



The Effect of Big Data Media Social on Intellectual Capital: Evidence from Makassar SMES

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Abstract. Big data is being used in business processes more and more since the pandemic. Big data from social media (BDMS), in particular, has benefited small and medium-sized businesses (SMEs) in Indonesia. Every social media platform that SMEs hold is actually a type of intellectual capital (IC) that needs to be acknowledged, evaluated, and presented. This study's objective is to evaluate the impact of BDMS on IC as a foundation for its presentation in financial reports. The SMEs in Makassar City were chosen as the sample for this study's data collection, and a questionnaire was provided to them. In this work, the BDMS and its influencing elements are subjected to quantitative empirical tests. Next, examine how BDMS affects IC. Statistical methods were used to analyse the data, particularly route analysis and factor analysis using SEM PLS. All of the research's hypotheses were proven correct, proving that the most important elements affecting the use of big data from social media are technological maturity, privacy compliance, data accessibility, and the availability of both human resources and talents. This has an impact on how MSME intellectual capital is used in big data. As a result, SMEs can build intellectual capital through the use of social media big data, and this in turn creates asset value that can be disclosed in financial reports.

Keywords: Intellectual Capital, Big Data, Social Media, SMEs.

1 Introduction

The successful use of big data from social media is growing in an endemic era, and has provided a lot of awareness to other entrepreneurs. Currently, many small and medium enterprises (SMEs) in Indonesia are maximizing the use of social media big data. Many SMEs in Indonesia actually grew and developed rapidly during the pandemic and still survived even after the endemic.

The use of big data is not only for profit, but of course it needs to be recognized and assessed so that it can provide the right business value. In theory, the cost sacrifices incurred must provide benefits for the company. Every post on social media is not only done for marketing, the aim of which is to increase sales. However, this can be further

exploited by utilizing big data by recognizing and then assessing it so that it can provide a competitive advantage over the big data obtained by social media users. The application of big data functions as a measure of a company's innovation capabilities in responding to business opportunities. For example, big data uses analytical capabilities to educate business responses in facing post-endemic challenges and planning for the future [1].

The ability to assess data and information is increasing and is needed by organizations as a means of increasing profitability and operational expenditure. However, existing assessment methods are considered unreliable and unsuitable for data and information. In fact, every social media and intellectual property owned by SMEs that are used on social media is a form of intellectual property that requires recognition, assessment and presentation. However, this cannot yet be done, it is necessary to carry out an in-depth study of what factors influence intellectual capital in social media big data [2,3].

This problem further shows that there is a lack of, and a need for, financial assessment methods for data and information. In addition, many articles discuss the benefits of data and information but do not present financial assessment methods that can be used by organizations. The need for such methods is widespread and closely related to natural business logic, an organization should not consume more assets than they are worth. This statement also applies to information, so organizations should not waste valuable and often limited capital on resources they cannot accurately assess [4,5].

This research tries to conduct an in-depth study of the factors that influence Intellectual Capital (IC) as a company asset related to social media big data. Big data that is assessed appropriately and presented in financial reporting will be a step for the company's competitive advantage. However, first you need to know the factors that influence the use of BDMS in SMEs. Next, measure the effect of BDMS on IC. This needs to be done so that it can become the basis for the company to be able to increase business value.

2 Research Methodology

The research method used in this research is a quantitative descriptive method. Research tools are used to measure these variables to analyze numerical data using statistical methods. The research results are then processed and analyzed to draw conclusions. If the research carried out is research that emphasizes numerical data analysis, then this research method will reveal this and the relationships between the variables studied so that conclusions can be drawn that clarify the picture of the object being studied.

The type of quantitative descriptive research used in this research is designed to provide information about how variables. This research was conducted in the Makassar area. The Makassar region was chosen as the research location, because here there is great potential for developing SMEs. The population in this study is SMEs in the Makassar City area because. The selection of the location based on the number of SME's growth every year and the city is the central from East Indonesia. The sample in this

research will be selected based on the purposive sampling method. The criteria used in selecting samples are: (1) SMEs that have been established during the pandemic (2019-2023), (2) Have social media and are consistent in their use (Instagram, Facebook, and Tiktok), (3) The business entity has a form of CV.

