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Do Intangible Assets and Innovation Orientation Influence Competitive Advantages? A Case Study of SMEs in Indonesia

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Abstract Competition in small and medium-sized businesses (SMEs) is growing in the era of transition. As a result, these advances are putting pressure on the retail sector to find new and efficient solutions to boost retail and customer experience. Meanwhile, in Central Java, Indonesia, there is one specific SME type that is part of the nation's cultural heritage, namely Batik SME. This study aims to determine the effect of Intangible Assets and Innovation Orientation on the Competitive Advantages of Batik SMEs in Central Java, Indonesia. This study's method was an explanatory survey method with a type of decompression-verification study from primary data obtained from Batik SMEs and using PLS SEM in analyzing the data of the book. The results of this study indicate that Intangible Assets with Path coefficient (β) = 0.320, P value <0.001 ($\alpha = 0.05$), and Innovation Orientation with Path coefficient (β) = 0.28 P value <0.038 ($\alpha = 0.05$), have a positive effect on Competitive Advantage with coefficient (β) = 0.46, P value <0.001 ($\alpha = 0.05$). This result means that the better Intangible Assets would improve the Batik SME Competitive Advantage. Besides, the Orientation owned by Batik SME would increase the Competitive Advantage. Batik SME in Central Java should improve the quality of their Intangible Asset and Innovation Orientation to increase their

Competitive Advantage.

Keywords Intangible Assets, Innovation Orientation, Competitive Advantage, SME

1. Introduction

Competition in small and medium-sized businesses (SMEs) is growing in the era of transition. For example, technology-based innovation can provide enhanced retail services and an enjoyable shopping experience [1]. As a result, these advances are putting pressure on the retail sector to find new and efficient solutions to boost retail and customer experience. Such inventions will significantly change the shape of SMEs. Demand-pull has mostly been seen as an innovation driver [2-3]. But this increasing technical complexity, coupled with a shorter life cycle of innovations, makes it difficult to make innovation decisions [4].

Many reports also looked at the disruptive factors that influence the market. Concentrating on process management [5], customer engagement in production [1-2][6], and drivers [2][7]. Forecasting future

technology's performance plays an important role for advertisers in projecting the output of a specific technological expenditure [8]. Similarly, a deep understanding of the disruptive factors that affect the business could provide executives with useful insights into better investment and policy alignment [9].

²⁸ Nonetheless, while these findings provide a clear picture of the factors driving market innovation in retail environments, they do not empirically validate retail as a highly innovative or low-innovation field. In the same way, they are not seeking to identify the essential growth ²⁸ ds of the sector. Also, Lee et al. [10] highlighted the extent to which the increasing complexity and availability of technological innovation require companies to track a technical change to maintain profitability for the company. Therefore, simple measuring tools are needed to build an understanding of the creative forces in retail and provide new ways for academics and practitioners to compete effectively in a changing context.

¹ Meanwhile, in Central Java, Indonesia, there is one specific SME type that is part of the nation's cultural heritage, namely Batik SME. Batik is a method of printing patterns on cloth using wax and, by translation, it also defines a piece of fabric printed in this way. Almost all regions in Central Java have various characteristics/motives. Certain areas dominate development in the field and batik motifs/types that have been known so far, such as Solo batik motifs in the area around the Surakarta Residency, Pekalongan batik motifs in the area around the Pekalongan residency, Lasem batik motifs in the Rembang Lasem region (Pati Residency), Semarang Batik Motifs in the Semarang residency area, Magelang Batik Motifs in the Magelang and surrounding regions (Kedu Residency), and Banyumasan Batik Motifs in the Banyumas and the surrounding regions (the Banyumas Residency). Its distribution can at the same time represent 6 (six) regions in Central Java. This study's objective was to examine the effect of intangible assets and innovative orientation toward the competitive advantage of Batik SMEs in Central Java, Indonesia.

