

# The quantitative analysis of intellectual capital to architect's performance in Malang City-Indonesia

Cite as: AIP Conference Proceedings 2545, 020018 (2022); <https://doi.org/10.1063/5.0112020>  
Published Online: 14 October 2022

Breeze A. S. Marangka, Anwar Sanusi and Abdul Manan



View Online



Export Citation

Trailblazers.<sup>New</sup>  
Meet the Lock-in Amplifiers that measure microwaves.  
Zurich Instruments  
Find out more

# The Quantitative Analysis of Intellectual Capital To Architect's Performance in Malang City-Indonesia

Breeze A. S. Maringka<sup>1,a)</sup>, Anwar Sanusi<sup>2,b)</sup> and Abdul Manan<sup>2,c)</sup>

<sup>1</sup>*Doctoral Program of Economics, University of Merdeka Malang, East Java, 65416 Indonesia*

<sup>2</sup>*Faculty of Economics & Business, University of Merdeka Malang, East Java, 65416 Indonesia*

<sup>a)</sup> Corresponding author: breezemaringka@lecturer.itn.ac.id

<sup>b)</sup> anwar.sanusi@unmer.ac.id

<sup>c)</sup> abdul.manan@unmer.ac.id

**Abstract.** Organizational performance represents the success of a managerial endeavor and is a measure of the level of achievement that can be achieved. The objective of the study is to investigate the influence of intellectual capital, leadership and motivation on work performance. The survey was taken place The population of this study were among the architects in Malang, Indonesia area who are members of Ikatan Arsitek Indonesia (IAI) as the professional association of architects. The questionnaires are involved 186 architects taken as samples by census. The analysis technique for this study was descriptive analysis and quantitative analysis by using Structural Equation Modelling (SEM). The analysis result showed that leadership mediates the most decisive influence of intellectual capital on architect's work performance. It proves that intellectual capital can improve work performance when leadership implementation is carried out well.

## INTRODUCTION

The world economy globalization fosters the increase of architect services and business sector development in Indonesia. The growth of the building services industry has increased the level of rivalry between enterprises and architects. The existence of competition brings the need to have a competitive edge or competitive advantage over the other company. One way to have competitiveness lies on architects through the improvement of their performance. In this study, the architect's performance will be the primary focus because architects conceive any planning/development idea. In Indonesia, Architects have a unifying platform of *Ikatan Arsitek Indonesia/ IAI* (Indonesian Architects Association) as stated in Republic of Indonesia Law No.6 of 2017 concerning Architects. This law also regulates the duties and responsibilities of architects together with their rights. *Ikatan Arsitek Indonesia* has administrators in each province and certain cities/regencies, including in Malang where the management for the Malang Region is covering Malang City, Malang Regency and Batu City (*Malang Raya*).

These days, technological innovation and severe business competition force consulting firms and architects to adapt their business models. To keep their competitive edge, consulting firms and architects must make a quick change in their strategies from an original idea that prioritizes labor (a labour-based business) that get mixed with implementation steps into a knowledge-based business development that prioritizes solely on a specific feature as a designer architect or planner, thus make its main character more to a science.

Intellectual capital may be one of the "missing connections" in today's world, where intangible assets have become a source of wealth and firm success [1]. It is considered as the hidden value of an organization. Human capital, organisational capital, and customer capital are the three components of Intellectual Capital, which attempt to measure any intangible assets and re-evaluate knowledge utilised to increase business excellence.

The concept of Intellectual Capital has gotten a lot of attention from a lot of people, especially accountants. This problem forces accountants to look for more thorough information on issues connected to the management of Intellectual Capital, starting with how to identify it, measuring it, and reporting it in the annual report.

Nonetheless, studies on Intellectual Capital is still inconclusive, particularly when it comes to firm performance. Physical capital, according to Firer and William [2], is the most important factor that influences firm performance. As a result, there is no link between intellectual capital and company performance. However, Houari et al. stated a relationship between intellectual capital and the leadership process [3]. Darmayanti et al. also noted that intellectual competence and work motivation positively and significantly affect performance [4].