The data used is primary data obtained from respondents in the form of questionnaires and interviews with all respondents. Questionnaires will be distributed to respondents directly to SMEs who have been selected as research samples. Then it will be continued with interviews with respondents to confirm the results of the questionnaire that has been processed. Then, data analysis will be carried out from these results.

Intellectual Capital (IC), measuring IC can be done through measuring and assessing three dimensions of intellectual capital, namely human capital, structural capital and customer capital. In this research, IC will focus on the structural capital dimension, namely on indicators for assessing technology, information systems and knowledge management systems in organizations [2]. Meanwhile, the customer capital dimension will focus on indicators of customer relationships and experiences with the organization as well as the brand and image owned by the organization.

Furthermore, Big Data Social Media (BDMS) is the collection, processing, analysis and interpretation of large amounts of data resulting from user interactions on social media platforms to gain deeper insight and understanding of user behavior and preferences. The indicators that will be used are the number of active users, number of posts, number of likes and shares, number of followers, sentiment and trending topics.

Technological Capability (KT) is the ability of an organization to use technology and utilize it effectively and efficiently in carrying out its operations. Indicators for measuring technological capabilities can include the technological infrastructure owned, the speed of data processing, the level of integration of technology in business processes, the level of use of the latest technology, and the availability of human resources who are skilled in using technology [6, 7].

The variable indicator that will be used is HR availability (KKS), namely the number of employees available in the organization and ready to work at a certain time. Then, for HR Skills, the indicators used are the abilities and skills possessed by employees in the organization, both technical and non-technical, which are needed to carry out their job duties and responsibilities [4,8].

In the context of social media big data, Data Availability (KD) can refer to the availability of social media data that is relevant and related to the desired analysis objectives. Indicators used to measure data availability include the amount of data available, the time required to access the data, and the level of data accuracy. The higher the level of data availability, the easier it is for organizations to collect data, process data, and utilize it to improve performance and competitiveness [9,10,11].

The operational definition of Privacy Compliance (KP) is an action or effort taken by an individual or organization to comply with applicable privacy policies in the collection, use, storage and dissemination of personal and sensitive data or information. Privacy compliance measurement indicators may include compliance with privacy regulations, an organization's internal privacy policies, use of tools or technology to protect data privacy, and actions to provide information and consent before sharing personal data with other parties [12].

The level of technological maturity (TKT) for social media can be operated as a construct that reflects the level of ability and readiness of an organization or company in adopting and utilizing the latest technology related to managing and analyzing data from social media. The indicator that can be used to measure the level of technological maturity in this research is the availability of adequate technological infrastructure to collect and process data from social media. The organization's ability to integrate data from social media with existing information systems [13].

This research analyzes the factors that influence intellectual capital on social media big data. Data analysis is carried out using statistical techniques appropriate to the type of data that has been collected. The data analysis techniques that will be used are path analysis and factor analysis. By using SEM PLS to analyze the relationship between independent and dependent variables, and taking into accounts the direct and indirect effects of these variables. PLS is used when the data is not normally distributed or does not meet normality assumptions. This method produces two models, namely the outer model for the validity and reliability of variables and the inner model for analyzing the relationship between variables. PLS uses bootstrapping techniques to obtain accurate and valid estimated coefficients.

Table 1. Descriptive statistics of respondents' answers.