2. Literature Review

2.1. SMEs

³⁰ According to the Organization for Economic Cooperation and ⁵⁰ Development (OECD), the characteristics of small and medium-sized businesses reflect the economic trends of the region and the social and cultural dimensions. Such specific patterns are clearly expressed in the different definitions and SME requirements adopted by foreign countries. While some point to the number of employees as their specific criterion for identifying SMEs, others use capital invested. Others use a variation of the number of employees, capital

invested, revenue, and business [11].

In spite of the variations in the comparative definitions of SMEs, businesses have certain common characteristics, the most significant of which is that ownership and management are shared by one individual / family [12] and therefore judgments are often discretionary. Second, SMEs require a small capital base, regardless of the industry and the nation in which they are based. Nevertheless, they also struggle to attract growth funds as a remedy to which they have to rely heavily on personal resources.

Thirdly, in fact, the controlling director seldom differentiates their own capital from the company's finances, and this contributes mainly to the inefficiency of many SMEs. Most SMEs work using labor-intensive technologies. Consider it less easy to move from one product line to something radically different; in fact, most SMEs connect their goals closely to the product line than in other topics such as capital usage. In most SMEs, there is less organizational diversity, a higher turnover of employees and a higher ratio of labor investment. Eventually, the cost of business is strong, likely due to low capital costs, lack of business-life partnership with the agent, lack of market knowledge and weak operating prices, among other factors [13].

Law No. 20/2008 concerning Micro, Small and Medium Enterprises in Article 1 states that: (a) Small Business is a productive economic business that stands alone, which is carried out by individuals or business entities ²³ that are not subsidiaries or branch companies that are owned, controlled, or become a part either directly or indirectly of Medium Enterprises or Large Enterprises that meet the Business criteria Small as referred to in this Act. (b) Medium Business is a productive economic business that stands alone, which is carried out by individuals or business entities that are not subsidiaries or branch ²³ companies that are owned, controlled, or become a part either directly or indirectly with a Small Business or Large Business with a net worth or annual sales results as stipulated in this Law.

2.2. Competitive Advantage

The word "competitive advantage" has become popular [14]. Recent competitive advantage literature ²⁴ discussed some of the issues associated with various competitive advantage concepts that have been available in the literature on strategic management since the concept was first introduced [15]. The literature, in particular, tends to equate competitive advantage with the superior performance of the company. Meanwhile some of the other emerging competitive advantage principles are more focused on factors of competitive advantage. For example, wordings such as "benefit" and "value" relate to the competitiveness of companies [16]. In addition, factors such as market position [14], competition obstacles [17],

company-specific capabilities [18] are related as deciding triggers of competitive advantage. Sigalas and Economou [15] concluded that the issue with these competitive advantage conceptualizations lies in the fact that competitive advantage was originally improperly operationalised. A less-qualified term, i.e. a higher performance category, should not be included in the description of "competitive advantage."

Competitive advantage in the process of Rao and Holt [19], spans four aspects, i.e. improved performance, improved quality, improved productivity or cost savings. Although the aim of Sigalas and Economou [15] was to merge and advocate for a narrow definition of the competitive advantage is welcomed, the competitive advantage of the business should simply be expressed in the financial aspect, i.e. cost leadership as suggested by Porter [14]. In addition, Rao and Holt [19] also allow calculation of other latent variables in the context of improved efficiency, competitiveness and improved quality. It is also well adapted when it comes to technological innovation, which is basically a combination of product innovation and method innovation. In the new empiric analysis, the authors are planning to follow the four dimensions as suggested by Rao and Holt [19] in order to assess the efficiency of small and medium-sized businesses in terms of the specific benefits obtained following the introduction of enhanced KM practices.

