

The Impact of Glass Ceiling: Prospects For Women's Career Development in Bureaucracy and The Performance of Public Sector Organizations

I Gede Eko Putra Sri Sentanu¹

¹Department of Public Administration, Universitas Brawijaya, Indonesia

Abstract

This study examines the practice of responsive and gender-friendly policies to encourage women's career prospects in the bureaucratic structure to improve the performance of local government agencies of the Malang City Government. The theoretical approach used is Glass Ceiling, to explain the strategic position of women, especially related to the barrier factor of women in achieving the highest position in an organization. The purpose of this study was to analyze the effect of the relationship between the glass ceiling on women's career development in bureaucracy. This study uses a quantitative approach, namely explanatory research to answer the questions in this study with quantitative and qualitative analysis. The sample in this study was all of the Government agencies in Malang City which amounted to 43 units with 126 respondents. The quantitative analysis used was Partial Least Square (PLS) -SEM. The results of this study indicate that there is an influence between the Glass Ceiling on women's career development and the performance of local government agencies in Malang City Government.

Keywords: Glass Ceiling, Career Development, Performance, Local Government, Bureaucracy

INTRODUCTION

Along with the development of the advancement of science and technology, it places a condition that men and women can compete fairly for the progress of a nation. Quantitatively, the population of Indonesia is almost balanced, namely the female population 49.76% of the total Indonesian population as a whole [1]. In a gender perspective, the biological conditions that distinguish between men and women often have an impact on disparities in political, economic, and social affairs which are then embodied in the cultural order in society concerning the hierarchical aspects of the division of labor between men and women. This then developed into a social and political problem with the emergence of conditions of women's subordination by men so that the position of women is still marginalized compared to men in the public and domestic sectors [2][3][4][5][6]. The role of the government as a regulator is very important in encouraging policies that are friendly to women and equitable referring to the MDGs declaration, and the Beijing platform for action.

Government or bureaucratic institutions are important institutions in serving the interests of the community, where the bureaucracy is the bridge between the civil servant and the public to

get good and maximum public services. The civil servant has urgency as a motor of bureaucracy to create a good bureaucratic performance based on the principles of good governance including promoting gender-responsive development and public services [7]. Puskapol UI in their study stated that "a representative bureaucracy is more likely to accommodate various kinds of social problems ... Women need to be at the heart of government so that they can eliminate discrimination and promote women's position and integrate women in development and increase women's involvement" [8]. In terms of quantity, the proportion of female civil servant in Indonesia continues to increase, amounting to 32, 64% in 2015 [9]. Gaps also appear to be seen from the composition of structural positions in bureaucratic institutions. The results of the Puskapol UI study in 2012 showed that the proportion of men and women in structural positions within 34 ministries tended to be unbalanced, with only 22.38% of structural positions being filled by women [7][8]. The reality then suggests that there has been a phenomenon of "vertical bias" and "horizontal bias" in the composition of structural positions in the bureaucratic environment.

Seeing the reality of these conditions, this study examines the practice of responsive and gender-friendly policies to encourage women's career prospects in structural bureaucracy in city governments in Malang City. Which is the city of Malang is one of the largest metropolitan cities in East Java Province. With a population of 3 million

Correspondence address:

I Gede Eko Putra Sri Sentanu

Email : sentanu@ub.ac.id

Address : Jl. MT. Haryono No. 163 Malang, 65145

people has developed into a city with a center of business, trade, industry, tourism, and education in Indonesia. Many achievements produced by Malang City Government.

Based on this background, first, this study raises the issue of women's career proposition in gender-responsive bureaucracy in regional government to occupy the top structural position in the regional government bureaucracy on the performance of local government agencies based on the glass ceiling approach and its relationship to career development, which has not much is done in previous research, especially in Indonesia. Second, this study tries to combine research methodology techniques between quantitative and qualitative in analyzing and describing phenomena that occur in local governments in Malang City comprehensively. Third, the results of this study are expected to contribute both theoretically and practically in the development of good governance implementation, especially gender-responsive local governance. Based on these considerations, the researchers took the title "The Impact of Glass Ceiling: Prospects for Women's Career Development in Bureaucracy and Public Sector Organizational Performance (Study on Malang City Government)."

