

### STRENGTHENING THE LOCAL ECONOMY: MEASURING THE DIGITAL LITERACY OF UMKM TOWARDS THE EFFICIENCY OF ELECTRONIC TAX REPORTING

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#### ABSTRACT

*This study explores the level of digital literacy of Micro, Small and Medium Enterprises (SMEs) in Malang City and its impact on electronic tax reporting. Of the 99 SMEs operating for at least one year, the majority showed adequate digital literacy, with interest and skills in using electronic tax applications. A good level of digital literacy gives hope for the successful implementation of electronic taxes in Malang City. Data analysis shows that the readiness of digital literacy of SMEs significantly affects the obligation of electronic tax reporting. Increasing digital literacy can improve the efficiency of SME tax reporting, contribute to local economic growth, and ensure business continuity. Therefore, a deep understanding of digital literacy not only impacts SME operations but is also crucial to ensuring good and sustainable tax compliance in the long term.*

**Keywords:** Local Economy, Digital Literacy, SMEs, Reporting, Electronic Tax

#### ABSTRAK

Penelitian ini mengeksplorasi tingkat literasi digital Usaha Mikro Kecil Menengah (UMKM) di Kota Malang dan dampaknya pada pelaporan pajak elektronik. Dari 99 UMKM yang beroperasi minimal satu tahun, mayoritas menunjukkan literasi digital yang memadai, dengan minat dan keterampilan menggunakan aplikasi pajak elektronik. Tingkat literasi digital yang baik memberikan harapan untuk berhasilnya implementasi pajak elektronik di Kota Malang. Analisis data menunjukkan bahwa kesiapan literasi digital UMKM secara signifikan berpengaruh positif terhadap kewajiban pelaporan pajak elektronik. Peningkatan literasi digital dapat meningkatkan efisiensi pelaporan pajak UMKM, berkontribusi pada pertumbuhan ekonomi lokal, dan memastikan kelangsungan usaha. Oleh karena itu, pemahaman mendalam tentang literasi digital bukan hanya berdampak pada operasional UMKM, tetapi juga krusial untuk memastikan kepatuhan pajak yang baik dan berkelanjutan dalam jangka panjang.

**Keywords:** Ekonomi Lokal, Literasi Digital, UMKM, Pelaporan, Pajak Elektronik

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## Introduction

Malang has experienced an increase in the number of Micro, Small and Medium Enterprises (SMEs) by 17,071 businesses in 2020, up from 17,021 in 2019.(BPS, 2020). The important role of SMEs in the economy of Malang City was proven during the pandemic, where many workers who were laid off turned to opening businesses. The existence of SMEs not only contributes to the absorption of labor, but also has a positive impact on tax revenues.

Based on data from the BPS of Malang City, there was an increase in the number of business premises overall in Malang City from 17,021 in 2019 to 17,071 in 2020. Klojen District became the area with the largest number of business units, namely 7,812 in 2020, although it experienced a decrease of 2.6% compared to the previous year. The highest positive growth occurred in Sukun District, with an increase of 7.7% from 3,409 units in 2019 to 3,674 units in 2020. However, Lowokwaru District experienced the lowest decrease, namely 0.2%, to 1,112 business units. This data indicates that the economic growth of Malang City is generally positive, although the growth rate is not evenly distributed across sub-districts. In practice, the tax reporting system in Indonesia adopts a self-assessment system and has started reporting taxes electronically using e-filing and e-forms. To implement electronic tax reporting, taxpayers must have digital literacy, namely the ability to use digital media, communicate, and interact in a healthy, wise, intelligent, and legally compliant manner.

Digital literacy among SMEs has a significant impact on tax reporting obligations. In the digital era, understanding and implementing digital literacy by SMEs can be the key to success in fulfilling tax responsibilities. SMEs with good digital literacy can optimize the use of digital accounting software, accelerate the reporting process, and improve the accuracy of financial data. Conversely, a lack of digital literacy can hinder the efficiency of tax reporting, even increasing the risk of errors in filling out forms and recording transactions. Therefore, a deep understanding of digital literacy among SMEs not only provides operational benefits, but is also key to ensuring good and sustainable tax compliance.

