

SUSTAINABLE DEVELOPMENT GOALS SOCIALIZATION USING KNOWLEDGE MANAGEMENT SYSTEMS FOR THE FIRST INDICATOR NO POVERTY UNDERSTANDING

Wahyu Sardjono¹, Maryani², Sarim³, and Erma Lusia⁴

¹⁻⁴*Information Systems Management, Binus Graduate Program, Bina Nusantara University Jl. Kebon Jeruk Raya No. 27, Kebon Jeruk, Jakarta Barat 11530 - INDONESIA*

**wahyu.s@binus.ac.id*

ABSTRACT

Global warming, poverty, climate change, and sustainable development are just a few of the issues facing the world today. The Sustainable Development Goals, which have 169 agreed targets, aim to improve human welfare and protect the environment through 17 main factors. Eliminating all forms of poverty is the first of the sustainable development goals (SDG 1: No Poverty). This objective discusses raising the impoverished's standard of living, guaranteeing their access to essential services, and shielding the entire neighborhood from natural disasters. The community as a whole needs to be informed about and sensitized toward this initiative. Factor analysis is utilized in the system evaluation process, and regression analysis is also used to create mathematical models. In order to successfully measure the performance of SDG 1—no poverty socialization through the use of knowledge management systems—new factors were created as a result of this research. These factors are socialization culture, socialization innovation, socialization technology, and socialization governance.

Keywords: sustainable development goal, no poverty, knowledge management systems, factor analysis, socialization

INTRODUCTION

The United Nations, along with its member nations, unveiled the Development Agenda Sustainable 2030 on September 25, 2015. The agenda comprises 17 Sustainable Development Goals (SDGs). The Sustainable Development Goals (SDGs) are based on the Millennium Development Goals (MDGs), which were implemented between 2000 and 2015 and will serve as a roadmap for achieving the global objective of sustainable development through 2030. It was decided that the SDG2 concept existed during the 2012 United Nations Sustainable Development Conference, which was held in Rio de Janeiro and attended by member nations (Della Santa Navarrete et al., 2020). The meeting aims to establish shared objectives for balancing the environmental, social, and economic facets. In order to preserve people, planet, wealth, peace, and partnerships, the three (three) lofty goals of combating climate change, establishing gender equality, and ending poverty must be accomplished by 2030. Apart from the other two accomplishments, poverty remains a significant and pressing concern. The following 17 Global Goals have been developed in concert to satisfy the efforts to accomplish these three admirable objectives.



Figure 1. SDG's 17 Global

SDG 1: No poverty is the first of the 17 (seventeen) global goals for sustainable development seen in Figure 1. This is an international pact. Across the continent, there is not a single instance of poverty. Since SDG 1 describes poverty from a variety of angles, coordinated responses are necessary. Local governments are in a unique position to recognize

individuals who are more closely living in poverty and offer specialized resources and services to assist in bringing them out of poverty. Our roles in providing basic services like water and sanitation at the local level put us in a crucial position to help achieve SDG 1. By creating local economic development strategies, raising incomes, and enhancing community resilience against potential dangers, we can also significantly contribute to the alleviation of poverty. Possible catastrophe. To meet the development goals of SDG 1, this condition must be quickly communicated to the larger population through local governments as stakeholders (Filho et al., 2021). In order for everyone in the community to comprehend and be able to carry out the sustainable development goals (SDGs) on their own, the program as a whole must be communicated and ingrained (Abbas & Sağsan, 2019). Community empowerment through autonomous socialization can be achieved by the creation of a knowledge management system that includes information on sustainable development goals. A performance measurement model can also be created to assess the degree of achievement.

LITERATURE REVIEW

To turn information into the company's intellectual assets, KMS is a tool that supports and manages all of the knowledge that exists in each individual and organization inside a corporation, both in the form of explicit knowledge and tacit knowledge. Examples of this knowledge include:

1. Communication between multiple users.
2. Coordination of user activity.
3. Collaborating across many user groups to design, develop, and release products.
4. Processing is managed to preserve integrity and to support the tracking of project development.

