

## TECHNOLOGICAL LITERACY AND RESOURCE MANAGEMENT IN SME INCOME

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### ABSTRAK

Karakteristik UKM terus disorot, namun hal menarik dibalik kekuatan mereka adalah masalah akut yang belum juga terselesaikan misalnya keterampilan teknologi, manajemen sumber daya manusia dan keuangan. Meminjam asumsi dari teori berbasis sumber daya, penelitian ini mencoba menguji pengaruh literasi teknologi, modal kerja, dan manajemen tenaga kerja terhadap pendapatan Usaha Kecil dan Menengah (UKM). Sampel terdiri dari 100 UKM di 14 industri yang ditentukan secara acak proporsional berdasarkan jenis industri mereka. Responden mengisi kuesioner penelitian secara langsung. Kuesioner yang terkumpul ditabulasi dan dianalisis menggunakan metode Partial Least Square. Hasilnya menunjukkan bahwa literasi teknologi, modal kerja, dan manajemen tenaga kerja berpengaruh positif terhadap pendapatan usaha baik secara individual maupun secara simultan. Temuan ini merekam bahwa 45 persen dari sampel tidak mengintegrasikan produk mereka dengan pesaing karena kurang terampil dalam menggunakan media informasi untuk mengukur kemampuan pesaing. Secara praktik, literasi teknologi dapat ditransformasikan untuk kegiatan produksi, administrasi, dan pemasaran produk sehingga penghasilan usaha dapat dimaksimalkan.

Kata kunci: literasi teknologi, manajemen, sumber daya, pendapatan, UKM.

### ABSTRACT

*The characteristics of SMEs continue to be highlighted, but the exciting thing behind their strengths are acute unresolved problems such as technology skills, human resource management and finance. Borrowing assumptions from resource-based theory, this study tries to examine the effect of technological literacy, working capital, and labour management on the income of SMEs. The sample consisted of 100 SMEs in 14 industries randomly assigned proportionally based on their industry type and filled out the research questionnaire directly. The collected questionnaires were tabulated and analyzed using the Partial Least Square method. The results show that technological literacy, working capital, and labour management positively affect business income individually and simultaneously. These findings record that 45 per cent of the sample do not integrate their products with competitors because they are less skilled in using information media to measure competitors' capabilities. In practice, technological literacy can be transformed for production, administration, and product marketing activities to maximize business income.*

*Key words: technological literacy, management, resource; income, SMEs.*

### INTRODUCTION

Over the past decade, Small and Medium Enterprises (SMEs) have been widely discussed by economists and business experts due to their unique characteristics (Islam et al., 2011; Sarwoko et al., 2013; Siddiqui, 2017; Wong et al., 2018), business relations (Lin and Lin, 2016), marketing and

business orientation (Amin et al., 2016; Mokhtar et al., 2014), access to finance (Machmud and Huda, 2011; Wellalage and Locke, 2017), business performance (Aziz et al., 2013; Ismanto et al., 2020; Mason et al., 2015; Musah et al., 2018), to the resilience of their businesses from disasters (Auzzir et al.,

2018; Fath et al., 2021; Purnomo et al., 2021; Samantha, 2018) and global economic crises (Patiware, 2019; Tambunan, 2020).

Even recently, the Covid-19 pandemic that has attacked almost all corners of the world, including Indonesia, has put pressure on business people in an economic downturn (Ozili and Arun, 2020). This condition resulted in large-scale restrictive policies that had a significant effect on the national economy (Olivia et al., 2020), especially for domestic businesses and exporters. Not to mention the lockdown policies (Akinwale, 2020; Javed and Ayaz, 2020) and new life (social distancing and quarantine) (Lutfi et al., 2020; H. H. Nguyen et al., 2021), further narrowing micro-economic productivity. Such challenging conditions test SMEs to survive, continue, grow, or even leave their business (Purnomo et al., 2021). Apart from that, MSME actors must have an extreme view of the other side of the challenge as an opportunity for a phenomenon that occurs (Prasanna et al., 2019; Purnomo et al., 2021). SMEs must face the reality that innovation strategies, resource management, technology and information literacy, and marketing strategies are important for them to survive in the market (Gunartin, 2017).