## **Performance**

Because of the importance of this factor in ensuring the company's success, organisational performance has become a fascinating topic. Employee performance (per-individual) and organisational performance (per-organizational) are two characteristics of performance, according to Pasolong [5.] Employee performance is the sum of an individual's work in an organisation, whereas organisational performance is the sum of an organization's labour. The performance of employees and the performance of the organisation are inextricably linked. The effectiveness of accomplishing organisational goals is inextricably linked to the organization's resources, which are led or run by employees who play active roles as actors in achieving the organization's objectives [5]. Furthermore, according to Keban, an organization's performance is measured by how well it can execute its objectives based on its previously established vision and mission [6]. Performance plays a significant role in increasing the fortune in business. According to Mahsun, performance is a description of the amount of implementation of an activity, programme, or policy in attaining the organization's goals, objectives, mission, and vision as expressed in the organization's strategic planning [7]. The organisational or corporate performance is a measure of the level of achievement that can be achieved and represents a manager's or entrepreneur's success.

Performance in an organization is an inseparable element while carrying out organizational tasks, both in government and private institutions.

## **Intellectual Capital**

Intellectual capital, as defined by Itami, is an intangible asset that encompasses technology, customer knowledge, brand name, reputation, and organisational culture, all of which are extremely valuable for a company's competitive advantage [8]. The definition is widely accepted by many research scholars in the field. Furthermore, according to Edvinsson, intellectual capital includes applied experience, organisational technology, customer interactions, and expertise, all of which can help a company gain a competitive advantage [9]. Edvinsson in his book explained in detail regarding the true value in institution or a company. The Organization for Economic Cooperation and Development also define intellectual capital as the economic value of two categories of a company's intangible assets: structural (organisational). Proprietary software and systems, distribution networks, and supply chains are all examples of structural capital. Human capital refers to internal and external human resources, such as customers and suppliers.

## **Leadership**

Leadership inside an organization plays a crucial role in determining the accomplishment (success) or failure of an organization. In other words, the organization and the leader are responsible when there is a job failure. A leader must be able to coordinate and instruct employees who have different feelings and minds and are of various types and characteristics, so the problem of leadership can't be seen as an easy task. A leader's ability can facilitate the company to meet its demand, which depends on the skills and capabilities of the leader. Leadership, according to Terry is an activity to influence people so that they can achieve organizational goals [10].

Furthermore, leadership is the ability to provide subordinates with direction and coordination (organizational members). This is to attain organisational goals and a willingness to lead group activities as the principal person in charge [11].

## **Motivation**

According to Maslow [12], motivation is a person's strength (energy) that can lead to perseverance and enthusiasm in completing a task, both from within the individual (intrinsic motivation) and from outside the individual (extrinsic motivation) (extrinsic motivation) . For this reason, it is necessary to describe basic human needs, the theoretical

framework of motivation, measurement of motivation, factors that influence motivation, and opinion differences among experts about motivation.

## DESCRIPTION OF METHOD

### 1. Architect performance

Architect performance is a measure of architect's quality work in the form of an architectural design document. The indicators are; concept design, pre-design, drawing work, design development, procurement of construction implementers and periodically supervision.

### 2. Intellectual capital

Intellectual Capital is a thinking ability and knowledge resources in the form of employees, customers, processes, or technology implemented in creating value for architects. The indicators are; human capital, customer capital, and structural capital.

### 3. Leadership

Leadership is the ability to provide direction and coordination to subordinates (organizational members) in achieving organizational goals and a willingness to be responsible for the group activities that this person leads. The indicators are being fair, providing advice, supporting objectives, playing as catalysts, creating a secure environment or feelings, representing organizations, playing as a source of inspiration, and valuing opinions among employees.

### 4. Motivation

Motivation is the driving force that creates a more intensive work enthusiasm for employees. The indicators are appropriate salary, job security, honour and recognition, fair treatment, a fascinating working atmosphere, and an attractive position in the company.

