

# Measuring Pro-Growth Working Environment: An Exploratory Factor Analysis

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# Measuring Pro-Growth Working Environment: An Exploratory Factor Analysis

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## ABSTRACT

This research will develop a new conceptual model that is Pro-growth Working Environment (PWE) from the perspective of Freud's theory of work and organization that is synthesized from the concepts of human

capacity and capability in work, work processes, and work environment.

This study used a survey method for 756 business start-up respondents in Indonesia and was tested using Exploratory Factor Analysis (EFA) with SPSS software. The EFA test results show that the concept of PWE can be measured by indicators of cognitive stimulation, supportive engagement, inspiring work-life, extra role willingness, and togetherness.

**Keywords:** Pro-growth Working Environment, Cognitive Stimulation, Supportive Engagement, Inspiring Work-Life, Extra Role Willingness, Togetherness.

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## INTRODUCTION

Studies on work-life have been carried out by many scientists, one of which was carried out by Sigmund Freud in 1930 to work that inspired other scientists. Work can be a fun activity, as well as a painful burden for humans. At first glance, this statement seems to contradict, but Freud provided a very logical explanation. To complete a job requires creativity and effort; this is the painful side of the burden. However, when the work produces work and achievement, then this is pleasure or happiness.

Many people do not value work activities as a path to happiness. Humans often associate pleasure with materialistic instincts, such as sexual urges and aggressiveness (pleasure principle). Freud believes that as mature human beings need to understand that they have a responsibility to society, and the fact is that if the pleasure principle becomes dominant in society, this damages the social fabric of society.

Society needs contributions from human life (reality principle); therefore, adult humans must be able to deny the pleasure principle and accept the reality principle. Humans must be able to change their sexual libido (pleasure principle) into "libido" to produce work for the community, through work that is their responsibility in the organization so that humans can enjoy the work, which Freud refers to as capacity to work (Diamond, 1996).

## LITERATURE REVIEWS

The scientists examined that capacity to work is the capacity that a person has to work and is one of the dimensions of work performance; in other words that through the capacity to work, followers can complete their work as expected. Capacity to work includes abilities, age, health, knowledge, skills, intelligence, level of education, endurance, stamina, energy level, motor skills (Blumberg & Pringle, 1982).

Besides, a study conducted by the Australian Social Security Act (1991) provides an understanding that work also requires the capability to work, which is a combination of capacity and ability that shows a person's ability to complete their work so that someone can work continuously even when they have to work independently (Gillespie, 2011).

Every job in the organization certainly has a work process as a guide to the implementation of work that needs to be

understood so that someone can complete it well. First is the complexity of the job, where every worker must be encouraged to have the skills needed by the job (technical job requirements). Second is the social context of work, which is how one must cooperate and interact socially in workgroups. The third is worker autonomy, whether a person is given the authority to settle independently or in a group. From the results of the study, it appears that organizations that have interactive (participative) work have more significant opportunities to make followers or workers grow both cognitively, affective, and behavior (Crouter, 1984).

In work processes that are oriented towards interactive work patterns, it will usually emphasize the personal development of followers, the promotion of work relationships, the provision of job opportunities or opportunities that encourage followers to become more proficient, making the quality of work-life so that a work environment will be created which is conducive for followers (Elizur & Shye, 1990; Liou, Sylvia, & Brunk, 1990). The work environment becomes essential and needs to be considered by the organization (organizational environment) because it will determine the organization's actions to move. It is not enough to look at the work environment in an organization from one perspective, because it will limit future views. In general, an organization's work environment can be understood as a harmonious work environment (harmony environment) where the organizational rhythm is more stable and a challenging work environment (challenging environment) where the organization and the people in it are required always to be adaptive to change (Frishammar, 2014).

This demand then encourages followers (creative self-efficacy) to give birth to new ideas (innovative work behavior) through the process of innovation in the work environment (innovation environment) which certainly has an impact on work results and follower achievement (Dziallas, 2018; Newman, Tse, Schwarz, & Nielsen, 2018).