Data from the Indonesian Ministry of Cooperatives and SMEs (KEMENKOPUKM) recorded that until 2019 MSMEs controlled 99.9% of the national market with 97% employment. Kementrian Koperasi dan UKM RI (2021) Microenterprises dominate them with 63.35 million business units, followed

by small and medium enterprises with 783 thousand and 60 thousand business units, respectively (Badan Statistik Pusat RI, 2021). Central Java province occupies the first position with the number of micro and small companies as many as 912,421 units, followed by East Java, West Java, and Yogyakarta, respectively. Meanwhile, the distribution of the most significant number of MSMEs in Central Java, respectively, from the largest is Purbalingga (73,715 units), Kebumen (52,497), Pemalang (51,334), Banyumas (51,254), Jepara (49,657), followed by 30 other regions (Badan Statistik Pusat Jawa Tengah, 2021). The researcher presents statistical data for the top 5 MSMEs with the most business units, along with the number of workers and their production values in table 1. However, based on the production value, Jepara is ranked 4th with a value of 4.2 trillion rupiahs. Compared to Purbalingga, this figure is far from the production value of Purbalingga SMEs of 2.5 trillion rupiahs. Meanwhile, Jepara became the region with the most Central Java Kadinda members in 2020. This is an exciting fact to explore further how SMEs in Jepara continue to grow by investigating the factors that can affect their growth.

**Table 1**  
**The Big Five Regencies/Cities with the Most Number of MSME Units in Central Java**

<b>Region</b>	<b>Business unit</b>	<b>Labor</b>	<b>Productionn Value (billion)</b>
Purbalingga	73.715	116.330	2.547
Kebumen	52.497	102.149	3.476
Pemalang	51.334	90.553	6.766
Banyumas	51.254	96.493	3.589
Jepara	49.657	94.812	4.212

*Source: Central Java BPS, 2019*

Revenue is often used to measure a firm's growth and financial performance (e.g., Dakhllalh et al., 2020; Eshima and Anderson, 2017; Gaur and Kesavan, 2015; Musah et al., 2018). The level of operating income can determine a company's competitiveness in product/service innovation (Carvalho and Costa, 2014; Ceptureanu, 2015). For this reason, many entrepreneurship experts suggest that it is important to know the amount of business income while the business is running to determine short-term and long-term financial actions and decision making (Musah et al., 2018; Wong et al., 2018).

To be able to compete and survive in the market, SMEs must manage their resources (working capital or human) efficiently to achieve maximum output income (Sharma et al., 2019). Adopting resourcebased theory proposed by Barney (1991) that companies achieve competitive advantage is based on the ability to use company resources. This theory assumes that everything the company owns (tangible and intangible assets) can be managed efficiently for heterogeneous output, diversify, sustain themselves, and improve their performance (Alvarez and Barney, 2017; Wernerfelt, 1984).

Although SMEs are economic pawns that can boost the country's economy, there are still many obstacles faced by business people in this industry to grow, for example, human resource management (Hung et al., 2016; Orobia et al., 2020), finance (Buchdadi et al., 2020), and poor technological literacy (Abdullah et al., 2018; Kulathunga et al., 2020). Researchers highlight these two essential factors because: 1) entrepreneurial success is closely related to resource management (working and human capital); 2) the development of science causes humans to live in tandem with technology.

In general, company resources include both tangible (for example, working capital) and intangible (for example, employee skills) resources (Kamasak, 2017). The frequency and management of these resources can determine the company's income level in a

certain period (Sharma et al., 2019). Previous studies have discussed the relationship between human resource management and working capital with company earnings in different demographic contexts. Several researchers have expressed this relationship with inconsistent results in the Indonesian context. For example, Lamia (2013), using a sample of fisherman in one sub-district in South Minahasa, found that fisherman income is influenced by capital, the number of workers, and experience. With the same sample in different places, Putri et al. (2013) also found that working capital and working hours affect fisherman income, but the number of workers is not significant.

In contrast to the results of the two previous studies, Sianturi et al. (2015) stated that the empirical results showed a negative relationship between working capital and fishermen's income. Using a sample of traders in one market, Patiware (2019) finds that working capital management determines the income of traders. Meanwhile, Nayaka and Kartika (2018) investigated the relationship between working capital and labor with the income of 57 industrial entrepreneurs in the Mengwi District. The results show that those factors affect the income of entrepreneurs.

These studies use a biased sample and focus on one specific area. Meanwhile, SMEs are widespread throughout Indonesia. Several other studies have examined the relationship between working capital and SME income (Noviono and Pelitawati, 2019; Wirawan et al., 2015) and labor management (Artini, 2019; Polandos et al., 2019) with SME income in various districts/cities. The researcher's knowledge of this research topic has not been found in Jepara Regency. In addition, they know many small and medium industries (14 industries) with a narrow area. This attracts researchers that the sample of SMEs in Jepara is sufficient to generalize the study results.

This study also includes the technology literacy variable because it relates to the knowledge and ability of entrepreneurs to

use technology for the sustainability of their business (Kulathunga et al., 2020). Winarsih and Furinawati (2018) mentions that technological literacy affects one's business skills, such as cooperation, negotiation, and problem solving. This study will be the first to investigate the relationship between technology literacy and SME income in the Indonesian context. Because so far, many studies have been found that prove the relationship between financial literacy and business performance (Adomako and Danso, 2014; Buchdadi et al., 2020; Eniola and Entebang, 2016), while SME technological literacy has become a hot topic in a decade abroad (Kulathunga et al., 2020). In addition, technological literacy is the basic literacy proclaimed in the 2020 National Literacy Movement (GLN) which is essential for business growth.