Construct	Mean	Med	Min	Max
IC	3,97	4,00	2,00	5,00
MS	4,22	4,22	2,00	5,00
KT	3,56	3,80	2,00	5,00
KKS	3,19	3,00	1,00	5,00
KD	3,67	4,00	2,00	5,00
KP	3,73	4,00	2,00	5,00
TKT	3,51	3,80	1,00	5,00

Based on Table 1, it shows that the respondents' answers to each question item show information that all research constructs provide good results. The average of all values in the sample in the collected data is 3.69. This provide that the middle value of the data distribution is very good. Meanwhile, the middle value (Median) of the data distribution when the data is sorted. The median value obtained was 3.83, this indicates that the data distribution tends to be symmetrical or does not have many significant outliers.

Structural Equation Model (SEM) is a statistical method used to test and develop conceptual models involving complex relationships between variables. This method allows for analysis of cause-and-effect relationships between latent variables (variables that are not directly measured) and measurement variables (indicators).

At this stage, validity and reliability are tested, and this is an important aspect in SEMPLS analysis. These two aspects help ensure that the model used is accurate, consistent, and reliable in measuring the constructs to be tested in the research.

Validity refers to the extent to which a measurement instrument actually measures what it is intended to measure. The results of convergent validity are things that are checked in the validity test. This refers to the extent to which the indicators used to measure a construct (leave variable) can reflect these constructs consistently.

Table 2. Table of Loading Factors Results

Construct	Loading factors	Information
IC	0,85	Valid
MS	0,87	Valid
KT	0,87	Valid
KKS	0,89	Valid
KD	0,84	Valid
KP	0,88	Valid
TKT	0,89	Valid

Based on the description in Table 2. then the loading factor value is greater than 0.07. The results of the factor loadings value show the extent to which each indicator contributes to the measurement of the latent construct. This shows the indicators are strongly measure the same construct. Each indicator used has a strong contribution.

Table 3. Table of Average Variance Extracted (AVE)

Construct	Average Variance Extracted (AVE)
IC	0.728
MS	0.687
KT	0.735
KKS	0.789
KD	0.786
KP	0.757
TKT	0.728

Based on the results obtained, the threshold value in the results of the data testing carried out is smaller than 0.07. This shows that discriminant validity is met. The next stage is reliability testing to measure the consistency and stability of the measurement instrument in producing similar results under different conditions. Composite Reliability measures the internal consistency or reliability of latent constructs in the PLS model. Based on Table 4, the CR value is > 0.7 . This shows that all constructs show better reliability. Therefore, the latent constructs in the PLS model have good internal consistency, and the indicators used to measure these constructs are consistently related to each other.

Table 4. Descriptive Statistics of Respondents' Answers

Construct	Cronbach's Alpha	Composite Reliability	Information
BDMS	0.953	0.960	Reliable
IC	0.923	0.939	Reliable
KD	0.909	0.932	Reliable
KKS	0.933	0.949	Reliable
KP	0.931	0.948	Reliable
KT	0.960	0.966	Reliable
TKT	0.953	0.960	Reliable

Therefore, Cronbach's Alpha (CA) which is used to measure reliability, especially when the latent variable has more than one indicator. Based on Table 4 CA values obtained were more than 0.7. Values greater than 0.7 are generally considered good for reliability. Thus, it shows that the indicators used to measure the latent construct are related to each other consistently and reliably.

To discuss the results of the Model Significance Test in PLS, it is necessary to consider several important aspects that show the extent to which the PLS model you are using matches the existing data. This research develops a model to measure what factors influence intellectual capital as a company asset on social media big data. Measurements were carried out by testing the relationship between the variables developed in this research. Next, measure the influence of social media big data on intellectual capital. This is important to know, because the subjects of this research are SMEs which currently rely on social media big data to run their business. Of course, in this case there is an impact on the intellectual capital owned so that this can increase the value of the company. This can be known through testing using PLS to test and develop complex conceptual models. This is because the research developed analyzes cause-and-effect relationships between complex variables and sees how these variables interact in a measurement model.