KMS offers assistance with numerous information functions (Di Vaio et al., 2020), including the following:

1. Information retrieval, indexing, capturing, and archiving.
2. Locate and make use of
3. Mixing, putting together, and changing.
4. Look for.

Benefits of knowledge management (KM) According to Dalkir (2013), KM provides benefits for employees individually, communities of practices, and for organizations. KMS system development focuses on a knowledge management framework in accordance with existing information and data (Zhao, 2009). Opportunities and risks of KM, KM is the center of raw material regulation. There are good opportunities for KM [7], but there are also various risks for poor KM. The successful implementation of KMS is supported by 4 (four) main pillars, namely people, process, technology and strategy and further construction will be built to prepare research instruments based on these four pillars. Figure 2.

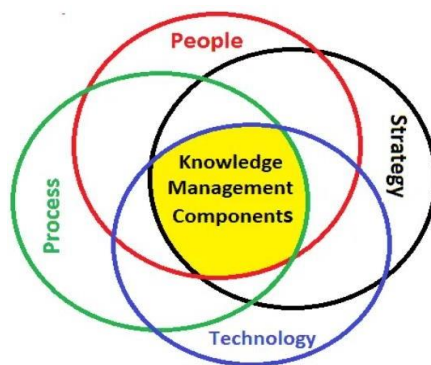


Figure 2. Component of Knowledge Management (Founder, 2023)

- a. People are the most crucial component of knowledge management because they are responsible for the creation, production, and application of knowledge, and they are also the key to the effective use of knowledge management. People's conduct has a big impact on the knowledge management system since different people have varying personalities, motivation levels, leadership styles, and cultural backgrounds that influence different aspects of the process.
- b. Process: Essential to the development of knowledge management. Within an organization or business,

the process serves to disseminate, organize, and develop knowledge. A well-defined method for knowledge management can facilitate innovation in the field and facilitate knowledge transfer. Because of this, it is essential to identify and map knowledge in order to create a mechanism for knowledge transfer and flow.

c. **Technology:** Technology facilitates the process of carrying out knowledge management by helping to find, store, and distribute knowledge or information. Technology plays a significant supporting role in knowledge management, but its use calls for a user who is confident and capable.

d. **Strategy:** strategy, is needed to build a culture and awareness of sharing knowledge. Sharing process knowledge is one of the conversion models of knowledge in the process of knowledge creation, to answer the challenges and opportunities faced, it is necessary to have a strategy for achieving optimum results.

From the Knowledge Management Concept, following a thorough investigation of several pre-existing factors, the study instrument was designed by searching for pertinent indicators based on pre-existing references. The findings are presented in Table 1.

Table 1. Development of Research Instrument

	Factor	Indicator	Ref
Knowledge Management Component	People (PP)	Leadership (PP1). The highest dominance comes from indicators of leadership readiness in the company encouraging the formation of knowledge sharing within the Company. (Ding et al., 2018)	(Ding et al., 2018)
		Attitude (PP2). It is not difficult to understand that higher levels of absorption will lead the better attitudes of individuals towards knowledge sharing. (Kwok & Gao, 2016)	(Kwok & Gao, 2016)
		Share (PP3). Organization needs to develop a strong culture that enables and encourages knowledge sharing as a process of knowledge shifting among people.	(Intezari et al., 2017)
		Innovation (PP4). Knowledge interaction and innovation, such as community practices need to be developed	(Lee, 2016)
		Skill (PP5). Skills have adequate disciplinary knowledge and know how to cooperate with others to function as a team.	(Abubakar et al., 2017)
		Teamwork (PP6). Good teamwork is one of the basic prerequisites for knowledge management.	(Lindner & Wald, 2010)
		Motivation (PP7). Humble employees seem to need economic incentives to motivate them to share knowledge.	(Wang et al., 2011)
		Organization (PP8). Both the business and academic communities believe that by leveraging knowledge, organizations can maintain their long-term competitive advantage.	(Miković et al., 2020)
		Vision Objective (PP9). Knowledge management (KM) encompasses all operations that use knowledge to accomplish organizational objectives, deal with environmental concerns, and maintain market competitiveness.	(Greiner et al., 2007)
		Communities Standard (PP10). These human resources, who can innovate and update knowledge, have the potential to create value for the future of organization.	(Oktari et al., 2020)
		Integration (PC1). Knowledge and business processes must be integrated and managed throughout their life cycle to fully deliver the combined benefits	(Jung et al., 2006)