LITERATURE REVIEW

Glass Ceiling and Career Development, The advancement of women's careers, is a crucial discussion in the life of the organization. Many organizations are less able to apply gender equality in choosing who is the top leader in their organization, causing the top management position to be dominated by men. The phenomenon of the scarcity of women who occupy leadership positions is one of them caused by a patriarchal culture that classifies jobs based on gender and prioritizes men to occupy the top positions in the organization [10]. According to [11], the scarcity of female leaders is related to the existence of continuing prejudice and discrimination against women in the workplace. This indicates that even though women are now able to move to a higher level, at some point, they are stopped by unseen obstacles. Barriers that make it difficult for women to rise to top management positions are often described as glass ceilings [12]. Therefore it is important for decision makers to identify the main problems in the workplace to develop strategies and policies that can minimize the occurrence of the glass ceiling phenomenon and be able to provide opportunities for women to be able to achieve

success in a career. In order to identify the phenomenon of the glass ceiling, this study will focus on 3 indicators, namely individual, family, and organizational factors [13].

Career success for women can be seen as a medium to fulfill their needs and desires for achievement, achievement, and acquisition of power [13]. To achieve career success, career development is required in a dynamic work environment to identify specific characteristics and requirements that direct different people to achieve career success in various organizational structures [14][15]. The indicators used in this study are career focused, and attitudes toward organization [13]. Many organizations are struggling to maintain the best women and are considered the smartest in doing work. However, the phenomenon of the glass ceiling makes it difficult for organizations to maintain it [16], even though women can also work like men if there are no obstacles that hinder their career development. Based on the argument, the following hypothesis is formulated:

H1: The glass ceiling has a significant effect on career development

Career Development and Performance

The condition of the organization is dynamic and demands to always experience improvements on all sides and tends to be risky for employees because they can lose their jobs if they are unable to adapt to the changes. Nowadays, the security of a person's structural position in work is no longer measured by the presence or absence of work carried out or the size of the organization, but measured by a person's ability to develop the potential needed in the work environment. In this regard, career development is needed which is a process to be ready to be selected and continually making choices from various types of work available. Also, career development is also determined by dynamic interactions between individuals, contextual, mediating, environment and output factors [17][18]. Career development is one of the supporting factors for organizational success. According to the perspective of human resource management organizational success is often described through organizational performance and profitability [19,20]. Gilley and Gilley [19] explained that career development is a process of identifying employee interests, values, competencies, activities, and tasks needed to develop work skills and improve their performance. Based on these explanations, the following hypothesis is formulated:

H2: Career Development has a significant effect on Performance

Glass Ceiling and Performance

The primary purpose of human resource management in an organization is to provide learning for individuals and organizations related to development to improve organizational performance [20]. Also, increasing the number of women in senior leadership roles can also increase organizational success because gender diversity in senior leadership has been shown to have a positive effect on organizational performance [21][22]. The study of gender and leadership also shows that women have distinctive values to contribute as leaders [23][24][25]. But in reality, many organizations have not provided opportunities for women to take part in senior leadership positions due to the phenomenon of the glass ceiling. Glass ceilings are a barrier for women to reach the top management position of an organization. According to [22] when women cannot reach senior leadership positions because of gender discrimination, their work motivation and productivity will also be affected. Dreher [22] even warns that diversity in senior leadership positions is also needed to avoid the deadlock in thinking in decision making that might result from too much homogeneity in the leadership perspective. Based on this explanation, the following hypothesis is formulated:

H3: The Glass Ceiling has a significant effect on Performance

RESEARCH METHOD

This study uses a quantitative approach to answer the questions in this study. The results of the quantitative phase will explain statistically and test between variables that will provide support and support the results of quantitative research approaches.