Table 5. Table of R-Square Values (R^2)

Construct	R Square	R Square Adjusted
Big Data Media Sosial (MS)	0.790	0.776
Intigble Capital (IC)	0.566	0.560

Based on table 5, the R^2 value is obtained which overall is above 0.5, which shows that each variable in the model is able to explain the latent variable well. Therefore, this value becomes the basis for the model that is built which is statistically significant and the level of variation explained by the model is high enough to explain the relationship between the variables in the model.

Table 6. Table of loading factors results.

	Saturated Model	Estimated Model
SRMR	0.081	0.095
d_ULS	6.868	9.356
d_G	10.529	10.674
Chi-Square	2860.811	2893.251
NFI	0.523	0.517

Based on the results above, in assessing the suitability of a model, we first look at the Standardized Root Mean Square Residual (SRMR). The SRMR value obtained was 0.081, this means that this value is relatively low or no more than 1, so this result shows that the research model and the data obtained are suitable. Next is the Normed Fit Index (NFI) value which measures the extent to which the research model represents the data by comparing the model built with the null model (a model that has no relationship between variables). A higher value indicates that your model fits the data better than the null model. The NFI value obtained was no more than 1, namely 0.523. This shows that the research model represents the data obtained.

Based on the values obtained, it shows that the value is close to 1 or close to zero. The result show that the research model fits the data very well. This indicates that the research model has good capabilities in explaining the relationship between variables in the data. Path coefficients are one of the most important outputs of PLS-SEM analysis, because they help in understanding how latent variables influence each other in the model. The following are the results of the path coefficient data:

Table 7. Hypothesis testing results.

HIP	Variable		P-Value	Direct Effect	Indirect Effect	Total Effect	Information
	Exogenous	Endogenous					
1	Technology Capability (X1)	Social Media Big Data (Y1)	0,000	0.093	0.066	0,159	Positive and Significant
2	Privacy Compliance (X2)	Social Media Big Data (Y1)	0.013	0.122	0.095	0,217	Positive and Significant
3	Data Availability (X3)	Social Media Big Data (Y1)	0.018	0.096	0.072	0,168	Positive and Significant
4	HR Availability and Skills (X4)	Social Media Big Data (Y1)	0.030	0.115	0.087	0,202	Positive and Significant
5	Technology Maturity Level (Y1)	Social Media Big Data (Y1)	0.032	0.069	0.052	0,121	Positive and Significant

6	Social Media Big Data (Y1)	Intigble Capital (Y2))	0.042	0.055	0.066	0,121	Positive and Sig- nificant
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Based on the hypothesis testing table above, a value is obtained path coefficients the positive. This shows the extent to which changes in one latent variable can influence changes in other latent variables. Based on the positive value results, it means that the relationship between each variable in the research model shows a positive relationship. And significant as written in the information column. Thus, based on the table above, all hypotheses in the research are accepted.

3 Discussion

The results of data analysis, social media big data directly and significantly influences intellectual capital for SMEs in Makassar City. This is reinforced by factors that influence the use of social media big data, namely Technology Capability, Privacy Compliance, Data Availability, HR Availability and Skills and Technology Maturity Level. These five factors support the use of big data in SMEs to increase company value.

The first hypothesis in this research tests the positive relationship between technological capability, privacy compliance, data availability, human resource availability and skills and the level of technological maturity on social media big data in SMEs. Based on the SEM PLS results, it shows that this hypothesis is accepted. The technological capabilities used by SMEs are very influential with social media big data. In this research, a survey was also conducted regarding the technology used by SMEs. Based on the results of the questionnaire obtained, SMEs are supported by computer devices and equipped with applications that support them to be able to utilize social media big data in running their business. Social media big data is used in marketing and creating content that can provide added value to the products being sold.

Product value is certainly something that needs to be owned. This is related to the image of the product itself. Technological developments are a determining factor, the ability of technology to facilitate the use of BDMS data makes companies able to maximize the value of their products. Modern technological capabilities allow social media platforms to collect data in large quantities and quickly. With a more robust and sophisticated infrastructure, they can store user data, interactions, and content more efficiently.