## Sample and Population of the Study

The population of this study was architects in Malang area who are members of the Ikatan Arsitek Indonesia (professional association of architects) for the Malang area with 186 architects as the sample. A census was chosen as the sampling technique.

## Data Analysis Technique

The analysis techniques applied in this study were descriptive analysis technique and quantitative analysis technique. Descriptive analysis technique was used to determine the respondent's characteristics which measured from a number of indicators stated in the questionnaire, while the Quantitative analysis technique was carried out through Structural Equation Modeling (SEM). Many studies have been conducted recently using SEM technique on different field/research areas [13 – 23].

## RESULT AND DISCUSSION

### 1. Normally test

From the data processing results, the CR multivariate value of 1.212 lies between -2.58 to 2.58, which can be concluded that the assumption of multivariate normality has been fulfilled. Thus the normality assumption required by SEM analysis was achieved.

### 2. Outlier test

The result of the outlier test by Mahalanobis Distance Squared method showed that the observed variable has a detected Mahalanobis Distance Observed Variable value smaller than the chi-square table ( $df = 23, \alpha = 0.001$ ), namely 49.25. Based on the analysis results, it is known that the 23 indicators used in this study have a Mahalanobis distance squared values smaller than 49.25, so none of them contains outliers.

### 3. Multicollinearity and singularity test

Based on the SEM output analyzed by AMOS showed that the determinant of the sample covariance matrix has a result of 0.224. It shows that the value is greater than zero, so there is no multicollinearity or singularity occur in this study. Therefore, from this evidence, this data is feasible to be used.

Following the literature review and study objectives, an overall structural model was developed as follows:

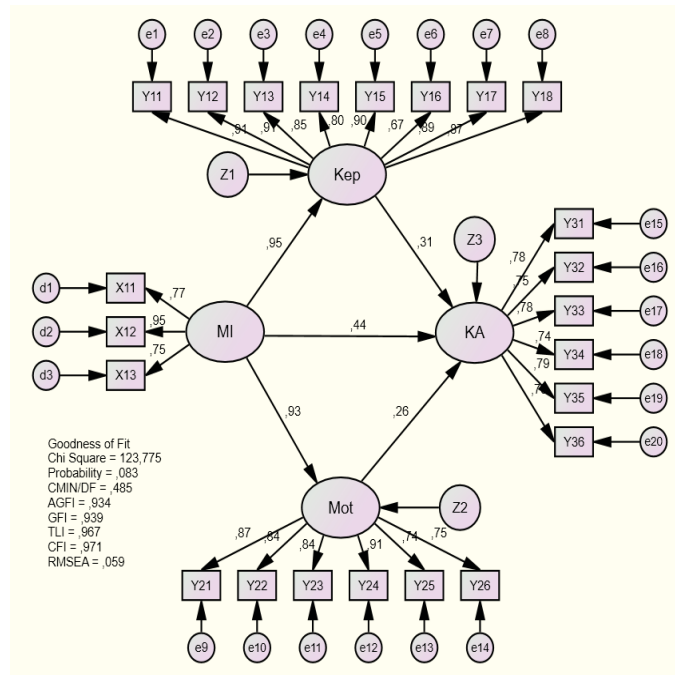


FIGURE 1. Result of SEM analysis

According to AMOS 18 computation for this SEM model, the goodness of fit indices is presented in Table 1. Then, the index values are compared with the critical value (cut-off value) of each index. The study shows very interesting result. A good model is expected to have the goodness of fit indices greater than or equal to the required value.

TABLE 1. The Result of Goodness of Fit for Modified Structural Model

Goodness of Fit Index	Cut-off Value	Model Result	Category
Chi-Square (df=225)	123,34	123,775	Good
Probability Chi-Square	≥ 0.05	0.083	Good
CMIN/DF	≤ 2.00	0.485	Good
RMSEA	≤ 0.08	0.059	Good
GFI	≥ 0.90	0.939	Good
AGFI	≥ 0.90	0.934	Good
CFI	≥ 0.95	0.967	Good
TLI	≥ 0.95	0.971	Good

Source: Primary Data Tabulation

Table 1 shows the evaluation results of Goodness of Fit for modified structural model. The results indicated that the overall model has met the requirements, thus it is proven that the model can be accepted.