The formation of a work environment in an organization is influenced by leadership style, for example, transformational leadership (Cheung & Wong, 2011; Nielsen & Daniels, 2012; Sandvik Alexander, 2018). Then the work environment will form interactions between leaders and followers, including determining the level of creativity of a follower's performance that may be preceded by the formation of

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psychological empowerment (Afsar & Masood, 2017; Bin Saeed, Afsar, Shahjehan, & Imad Shah, 2019; Hughes, Lee, Tian, Newman, & Legood, 2018; Jha, 2017; Matsuo, 2019; Meyerson & Kline, 2007; Seibert, Wang, & Courtright, 2011; Spreitzer, 1995; Uhl-Bien, Riggio, Lowe, & Carsten, 2014; Zimmerman, 2000).

Through the concepts that have been described, it can be synthesized a new concept, namely, Pro-growth Working Environment, which has a meaningful work environment that encourages personal growth characterized by empowering interactions, a passion for progress, with challenging responsibilities.

Pro-growth Working Environment has three components that influence its formation. The component explains the dimensions of the Pro-growth Working Environment as follows ((Dziallas, 2018; Elizur & Shye, 1990; Frishammar, 2014; Gillespie, 2011; Liou et al., 1990; Newman et al., 2018):

1. Challenging tasks, namely the availability of challenging work or tasks that can be measured through indicators:
  1. Achievement-oriented is the work or task that is target-oriented, as measured through statements:
    1. My works or tasks are target-oriented (PWE-1).
    2. My works or tasks encourage me to do more (PWE-2).
  2. Cognitive stimulation is a job or task that always stimulates new ideas, which are measured through statements:
    1. My works or tasks always stimulates critical thoughts or new ideas (PWE-3).
    2. My works do not trap me in routine (PWE-4).
2. Empowering dynamics, namely the dynamics of the relationship between leaders, and empowering coworkers, which can be measured through indicators:
  1. Supportive engagement is a work-life interaction that supports each other, which can be measured through statements:
    1. In my work environment, there is an atmosphere of mutual support from both the leader and my colleague (PWE-5).
    2. In my work environment, there is a fair work competition (PWE-6).
  2. Inspiring work life is the interaction of work-life that always gives inspiration and encouragement, which is measured in the following statement:
    1. In my work environment, there is a relationship between the leader and colleagues, who always inspire me to work better (PWE-7).
    2. In the work environment, I reprimand each other if there are errors to be able to work better (PWE-8).
3. Progressive spirit, which is the spirit of improving one's abilities continuously and capacities through robust collaboration, which can be measured through indicators:
  1. Extra roles willingness is the spirit always to be willing to help coworkers outside their primary responsibilities, as measured through statements:
    1. I am always enthusiastic about being willing to help my colleagues outside the primary responsibilities of my work (PWE-9).
    2. I am willing to work outside my mandatory work time (PWE-10).
  2. Togetherness is the spirit of cohesiveness always to solve problems together, as measured through statements:

1. I am always passionate about building cohesiveness in solving problems together (PWE-11).
2. I participate in activities organized by my company (PWE-12).

### 2. SEARCH METHOD

Factor analysis is one of the statistical analyzes used to provide relatively simple descriptions by reducing the number of variables called factors. Factor analysis is a procedure for grouping items or variables based on similarity, which is indicated by a high correlation value. Items that have a high correlation value will form a crowd of factors. The principle underlying factor analysis is to simplify the description of the data by reducing the number of variables/dimensions. Factor analysis is a statistical method used to explain the variability between observable variables (manifest variables) or correlated variables with the number that represents the number of unobserved variables called factors. For example, suppose eight observable variables illustrate the variation of two unobservable variables. The analysis factor traces these variations in response to the unobserved variable (latent variable). The observed variables are modeled as a linear combination of factors plus errors. Information about interdependencies between observed variables can then be used to reduce the number of variables. Initial factor analysis is used for psychometrics and is used in behavioral sciences, and other fields (Costello & Osborne, 2005; Fabrigar, Wegener, MacCallum, & Strahan, 1999; Tabachnick & Fidell, 2019).