These results are supported by the results of previous research conducted by Yeni, Absah, et al (2018) [5], Which shows that technological capabilities enable SMEs to adapt to be able to compete in the global market. This research examines antecedent factors related to MSME social media implementation. The test results show the positive influence of technological capabilities on social media big data. Social media for handling information processing needs to be strengthened with good technological capabilities. The technological capabilities have a positive effect on social media big data [14].

The second hypothesis developed in this research is that privacy compliance has a positive effect on social media big data. The test results show that the second hypothesis is accepted. This shows that privacy compliance plays a very important role in the management and utilization of Big Data in social media. When large amounts of user data are collected, stored, and used in the context of social media, privacy compliance becomes a key factor influencing how this data can and may be used.

SMEs can make good use of social media big data because privacy compliance involves giving users (SMEs and consumers) control over data. This includes providing options to oppose data collection, set privacy preferences, and delete data if necessary. Privacy compliance also includes ensuring that user data is stored securely and protected from unauthorized access. Strong privacy compliance can improve social media reputation and win users' trust. On the other hand, data privacy violations can damage reputation and result in loss of users. Thus, privacy compliance is a key factor influencing how Big Data is managed and used in social media. Social media organizations must take appropriate steps to ensure that they comply with applicable privacy regulations and keep the privacy and security of user data a top priority. This is also an important factor in winning user trust.

This result is also supported by the results of research conducted by Xu et al (2015) which found a paradox between social media users' privacy concerns and their behavior. Even though users express privacy concerns, they often still share personal information openly [15]. This shows a difference between privacy awareness and user actions. Thus, in this condition it is possible to increase the use of social media data bids for SMEs. However, it should be noted that privacy issues are becoming increasingly important with the growth of Big Data in social media. While companies collect user data for analysis, there is an urgent need to consider the privacy implications and take appropriate steps to protect user data [12,16, 17].

Testing in this research provides the third hypothesis that is accepted which tests that data availability has a positive and significant effect on social media big data. These results show that data availability plays a very important role in the management and utilization of Big Data in social media. The availability of sufficient and relevant data can enable deeper analysis and better insights.

The availability of abundant data will enable the collection of richer and more comprehensive information. This includes data about user behavior, preferences, interactions, and content shared on social media platforms. So more and varied data allows for more in-depth analysis. It includes sentiment analysis, social network analysis, trend analysis, and more. The more data available, the more insights can be discovered.

The wide availability of data from various social media platforms has helped in the development of more sophisticated Big Data analysis tools. This has enabled a better understanding of user behavior on social media. The results of research conducted by Ghasemaghahi and Carlic (2019) highlight the challenges and opportunities that arise from the availability of data on social media. The research results show a significant influence on data availability on social media big data, but user privacy must also be respected and data protection is important [18]. The availability of large data in Big

Data research on social media must be balanced with careful ethical considerations to avoid violating user privacy [15].

Good data availability and high data quality are very important in optimizing the performance of predictive analysis-based decisions in social media [18]. However, it is important to note that data availability must always be balanced with concerns about privacy and security. Data use must comply with applicable privacy regulations and ensure that user rights are protected. Additionally, organizations must ensure that the data collected is not used for purposes that violate privacy or harm users. Thus, data availability is a very important factor in the social media Big Data ecosystem, but its use must be done wisely and ethically

The fourth hypothesis states that the availability and skills of human resources (HR) have a significant effect on social media big data. The test results show that the hypothesis is accepted. This means that the relationship between HR availability and skills and Big Data management on social media is very close. The availability of adequate human resources and relevant skills can have a significant impact on an organization's ability to manage, analyze and understand the enormous and complex data on social media.

Availability of sufficient human resources means that the organization has a sufficient number of trained personnel to manage Big Data related tasks on social media. Additionally, HR skills include knowledge and expertise in managing Big Data infrastructure, including large databases, analytical software and related technologies. These skills also include an understanding of relevant data analysis algorithms. Additionally, HR's ability to perform in-depth analysis of social media data, including sentiment analysis, predictive modeling, and data visualization, is critical to understanding user behavior and trends on social media platforms.