Hypothesis testing in this study was carried out by assessing the p-value (probability). In statistics study, the p-value is the probability of gaining results at least as extreme as the observed results of a statistical hypothesis test. This is by assuming that the null hypothesis is correct. If the p-value is higher or equal to 0.05, then it is said there is a significant influence on the matter.

TABLE 2. The hypothesis tests.

Hip	Variables			Regression Coefficients			Result	
	Exogen	Mediation	Endogen	Direct Effect		Indirect Effect		
				Koef.	Prob.			
H <sub>1</sub>	Intellectual Capital	Leadership		0.95	0.00*	-	0.95	Accepted
H <sub>2</sub>	Intellectual Capital	Motivation		0.93	0.000*	-	0.93	Accepted
H <sub>3</sub>	Intellectual Capital	-	Architect Work Performance	0.44	0.042*	-	0.44	Accepted
H <sub>4</sub>	-	Leadership	Architect Work Performance	0.31	0.047*	-	0.47	Accepted
H <sub>5</sub>	-	Motivation	Architect Work Performance	0.26	0.023*	-	0.47	Accepted
H <sub>6</sub>	Intellectual Capital	Leadership	Architect Work Performance	0.44	0.042*	0.29	0.73	Accepted
H <sub>7</sub>	Intellectual Capital	Motivation	Architect Work Performance	0.44	0.042*	0.25	0.69	Accepted

\*Significant at  $\alpha = 5\%$

### The Description of Intellectual Modal, Leadership, Motivation, and Performance of Architect's

The concept of Intellectual Capital is formed by human capital, customer capital and structural capital. The most significant contribution to intellectual capital formation is human capital, which is described as a working state at full capacity. This shows that people are valuable assets in achieving pre-determined goals. It is aligned with Stewart's conception, which stated that intellectual capital is a material that has been formulated, caged, and leveraged to create wealth by producing high valuable assets [24].

Leadership is formed by acts of fairness, giving suggestions, supporting goals, catalysts, creating security, representing work teams, sources of inspiration, and respecting others. The most immense contribution to the formation of leadership is supporting goals, as reflected in the ability of the respondent to communicate fluently with the work team. This is in accordance with the conception of Terry, which states that leadership is an activity to influence people so that it can be directed to achieve organizational goals [10].

Motivation is formed from a suitable salary, job security, respect and recognition, fair treatment, enjoyable working atmosphere and attractive position. The most enormous contribution to motivating is an exciting work atmosphere, reflected in the respondent who is willing to work according to the agreed plan. This is consistent with Maslow's conception, which states that a person's strength (energy) can generate persistence and enthusiasm in carrying out an activity, both those originating from within the individual himself (intrinsic motivation) and from outside the individual (extrinsic motivation) [12].

Architect performance is produced by the ideas of design, pre-design, drawing work, design development, procurement of construction implementers, and periodic supervision, as the last concept suggests. Many researchers feel that this is a critical component. The design concept, which is expressed in the respondent's sketching of ideas, makes the most significant contribution to the formation of an architect's performance. The viewpoint is consistent with Brumbach's definition of performance, which stipulates that it is both a behaviour and an outcome [25]. The individual's behaviour, starting with an abstract and leading to action that resulted in the task being completed as planned.

## **The Influence of Intellectual Capital on Leadership**

Intellectual capital influences leadership, so the more intellectual capital you have, the better your leadership will be. Intellectual capital is knowledge and information that is used to produce value in the workplace. Knowledge in the production of intellectual property, as well as any experience that may be leveraged to create wealth, are examples of intellectual capital. The architect's intellectual capital encompasses all of his or her knowledge, organisation, and ability to add value and maintain a competitive advantage. As seen from the leadership, intellectual capital is a resource controlled by an architect that can subsequently bring rewards in the future. Every work accepted that will be assumed by the architects as the highest trust offered reflects the indicator of intellectual capital, which makes the most significant contribution in enhancing the quality of leadership produced from customer capital. Mutual understanding between consumer (customer) demands and producer (architect) inconsistency creates customer capital. This study's findings are consistent with those of Houari et al. [3], Almanaseer, and Matarnah [26], who claim that intellectual capital influences leadership.