Sample

The research sample involved in this study was the civil servant in all of the local government agencies in Malang City. The number of Local Government Agencies in Malang City in this study has 43 units, totaling 126 respondents. The reason for choosing the research location in the city is that the Malang City Government won the award as one of the 20 cities/districts with the best performance in Indonesia so that it can support the implementation of this research.

Operational Definition and Measurement

The variable used in this study consists of exogenous variables, namely Glass Ceiling (X) which has a barrier to mobility of women to be able to reach the top management position of an organization. The indicators used are individual factors, family factors, and organizational factors [26] and endogenous variables namely Career Development (Y1) which has the meaning of implementing and developing employee work whose indicators include career focus and behavior towards the organization [26] and Organizational Performance (Y2) which means the results of work achieved by an organization whose indicators consist of operational use, incentive use, and exploratory use [27]. The measurement scale used in this study was using the Likert scale with five measurements. The details of the five measures are, 1) strongly disagree, 2) disagree 3) neutral 4) agree and 5) strongly agree.

Data analysis method

Data analysis in this study uses inferential statistics such as validity and reliability, and descriptive analysis. Hypothesis testing in this study using SEM-PLS with WarpPLS 3.0 software. SEM-PLS is used because there are direct or indirect influences [28][29]. SEM-PLS can find out the influence of the research model with a relatively small sample and does not require a normality test and goodness of fit models and can be tested in a simple mode [30][31]. Evaluation of the PLS model using measurements and structural models. The data analysis technique can analyze the amount of influence directly and indirectly.

RESULT AND DISCUSSION

Based on the data collected, the number of respondents in this study amounted to 126 respondents who were civil servants in the Malang City Government. The majority of respondents in this study were female 87 people (69%) out of 126 respondents. The level of education of the Bachelor to be the majority in the respondents of this study amounted to 71 people (56.3%). The majority of age >46 years old amounted to 60 people (47.6%) and the majority of respondents who had work experience for >16 years worked as civil servants with several respondents 77 people (60.3%). This explanation can be seen in table 1 of the respondents' demographics.

Table 1. Responden's Demographics (N=126)

Notes	Num ber	(%)	Notes	Num ber	(%)
Gender:			Education:		
Male	39	31	High School	15	11,9
Female	87	69	Diploma	10	7,9
			Undergraduate	71	56,3
			Graduate	30	23,8
Age:			Length of Work:		
18-25 years old	14	11,1	< 5 years	14	11,1
26-35 years old	17	13,5	6-10 years	19	15,1
36-45 years old	35	27,8	11-15 years	16	12,7
> 46 years old	60	47,6	>16 years	77	60,3

Source: Processed by The Author

This study uses PLS-SEM which was initially tested for validity and reliability. The purpose of this study was to determine the impact of the glass ceiling on women's career development and its impact on organizational performance. The survey was conducted on 126 respondents who were civil servants in the city of Malang. The results are considered valid and reliable. The criteria in PLS-SEM are shown in table 2 below:

Table 2. Reliability Test Result and Test Validity

Composite Reliability	AVE	α	Variable	GC	WD	PO
0.869	0.765	0.842	GC	0.879		
0.839	0.858	0.782	WD	0.827	0.790	
0.883	0.933	0.854	PO	0.789	0.508	0.726

Source: Processed by The Author

The criteria for PLS-SEM were mainly evaluated from reliability and validity assessment. Reliability assessment was evaluated using Cronbach alpha and composite reliability where the recommended values ranged from 0.7 to 0.98. From table 1, it can be explained that all variables show higher results than the recommended minimum values, both for composite reliability or Cronbach's alpha. The second step is the assessment of validity which consists of two assessments of validity namely convergent validity and discriminant validity. Convergent validity is evaluated by the score of Average