Process (PC)	Workflows (PC2). Several goals can be achieved when conducting a knowledge mapping exercise. Practitioners are often faced with dilemma of having to work knowledge mapping approach.	(Pileggi, 2021)
	Best Practice (PC3). Employees often will not share information because they feel it will decrease their personal value to the company if they share secrets or best practiced learned over the years.	(Caballer o- Anthony et al., 2020)
	Business Intelligence Standard (PC4). Business performance can be enhanced by using business intelligence tools to access, analyze, and share knowledge and information inside an organization.	(Rostami, 2014)
Techno- Log (TN)	Data stores and format (TN1). Most knowledge management activities are a combination of business processes and information technology.	(Bandera et al., 2018)
	Network (TN2). Knowledge obtained from knowledge sources is disseminated through social network within an organization.	(Harijanti, 2015)
	Internet (TN3). The Internet of Things (IoT), is changing the way in which knowledge is managed within organizations, calling for new and inventive knowledge management systems.	(Hwang & Kim, 2013)
	Data Mining & Analysis (TN4). One of the key components of information discovery in the database process is data mining, which is also regarded as an essential area of study within knowledge management.	(Kumar et al., 2016)
	Decision Tools (TN5). For converting explicit knowledge into tacit knowledge, data warehousing and information systems are some of technologies that can be used.	(Makarechi & Yerushalmi, 2010)
	Automation Standard (TN6). Knowledge management systems include human and automated activities and associated artifacts.	(Sardjono et al., 2020)
Strategy (ST)	Challenge (ST1). The analysis showed that although many of elements of successful KM are in place, a number of important gaps and challenges remain.	(Assegaff et al., 2013)
	Opportunity (ST2). KM is very important for an organization because it functions as a planned and also systematic approach to ensure the good application of organizational knowledge.	(Shujahat et al., 2017)

METHODOLOGY

The data is processed by the application of factor analysis. Following the use of a questionnaire instrument for data collecting, data analysis is the following phase, which involves lowering the number of variables or indicators while maintaining the majority of the information found in the variables. The following is the factor analysis algorithm that was used:

1. Examining variables and evaluating the viability of variables utilizing the Kaiser Meyer Olkin (KMO) and measure of sample adequacy (MSA) methods for inclusion in the ensuing study. A variable cannot be omitted or subjected to additional analysis when the MSA value is 0.5, and vice versa.
2. Using the Maximum Likelihood Method as a factor.
3. Factor rotation using the Varimax method, which makes it easier to understand the factors that are created.
4. Find the residual correlation matrix and the reproduced correlation matrix (Rr).

5. Calculate the Residual Mean Square Root (RMSR). The RMSR can be used to quantify the degree of goodness of the factors that have been generated.
6. Results Interpretation. This phase involves assigning names to the created factors and using the RMSR value to determine how good the formed factors are.

RESULT & DISCUSSION

Reliability Test

A value of 0.709 was achieved from the reliability test using Cronbach's Alpha for a total of 112 respondents with 21 indicators. Table 2.

Table 2. Reliability Test

Cronbach's Alpha	N of Items
0,802	22

Test of Validity

Construct validity is one of the methods available for conducting validity tests. A test called construct validity is used to determine whether the research instrument's items are suitable for measuring the theoretical constructs that are currently in use. The KMO-MSA score of 0.809 found in this investigation suggests that the acquired data is worthy of factoring.