Exploratory Factor Analysis (EFA) is a statistical method used to build a structural model that consists of a set of many variables. EFA is one of the factor analysis methods to identify the relationship between manifest variables or indicator variables in constructing a construct. EFA is used in conditions where researchers do not have preliminary information or hypotheses that must be grouped into any variable set of indicators that have been made. So the researcher departs from the indicator (manifest) then forms a variable. EFA is also used in conditions where latent variables have unclear indicators. One latent variable indicator may overlap with other latent variable indicators (Asparouhov & Muthén, 2009; Henson & Roberts, 2016; Reio & Shuck, 2014).

This study uses SPSS software to analyze EFA. The input used is data from indicator variables. Because there is no assumption as to where the indicators will cluster, usually in the EFA analysis, it is unknown how many latent factors or variables will be formed. Measures that indicate that an indicator is included in a particular indicator in the EFA is the value of the loading factor. When the value of loading an indicator is higher than a specific factor, then the indicator can be grouped into these factors (Hayton, Allen, & Scarpello, 2016; Tabachnick & Fidell, 2019). The study used a sample of 756 respondents who were business start-up employees in Indonesia.

### RESULTS AND DISCUSSIONS

The EFA test requirements are as follows (Fabrigar et al., 1999; Hayton et al., 2016; Henson & Roberts, 2016; Reio & Shuck, 2014; Tabachnick & Fidell, 2019; Watkins, 2018):

1. KMO and Bartlett's Test values must be high (minimum > 0.5)
2. Matrix components must be in 1 column
3. If there are numbers contained in 2 columns, then the indicator must be discarded, then reprocessed until the matrix data is in 1 column.

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From data processing, 756 respondents who obtained the results as in table 1 and table 2 as follows.

Table 1. KMO and Bartlett's Test (Sequence 1)

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.919
Bartlett's Test of Sphericity	Approx. Chi-Square	3248.460
	df	66
	Sig.	.000

Table 2. Componen Matrix (Sequence 1)

	Component	
	1	2
PWE11	.762	
PWE7	.748	
PWE9	.723	
PWE5	.711	
PWE12	.696	
PWE8	.661	
PWE2	.658	.457
PWE3	.640	
PWE10	.629	
PWE6	.606	
PWE4	.595	
PWE1	.455	.704

Extraction Method: Principal Component Analysis.  
a. 2 components extracted.

In table 1, the KMO and Bartlett's Test scores show 0.919, which means the results meet the requirements, but in table 2, there are PWE 1 and PWE 2 indicators which are in both columns, so these two indicators must be excluded from the data processing.

After issuing the PWE 1 and PWE 2 indicators, the data processing can be repeated with the same steps as the results shown in table 3 and table 4 below.

Table 3. KMO and Bartlett's Test (Sequence 2)

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.916
Bartlett's Test of Sphericity	Approx. Chi-Square	2723.923
	df	45
	Sig.	.000

Table 4. Componen Matrix (Sequence 2)

Component Matrix <sup>a</sup>	
	Component
	1
PWE11	.766
PWE7	.759
PWE9	.740
PWE5	.723
PWE12	.709
PWE8	.673
PWE10	.647
PWE3	.613
PWE6	.610
PWE4	.608

Extraction Method: Principal Component Analysis.  
a. 1 components extracted.

In table 3, the KMO and Bartlett's Test scores show 0.916, which means the results meet the requirements, and in table 4, all the measurement indicators are in one column only, so the test in this second stage is declared to have met the requirements.

### CONCLUSIONS

Through the results of the EFA test above, it can be concluded that the measurement of the concept of Pro-growth Working Environment (PWE) can be done with the following indicators:

1. Cognitive stimulation
2. Supportive engagement
3. Inspiring work life
4. Extra role willingness
5. Togetherness.

In future studies, the concept of PWE can be used to examine the relationship between antecedents and consequences variables in the same context as this study and different settings.