2.3. Intangible Assets

Intangible assets are becoming increasingly important for businesses. The main reason for the increased emphasis on intangible assets is the shift from production to a knowledge-based economy, where competitiveness is primarily based on intangibles. Intangible assets are a crucial tool for creating competitive advantages for companies. In businesses that are now becoming more knowledge-based and information-based, intangible assets will account for a significant percentage of the total business value. The concept of intangible assets is not always clearly known [20]. According to Epstein and Mirza [21], intangible assets are non-financial assets with no physical material maintained for use in manufacturing or supply of goods or services, or for leasing to others, or for administrative purposes that are recognized and controlled by the company as a result of past activities and from which future economic benefits are likely to emerge.

According to the International Accounting Standards Committee (IASC), intangible assets are assets owned by a corporation due to past events and from which future economic benefits are expected to flow to the corporation (IAS 38). Others defined intangibles as human expertise, skills, abilities, and organizational records, technologies, and routines [22]. Intangible words, knowledge assets, and

intellectual capital are used interchangeably and are non-physical interest streams (future benefit claims) generated through innovation (discovery), complex organizational structures, or human resource activities. Different groups use different terms to describe a non-physical request to future benefits—knowledge in accounting literature, intelligence assets of economics, and intellectual capital in management and legal literature—but are pointing to the same thing; a non-physical claim to future benefits [23]. Similar to company tangible assets, intangible assets have become essential resources for the growth of business value. Intangible assets are of increasing importance to all types of organizations for organizational value creation processes.

There are two main ways to determine the company's interest: an internal assessment based on its financial statements (such as the balance sheet and income statement) or external valuation based on its market value. These days, the two concepts diverge extensively [24]. Market value is often much more significant for most companies than book value because market value is generated mainly from investments that do not explicitly show the company's balance sheet. The reason for the difference is, among other factors, the intangible properties of the firms, which are not usually included in the financial statements. For example, the importance of customer relationships, employee interactions, or organizational culture cannot be measured on a balance sheet basis [25].

In the current era of the knowledge economy, the value of intangible assets has increased. Of starters, because businesses such as Microsoft or Coca Cola disclose traditional investments on their balance sheets, they compensate for less than 5% of their total market capitalization. In 1982, a total of US\$ 62.30 (62%) was expended on tangible assets out of every \$100 invested in US industrial and mining stocks.

2.4. Innovation Orientation

As regards research on the innovation orientation of SMEs, the scarcity of resources that is widely attributed to them is a crucial issue; Woschke et al. [26] argue that for SMEs, 'resources are often limited, and these constraints likely interfere with their innovation capabilities' [26] p.197. Oke et al. [27] and Woschke et al. [26] note that the greater the financial pressures on SMEs, the greater the focus on exploitative innovation. Kammerlander et al. [28] suggest that SMEs are more concentrated on exploration as their capital base grows. In contrast, McDermott and Prajogo [29] note that SMEs are more centered on development as their resource base decreases. Finally, SMEs can improve their productivity by ambidextrous ingenuity [30].

2.5. Gap Analysis

Despite these past studies, not many of them focused on intangible assets, innovation orientation, and competitive advantages among SMEs in Indonesia. That condition left a gap for more studies to be done in Indonesia.

3. Materials and Methods

3.1. Methods

This research uses the explanatory research method by using a quantitative approach. According to Sugiyono [31], analysis according to the level of explanation is research intends to explain the position of the variables studied and the relationship between one variable with another variable.

3.2. Population and Samples

The population is a generalization area consisting of objects/subjects with specific qualities and characteristics determined by researchers to be studied and then drawn conclusions [31]. Because the Batik SME group in Central Java found 1,200 SMEs, this study uses a sample.

A sample is part of the number and characteristics possessed by the population [31]. Suggested suitable sample sizes range from 100-200 respondents [32]. Population characteristic for this research is not known, so the authors chose the Non Probability Sampling technique, which is a sampling technique by not providing equal opportunities for each element or member of the population to be selected as a sample. The authors did coordinate with several stakeholders (SME and Cooperative Regional Department) to reach the sample. There were 200 respondents chosen and interviewed. The data was collected with a questionnaire in June-September 2019.