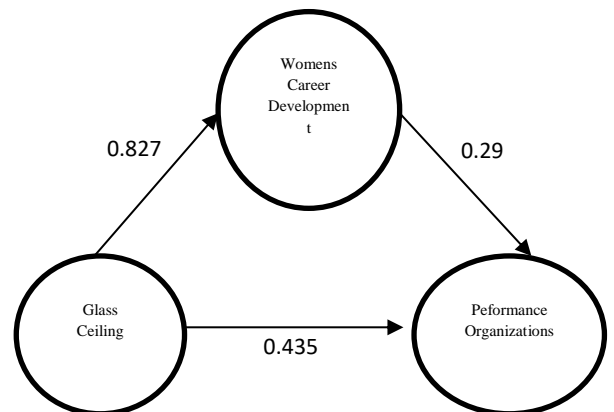
Variance Extracted (AVE score) where the cut-off value must be higher than 0.50. From the table above AVE, the output shows that all variables have met the cut-off value (> 0.50). The second validity was tested with discriminant validity using Fornell-Larcker criteria.

Table 2 also shows that the diagonal-bold value has a higher score than the off-diagonal value, so the broader Fornell criteria meet the cut-off value. The next step after reliability and validity has met the cut-off criteria; the model can be further processed for model evaluation. Model evaluation is used to analyze situations by identifying path coefficients both direct effects, indirect effects and total effects. The effect directly identifies the direct effect of a causal relationship between two variables. The indirect effect identifies the role of mediating variables in path modeling, while the total effect is concluded both direct and indirect effects. The model evaluation in this study is shown in table 3 and figure 1 below:

Structural Model**Table 3. The model Evaluation output table**

Hypot thesis	DIRECT			INDIRECT			Total		
	pat h	t- calc	Suppo rted	Pat h	t- calc	suppo rted	pat h	t- calc	suppo rted
GC \rightarrow WD	0.8	29.8					0.8	29.8	
	27	58	YES				27	58	YES
GC \rightarrow PO	0.4	3.21		0.3	2.7		0.7	22.7	
	35	9	YES	55	52	YES	90	33	YES
WD \rightarrow PO	0.4	2.82					0.4	2.82	
	29	7	YES				29	7	YES

Source: Processed by The Author

**Figure 1.** Explain the direct effects of each hypothesis.

From table 3 and figure 1 it can be explained that the direct effect of each hypothesis shows a significant effect indicated by the t-calc score using a critical ratio ($CR > 1.96$). The results of direct effects from the model show a significant effect on each hypothesis. The biggest coefficient is indicated by the effect of the Glass ceiling on women career development with a coefficient of 0.827. The effect of the glass ceiling on organizational performance shows a coefficient of 0.435. Finally, the influence of women's career development on organizational performance shows a coefficient of 0.429. From these results, it can be seen that the glass ceiling is a factor that has a more significant impact on organizational performance than women's career development. From table 3 also can be seen as indirect effects. Table 3 shows a significant effect on the indirect effect of the impact of the glass ceiling on organizational performance through women's career development with a coefficient of 0.355.

The Effect of Glass Ceiling on Women Career Development

Based on the results of statistical tests show that there is significant influence between the glass ceiling towards women career development. The influence shows that there are factors in the glass ceiling such as individual factors, family factors, organizational factors, and cultural factors that can influence women's career development. According to respondents, the majority of women agree that women can control existing barriers from individuals, families, organizations, and cultures so they can develop women's careers. The Glass ceiling shows that there are obstacles that are not visible, but respondents said they could overcome the problem. Barriers that make it difficult for women to rise to top management positions are often described as glass ceilings [12]. This study agrees with Weyer's opinion [11] that there is prejudice or discrimination against gender. Women can move at a higher structural level, but at positive momentum, the factors in the glass ceiling can affect women's careers. This research also shows that decision maker or authorized officials also need to identify factors that can become obstacles in the workplace so they can develop strategies and policies that can minimize the occurrence of the glass ceiling phenomenon and can provide opportunities for women to achieve success in career.