Digital literacy according to Lee (2014), is the ability to understand and utilize information from various sources presented through computers. This includes the ability to understand, analyze, assess, organize, and evaluate information using digital technology, as defined in digital literacy literature. This definition involves an understanding of various technologies and how they are used, as well as recognizing their impact on individuals and society. Digital literacy, as stated by Martin(2008), opening the door to improved communication skills, work effectiveness, and productivity, especially in collaboration with individuals with similar skills.

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Sense (2009) identified three main skills in digital literacy, namely using technology, understanding and interpreting digital content, and assessing its credibility. In other words, digital literacy is not only related to the ability to search for, use, and disseminate information, but also includes skills in creating information, making critical assessments, ensuring the relevance of the applications used, and fully understanding digital content. Given the impact of digital literacy on society, responsibility is needed in the dissemination of information to ensure that the use of digital technology is carried out with full awareness and caution.

Although SMEs are recognized as having a vital role in the economy of Malang City, the selection of research focus on SME digital literacy towards electronic tax reporting requires deeper rationalization. The impact of SME digital literacy on electronic tax reporting is very important because it is closely related to two crucial aspects: tax revenue and SME sustainability. Concretely, a high level of digital literacy among SMEs can increase efficiency in electronic tax reporting, accelerate the administration process, and improve the accuracy of financial data. With a good understanding of electronic tax reporting procedures, SMEs can optimize the use of digital accounting software, which in turn can increase their financial transparency. This not only makes it easier to fulfill tax obligations but can also have a positive impact on overall tax revenue. In addition, good digital literacy can help SMEs adapt to the digital era, increase competitiveness, and ensure the sustainability of their businesses in the long term. Therefore, research on SME digital literacy towards electronic tax reporting in Malang City is expected to provide in-depth insights into how increasing digital literacy can contribute to local economic growth and SME sustainability.

In detailing the research problem, the main focus of this study is to explore and understand the level of digital literacy of SMEs in Malang City and its impact on electronic tax reporting. The crucial issue that needs to be solved is the extent of understanding and readiness of SMEs in adopting digital technology to fulfill tax reporting obligations. In this context, it is important to assess whether SMEs have adequate understanding of the use of digital accounting software, procedures for electronic tax reporting, and awareness of the importance of digital literacy in the context of taxation. This problem is considered to have a significant impact on SMEs in Malang City, because low levels of digital literacy can hinder efficiency tax reporting, increasing the risk of errors, and in turn, affecting the contribution of SMEs to the economy and tax revenues at the local level. Therefore, this study aims to provide in-depth insights into the digital literacy profile of SMEs and how it can affect the quality of reporting electronic tax in Malang City.

## Method

In this study, the hypothesis or causal hypothesis that has been made previously is tested. This study uses a questionnaire to collect initial data, which shows the opinions of each participant. Therefore, the unit of analysis is also carried out individually. Small and medium enterprises (SMEs) in Malang City are the subjects of this study. This study uses a sample method, and the number of samples ranges from 99 samples. To calculate the number of sufficient samples, the Slovin formula is used (Sevilla, 2007). This also considers the capabilities or limitations of researchers and the characteristics of the population that tend to be homogeneous. The research sample consisted of 99 SMEs in Malang City that met the following criteria: SMEs have been operating for at least one year and respondents were at least 25 years old and had a minimum elementary school education. The number of samples was calculated using the Slovin Formula. This study used a questionnaire on a Likert scale (strongly agree, agree, disagree, strongly disagree) with the following research instruments:

- a. Digital Literacy Readiness Indicators
  1. Views on the internet
  2. Interest and feelings towards digitalization
  3. Views on digitalization training
  4. Views on productivity
  5. Dependence on the internet
  6. Belief in the Importance of Digital Literacy
- b. Tax Reporting Obligation Indicators
  1. Ability to Use Electronic Tax Applications
  2. Ease and Skill in Operating Electronic Tax Applications
  3. Interest and Clarity in Using Electronic Tax Applications
  4. Ease of Learning and Accessing Electronic Tax Applications
  5. System complexity level
  6. Precision in Operating According to Needs
  7. Perception of System Complexity Level

The data analysis method used in this study is multiple regression to see and determine the influence between variables with the T-test. The test was carried out using normality, linearity, multicollinearity, and autocorrelation analysis.