## **The Influence of Intellectual Capital on Motivation**

Intellectual capital also profoundly affects motivation, which means that an increase in intellectual capital can elevate cause. Intellectual capital consists of human capital, customer capital and technology capital, which cannot be imitated and characterized as irreplaceable, three aspects that are powerful to create a competitive advantage. Human capital will increase whenever the organization keens enough to apply its architect's knowledge into its architecture creation. In contrast, customer capital is a component of intellectual capital that provides tangible value. This element takes form in the harmonious relationship owned by an architect with its partners, whether they come from reliable and qualified suppliers, loyal customers who are satisfied with the organization's services, or the organization's relationship with the surrounding community. As technological capital is the ability of architects to fulfil routine organizational and technical processes that support architects' efforts to produce optimal intellectual performance and overall business performance. From this explanation, it is clear that Intellectual Capital has the potential to advance the organization to increase work motivation. The result of this study conforms with Darmayanti [4], Sivalogathanan and Wu [27], which state that intellectual capital affects motivation.

## **The Influence of Intellectual Capital on Architect's Performance**

Intellectual capital affects the performance of an architect, which means that the higher the intellectual capital, the better the performance of the architect. The loading factor for intellectual capital that provides the most significant contribution in improving architect performance is customer capital. The architect's success is greatly influenced by their systematic efforts to maximize the values of his intellectual means. Edvinsson argues that intellectual capital is composed of applied experience, customer relations, organizational technology, and expertise in the workfield which can create competitive advantages [9]. Architects who have good intellectual capital are architects who have a competitive advantage.

By conducting intellectual capital management, it can be beneficial to provide information about architects' abilities, how to do their activities in a good way, giving information for recognizing architects progress in developing their knowledge, and providing information about the development of the knowledge source. The result of this study is in line with Helmiatin and Sutanto [28] also Siswanta [29] who state that intellectual capital affects performance.

## **The Influence of Leadership on Architect's Performance**

Architects' performance is affected by leadership, which implies that the better the administration, the better the architect's performance can be enhanced. Providing solutions, as evidenced by the success obtained via the execution of work procedures, is the factor loading indication that can make the most substantial contribution to increasing an architect's performance.

Leadership is an attempt to persuade a large group of people to achieve a common goal through effective communication, or to persuade them with instructions or demands. These activities elicit a response from others, resulting in better transformation, an important dynamic force that helps the organisation achieve its objectives by fostering self-confidence and support among subordinates.

Essentially, inside leadership, there are some elements such as the ability to direct, influence, or set the level of behaviour of other people or groups toward goals. Leadership tends to assign examples of behaviour so that its subordinates can imitate it, convey high expectations about the work of subordinates. This will, at the same time show high self-confidence in their subordinates, tend to behave that can bring up relevant motives that in accordance to the group mission. The result of this study is in line with Marpaung [30] and Muizu [31], which state that leadership affects performance.

### **The Influence of Motivation on Architect's Performance**

Motivation also affects the performance of an architect, which means that the higher the level of work motivation the better it can improve the performance of the architect. Based on the factor loading indicator, motivation that can enhance architect's performance is fair treatment, as reflected in carrying out assignments according to their competence. Motivation is an important variable, where it needs to accept great attention from the architects in their progress to improve the performance. Work motivation is an impulse that arises within architect's mind for doing or working on something because any external stimulus comes from the employer and the work environment, as well as the basis for fulfilling needs and satisfaction feeling, and realization of responsibility for assigned tasks. Suppose the behaviour led to a goal and equipped with ample motivation. In that case, the maximum achievement of targets is possible to obtain so that the implementation of the work can be done as well with expected result of the best performance from the architect be achieved.