The Effect of Glass Ceiling on Organizational Performance

Based on the results of statistical tests, it shows that there is significant influence between the glass ceiling on organizational performance. This influence indicates that with the glass ceiling, respondents can overcome the obstacles that exist so that they can improve organizational performance. In this study shows that the presence of the glass ceiling is not an obstacle for women to enhance organizational performance in Malang City Government Organization. This research also indicates that the role of women as civil apparatus in community service is not limited by gender. This study agrees with [21] that the role of women can increase gender success in diversity so that organizational performance can improve.

This is also supported by Eagly's opinion [24] that women have particular values as leaders so that they can improve organizational performance. Women also have a leadership role in increasing organizational success due to gender diversity especially in senior leadership which has been shown to have a positive effect on performance [21][22]. Dreher explains that the Glass ceiling can also be a concern when women cannot reach senior leadership positions due to gender discrimination, so their working motivation and productivity will also be affected. Therefore leaders as decision makers also need to formulate policies or regulations that pay attention to gender equality.

According to [22], when women can achieve senior leadership positions due to gender discrimination, their motivation and work productivity will also be affected. Dreher also warns that diversity in senior leadership positions is also needed to avoid the deadlock in thinking of possible decision making obtained from too much homogeneity in the leadership perspective. Based on this explanation, it can be explained that the Glass Ceiling can affect the performance of the organization.

Effect of Career Development Women on Organizational Performance

Based on the results of statistical tests show that there is significant influence between women career development on organizational performance. The influence shows that the more significant the increase in women's career development the higher the performance of the organization. This research shows that with the existence of career development, women can

position themselves in the team. Women also do not feel discriminated by male positions. Women who are supported by the leader's policies can actualize themselves in developing their careers. Career development is supported by regulations and leaders can improve organizational performance.

This research is in line with [19] that career development is a process of identifying employee interests, values, competencies, activities, and tasks needed to develop work skills and improve performance. Identifying the capabilities and competencies of the state civil apparatus becomes important with the support of the leadership so that the organization's performance can also increase. The condition of the regional organization that continues to grow also has obstacles for its employees so that it requires employees to be able to adapt to changes. At this point, the state civil apparatus needs to clarify the status in developing their careers. Competence in terms of work becomes the most critical point compared to gender so that civil servant can adapt to changes in the existing work environment. This research is in line with the opinion of [20] that the development of women's careers can improve organizational performance.

CONCLUSIONS

This study explains that there is significant influence between the glass ceiling on career development and organizational performance. The influence explained that civil servants in the Malang City Government could overcome unseen obstacles within the Glass ceiling. The obstacles are in the form of individual, family, organizational and cultural factors. The existence of these obstacles does not become a fundamental problem in the Malang city civil apparatus, especially women.

The existence of this research shows that stakeholders can make policies that are friendly to women such as being able to adapt to organizational working hours. Women can also have equal opportunities for promotion when they have good achievements. The limitation of this study is that this study only shows the influence of the variables studied.