## Results and Discussion

This study captures demographic information of SME actors in Malang City about having been running a business for at least 1 year, respondents are at least 25 years old. And respondents have at least elementary school education as seen in Table 1.

**Table 1.** Summary of Respondent Demographic Information

Category	Information	Amount
Gender	Man	62
	Woman	37
Level of education	Elementary school	4
	JUNIOR HIGH SCHOOL	23
	SENIOR HIGH SCHOOL	48
	Diploma/Bachelor	24
Company Age	< 1 Year	42
	> 1 Year	57

The online questionnaire has been distributed and 99 data have been collected from respondents which were then analyzed and processed. Most of the SMEs in Malang City already have more than 50% of their company age of more than 1 year.

**Table 2.** Summary of Questionnaire Results by Indicators

No	Indicator	Results (%)
1	Views on the internet	75
2	Interest and feelings towards digitalization	80
3	Views on digitalization training	70
4	Views on productivity	78
5	Dependence on the internet	85
6	Belief in the Importance of Digital Literacy	90
7	Ability to Use Electronic Tax Applications	75
8	Ease and Skill in Operating Electronic Tax Applications	80
9	Interest and Clarity in Using Electronic Tax Applications	75
10	Ease of Learning and Accessing Electronic Tax Applications	78
11	System complexity level	60
12	Precision in Operating According to Needs	75
13	Perception of System Complexity Level	65

Based on the results of the study, it can be seen that the majority of SMEs in Malang City have fairly good digital literacy and readiness to adopt electronic tax technology. Although there are still some respondents who feel the system is quite complicated, most of them show interest, skills, and confidence in using electronic tax applications. This conclusion provides an optimistic view regarding the potential for successful implementation of electronic tax among SMEs in Malang City with increased digital literacy. Descriptively, this study with the sample used is shown in Table 3.

**Table 3.Descriptive Test Results**

	N	Minimum	Maximum	Mean	Std. Deviation
X1	99	3.00	4.50	4,3825	,30246
Y	99	2.33	4.67	4,1207	,45761
Valid N (listwise)	99				

Research related to digital literacy readiness with a mean value of 4.3825, the minimum respondent answered 3.00 (quite agree) and the maximum answered 4.50 (between agree and strongly agree) with a standard deviation of 0.30246. The tax reporting obligation variable from 100 respondents 2.33 answered disagree and a maximum of 4.67 (between agree and strongly agree) with a standard deviation of 0.45761.

This study used a questionnaire, the results of the validity and reliability tests are shown in Tables 4 and 5.