3.3. Variables

Variable is an attribute or nature or value of people, objects, or activities with individual variations determined by researchers to be studied and drawn conclusions [31]. Research variables can be divided into two, namely:

1. Independent variables influence or are the cause of changes or the appearance of the dependent variable.

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The independent variables used in this study are Intangible Assets and Innovation Orientation.

2. A dependent variable is a variable that is affected, or that is due to the existence of an independent variable. The dependent variable used in this study is Competitive Advantage.

3.4. Hypothesis

Consequently, the authors offer the following hypotheses on the link between intangible assets, innovation orientation, and competitive advantage:

Hypotheses 1:

H_a: Intangible assets have a positive effect on competitive advantage

H₀: Intangible assets have not a positive effect on competitive advantage

Hypotheses 2:

H_a: Innovation orientation has a positive effect on competitive advantage

H₀: Innovation orientation has not a positive effect on competitive advantage

4. Result

4.1. Descriptive Analysis of Respondents

Descriptive data displays a general description of respondents' answers in the questionnaire. Based on the responses of 200 respondents regarding the variables, the authors described in detail the respondents' answers, which were grouped in descriptive statistics. The range of answers to each variable's question dimensions was determined using the three-box criteria (three-box method) [33]. For ease of interpretation, the answer range was converted to 100. For this condition, the range of answers starts from 15 to 100, where the range that occurs was 85. Furthermore, the range that occurs was divided by three and produced a range of 28.33, which be used as the basis for interpreting the index value, namely:

- Index value 15.00 - 43.33 = Low interpretation
- Index value 43.34 - 71.67 = Medium interpretation
- Index values 71.68 - 100 = High interpretation

Table 1. Index of Variables

No	Indicator	Technological Capital Index							Index
		1	2	3	4	5	6	7	
1	Product development guidelines	0	2	2	5	5	122	64	88.21
2	Technical knowledge of special product manufacturing	1	2	3	13	16	105	60	85.42
3	The secret ownership of the product formulation	0	20	3	32	15	85	45	76.92
4	The advantages of the product offered compared to competitors	0	0	0	21	16	76	76	87.78
Total Average									84.58
No	Indicator	Organizational Capital Index							Index
		1	2	3	4	5	6	7	
1	Number of HR outside technical workers	0	5	15	28	16	122	14	76.92
2	Business experience	0	2	18	10	23	91	58	82.78
3	Performance allowances	0	2	4	17	22	150	27	82.21
4	Employee system	1	1	4	24	24	137	9	79.71
5	Formal education experience	1	1	14	72	37	72	4	68.35
6	Non-formal education experience	0	5	13	77	45	55	5	67.64
Total Average									76.27
No	Indicator	Relation Capital Index							Index
		1	2	3	4	5	6	7	
1	Marketing network ownership	0	1	0	11	28	103	57	85.92
2	Network ownership with supporters	0	14	0	12	13	127	34	81.5
3	Supplier network ownership	0	11	0	3	15	118	53	84.85
4	Funding	0	16	3	13	20	104	44	80.35
5	The habit of sharing business problem among employees	0	1	0	14	22	109	54	85.71
Total Average									83.67
Intangible Asset Index									81.51
No	Indicator	Innovation Orientation Index							Index
		1	2	3	4	5	6	7	
1	New products introduced	0	0	0	9	13	131	47	86.85
2	Imitation products introduced	27	50	14	47	16	31	15	52
3	Modification of existing products	0	0	6	21	13	96	64	85.07
4	Environmentally friendly products	0	0	0	19	17	112	52	85.5
5	Use of new technique in the production	0	4	12	38	23	102	21	76.42
Total Average									86.85
Strategic Orientation Index									77.17
No	Indicator	Competitive Advantage Index							Index
		1	2	3	4	5	6	7	
1	Low Cost/ Cost Leadership	6	10	7	40	23	102	12	80.96
2	High Quality	0	0	2	20	6	112	60	82.224
3	Differentiation	0	2	3	16	22	120	37	83.488
4	Quick Response	0	0	3	16	11	119	51	84.752
5	In Imitable	0	4	4	55	35	69	33	86.016
6	Unsubstituted	0	9	5	57	26	72	31	87.28
7	The company have been known	1	6	0	18	18	130	27	88.544
8	The product has been known	0	4	2	29	22	126	17	89.808
Total Average									85.38