### REFERENCES

1. Afsar, B., & Masood, M. (2017). Transformational Leadership, Creative Self-Efficacy, Trust in Supervisor, Uncertainty Avoidance, and Innovative Work Behavior of Nurses. *The Journal of Applied Behavioral Science*, 54(1), 36-61. doi: 10.1177/0021886317711891
2. Asparouhov, T., & Muthén, B. (2009). Exploratory Structural Equation Modeling. *Structural Equation Modeling: A Multidisciplinary Journal*, 16(3), 397-438. doi: 10.1080/10705510903008204
3. Bin Saeed, B., Afsar, B., Shahjehan, A., & Imad Shah, S. (2019). Does transformational leadership foster innovative work behavior? The roles of psychological empowerment, intrinsic motivation, and creative process engagement. *Economic Research-Ekonomska Istraživanja*, 32(1), 254-281. doi: 10.1080/1331677x.2018.1556108
4. Blumberg, M., & Pringle, C. D. (1982). The Missing Opportunity in Organizational Research: Some



## Measuring Pro-Growth Working Environment: An Exploratory Factor Analysis

- Implications for a Theory of Work Performance. *Academy of Management Review*, 7(4), 560-569.
5. Cheung, M. F. Y., & Wong, C. S. (2011). Transformational leadership, leader support, and employee creativity. *Leadership & Organization Development Journal*, 32(7), 656-672. doi: [10.1108/01437731111169988](https://doi.org/10.1108/01437731111169988)
  6. Costello, A. B., & Osborne, J. (2005). Best practices in exploratory factor analysis: four recommendations for getting the most from your analysis. *Practical Assessment, Research, and Evaluation*, 10(7). doi: [10.7275/jyj1-4868](https://doi.org/10.7275/jyj1-4868)
  7. Crouter, A. C. (1984). Participative Work as an Influence on Human Development. *JOURNAL OF APPLIED DEVELOPMENTAL PSYCHOLOGY*, 5, 71-90.
  8. Diamond, M. A. (1996). Book Review: The Psychodynamic of Work and Organization. *Administrative Science Quarterly*, 41(1), 184-186.
  9. Dziallas, M. (2018). How to evaluate innovative ideas and concepts at the front-end? *Journal of Business Research*. doi: [10.1016/j.jbusres.2018.05.008](https://doi.org/10.1016/j.jbusres.2018.05.008)
  10. Elizur, D., & Shye, S. (1990). Quality of Work Life and its Relation to Quality of Life. *APPLIED PSYCHOLOGY: AN INTERNATIONAL REVIEW*, 39(3), 275-291.
  11. Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., & Strahan, E. J. (1999). Evaluating the Use of Exploratory Factor Analysis in Psychological Research. *Psychological Methods*, 4(3), 272-299.
  12. Frishammar, J. (2014). Organizational Environment Revisited: A Conceptual Review and Integration. *International Studies of Management & Organization*, 36(3), 22-49. doi: [10.2753/imo0020-8825360302](https://doi.org/10.2753/imo0020-8825360302)
  13. Gillespie, S. (2011). Employment and Support Allowance Work Capability Assessment review. United Kingdom: MS Society.
  14. Hayton, J. C., Allen, D. G., & Scarpello, V. (2016). Factor Retention Decisions in Exploratory Factor Analysis: a Tutorial on Parallel Analysis. *Organizational Research Methods*, 7(2), 191-205. doi: [10.1177/1094428104263675](https://doi.org/10.1177/1094428104263675)
  15. Henson, R. K., & Roberts, J. K. (2016). Use of Exploratory Factor Analysis in Published Research. *Educational and Psychological Measurement*, 66(3), 393-416. doi: [10.1177/0013164405282485](https://doi.org/10.1177/0013164405282485)