**Table 4.Validity Test**

		Correlations														Correlations				TOT					
		X1	X2	X3	X4	X5	X6	X7	X8	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14		
X1	Pearson Correlation	1	-.050	-.026	.202	.242	.010	.496**	.337**	-.029	.358	-.051	-.051	1,000**	-.050	-.026	.202	.242	.010	.496**	.337**	-.029	.028	.426**	
	Sig. (2-tailed)		.623	.795	.045	.016	.925	.000	.001	.779	.000	.618	.619	.000	.623	.795	.045	.016	.925	.000	.001	.779	.785	.000	
X2	Pearson Correlation	-.050	1	.462**	-.063	.299**	-.046	-.063	.332**	-.032	.282	.541**	-.058	-.050	1,000**	.462**	-.063	.299**	-.046	-.063	.332**	-.032	-.204	.427**	
	Sig. (2-tailed)	.623		.000	.537	.003	.651	.532	.001	.750	.009	.000	.571	.623	.000	.000	.537	.003	.651	.532	.001	.750	.643	.000	
X3	Pearson Correlation	-.026	.462**	1	.138	.352**	.154	.192	.439**	.437**	.370	.425	.230	-.026	.462**	1,000**	.138	.352**	.154	.192	.439**	.437**	-.033	.657**	
	Sig. (2-tailed)	.795	.000		.172	.000	.129	.056	.000	.000	.000	.000	.022	.795	.000	.000	.172	.000	.129	.056	.000	.000	.748	.000	
X4	Pearson Correlation	.202	-.063	.138	1	.064	.171	.270**	.204*	-.036	.160	-.064	.254*	.202	-.063	.138	1,000**	.064	.171	.270**	.204*	-.036	-.072	.399**	
	Sig. (2-tailed)	.045	.537	.172		.528	.090	.007	.043	.725	.113	.528	.011	.045	.537	.172	.000	.528	.090	.007	.043	.725	.477	.000	
X5	Pearson Correlation	.242	.299**	.362**	.064	1	.005	.377**	.367**	-.030	.403*	.424*	.150	.242	.299**	.362**	.064	1,000**	.005	.377**	.367**	-.030	.121	.619**	
	Sig. (2-tailed)	.016	.003	.000	.528		.959	.000	.000	.771	.000	.000	.138	.016	.003	.000	.528	.000	.959	.000	.000	.771	.232	.000	
X6	Pearson Correlation	.010	-.046	.154	.171	.005	1	.002	.129	.515**	-.083	.099	.283*	.010	-.046	.154	.171	.005	1,000**	.002	.129	.515**	.022	.296**	
	Sig. (2-tailed)	.925	.651	.129	.090	.959		.987	.204	.000	.415	.333	.005	.925	.651	.129	.090	.959	.000	.987	.204	.000	.827	.003	
X7	Pearson Correlation	.496**	-.063	.192	.270**	.377**	.002	1	.339**	.163	.469**	.024	.097	.496**	-.063	.192	.270**	.377**	.002	1,000**	.339**	.163	.179	.963**	
	Sig. (2-tailed)	.000	.532	.056	.007	.000	.987		.001	.107	.000	.811	.391	.000	.532	.056	.007	.000	.987	.000	.001	.107	.078	.000	
X8	Pearson Correlation	.337**	.332**	.439**	.204*	.367**	.129	.339**	1	.206*	.286**	.436**	.099	.337**	.332**	.439**	.204*	.367**	.129	.339**	1,000**	.206*	.028	.766**	
	Sig. (2-tailed)	.001	.001	.000	.043	.000	.204	.001	.041		.007	.000	.232	.001	.001	.000	.043	.000	.204	.001	.000	.041	.780	.000	
N		99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	99	

From the results of the factor analysis output above, the digital literacy readiness variable obtained a calculated t value > t table 0.202. It can be concluded that the analysis test for the digital literacy readiness variable can be continued. Furthermore, the value of the tax reporting obligation variable obtained a calculated t value > t table 0.202, this means that the tax reporting obligation variable can be continued.

**Table 5.Reliability Test**

Cronbach's Alpha	N of Items
.724	23

Additional checks related to data reliability involve the use of reliability testing techniques using Cronbach's Alpha, which shows a value of 0.7. When the Cronbach's Alpha value

exceeds 0.7, it can be concluded that the measuring instrument used is reliable; conversely, if the value is less than 0.7, then the instrument is considered inconsistent or unreliable.(Ghazali, 2018). Reliability testing on variables such as digital literacy readiness and tax reporting obligations showed a Cronbach's Alpha value of 0.724.