From Table 1, it can be explained that the index on all variables showed a high interpretation because the index is more significant than 71.68.

a. Data analysis

22 Data processing techniques using the SEM method based on Partial Least Square (PLS) require two stages to assess a research model [34]. The stages are as follows:

a. Outer Model / Measurement model

The outer model is intended to evaluate how the relationship between indicators and the variables they ¹⁶asure. This model includes three parameters used, namely convergent validity, disk validity, and reliability.

4.2. Convergent Validity Test

In this test, the authors used criteria by Solihin and Ratmono [35] as follow:

1. Loading factor > 0.7 indicators were used, loading factor 0.4 to 0.7 indicators were considered, and loading factor < 0.4 indicators was not used
2. P-value < 0.05 from result ¹⁹ of the analysis using SEM-PLS 3.0 obtained the loading factor and P-value as shown in Table 2:

¹³ ¹⁹ results of the analysis using SEM-PLS 3.0 obtained the loading factor and P-value as shown in Table 2:

Table 2. Outer Loading (Convergen Validity)

Item / Indicator	Early Model		After Modification	
	Loading Factor	P value	Loading Factor	Loading Factor
TECH-CAP.1	0.729	<0.001	0.729	<0.001
TECH-CAP.2	0.814	<0.001	0.814	<0.001
TECH-CAP.3	0.439	<0.001	0.439	<0.001
TECH-CAP.4	0.700	<0.001	0.700	<0.001
ORGS-CAP.1	0.729	<0.001	0.729	<0.001
ORGS-CAP.2	0.512	<0.001	0.512	<0.001
ORGS-CAP.3	0.661	<0.001	0.661	<0.001
ORGS-CAP.4	0.782	<0.001	0.782	<0.001
ORGS-CAP.5	0.557	<0.001	0.557	<0.001
ORGS-CAP.6	0.239	<0.001	0.239	<0.001
REL-CAP.1	0.401	<0.001	0.401	<0.001
REL-CAP.2	0.853	<0.001	0.853	<0.001
REL-CAP.3	0.872	<0.001	0.872	<0.001
REL-CAP.4	0.846	<0.001	0.846	<0.001
REL-CAP.5	0.286	<0.001	0.286	<0.001
INOV-ORI.1	0.460	<0.001	0.460	<0.001
INOV-ORI.2	0.382	<0.001	0.382	<0.001
INOV-ORI.3	0.548	<0.001	0.548	<0.001
INOV-ORI.4	0.783	<0.001	0.783	<0.001
INOV-ORI.5	0.699	<0.001	0.699	<0.001
COMP-ADV.1	0.358	<0.001	0.358	<0.001
COMP-ADV.2	0.597	<0.001	0.597	<0.001
COMP-ADV.3	0.609	<0.001	0.609	<0.001
COMP-ADV.4	0.620	<0.001	0.620	<0.001
COMP-ADV.5	0.742	<0.001	0.742	<0.001
COMP-ADV.6	0.725	<0.001	0.725	<0.001
COMP-ADV.7	0.530	<0.001	0.530	<0.001
COMP-ADV.8	0.508	<0.001	0.508	<0.001

Note:

- TECH-CAP: Technological Capital
- ORGS-CAP: Organizational Capital
- REL-CAP: Relation Capital
- INOV-ORI: Innovation orientation
- COMP-ADV: Competitive advantage
- INT-ASST: Intangible Asset

Based on the criteria and the results in the loading table, these factors indicate that all 28 indicators/item instruments used in this study are included in the valid categories.