Based on the background review of previous research results and the phenomena that occur, this study aims to investigate the effect of technological literacy, working capital, and labor management on the income of SMEs in Jepara. The researcher also presents a literature review in the second part and the research methodology in the third part. Then the results and discussion are in the next section.

## LITERATURE REVIEW

### Resource-Based Theory

Resource-based theory develops because of the business life cycle in seeing opportunities and utilizing knowledge for competitive advantage (Barney, 1991). This theory assumes the introduction of knowledge and opportunities for company resources to create heterogeneous outputs (Alvarez and Barney, 2017). Conner and Prahalad (1996) developed a resource-based theory with a knowledge-based and opportunism-based perspective that business activities are formed based on knowledge and opportunism of organizational modes. While a resource is anything that can be considered a particular company's strength or weakness.

More formally, company resources at a given time can be defined as assets (tangible and intangible) that are tied semipermanently to the company, such as brands, trade contacts, machines, efficient procedures, capital, and others (Wernerfelt, 1984). Furthermore, the view of this theory is the application of growth strategies by involving a balance between the exploitation of existing resources and the development of new ones to sustain themselves and improve their performance. Not only production resources in the form of money and material, Boon et al. (2018) reveals that human capital is also a strategic resource that can gradually determine the company's prosperity over time.

### Operating income

The primary purpose of a person running a business is to earn income. Income results from a person's efforts after doing work that is used to meet daily needs (Khoirudin and Setiaji, 2019). Nguyen and Huynh (2019) mentions that income quality is important for the organizations' financial effectiveness. Therefore, measuring operating income is necessary to know for business sustainability decision making. In a business sense, income increases the company's wealth due to changes in value that are not caused by capital and debt.

Income is the most crucial element that determines the success and decline of a business (Eshima and Anderson, 2017; Musah et al., 2018). Therefore, business actors develop specific strategies to maximize sales of marketed products/services (Amin et al., 2016; Nehete et al., 2011; Purba et al., 2021). Revenue is usually used as a measure of business performance. Bhatia and Awasthi (2018) found that business performance depends on the implementation of a quality management system, including operational, workforce, and environmental performance.

The amount of income can determine business continuity because the company's ability to finance business activities is

determined by the funds it has (López-Pérez et al., 2017). Some researchers use operating income as net profit (Eshima and Anderson, 2017; Musah et al., 2018).

### **Technology Literacy**

Technological literacy is often referred to as information and communication technology or information and technology literacy (Farmer, 2011; Hashim, 2015). Technological literacy is an integral part of basic literacy, which is included in the category of knowledge and ability to use information and communication technology (ICT), including an understanding of computer concepts and principles, digital information systems, programming, the internet, and the ability to use ICT tools such as management numbers and words (Kulathunga et al., 2020). Syarifuddin (2014) said that technological literacy is a person's ability to understand, master and utilize mass media. In addition, technological literacy also shows a person's ability to regulate and assess innovation in a problem-solving process (Blikstein et al., 2017). This is not just a knowledge of computers and the like. However, technological literacy is associated with the level of knowledge about technology's nature, behaviour, strengths, and consequences (Danim, 2019).

UNESCO (2018) mentions technological literacy includes seven skills related to technology and information. These abilities include defining, accessing, managing, integrating, evaluating, creating, and communicating. For this reason, technological literacy refers to the accountability and effectiveness of using technology (Farmer, 2011).

### **Working capital**

Companies need capital to run business activities. Capital can generally come from internal or external companies (Alma, 2015). Internal capital usually comes from operating income, while external capital comes from third-party funding. Farnè and Vouldis (2020) states that capital is all forms of wealth, whether it is obtained from the

company's ability or from other parties in the form of loans. The capital consists of 1) business capital, all assets that can be used directly or indirectly by the company to increase output, and 2) working capital, the capital needed for daily operational costs.

Working capital is an investment that is invested in short-term assets, such as securities, banks, receivables, cash, inventory receivables and current assets (Kasmir, 2014). Working capital may be considered as the capital required to finance the company's investment needs, such as purchasing raw materials, paying company debt, paying labour wages and making other payments (Singhania and Mehta, 2017).

In the theory of production factors, inadequate working capital supplies can cause financial difficulties and even business failure (Banerjee, 2014; Sunarjanto et al., 2016). Working capital can be measured by the amount of use of raw materials and the turnover rate of the amount of capital (Wirawan et al., 2015). It can also be measured by the capital structure, the use of additional capital, barriers to accessing external capital, the state of the business after adding capital (Putri et al., 2014).