Factor Analysis Outcome

A reduction in the amount of data occurs during the factor analysis process when appropriate components to be employed as indicators of socialization are filtered. IBM SPSS software was used to assist in the factor analysis process and produce the study's results.

Table 5. Formed Factors

No	Indicator	New Factor
1	Vision objective (PP9)	Socialization Culture
	Internet (TN3)	
	Leadership (PP1)	
	Motivation (PP7)	
	Data stores and format (TN1)	
	Attitude (PP2)	
	Share (PP3)	
2	Automation Standard (TN6)	Socialization Innovation
	Workflows (PC2)	
	Best Practice (PC3)	
	Business Intelligence standard (PC4)	
	Challenge (ST1)	
	Opportunity (ST2)	
3	Decision Tools (TN5)	Socialization Technology
	Integration (PC1)	
	Data Mining & Analysis (TN4)	

	Communities Standard (PP10)	
4	Organization (PP8)	Socialization Governance
	Network (TN2)	

Socialization Culture is the first factor in Table 5 that was created throughout the factor analysis procedure. There are seven characteristics in this factor: goal and vision; internet; leadership; drive; data stores and formats; attitude; and share.

The second component, which is represented by socialization innovation, was created throughout the factor analysis procedure. Six signs make up this factor: Workflows, Automation Standards, Business Intelligence Standard, Challenge, and Opportunity. Socialization Technology is the third element that was created throughout the factor analysis procedure. There are four indicators in this factor: Communities Standard, Data Mining & Analysis, Integration, and Decision Tools.

Socialization Governance is the fourth component that was created throughout the factor analysis method. There are two indicators in this factor: Network and Organization. The following equation can describe the socialization performance measurement model.

$$Y = 6.330 + 0.160 X_1 + 0.045 X_2 + 0.107 X_3 - 0.079 X_4$$

With the constrain,

- $2.698 \leq X_1 \leq 2.380$
- $2.775 \leq X_2 \leq 2.360$
- $1.198 \leq X_3 \leq 2.623$
- $2.767 \leq X_4 \leq 3.089$

Based on the above model, the relationship model that can be used to evaluate as a formula that describes the socialization performance measurement model.

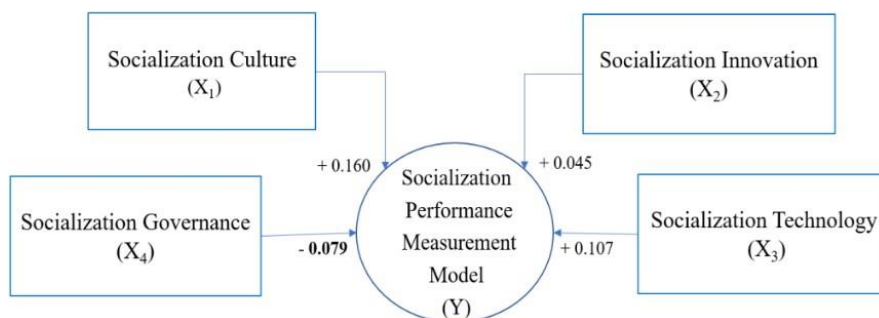


Figure 3. Relationship model

CONCLUSION

SDG 1: No poverty is the first of the 17 (seventeen) global goals for sustainable development seen in Figure 1. This is an international pact. Across the continent, there is not a single instance of poverty. Since SDG 1 describes poverty from a variety of angles, coordinated responses are necessary. Local governments are in a unique position to recognize individuals who are more closely living in poverty and offer specialized resources and services to assist in bringing them out of poverty. Our roles in providing basic services like water and sanitation at the local level put us in a crucial position to help achieve SDG 1. By creating local economic development strategies, raising incomes, and enhancing community resilience against potential dangers, we can also significantly contribute to the alleviation of poverty. Possible catastrophe. To meet the development goals of SDG 1, this condition must be quickly communicated to the larger population through local governments as stakeholders (Filho et al., 2021). In order for everyone in the community

to comprehend and be able to carry out the sustainable development goals (SDGs) on their own, the program as a whole must be communicated and ingrained (Abbas & Sağsan, 2019). Community empowerment through autonomous socialization can be achieved by the creation of a knowledge management system that includes information on sustainable development goals. A performance measurement model can also be created to assess the degree of achievement.