REFERENCES

- [1] BPS. Population Percentage by Province and Gender, 2009-2018 [Internet]. Gender. 2019 [cited 2019 Apr 28]. Available from: <https://www.bps.go.id/dynamictable/2018/03/20/1288/persentase-penduduk-menurut-provinsi-dan-jenis-kelamin-2009-2018.html>
- [2] Asnawi HS. Politik Hukum Kesetaraan Kaum Perempuan dalam Organisasi Masyarakat Islam di Indonesia. *Musawa* [Internet]. 2012;11(1):67–84. Available from: [ejournal.uin-suka.ac.id/pusat/MUSAWA/article/download/.../762%0ATranslate th](http://ejournal.uin-suka.ac.id/pusat/MUSAWA/article/download/.../762%0ATranslate%20th)
- [3] Maulana D. Partisipasi Politik Perempuan dan Kebijakan Publik di Provinsi Banten. *J Komun* [Internet]. 2013;2(2):32–40. Available from: [ejournal.uin-suka.ac.id/pusat/MUSAWA/article/download/.../762%0ATranslate th](http://ejournal.uin-suka.ac.id/pusat/MUSAWA/article/download/.../762%0ATranslate%20th)
- [4] Rahmatunnisa M. Affirmative Action dan Penguatan Partisipasi Politik Kaum Perempuan di Indonesia. *J Wacana Polit* [Internet]. 2016;1(2):90–5. Available from: <http://jurnal.unpad.ac.id/wacanapolitik/article/download/11049/pdf>
- [5] Schweissel. Sekadar Ada Pemberi Warna. In: Siregar AE, editor. *Sekadar Ada Pemberi Warna* [Internet]. Pergerakan Indonesia dan Komite Persiapan Yayasan Indonesia Kita; 2009. p. 1–74. Available from: [http://library.fes.de/pdf-files/bueros/indonesien/07003/jurnal edisi 6 kirim.pdf](http://library.fes.de/pdf-files/bueros/indonesien/07003/jurnal_edisi_6_kirim.pdf)
- [6] Silalahi U, Rachmawati T, Bernadus SEU. Kesetaraan Gender dalam Administrasi Publik: Peluang Pegawai Perempuan dalam Promosi Jabatan di Pemerintah Kota Bandung [Internet]. Bandung; 2016. Available from: [http://repository.unpar.ac.id/bitstream/handle/123456789/808/LPD_ULber_Kesetaraan Gender dalam-p.pdf?sequence=1&isAllowed=y](http://repository.unpar.ac.id/bitstream/handle/123456789/808/LPD_ULber_Kesetaraan_Gender_dalam-p.pdf?sequence=1&isAllowed=y)
- [7] Suharto DG. Kesetaraan. In: Hidayati, Si D, editor. *Proceeding Seminar Nasional Ilmu Sosial dan Ilmu Politik: Gender Politik dan Pembangunan di Indonesia*. Surakarta: UNS Press; 2015. p. 247–55.
- [8] Puskapol UI. Ketimpangan Keterwakilan Perempuan dalam Birokrasi [Internet]. Puskapol UI. 2012 [cited 2018 Mar 25]. p. 1–2. Available from: <http://www.puskapol.ui.ac.id/wp-content/uploads/2014/04/factsheet-ketimpangan-keterwakilan-perempuan-dalam-birokrasi.pdf>
- [9] KemenPPPA. *Dinamika Pertumbuhan Srikandi di Indonesia di Sektor Publik*