### **Labor Management**

Labor is one of the leading production factors that determine business success (Hieu and Nwachukwu, 2020). Often encountered empirical literature that discusses the importance of maintaining employee welfare and productivity for business success (Chang et al., 2021; Malik and Usman, 2011). In fact, human resources are considered a valuable strategic asset for business performance (Boon et al., 2018). This is because labor is not only their quantity but also their knowledge and skills, an intangible resource for the company (Hall, 1991; Hieu and Nwachukwu, 2020; Kamasak, 2017). Adopting resource-based theory that maximizing resources efficiently can lead the company to higher output (Alvarez and Barney, 2017), meaning higher income.

The existence of employees in the company plays a vital role in the company's financial performance. Many research papers discuss this topic. For example, Alhan et al. (2020) investigate how the quality of employees can affect the financial performance of banks. In different business sectors, Nanu et al. (2020) found that employee satisfaction positively impacts the financial performance of resort and hotel companies. Therefore, many experts and researchers suggest that owners/managers pay attention the employee satisfaction and productivity for higher performance (Ismanto, 2018). Human resource management can be applied effectively in companies because human resource practices are often associated with the higher job and life satisfaction (Guest, 2017). These practices include adequacy, quality, sex, and temporary workforce (Sulistiana, 2013).

### **The Effect of Technological Literacy on Operating Income**

Today, the use and utilization of technology have excellent opportunities for business actors to develop their business and increase income. Their ability to master this technology is called technological literacy. Technological literacy is associated with the level of knowledge about technology's nature, behavior, strengths, and consequences (Danim, 2019) to solve a problem (Blikstein et al., 2017). Utilizing technology and information to encourage MSME business activities, especially in product/service marketing, technology offers efficiency, flexibility, ease of access, and lower transaction costs (Kiveu and Ofafa, 2013). In the end, operating income can increase over time. Technology and information practice for SMEs can accelerate the wheels of business because it provides a flexible system and fast response. Thus, this study proposes the following hypothesis.

H<sub>1</sub>: Technological literacy has a positive effect on operating income.

### **Effect of Working Capital on Operating Income**

In the theory of production factors, the working capital stock can reflect its financial condition, whether it is adequate or distressing (Banerjee, 2014; Sunarjanto et al., 2016). Working capital is used to finance the company's investment needs, such as purchasing raw materials, paying company debt, labor wages and making other payments (Singhania and Mehta, 2017). For this reason, adequate working capital will be able to encourage company productivity so that their income is higher. Thus, this study proposes the following hypothesis.

H<sub>2</sub>: Working capital has a positive effect on operating income.

### **The Effect of Labor Management on Operating Income**

Human resources are often considered a valuable strategic asset for business performance (Boon et al., 2018). Their welfare and productivity largely determine business performance and success (Chang et al., 2021; Hieu and Nwachukwu, 2020; Malik and Usman, 2011). This study borrows the resource-based theory that human resource management can be applied effectively in companies for higher output (Alvarez and Barney, 2017; Guest, 2017). Thus, this study proposes the following hypothesis.

H<sub>3</sub>: Labor management has a positive effect on operating income.

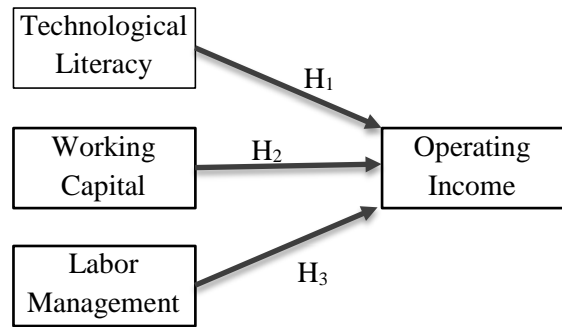
## **RESEARCH METHOD**

This research is a quantitative research that the data collected by researchers is in the form of numbers (Yusuf, 2014). This research was conducted on SMEs in Jepara Regency in 2020. To achieve objectives research, research variables were measured based on the measurement indicators used by previous researchers. The dependent variable is operating income (INCO), which is measured using a combination of indicators from Marfuah and Hartiyah (2019). INCO variable items regarding respondents' responses to their profits and income. Meanwhile, the

technological literacy variable (TECH) refers to the UNESCO (2018) indicator covering insight and application of technology; the working capital variable (WORK) indicator from Putri et al. (2014) covers sources and general conditions related to working capital; and labor management indicators (EMPY) from Sulistiana (2013) cover the adequacy and quality of labor. All question items were put together in a questionnaire form with an answer scale of 1 - 5, where 1 for "Strongly disagree" and 5 for "Strongly agree".