REFERENCES

- Abbas, J., & Sağsan, M. (2019). Impact of knowledge management practices on green innovation and corporate sustainable development: A structural analysis. *Journal of Cleaner Production*, 229, 611–620. <https://doi.org/10.1016/j.jclepro.2019.05.024>
- Abubakar, A. M., Elrehail, H., Alatailat, M. A., & Elçi, A. (2017). Knowledge management, decision-making style and organizational performance. *Journal of Innovation & Knowledge*, 4(2), 104–114. <https://doi.org/10.1016/j.jik.2017.07.003>
- Assegaff, S., Razak, A., Hussin, C., & Dahlan, H. M. (2013). Knowledge Management System as enabler in knowledge management practices in virtual communities. *International Journal of Computer Science Issues*, 10(1), 1.
- Bandera, C., Collins, R., & Passerini, K. (2018). Risky business: Experiential learning, information and communications technology, and risk-taking attitudes in entrepreneurship education. *The International Journal of Management Education*, 16(2), 224–238. <https://doi.org/10.1016/j.ijme.2018.02.006>
- Caballero-Anthony, M., Cook, A. D., & Chen, C. (2020). Knowledge management and humanitarian organisations in the Asia-Pacific: Practices, challenges, and future pathways. *International Journal of Disaster Risk Reduction*, 53, 102007. <https://doi.org/10.1016/j.ijdrr.2020.102007>
- Dalkir, K. (2013). Knowledge management in theory and practice. In *Routledge eBooks*. <https://doi.org/10.4324/9780080547367>
- Della Santa Navarrete, S., Borini, F. M., & Avrichir, I. (2020). Environmental upgrading and the United Nations Sustainable Development Goals. *Journal of Cleaner Production*, 264, 121563. <https://doi.org/10.1016/j.jclepro.2020.121563>
- Di Vaio, A., Palladino, R., Pezzi, A., & Kalisz, D. E. (2020). The role of digital innovation in knowledge management systems: A systematic literature review. *Journal of Business Research*, 123, 220–231. <https://doi.org/10.1016/j.jbusres.2020.09.042>
- Ding, W., Choi, E., & Aoyama, A. (2018). Relational study of wise (phronetic) leadership, knowledge management capability, and innovation performance. *Asia Pacific Management Review*, 24(4), 310–317. <https://doi.org/10.1016/j.apmr.2018.10.005>
- Filho, W. L., Lovren, V. O., Will, M., Salvia, A. L., & Frankenberger, F. (2021). Poverty: A central barrier to the implementation of the UN Sustainable Development Goals. *Environmental Science & Policy*, 125, 96–104. <https://doi.org/10.1016/j.envsci.2021.08.020>
- Founder, T. (2023, May 30). *Components of Knowledge Management – best Guide*. TODAY FOUNDER. <https://todayfounder.com/components-of-knowledge-management-best-guide/>
- Greiner, M. E., Böhmman, T., & Krcmar, H. (2007). A strategy for knowledge management. *Journal of Knowledge Management*, 11(6), 3–15. <https://doi.org/10.1108/13673270710832127>
- Harijanti, S. D. (2015). The changing paradigm on governance: the case of Indonesia. *International Journal of Public Law and Policy*, 5(1), 77. <https://doi.org/10.1504/ijplap.2015.067781>
- Hwang, T., & Kim, S. T. (2013). The moderating effects of eco-oriented organisational culture on the green practice-performance relationship. *International Journal of Services Sciences*, 5(1), 74. <https://doi.org/10.1504/ijssci.2013.057660>
- Intezari, A., Taskin, N., & Pauleen, D. J. (2017). Looking beyond knowledge sharing: an integrative approach to knowledge management culture. *Journal of Knowledge Management*, 21(2), 492–515. <https://doi.org/10.1108/jkm-06-2016-0216>
- Jung, J., Choi, I., & Song, M. (2006). An integration architecture for knowledge management systems and business process management systems. *Computers in Industry*, 58(1), 21–34. <https://doi.org/10.1016/j.compind.2006.03.001>
- Kumar, M., Raman, J., & Priya, N. (2016). The effects of green policy on the performance of green supply chains. *International Journal of Integrated Supply Management*, 10(1), 1. <https://doi.org/10.1504/ijism.2016.074416>
- Kwok, S. H., & Gao, S. (2016). Attitude towards Knowledge Sharing Behavior. *Journal of Computer Information Systems*, 46(2), 45–51. <http://repository.ust.hk/ir/Record/1783.1-21131>