Based on the 21st century capabilities that must be possessed, one of them is knowledgeable human resources who can help organizations adapt to rapid changes in social media, including changes in user behavior and new social media platforms. And trained human resources can also ensure that the management of Big Data on social media continues to comply with applicable privacy regulations and data protection policies.

Mishra, et al. (2019), found that organizations that have human resources who have the skills and knowledge needed to manage Big Data have better performance in implementing Big Data analysis on social media [7]. This is supported by research conducted by Ferraris (2019) which states that the ability to analyze Big Data on social media is significantly related to company performance. HR skills in managing and analyzing data are essential in achieving better results [6].

So that it is safe, it is necessary to increase HR skills in managing and analyzing data, including Big Data, which is a key factor in the ability of research institutions to utilize the full potential of this data. How to emphasizes the importance of having an HR team that is trained and knowledgeable in the field of Big Data analysis. High-quality HR can help organizations extract valuable insights from social media data. In order to maximize the benefits of Big Data in social media, organizations must pay attention to these two aspects: the availability of adequate human resources and the development of relevant skills [20]. This ensures that organizations can face the

challenges and opportunities arising from Big Data analysis in social media more effectively and successfully.

The fifth hypothesis in this research states that the level of organizational technological maturity has a significant influence on social media big data. The test results show that this hypothesis is accepted, this shows that the level of technological maturity gives meaning to the ability of SMEs to manage, analyze and utilize Big Data on social media. Technological maturity includes information technology infrastructure, software, processes, and organizational culture.

The technology maturity level includes storage and computing capacity. Organizations that have a robust and scalable infrastructure can better handle the large volumes of data generated by social media. With mature technology, organizations can collect data from various social media sources more efficiently. This includes using automated tools to capture data and integrate it into systems.

Nowadays, sophisticated technology allows SMEs to create data visualizations that are attractive and easy to understand. This helps in better communicating insights to stakeholders. In addition, more efficient process management, which allows SMEs to better manage Big Data projects in social media, including data collection, processing and analysis. Then, with access to better data and more sophisticated analytical tools, organizations with high technological maturity can make better, data-driven decisions.

These results are in line with research conducted by Li (2019) which states that Big Data Maturity (BDMM) is one of the main tools for assessing and monitoring big data and guidelines for maximizing the use and opportunities of big data in organizations. BDMM development for SMEs is a new concept and full of challenges in terms of development, implementation and adoption. The research results show that the level of technological maturity influences the application of social media big data in SMEs [8,11].

Sathish (2020), identified that an organization's level of technological maturity significantly influences their ability to adopt and apply social media analytics. Organizations with more mature technology tend to have better capabilities in processing and analyzing social media data [20]. Organization's information technology capabilities (IT capabilities) influence digital business strategies and social media capabilities. Organizations that have a higher level of technological maturity tend to have better business strategies regarding social media. Thus, the level of technological maturity and organizational information infrastructure is very important in managing and analyzing large social media data. The ability to process data quickly and efficiently depends on the maturity level of the technology [21]. The results of this research show that the level of technological maturity has a significant impact on the ability of SMEs to manage Big Data on social media. SMEs that have invested in sophisticated technological infrastructure and have good analytical capabilities will be better able to understand trends, user behavior and opportunities on social media. This, in turn, can impact an organization's performance and competitive advantage.

The final hypothesis in this research is to test the relationship between social media big data and Intellectual Capital. Based on the test results, it was found that hypothesis 6 was accepted. The relationship between Big Data in social media and intellectual capital (intellectual capital) is an interesting topic in the context of data analysis and

business decision making. Big Data can provide valuable insights that can increase an organization's intellectual capital.

Social media data can provide deep understanding of user behavior and preferences. This information is an important component of intellectual capital, especially customer capital and human capital. By understanding customers better, organizations can increase customer retention and provide better service.