Data were collected from the tabulation of the answers to the questionnaire by respondents of SMEs in the Jepara Regency. Researchers used a direct approach by visiting SME owners to ask for their supplies to participate in the research. The researcher accompanied the respondent to fill out the questionnaire to avoid bias due to the respondent's misunderstanding on one or several certain questions. The researcher excluded micro-enterprises from the sample because these were the most vulnerable and their business skills were poor (Eugene et al., 2019; Fatoki, 2014b). So, the sample in this

research is small and medium-sized enterprises. The sample size is determined based on the results of the calculation of the Slovin formula with an error tolerance limit of 10%, which is 100 respondents. Sampling in this study used a proportional random sampling technique based on the type of industry (see Table 2). The data was then tested using Partial Least Square (PLS) regression analysis which had previously passed the reliability and validity test. To provide a more concise description of this research, the researcher describes the theoretical framework in figure 1.



**Figure 1**  
**Theoretical Framework**

Source: The authors

**Table 2**  
**Distribution of Research Sampling**

No	Type of Small and Medium Industry	Business Unit	Frequency
1	Wooden Furniture	5.870	31
2	Rattan Craft	846	5
3	Weaving	724	4
4	Monel	638	3
5	Pottery	94	1
6	Rooftile	3.688	20
7	Cigarette	29	0
8	Woodcraft	1.346	7
9	Food and beverages	2.788	15
10	Convection	2.043	11
11	Embroidery	318	2
12	Children toys	228	1
13	Simplified Craft	29	0
14	Brass Craft	54	0
	Total	18.695	100

Source: BPS Jepara, 2021

## ANALYSIS AND DISCUSSIONS

Before discussing further the empirical results, the researcher describes the respondents' profile in this study (see Table 3).

**Table 3**  
**Respondent Profiles**

Item	Category	Percentage
Gender	Male	71
	Female	29
Business age	< 5 years	10
	6-10 years	20
	11-15 years	17
	16-20 years	17
	> 21 years	36
Type of industry	Furniture of wood	31
	Craft of rattan	5
	Weave	4
	Monel	3
	Poltery	1
	Tile	20
	Craft of wood	7
	Foods	15
	Convection	11
	Embroidery	2
	Toy	1

Source: Processed data, 2020

**Table 4**  
**Descriptive Statistics**

Var.	N	Min	Max	Mean	Std. Deviation
TECH	100	14	35	0,163	0,092
WORK	100	15	25	0,322	0,107
EMPY	100	10	20	0,359	0,130
INCO	100	7	15	0,485	0,082

Source: Processed data, 2020

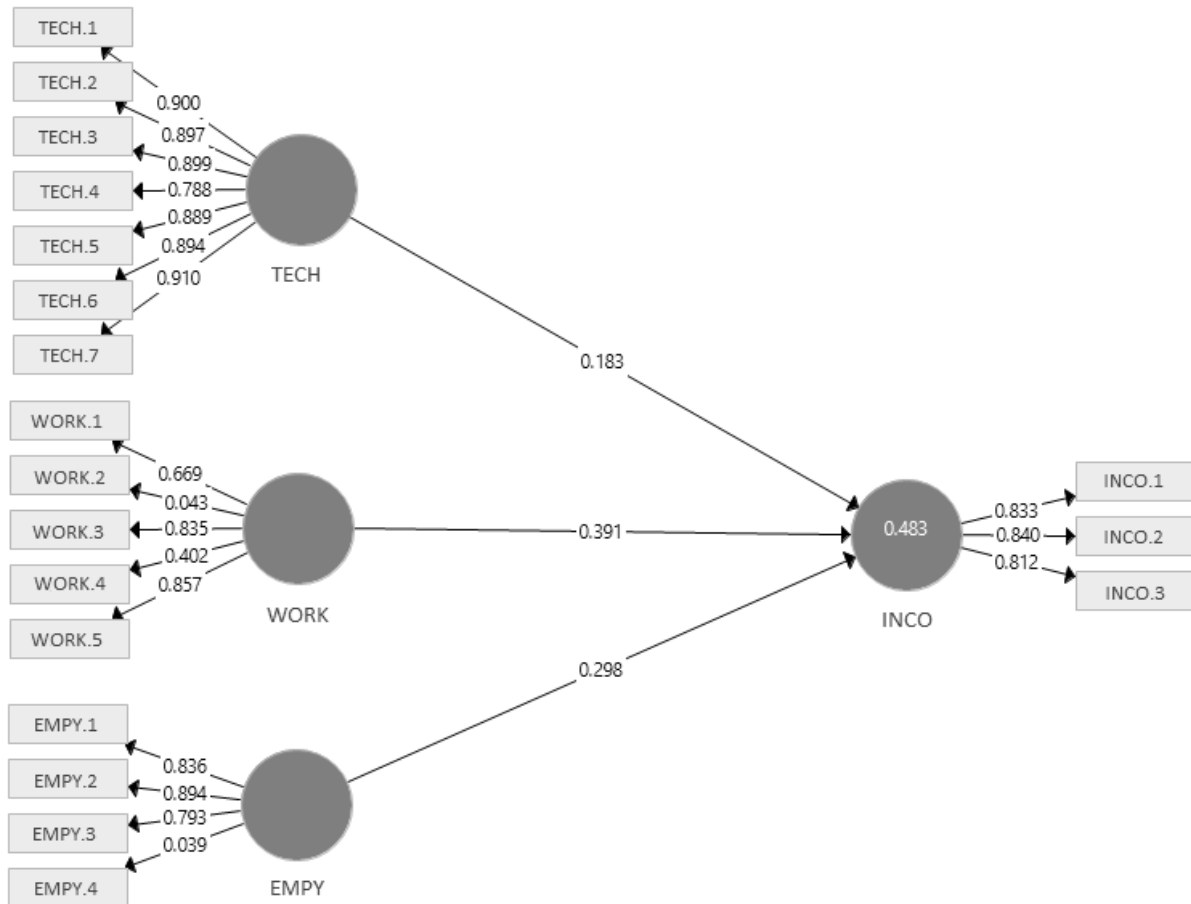
Most of the respondents were male as many as 71 people and the rest were female. 90% of respondents have been in business for more than five years and 70% have been in business for more than ten years. Meanwhile, 36% of respondents have run their business for more than two decades. Researchers observe that most of the SMEs in Jepara are businesses that have been passed down from their predecessors. The industries involved