- Lee, M. C. (2016). Knowledge management and innovation management: best practices in knowledge sharing and knowledge value chain. *International Journal of Innovation and Learning*, 19(2), 206. <https://doi.org/10.1504/ijil.2016.074475>
- Lindner, F., & Wald, A. (2010). Success factors of knowledge management in temporary organizations. *International Journal of Project Management*, 29(7), 877–888. <https://doi.org/10.1016/j.ijproman.2010.09.003>
- Makarechi, S., & Yerushalmi, L. (2010). Shades of green technologies: identification of significant parameters affecting the performance of green technologies in buildings. *International Journal of Environmental Policy and Decision Making*, 1(1), 64. <https://doi.org/10.1504/ijepdm.2010.033912>
- Miković, R., Petrović, D., Mihić, M., Obradović, V., & Todorović, M. (2020). The integration of social capital and knowledge management – The key challenge for international development and cooperation projects of nonprofit organizations. *International Journal of Project Management*, 38(8), 515–533. <https://doi.org/10.1016/j.ijproman.2020.07.006>
- Oktari, R. S., Munadi, K., Idroes, R., & Sofyan, H. (2020). Knowledge management practices in disaster management: Systematic review. *International Journal of Disaster Risk Reduction*, 51, 101881. <https://doi.org/10.1016/j.ijdrr.2020.101881>
- Pileggi, S. F. (2021). Knowledge interoperability and re-use in Empathy Mapping: an ontological approach. *Expert Systems With Applications*, 180, 115065. <https://doi.org/10.1016/j.eswa.2021.115065>
- Rostami, N. A. (2014). Integration of Business Intelligence and Knowledge Management – A literature review. *Journal of Intelligence Studies in Business*, 4(2). <https://doi.org/10.37380/jisib.v4i2.95>
- Sardjono, W., Laksmono, B. S., & Yuniastuti, E. (2020). The social welfare factors of public transportation drivers with online application as a result of the 4.0 industrial revolution in transportation. *ICIC Express Letters*, 14(4), 361–368. <https://doi.org/10.24507/icicel.14.04.361>
- Shujahat, M., Sousa, M. J., Hussain, S., Nawaz, F., Wang, M., & Umer, M. (2017). Translating the impact of knowledge management processes into knowledge-based innovation: The neglected and mediating role of knowledge-worker productivity. *Journal of Business Research*, 94, 442–450. <https://doi.org/10.1016/j.jbusres.2017.11.001>
- Tiberius, V., Schwarzer, H., & Roig-Dobón, S. (2020). Radical innovations: Between established knowledge and future research opportunities. *Journal of Innovation & Knowledge*, 6(3), 145–153. <https://doi.org/10.1016/j.jik.2020.09.001>
- Wang, S., Noe, R. A., & Wang, Z. (2011). Motivating knowledge sharing in knowledge management systems. *Journal of Management*, 40(4), 978–1009. <https://doi.org/10.1177/0149206311412192>
- Zhao, J. (2009). School knowledge management framework and strategies: The new perspective on teacher professional development. *Computers in Human Behavior*, 26(2), 168–175. <https://doi.org/10.1016/j.chb.2009.10.009>