- [Internet]. Kemen PPPA. 2017 [cited 2018 Mar 25]. Available from: <https://www.kemenpppa.go.id/index.php/page/read/31/1357/dinamika-pertumbuhan-srikandi-indonesia-di-sektor-publik>
- [10] Broadbridge A. Contemporary Views in Gender and Management. *Gend Manag An Int J*. 2008;23(7):465–8.
- [11] Weyer B. Twenty years later: explaining the persistence of the glass ceiling for women leaders. *Women Manag Rev*. 2007;22(6):482–96.
- [12] Morrison, A. M., White, R. P., Velsor, E. & T, Leadership. C for C. Breaking the GC: Can women reach the top of America's largest corporations? MA: Addison-Wesley; 1987.
- [13] M. Bombuwela P, De Alwis A. Effects of Glass Ceiling on Women Career Development in Private Sector Organizations – Case of Sri Lanka. *J Compet*. 2013;5:3–19.
- [14] Lau VP, Shaffer MA. Career success: the effects of personality. *Career Dev Int* [Internet]. 1999 Jul;4(4):225–31. Available from: <http://www.emeraldinsight.com/doi/10.1108/13620439910270607>
- [15] Reklitis P, Trivellas P. Performance implications of aligning generic strategies with the business environment. *Int J Manag Decis Mak*. 2002;3:319–36.
- [16] Akrivos C, Ladkin A, Reklitis P. Hotel managers' career strategies for success. Johns N, editor. *Int J Contemp Hosp Manag* [Internet]. 2007 Mar 13;19(2):107–19. Available from: <http://www.emeraldinsight.com/doi/10.1108/09596110710729229>
- [17] Ismail M, Ibrahim M. Barriers to career progression faced by women. *Gend Manag An Int J* [Internet]. 2008 Feb 8;23(1):51–66. Available from: <http://www.emeraldinsight.com/doi/10.1108/17542410810849123>
- [18] Szymanski EM, Hanley-Maxwell C. Career development of people with developmental disabilities: An ecological model. *J Rehabil*. 1996;62:48–55.
- [19] Szymanski EM, Vancollins J. Career Development of People with Disabilities: Some New and Not-So-New Challenges. *Aust J Career Dev* [Internet]. 2003;12(1):9–16. Available from: <https://doi.org/10.1177/103841620301200103>
- [20] Gilley, Jerry W. GAM. Strategically Integrated HRD: A Six- Step Approach To Creating Results-Driven Programs Performance (New Perspectives in Organizational Learning, Performance, and Change) 2nd Edition. Cambridge: Perseus; 2002. 324 p.
- [21] Swanson, R. A., Holton EF. Foundations of Human Resource Development. San Francisco: Berrett-Koehler; 2001.
- [22] Catalyst. The Bottom Line: Connecting Corporate Performance and Gender Diversity [Internet]. 2004. Available from: <https://www.catalyst.org/research/the-bottom-line-connecting-corporate-performance-and-gender-diversity/>
- [23] Dreher G. Breaking the Glass Ceiling: The Effects of Sex Ratios and Work-Life Programs on Female Leadership at the Top. *Hum Relations - HUM RELAT*. 2003;56:541–62.
- [24] Eagly AH, Wood W, Diekmann AB. Social role theory of sex differences and similarities: A current appraisal. The developmental social psychology of gender. Mahwah, NJ, US: Lawrence Erlbaum Associates Publishers; 2000. p. 123–74.
- [25] Eagly, A.H. and Carli LL. Women and the Labyrinth of Leadership. *Harv Bus Rev*. 2007;85:62–71.
- [26] Galinsky E, Aumann K, Bond JT. Times are Changing: Gender and Generation at Work and at Home in the USA. In: Poelmans S, Greenhaus JH, Maestro MLH, editors. *Expanding the Boundaries of Work-Family Research: A Vision for the Future* [Internet]. London: Palgrave Macmillan UK; 2013. p. 279–96. Available from: https://doi.org/10.1057/9781137006004_13
- [27] Speklé RF, Verbeeten FHM. The use of performance measurement systems in the public sector: Effects on performance. *Manag Account Res* [Internet]. 2014 Jun 1 [cited 2019 Apr 28];25(2):131–46. Available from: <https://www.sciencedirect.com/science/article/pii/S1044500513000693?via%3Dihub>
- [28] 28. Gudono. Analisis Data Multivariat [Multivariate Data Analysis], 2nd Edition. Yogyakarta: BPFE; 2012.
- [29] D. Barclay, C. Higgins and RT. The partial least squares (PLS) approach to causal modelling: Personal computer adoption and use as an illustration. *Technol Stud Res Methodol*. 1995;2(2):285–309.
- [30] Latan H, Gudono J. Structural Equation Modeling: Applications Software TETRAD IV.

- 2012.
- [31] Sholihin M DR. Analisi SEM-PLS dengan WarpPLS 3.0 Untuk Hubungan Nonlinear dalam Penelitian Sosial dan Bisnis. Yogyakarta: Andy Offset; 2013.