In the heart of every architect lies an expectation of making an outstanding achievement, and of achieving this success requires quality resources. To create a qualified architect, it takes strong support towards its goal. This encouragement can be found in the form of motivating architects to improve their performance. Architects who have high motivation will work optimally until their work outcomes also increase. The result of this study is in line with Sitorus and Soesatyo [29] also Rahmayanti [32], which state that motivation affects performance.

### **The Influence of Intellectual Capital on Architect's Performance Through Leadership**

Leadership moderates the impact of intellectual capital on architect performance, implying that when leadership is deployed according to pre-determined operational norms, intellectual capital can increase architect performance. Intellectual capital is critical to architects' performance since it can determine the amount to which the progress and talents of architects can be used as a consideration for building organisations in the future. Intellectual capital is also important in increasing architect performance since it can be used by the organisation to establish expected performance and as an evaluation tool to assess architects' performance in order to develop a resilient architect who will be able to survive in the future.

### **The Influence of Intellectual Capital on Architect's Performance Through Motivation**

Motivation moderates the impact of intellectual models on an architect's performance, implying that intellectual capital can help architects perform better when they are highly motivated at work. Motivation is giving inner encouragement to make other parties take certain actions and create a series of incentives aimed at others and themselves. Thus, through this encouragement, hopefully, they can act towards the desired goal. An architect's motivation begins with a need, desire and urges to work to achieve those needs or objectives. This explanation indicates the magnitude of the urge (drive), effort, intensity, and willingness to sacrifice to achieve goals. The stronger the motivation, the higher the performance. Motivation for architects plays a vital role in improving performance. Therefore, it is necessary to motivate architects to elicit better and optimum performance from them.

## **CONCLUSIONS**

1. Structure capital, human capital, and customer capital all influence intellectual capital. Human capital, which is defined as working to the fullest, makes the most substantial contribution to intellectual capital production. Leadership is formed from being fair, giving suggestions, supporting goals, catalysts, creators of security, representatives of work teams, sources of inspiration and respect. The most significant contribution to leadership formation is supporting goals, which is reflected in the respondent who can communicate smoothly with the work team. Motivation is formed from appropriate wages, job security, respect and recognition, fair treatment, an



exciting work atmosphere and attractive positions. The most significant contribution to motivating is an enjoyable working atmosphere, which is reflected in the respondent working according to the agreed plan. Design, pre-design, drawing work, design development, procurement of construction executives, and periodic supervision all contribute to an architect's performance. The design concept, which is expressed in the respondent's sketching of ideas, makes the most significant contribution to the formation of Architect's performance.

2. Leadership is influenced by intellectual capital; this phrase demonstrates that intellectual capital is a resource possessed by an architect that can give future benefits, as evidenced by his leadership. The findings of this study agree with those of Houari et al. [3] According to Almanaseer and Matarneh [26], intellectual capital has an impact on leadership.
3. Intellectual capital has the potential to improve architect's performance so it able to increase work motivation too. The result of this study is in line with Darmayanti et al., [4], Sivalogathan and Wu [27] stated that intellectual capital affected motivation.
4. Intellectual capital is a combination of practical experience, organisational technology, customer relationships, and expertise that can help an architect gain a competitive advantage and improve his or her performance. The result of this study is in line with Helmiatin [28] and Sutanto also Siswanta [33] stated that intellectual capital affects performance.
5. Leadership is a way of influencing people with instructions or commands, or actions that cause others to respond and be willing to be directed to better changes that impact the architect's performance. The result of this study is in line with Marpaung [30] and Muizu [31] stated that leadership affects performance.
6. Work motivation is an impetus that arises within an architect's mind to carry out activities ignited by external stimulus, both from the employer and the work environment. This also includes the basis for fulfilling needs and feelings of satisfaction and completing responsibility for the tasks given and carried out within the organization that can improve the architect's performance. The result of this study is in line with Sitorus and Soesatyo [29] also Rahmayanti [32] stated that motivation affected performance.
7. When leadership is successfully executed, it mediates the effects of intellectual capital on architect performance, which means that intellectual capital owned by the leader can boost architect performance.
8. Motivation moderates the impact of intellectual capital on architect performance, implying that intellectual capital can help architects perform better when they are highly motivated to complete their work.

