.019		F	(1,97)	=4.813,p	=0.031		F	(1,96)	=12.066	p=0.001		
d	epen	dent var	iable: Y	′1												

Table 5. Results of moderating effect analysis

	Mod	del 1				Model 2						Model 3					
	b	Standard error	t	р	β	b	Standard error	t	р	β	b	Standard error	t	р	β		
constan	t 2.12	260.068	31.16	80.000*	*_	2.126	0.068	31.28	50.000*	*_	2.252	0.069	32.52	40.000*	*_		
Х	0.83	860.099	8.412	0.000*	*0.648	31.007	0.163	6.179	0.000*	*0.780	0.979	0.150	6.516	0.000*	*0.759		
Z						-0.188	30.143	-1.319	0.190	-0.167	7-0.100	00.133	-0.752	0.454	-0.08		
X*Z											-0.295	50.069	-4.267	7 0.000*	*-0.30		
R 2		0.419					0.430					0.520					
adjust R 2		0.413					0.418					0.506					
f		F (1,98)=7	70.762,	p=0.000			F (2,97)=36	6.519,p	=0.000			F (3,96)=3	4.735,p	=0.000			
∆R 2		0.419					0.010					0.091					
Δf		F (1,98)=7	70.762,	p=0.000			F (1,97)=1.	741,p=	0.190			F (1,96)=18	3.209,p	=0.000			
de	epend	lent variable	e: Y2														
*	p<0.0	5 ** p<0.01	L														

E-ISSN: 2224-2899 2120 Volume 20, 2023