Big Data in social media allows organizations to perform in-depth sentiment analysis. This can help in understanding how a brand or product is viewed by society. This information contributes to brand capital and customer relationship capital. In addition, social media data can be used to identify new trends and opportunities. This contributes to the organization's structural capital, especially innovation capital. This information can help organizations to develop new products and services or improve existing ones. Today social media data can be used to facilitate collaboration among organizational members and with external parties. Information shared on social media platforms can be a valuable source of knowledge that contributes to an organization's human capital.

Company value is a consideration for companies, especially SMEs. Big Data on social media allows SMEs to manage their reputation more effectively. This can affect brand capital and customer capital. And used to understand customer problems and provide solutions quickly. This contributes to customer relationship capital.

IC has a positive and significant effect on intellectual capital. In general, MSME owners and managers must focus on improving intellectual capital strategies in order to improve business performance [22]. The huge potential of social media data in increasing an organization's intellectual capital. Organizations that are able to incorporate social media data into their strategy can increase intellectual capital especially in terms of customer capital and structural capital. Furthermore, organizations that integrate social media data into their knowledge management systems have higher intellectual capital. SMEs can generate new knowledge and use it to improve innovation and customer service [7]. Off course, companies that are active on social media have higher customer capital and are better at interacting with customers [24].

These results indicate that Big Data in social media has great potential to positively influence an organization's intellectual capital. The ability to understand user behavior, gather valuable insights, and improve customer service can make a significant contribution to intellectual capital, which in turn can improve organizational performance and business value. However, it is important to note that these results can vary depending on the industry, size of the organization, and how social media data is used in business strategy.

However, in order to capitalize on the relationship between social media Big Data and intellectual capital, organizations need to develop effective data management strategies and ensure that insights gained from social media data are used efficiently in business decision making. This can improve organizational performance and help in creating added value.

4 Conclusion

Social media big data for SMEs is something that really supports running a business. All hypotheses in this research are accepted, this shows that the factors that influence the use of social media big data are technological capabilities, privacy compliance, data availability, HR availability and skills, and the level of technological maturity. This simultaneously influences the use of big data on MSME intellectual capital. Thus, the use of social media big data allows the creation of intellectual capital in SMEs which of course provides asset value that can be presented in financial reports. Than the limitation of this research is the sample not classified by the scope and technology infrastructure.

Based on the research conclusions, it is deemed necessary to carry out an in-depth and explanatory study of big data in relation to intellectual capital. Sample selection is also necessary to divide MSME classifications based on the availability of the technology they have. And for development, research needs to be carried out regarding the disclosure and presentation of intellectual capital in financial reports

References

1. Hasan, M.M.; Yajuan, L.; Mahmud, A.: Regional Development of China's Inclusive Finance Through Financial Technology. *SAGE Open*, 10(1), 1–16 (2020)
2. Ma, J., Wang, D., Yang, B., & Liu, Z.: Big data analytics and intellectual capital: The moderating role of data availability. *Journal of Business Research*, 111(Agustus), 68-8. (2020).
3. Huh, J. H., & Kim, S. W.: Big Data analysis for knowledge-intensive service innovation: A managerial tool for insight generation. *Technological Forecasting and Social Change*, 87, 160-171 (2014).
4. Park, Y., Choi, M., Lee, H., & Park, J.: Exploring the role of human resource capability in the relationship between Big Data analytics capability and firm performance. *Industrial Management & Data Systems*, 118(9), 1951-1971 (2018).
5. Absah, Y., Chairunisa, M. Y., Qamariah, I.: Antecedent and Business Process Management Non-Technical Capabilities in Social Media Implementation for Micro, Small, and Medium Enterprise: A Conceptual Model. *Procedia Computer Science*. 161, 1114-1121 (2018).
6. Aremu, A.O., & Fagbola, T.: M. Big data analytics for business intelligence in social media: A review of literature. *Journal of Information Systems Engineering & Management*, 6(2), 28 (2021).
7. Mishra, D., Luo, Z., Hazen, B., Hassini, E. and Foropon, C.: Organizational capabilities that enable big data and predictive analytics diffusion and organizational performance: A resource-based perspective. *Management Decision*. 57(8), 1734-1755 (2021).
8. Li, Y., Wu, Y., & Li, X.: Big data analytics talent: A new challenge for human resource management. *Journal of Business Research*, 85, 1-10 (2018).
9. Baral, R., Ghimire, S., & Shakya, S.: Importance of social media analytics for business sustainability. *Journal of Management and Marketing Review*, 5(2), 11-24. (2020).
10. Lee, J. N., & Kim, Y. G.: The impact of organizational characteristics on Big Data adoption: An empirical study. *Telematics and Informatics*, 33(2), 388-403 (2016).