## RECOMMENDATION

1. Benefits for the science's development.

In establishing the concept of improving architect's performance related to leadership and motivation, it is necessary to develop and improve ways of utilizing human capital to improve the architect's performance to achieve goals through an enjoyable working atmosphere when realizing or working on a design concept.

2. Benefits for the Architects.

Architects as a human capital need to improve their performance through training and work operational standards. By training for architects in the framework of drafting design concepts, there is necessary to introduce the latest materials and up to date technology.

3. Benefits for further researches.

The result of this study can be used as a reference in conducting further research related to the field of architect's performance improvement influenced by intellectual capital through leadership and motivation aspects such as training and competency factors.

## REFERENCES

1. Young et al, Organization for Economic Co-Operation and Development (OECD), "International symposium for measuring and reporting intellectual capital: experience, issue, and prospects," Amsterdam, 2009.
2. Steven Firer & William, Intellectual Capital And Traditional Measures Of Corporate Performance, [Journal of Intellectual Capital](#), 2003, vol 4(3): page 348-360
3. Houari et al, "The impact of leadership patterns on the development of intellectual capital in the educational sector in The Kingdom of Bahrain," [Research Journal of Finance and Accounting](#), 2015, vol. 6, no.2.
4. Darmayanti, Ni Putu, I Wayan Bagia, and I Wayan Suwendra, "Pengaruh kompetensi intelektual dan motivasi berprestasi terhadap kinerja pegawai pada Perusahaan Daerah Air Minum (PDAM) di Kabupaten Gianyar," *E-*