are varied. Usually, they are concentrated in one industrial area, for example the Monel industry in Kriyan, the woven fabric industry in Troso, the furniture industry in Mulyoharjo, the convection industry in Medium, and other industries. In the sample of this study, the largest industry in Jepara is furniture, then the roof tile industry, food, convection, and other industries.

Table 4 presents descriptive statistics of the research data. The TECH variable has a minimum value of 14 and a maximum of 35. In comparison, the standard deviation value is 0.092 with an average value of 0.163. The standard deviation value is smaller than the average value from these results, so it does not indicate any deviation from the data. The WORK variable has a minimum value of 15 and a maximum of 25. While the standard deviation value is 0.107 with an average value of 0.322. The standard deviation value is smaller than the average value, indicating no data deviation. Furthermore, the EMPY variable has a minimum value of 10 and a maximum of 20. While the standard deviation value is 0.130 with an average value of 0.359. Based on these results, it can be concluded that there are no data deviations. Meanwhile, the dependent variable INCO also does not show any data deviation. This variable has a minimum value of 7 and a maximum of 15, with a standard deviation value of 0.082 and an average value of 0.485.

Figure 2 is the loading factor value after calculating. The loading factor value is above 0.5 which can be used as a measuring tool for each construct. So that the loading factor value below 0.5 must be removed as in the variable statement X2.2 of 0.043, X2.4 of 0.402 and X3.4 of 0.039. Reflexive indicators also need to be checked for discriminant validity by comparing the cross-loading value of one variable's construct that must be higher than another variable's construct. The results are shown in table 5, that all constructs are valid. The next table, table 6, also presents the average variance extracted (AVE), where the AVE value of the four research variables is above 0.5 so that all constructs are valid.





**Figure 2**  
Convergent Validity

Source: Processed data, 2020

**Table 5**  
Discriminant Validity

	TECH	WORK	EMPY	INCO
TECH1	0,900	0,254	0,511	0,404
TECH2	0,897	0,130	0,423	0,269
TECH3	0,899	0,127	0,387	0,361
TECH4	0,788	0,049	0,297	0,249
TECH5	0,889	0,165	0,482	0,343
TECH6	0,894	0,167	0,483	0,377
TECH7	0,910	0,161	0,447	0,362
WORK1	0,218	0,665	0,382	0,358
WORK3	0,112	0,877	0,491	0,428
WORK5	0,129	0,901	0,472	0,525
EMPY1	0,426	0,441	0,834	0,478
EMPY2	0,433	0,479	0,897	0,579
EMPY3	0,400	0,466	0,793	0,466
INCO1	0,330	0,438	0,549	0,836
INCO2	0,345	0,470	0,491	0,836
INCO3	0,293	0,435	0,465	0,813

Source: Processed data, 2020

**Table 6**  
**Average Variance Extracted (AVE)**

Variable	AVE
Operationg Income (INCO)	0,900
Technological Literacy (TECH)	0,897
Working Capital (WORK)	0,899
Labor Management (EMPY)	0,788

*Source: Processed data, 2020*

**Table 7**  
**Result of Reliability Testing**

Variable	Cronbach's Alpha	Composite Reliability
TECH	0,953	0,961
WORK	0,751	0,859
EMPY	0,772	0,868
INCO	0,795	0,880

*Source: Processed data, 2020*

Next is the reliability test by comparing the value of Cronbach's alpha and composite reliability with a critical value of 0.7 (Ghozali and Latan, 2015). The results are summarized in table 7, the value of Cronbach's alpha and composite reliability of all variables above the critical value so that the data is reliable.