11. Li, X., Liang, H., Wang, D., & Huang, J.: Big Data analytics capability and firm performance: The mediating role of marketing capability. *Information & Management*, 56(7), 103165 (2019).
12. Kaisler, S., Armour, F., Espinosa, J. A., & Money, W.: Big Data Privacy Issues in Public Social Media. In: 7th IEEE International Conference on Digital Ecosystems and Technologies (DEST), pp. 1-6, Campione d'Italia (2013).
13. Singh, J., & Singh, H.: Intellectual capital and big data analytics maturity in Indian firms. *Journal of Intellectual Capital*, 20(5), 1045-1061 (2019).
14. Handayani, S. F and Mehendrawathi, E.R. Implementation of Knowledge Management to Encourage Innovation and Productivity of SMEs Using Social Media Big Data. In: The Fifth Information Systems International Conference, pp. 23-24, Surabaya (2019).
15. Saltz, J.S., and Dewar, N.: Data science ethical considerations: a systematic literature review and proposed project framework, *Ethics and Information Technology* 21(3), 197–208 (2019).
16. Xu, H., Dinev, T., Smith, J. H., & Hart, P.: The Paradox of Privacy Concern and Online Social Media Behavior. *European Journal of Information Systems*, 22, 295–316 (2015)
17. Le Roux, Y.: Privacy and Data Analytics, CA Technologies, New York City, NY (2012).
18. Ghasemaghahi, M., Calic, G.: Can big data improve firm decision quality? The role of data quality and data diagnosticity. *Decision Support Systems*. 120(May 2019), 38-49 (2019).
19. Vrontis, D., Thrassou, A., & Weber, Y. Digital maturity, big data analytics capabilities, and firm performance: Towards a contingency theory framework. *Journal of Business Research*, 98, 365-375 (2019).
20. Vassakis, K., Petrakis, E., Kopanakis, I. (2018). Big Data Analytics: Applications, Prospects and Challenges. In: Skourletopoulos, G., Mastorakis, G., Mavromoustakis, C., Dobre, C., Pallis, E. (eds) *Mobile Big Data. Lecture Notes on Data Engineering and Communications Technologies*, vol 10, pp 3-20. Springer (2018).
21. Sathish, R., Manikandan, R., Silvia Priscila, S., Sara, B.V., and Mahaveerakannan, R.: A Report on the Impact of Information Technology and Social Media on Covid-19. In: A Report on the Impact of Information Technology and Social Media on Covid-19, pp. 224–230. IEEE, Thoothukudi (2020).
22. Shin, J., & Kim, Y. G.: Enhancing firm competitiveness through big data analytics capability and business strategy alignment. *Journal of Business Research*, 70(Januari), 149-156 (2017).
23. Chen, H., Chiang, R. H., & Storey, V. C.: Business intelligence and analytics: From big data to big impact. *MIS quarterly*, 36(4), 1165-1188 (2012).
24. Rahimi, Z., Abdollahi, M., & Askari, M. Big data analytics in social media: A systematic mapping study. *International Journal of Information Management*, 50, 431-445 (2020).

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