- Journal Bisma, Ganesha Education University, Departement of Management, , 2014, vol. 2*
5. Harbani & Paramudia Pasolong Kepemimpinan birokrasi, Pusat Kajian & Pendidikan dan Latihan Aparatur Negara Lan Makassar, Indonesia, 2008
  6. Yermias T. Keban, "Enam dimensi strategis administrasi publik: konsep, teori, dan isu," Yogyakarta, Gaya Media, 2004.
  7. Mohamad Mahsun, "Pengukuran kinerja sektor publik," Yogyakarta, BPFE, 2006.
  8. H. Itami, "Mobilizing invisible assets," London, United Kingdom, Harvard University Press, 1987.
  9. L. Edvinsson and M. Malone, "Intellectual capital: realizing your company's true value by finding its hidden brainpower," New York, Harper Collins, 1997.
  10. George R. Terry, "Principles of management," 6th Edition, Illinois, Richard D. Irwin Homeworrd, 1972.
  11. Mamduh Hanafi, "Manajemen," 3th Edition, Yogyakarta, Universitas Gajah Mada, 2011.
  12. Maslow, A. H. , A theory of human motivation. [Psychological Review](#), 1943, 50(4), 370–396.
  13. Wonjoon Kim, A study on the subjective feeling affecting tactile satisfaction of leather in automobile: A structural equation modeling approach, [International Journal of Industrial Ergonomics](#), Volume 84, 2021, 103167,
  14. Caterina Cruciani, Gloria Gardenal, Ugo Rigoni, Trust-formation processes in financial advisors: A structural equation model, *The Quarterly Review of Economics and Finance*, Volume 82, 2021, Pages 185-199, ISSN 1062-9769,
  15. Hongbiao Yin, Shenghua Huang, Applying structural equation modelling to research on teaching and teacher education: Looking back and forward, *Teaching and Teacher Education*, 2021, 103438, ISSN 0742-051X,
  16. Ali Hauashdh, Junaidah Jailani, Ismail Abdul Rahman, Najib AL-fadhali, Structural equation model for assessing factors affecting building maintenance success, [Journal of Building Engineering](#), 2021, volume 44, 102680, ISSN 2352-7102,
  17. Kiki Farida Ferine, Reza Aditia, Muhammad Fitri Rahmadana, Indri, An empirical study of leadership, organizational culture, conflict, and work ethic in determining work performance in Indonesia's education authority, [Heliyon](#), 2021, volume 7, Issue 7, e07698, ISSN 2405-8440,
  18. Robert Mai, Thomas Niemand, Sascha Kraus, A tailored-fit model evaluation strategy for better decisions about structural equation models, [Technological Forecasting and Social Change](#), 2021, volume 173, 121142, ISSN 0040-1625,
  19. Pushpa Choudhary, Nishant M. Pawar, Nagendra R. Velaga, Digvijay S. Pawar, Overall performance impairment and crash risk due to distracted driving: A comprehensive analysis using structural equation modelling, [Transportation Research Part F: Traffic Psychology and Behaviour](#), 2020, volume 74, pp 120-138, ISSN 1369-8478,
  20. Ariadna Monje Amor, Despoina Xanthopoulou, Nuria Calvo, José Pablo Abeal Vázquez, Structural empowerment, psychological empowerment, and work engagement: A cross-country study, [European Management Journal](#), 2021, ISSN 0263-2373,
  21. Di Yang, Kun Xie, Kaan Ozbay, Hong Yang, Fusing crash data and surrogate safety measures for safety assessment: Development of a structural equation model with conditional autoregressive spatial effect and random parameters, [Accident Analysis & Prevention](#), 2021, volume 152, 105971, ISSN 0001-4575,
  22. Ardarn Khunsoonthornkit, Vinai Panjakajornsak, Structural equation model to assess the impact of learning organization and commitment on the performance of research organizations, [Kasetsart Journal of Social Sciences](#), 2018, volume 39 (3), pp 457-462, ISSN 2452-3151,
  23. Maryam Fakhari, Vida Vahabi, Rima Fayaz, A study on the factors simultaneously affecting visual comfort in classrooms: A structural equation modeling approach, [Energy and Buildings](#), 2021, volume 249, 111232, ISSN 0378-7788,
  24. Stewart, T.A., *Intellectual Capital The New Wealth of Organizations*. Doubleday/Currency, New York, 1997.
  25. Brumbach GB, Some ideas, issues and predictions, about performance management, *Pub. personnel manage.*, [Winter](#), 1988, pp 387- 402
  26. Almanaseer & Matarneh, *Contribution Of Islamic Banks In Financing Small And Medium Enterprises In The Kingdom Of Bahrain*, 2015.
  27. V. Sivalogathan and Xiaobo Wu, "Impact of organization motivation on intellectual capital and innovation capability of the textile and apparel industry in Sri Lanka," [International Journal of Innovation Science](#), 2015, vol. 7. No. 2, pp. 153-168.
  28. Helmiatin, "Optimalisasi peran modal intelektual terhadap kinerja karyawan," [Journal Etikonomi](#), 2015, vol. 14,

no. 1, pp. 51–68.

29. Deo Sansha Sitorus and Yoyok Soesatyo, “Pengaruh kemampuan, motivasi kerja, dan komitmen organisasi terhadap kinerja karyawan,” [Journal of Management](#), 2014, vol. 2, no. 3.
30. Marudut Marpaung, “Pengaruh kepemimpinan dan team work terhadap kinerja karyawan di Koperasi Sekjen Kemendikbud Senayan Jakarta,” [Journal Scientific Widya](#), 2014, vol. 2, no. 1.
31. Wa Ode Zusnita and Muizu, “Pengaruh kepemimpinan terhadap kinerja karyawan,” [Journal of Business and Economy](#), 2014, vol. 6, no. 1, pp. 1-13.
32. Rahmayanti, “Pengaruh motivasi kerja terhadap kinerja karyawan pada CV. Putra Kaltim Samarinda,” [E-Journal of Business Administration](#), 2014, vol. 2, no. 2, pp. 215-229.
33. Natalia Sutanto and I Gede Siswantaya, “Pengaruh modal intelektual terhadap kinerja perusahaan pada perusahaan perbankan yang terdaftar di Bursa Efek Indonesia,” [Journal Modus](#), 2014 vol. 26, no 1, pp. 1-17, ISSN 0852-1875.