Before involving linear regression testing, the data were processed to test for normality using the Kolmogorov-Smirnov value, which showed a significant value of 0.066, exceeding the significance threshold of 0.05. This indicates that the data does not show multicollinearity, with a Variance Inflation Factor (VIF) value of less than 10 and a tolerance of more than 0.01. In addition, heteroscedasticity problems were identified through the Glejser test, especially in the literacy readiness variable. However, the Durbin Watson statistic of 1.246 shows a higher value than the DW value in the autocorrelation-free test table, indicating that the classical assumptions have been met before multiple linear regression testing was carried out.

**Table 6. Multiple Linear Regression Test Results**

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	36,785	3,002		12,252	.000
X1	,682	,092	,603	7,435	.000

The results of the data test show that the multiple linear regression model  $Y = 36.785 + 0.682X1 + e$ . The results of the regression equation show that the variable of digital literacy readiness towards tax reporting obligations is positive or can increase the digital knowledge of SME actors in Malang City.

With a coefficient of 0.682, the digital literacy variable shows an influence on tax reporting obligations. With a significant t-test, the digital literacy variable obtained a significance value of 0.000 less than 0.05, which indicates that this variable has an effect on tax reporting obligations. Based on the results of the analysis above, the research hypothesis states that Malang City SME business actors must be ready with digital literacy, which has a significant impact on tax reporting obligations.

**Table 7. Coefficient of Determination**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,603a	,363	,356	3,07829	1,281

Based on Table 7, the coefficient of determination value is 0.603, which means that the influence of the digital literacy readiness variable on tax reporting obligations is 60.3% and the remaining 39.7% is influenced by other variables outside this research model. Variables outside the model can be a reference in further research that is in accordance with the characteristics of business actors, for example financial literacy.

### **Digital Literacy Readiness for Tax Reporting Obligations**

The results of the study show that the majority of Micro, Small, and Medium Enterprises (SMEs) in Malang City have adequate levels of digital literacy and readiness to adopt electronic tax technology. Positive views of the internet, enthusiasm for learning digitalization, and the belief that digitalization training will improve skills, indicate that SMEs in Malang City have a proactive attitude towards technological change. The high interest and trust in the use of digital technology in daily work is also reflected in the perception that working with digitalization can increase productivity. Therefore, digital literacy is not only seen as a necessity, but also as an investment to advance the business.

On the tax reporting obligation side, the results show that most SMEs have basic skills in using electronic tax applications such as e-SPT, e-form, and e-filing. The ease and easy-to-understand display, along with the skills in operating the application, indicate a positive adoption of electronic tax technology among SMEs. Although some respondents considered the level of system complexity to be quite high, most felt that they could overcome these difficulties with increased understanding and training. This highlights the importance of mentoring and training efforts for SMEs so that they can make maximum use of electronic tax technology.

The focus of digital literacy is on the ability of individuals or groups to find, organize, and create information through the use of digital technology, such as the internet, mobile phones, computer hardware and software, and other digital devices.(Warlick, 2004). This means that digital literacy includes the extent to which a person or group can master the use of computer systems and applications. In this context, the results of the study indicate that the level of digital literacy of Micro, Small, and Medium Enterprises (SMEs) in Malang City has a significant correlation with the obligation to report taxes electronically.

Overall, the digital literacy of SMEs in Malang City is considered high, reflecting an intensive understanding and use of the internet. SMEs in the city often use current technology to increase productivity in their daily activities. Thus, they are better prepared to face situations where electronic tax reporting becomes a necessity.Desmayanti(2012) added that a person's readiness for technology, especially related to electronic tax reporting, is significantly influenced by the individual's attitude. Individuals who are able to respond well to technology tend to be more enthusiastic about reporting taxes electronically.

According toDesmayanti(2012), readiness for information technology can also affect a person's way of thinking. The more ready a person is to accept new technology, especially in adapting, the more progressive their mindset is. Therefore, digital literacy and readiness



for information technology play an important role in shaping the attitudes and behavior of SME actors, especially regarding the obligation to report taxes electronically.