The R-square value was found to be 0.431, which means that 43.1 percent of SME business income is influenced by technological literacy, working capital, and labor management factors (see Table 8). These

three factors affect the income of SMEs simultaneously. The partial effect of each independent variable with the dependent variable is tested and the results are presented in table 9.

**Table 8**  
**R-Square**

	R Square	R Square Adjusted
INCO	0,448	0,431

*Source: Processed data, 2020*

The regression coefficient on the technological literacy variable (TECH) is 0.158. This means that the technological literacy variable has a positive influence on SME business income. If there is an increase of 1 percent in technology literacy, it will increase operating income by 0.158. The regression coefficient on the working capital variable (WORK) is 0.319. This means that the working capital variable has a positive influence on the business income of SMEs. If there is an increase of 1 percent of working capital, it will increase business income by 0.319. The regression coefficient on the labor variable (EMPY) is 0.353. This means that the labor variable has a positive influence on the business income of SMEs. If there is an increase of 1 percent of the workforce, it will increase business income by 0.353.

**Table 9**  
**Regression Analysis Result**

	Original Sample (O)	Standard Deviation (STDEV)	T Statistics ( O/STDEV )	P Values
TECH -> INCO	0,158	0,092	1,714	0,087
WORK -> INCO	0,319	0,107	2,972	0,003
EMPY -> INCO	0,353	0,130	2,711	0,007

*Source: Processed data, 2020*

Focus on the t-statistic value and the probability in table 9 that all of them are above the t-table (1.66088). Thus, the three research hypotheses were accepted, but the TECH variable was insignificant. The technological literacy variable has an original sample value of 0.158 with a t-statistic value of 1.715 which is greater than the t-table and is not significant because the probability value of 0.087 is greater than 5 percent significance. This means that the first hypothesis of this study is partially accepted, that technological literacy has a positive effect on the income of SMEs, but not significantly. The working capital variable has an original sample value of 0.139 with a t-statistic value of 2.972 which is greater than the t-table and significant because the probability value of 0.003 is less than a significance of 5%. This means that the second hypothesis is accepted, that working capital has a positive effect on the income of SMEs. Finally, the labor variable has an original sample value of 0.353 with a t-statistic value of 2.711 which is greater than the t-table. Thus, the third hypothesis is accepted that labor has a positive effect on the income of SMEs

## Discussion

Every business requires a mindset to grow. Business actors are expected to be able to think and use technology as a tool to solve problems and make decisions (Winarsih and Furinawati, 2018). The ability of business actors to use, understand, manage and evaluate an innovation is critical to their success. The first hypothesis which states that technological literacy has a positive effect on operating income is accepted. Technological literacy is a person's ability to use, utilize or assess an innovation through technology to solve a problem. With broad insight into technology, SME players can receive good feedback from technology for business activities and product/service marketing. Agree with Kiveu and Ofafa (2013) argument that technology and information offer efficiency, flexibility, and ease of access

for its users. So that SMEs can maximize their income by emphasizing the costs incurred from traditional production and marketing. The probability value of this relationship which is not significant can indicate that this effect is not strong because the technological literacy of SMEs is still low, especially in product marketing (in the indicators of managing media and integrating product information). 45 percent of the sample do not integrate their products with competitors because they are less skilled in using information media to measure competitors' capabilities.

However, the findings of the positive influence of technological literacy on SMEs' income reflect the importance of knowledge and skills of SMEs about technology for the sustainability of their businesses. Several previous studies have proven the benefits of technology for business. In their comprehensive research, Mithas and Rust (2016) concluded that firms can achieve higher performance when they invest in information and technology. They added that technology and information can be used to reduce costs, increase revenue, or reduce costs and increase revenue simultaneously. Researching SME suppliers, Abid et al. (2011) found that the benefits of technology are not just cost savings. They mention that five major benefits can be obtained from the use of e-business, including competitiveness, increased sales, access to methods and models for strategic decision making, distribution channel improvement, and lastly cost reduction.

Running a business cannot be separated from the need for working capital. Working capital is used by the company to meet daily operational needs or to finance the company's investment needs (Singhania and Mehta, 2017). Such as purchasing raw materials, paying labor wages, paying debts, and other costs.