  16. Hughes, D. J., Lee, A., Tian, A. W., Newman, A., & Legood, A. (2018). Leadership, creativity, and innovation: A critical review and practical recommendations. *The Leadership Quarterly*, 29(5), 549-569. doi: [10.1016/j.leaqua.2018.03.001](https://doi.org/10.1016/j.leaqua.2018.03.001)
  17. Jha, S. (2017). Mediation of superior-subordinate relationship and a climate of innovation on psychological empowerment. *International Journal of Productivity and Performance Management*, 66(7), 932-947. doi: [10.1108/ijppm-12-2015-0195](https://doi.org/10.1108/ijppm-12-2015-0195)
  18. Liou, K. T., Sylvia, R. D., & Brunk, G. (1990). Non Work Factors and Job satisfaction Revisited. *Human Relations*, 43(1), 77-86.
  19. Matsuo, M. (2019). Antecedents of psychological empowerment: the effects of developmental experience, learning goal orientation and authenticity. *Asia Pacific Journal of Human Resources*. doi: [10.1111/1744-7941.12228](https://doi.org/10.1111/1744-7941.12228)
  20. Meyerson, S. L., & Kline, T. J. B. (2007). Psychological and environmental empowerment: antecedents and consequences. *Leadership & Organization Development Journal*, 29(5). doi: [10.1108/01437730810887049](https://doi.org/10.1108/01437730810887049)
  21. Newman, A., Tse, H. H. M., Schwarz, G., & Nielsen, I. (2018). The effects of employees' creative self-efficacy on innovative behavior: The role of entrepreneurial leadership. *Journal of Business Research*, 89, 1-9. doi: [10.1016/j.jbusres.2018.04.001](https://doi.org/10.1016/j.jbusres.2018.04.001)
  22. Nielsen, K., & Daniels, K. (2012). Does shared and differentiated transformational leadership predict followers' working conditions and well-being? *The Leadership Quarterly*, 23(3), 383-397. doi: [10.1016/j.leaqua.2011.09.001](https://doi.org/10.1016/j.leaqua.2011.09.001)
  23. Reio, T. G., & Shuck, B. (2014). Exploratory Factor Analysis. *Advances in Developing Human Resources*, 17(1), 12-25. doi: [10.1177/1523422314559804](https://doi.org/10.1177/1523422314559804)
  24. Sandvik Alexander, M. (2018). Intellectual stimulation and team creative climate in a professional service firm. *Evidence-based HRM: a Global Forum for Empirical Scholarship*, 6(1), 39-53. doi: [10.1108/EBHRM-01-2017-0006](https://doi.org/10.1108/EBHRM-01-2017-0006)
  25. Seibert, S. E., Wang, G., & Courtright, S. H. (2011). Antecedents and Consequences of Psychological and Team Empowerment in Organizations: A Meta-Analytic Review. *Journal of Applied Psychology*, 96(5). doi: [10.1037/a0022676.supp](https://doi.org/10.1037/a0022676.supp)
  26. Spreitzer, G. M. (1995). Psychological Empowerment In The Workplace: Dimensions, Measurement, And Validation. *Academy of Management {numnl}*, 38(5).
  27. Tabachnick, B. G., & Fidell, L. S. (2019). *Using Multivariate Statistics* (Seventh edition ed.). Boston: Pearson Education.
  28. Uhl-Bien, M., Riggio, R. E., Lowe, K. B., & Carsten, M. K. (2014). Followership theory: A review and research agenda. *The Leadership Quarterly*, 25(1), 83-104. doi: [10.1016/j.leaqua.2013.11.007](https://doi.org/10.1016/j.leaqua.2013.11.007)
  29. Watkins, M. W. (2018). Exploratory Factor Analysis: A Guide to Best Practice. *Journal of Black Psychology*, 44(3), 219-246. doi: [10.1177/0095798418771807](https://doi.org/10.1177/0095798418771807)
  30. Zimmerman, M. A. (2000). *Empowerment Theory*. New York: Kluwer Academic/Plenum Publishers.

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