## Conclusion

Based on the findings of the previous discussion, it can be concluded that digital literacy readiness has an impact on tax reporting obligations. This sends a message to the government as a regulator, academics as instructors, the business world as a catalyst, and the general public as an incentive to further socialize and develop digital literacy and tax reporting readiness in SMEs in Malang City. The results of the study provide a positive picture regarding digital literacy and the readiness of SMEs in Malang City for electronic tax reporting. However, it must be acknowledged that there are still a small number of respondents who experience obstacles in dealing with the complexity of the system. Therefore, further steps are needed, such as training and mentoring programs, to ensure that all SMEs can utilize this technology optimally. These results increase our understanding of the adoption of technology by SMEs and how it impacts electronic tax reporting at the local level. The limitations of this study are that the level of digital literacy only measures the technical ability of respondents in using computers and organizing the data collected, not their ability to analyze the data. In addition, because each electronic tax obligation requires a different level of readiness, the level of effort of respondents is very different and has an impact on the tax obligations that must be met by respondents.

## Reference

- Andi, A. (2018). The Ability of Individual Taxpayers in Using E-Filing. *Jurnal Ekonomi-Qu*, 8(2), 174–211. <https://doi.org/10.35448/jequ.v8i2.4448>
- BPS. (2020). Number of Micro, Small and Medium Enterprises (SMEs) by District in Malang City (Unit), 2021-2022. <https://malangkota.bps.go.id/indicator/35/531/1/jumlah-usaha-mikro-kecil-menengah-umkm-menurut-kecamatan-di-kota-malang-.html>
- Desmayanti, E. (2012). Factors Influencing the Use of E-Filing Facilities by Taxpayers as a Means of Submitting Periodic Tax Returns Online and in Real Time. *Journal of Accounting*, 1(1), 1–12.
- Ghazali, I. (2018). *Multivariate Analysis Application with IBM SPSS 25 Program*. Semarang: Diponegoro University Publishing Agency.
- Gilster, P. A. (2007). Closing Remarks: A Charter for Interstellar Studies. *AIP Conference Proceedings*, 886, 204–206. AIP. <https://doi.org/10.1063/1.2710056>
- Ministry of Education and Culture. (2017). K. Jakarta: Secretariat of the GLN Team, Ministry of Education and Culture, 8.
- Leaning, M. (2019). An approach to digital literacy through the integration of media and information literacy. *Media and Communication*, 7(2), 4–13.

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<https://doi.org/10.17645/mac.v7i2.1931>

- Lee, S.-H. (2014). Digital Literacy Education for the Development of Digital Literacy. *International Journal of Digital Literacy and Digital Competence*, 5(3), 29–43. <https://doi.org/10.4018/ijdlcdc.2014070103>
- List, A. (2019). Defining digital literacy development: An examination of pre-service teachers' beliefs. *Computers and Education*, 138(May 2018), 146–158. <https://doi.org/10.1016/j.compedu.2019.03.009>
- Martin, A. (2008). *Digital Literacies: Concepts, Policies & Practices*.
- Nasikin, M. (2016). *Practice of Financial Report Preparation in Culinary UMKM in Ishokuiki UMKM, Tuban City*. Perbanas Surabaya School of Economics.
- Riel, J., & Christian, S. (2016). Charting Digital Literacy: A Framework for Information Technology and Digital Skills Education in the Community College. *SSRN Electronic Journal*, (541), 1–22. <https://doi.org/10.2139/ssrn.2781161>
- Rumat, SHW, & Sitinjak, ND (2019). Dynamics of Individual Taxpayer Compliance in Kupang City. *Scientific Journal of Business and Taxation*, 1(1), 44–54.
- Sense, C. (2009). *Digital Literacy and Citizenship in the 21st Century*. Common Sense Media.
- Seville. (2007). *Research Methods*. Quezon City: Rex Printing Company.
- Tambunan, T. (2002). *Small and Medium Enterprises in Indonesia, Some Important Issues*. Jakarta: Salemba Empat.
- Warlick, F. (2004). *Redefining Literacy for the 21st Century*. Santa Barbara, CA: Linworth Publishing.