The second hypothesis of this study is also accepted, that working capital has a significant positive effect on the income of SMEs. Working capital is the capital used by the company to meet operational needs such

as purchasing raw materials, paying wages and salaries, to accounts payable. If SMEs can provide sufficient working capital to meet their operational or urgent needs, they will not experience financial difficulties and even minimize company losses. The results of this study support the resource-based theory and production factors that the working capital stock determines the health and sustainability of the SME business (Banerjee, 2014; Sunarjanto et al., 2016). Greater the working capital, the company will maximize its use by increasing production capacity so that an increase in income is expected to occur. On the other hand, companies will reduce their production capacity when there is a shortage of working capital. In simple terms, working capital adequacy must be considered for the financial stability of SMEs even in emergency conditions.

It is not only financial resources that are important for business sustainability, the strength of human resources also plays a critical role there. The final hypothesis of this study is accepted that labor management has a significant positive effect on the income of SMEs. As mentioned in the literature that human resources are a strategic asset of the company (Boon et al., 2018). This study provides the same view with resource-based theory and factors of production that managing human resources effectively can produce higher output. Supporting the study of Nayaka and Kartika (2018), a more productive workforce tends to produce more production output.

Labor management is not only a matter of quantity but also workforce knowledge and skills. To get a responsible workforce, a selection process is needed. The process must take into account factors such as education level, experience, physical condition, skills, and gender. The labor quantity and quality are integrated with production capacity. Lack of workforce and/or lack of workforce skills will hinder the production process. In addition, the placement of workers according to their abilities in certain lines greatly determines the production

process. However, their welfare largely determines business performance and success (Chang et al., 2021; Hieu and Nwachukwu, 2020; Malik and Usman, 2011).

The findings provide other facts besides the relationship between the explanatory and dependent variables. The findings confirm that only half of the SMEs in the study sample had net profits that were not better than the target. This figure seems to be sufficient to illustrate that SMEs are experiencing problems in their productivity and promotion. Although the data shows that 73% of SMEs agree that technological literacy is important, their knowledge and skills in technology are still minimal. From the financial side of SMEs, research data shows that only 7% of the sample has a business loan. This finding also confirms that SMEs are aware of the importance of working capital for them. This shows that most SMEs survive with their own capital. Although this study did not delve deeper into the reasons for not taking loans, several previous empirical studies have confirmed that the financial limitations of SMEs are due to difficult access to finance and a problem for SMEs globally (e.g. Ahiawodzi and Adade, 2012; Maiti, 2018; Wasiuzzaman, 2019). In addition, poor management and low competitive skills make it difficult for SMEs to develop (see, Fatoki, 2014a; Ihua, 2017).

## CONCLUSION AND SUGGESTION

Although SMEs are pawns of the country's economy, they often face acute unresolved problems such as technological skills, human resource management and finances. Their characteristics and growth continue to be highlighted by economists and researchers, especially their resilience during pandemic outbreaks. Regardless of the natural conditions, this study wants to investigate the internal factors of SMEs that can affect their business income. This study borrows assumptions from the theory of resource-based and factors of production to describe the relationship between resource management and operating income. In addi-

tion, the technological literacy of SME owners was also investigated.

Testing the hypothesis of this study found that technological literacy, working capital, and labor management have a positive effect on operating income both individually and simultaneously. This finding holds up to the resource theory that firms can achieve higher earnings by managing their human and financial resources effectively. Adequate working capital and proper workforce management will drive SMEs to higher incomes. However, the researchers found an interesting finding that the effect of technological literacy was not significant. Based on the researcher's search, this insignificance can indicate that the technological literacy of SMEs is still low, especially in managing media and integrating product information. This finding noted that 45 percent of the sample did not integrate their products with competitors because they were less skilled in using information media to measure competitors' capabilities. Even so, the positive effect of technology literacy on business income illustrates the importance of SME owners mastering technology for efficiency, flexibility, and easy access by the public about their company and product profiles.

The results of this study contribute to the expansion of the financial and business management literature especially related to technology literacy for SMEs and businesses in general. In practice, good technology literacy by management can be transformed into production, administration, and product marketing activities. In the end, their performance and productivity will tend to improve over time. However, the researcher advises business people, especially SMEs, to pay attention to the welfare of their employees, skills, and career paths. In addition, business people can make reasonable use of online financing platforms such as equity crowdfunding and peer-to-peer lending for business development. Researchers realize that no human activity is perfect, neither does this study. Without reducing the quality of

the results of this study, there is one gap that further researchers can fill. Although the sample size of this study is thought to be sufficient to generalize the results, data were still collected from only one district. Future research can expand this study on a national scale due to the varying demographics of SMEs.

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