4.3. Discriminant Validity Test

In the discriminant validity test using criteria [35], the validity test is intended to test whether the indicators used are sufficiently valid in contributing to R2,

4.4. The Criteria Used in This Validity Test Are:

AVE square root value > correlation value between variables or, Correlation value in red > other correlation values in one column. The results of the analysis using SEM-PLS 3.0 obtained AVE square root values as in Table 3.

Based on the criteria and the results in the table above, all indicators used to measure variables meet valid discriminant criteria.

4.5. Construction Reliability Test

Criteria used in the reliability test are from Sholihin and Ratmono [35]:

1. Composite coefficient of reliability > 0.7
2. Cronbach's alpha coefficient > 0.7

The results of the analysis using SEM-PLS 3.0 obtained composite reliability and Cronbach's alpha coefficients as in the Table 4.

Based on the criteria and results in the table above it shows that all indicators used to measure variables meet reliable criteria.

4.5.1. Inner Model (Structural Model)

Structural models are used to examine the relationship/influence between latent constructs and assess these relationships' level. Some tests for structural models include: test the suitability of the model and test the hypothesis.

4.5.2. Model Conformity Test

Model fit and quality indices

Average path coefficient (APC) = 0.352, P < 0.001
 Average adjusted R-squared (AARS) = 0.650, P < 0.001
 Average block VIF (AVIF) = 1.425, acceptable if <= 5,
 id <= 3.3

The results of the analysis show that the model in this study is appropriate. (See Figure 1).

Table 3. Correlations among I.vs. With sq. rts. Of AVEs

	TECH-CAP	ORGS-CAP	REL-CAP	INOV-ORI	COMP-ADV	INT-ASST
TECH-CAP	0.685	0.537	0.259	0.338	0.351	0.793
ORGS- CAP	0.537	0.660	0.376	0.208	0.343	0.851
REL- CAP	0.259	0.376	0.774	0.149	0.236	0.663
INOV-ORI	0.338	0.208	0.149	0.651	0.484	0.303
COMP-ADV	0.351	0.343	0.236	0.484	0.629	0.406
INT-ASST	0.793	0.851	0.663	0.303	0.406	0.773

Note: Square roots of average variances extracted (AVEs) shown on diagonal.

Table 4. Composite reliability coefficients dan Cronbach's alpha coefficients

TECH-CAP	ORGS- CAP	REL- CAP	INOV-ORI	INT-ASST	COMP-ADV
0.772	0.791	0.847	0.739	0.815	0.819
TECH-CAP	ORGS- CAP	REL- CAP	INOV-ORI	INT-ASST	COMP-ADV
0.607	0.668	0.750	0.532	0.658	0.741

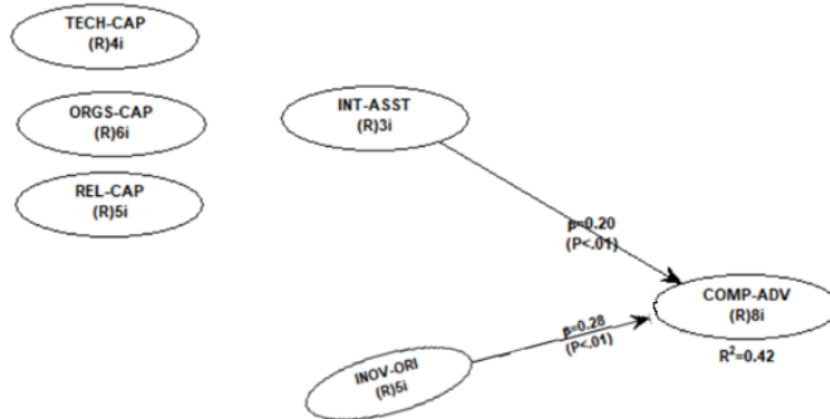


Figure 1. SEM Analysis Diagram (With parameter value)

Table 5. Path coefficients, P-Value & Effect Size

Coefficients	Independent Variable	Dependent Variable
		COMP-ADV
Path Coefficients (β)	INT-ASST	0.20
	INOV-ORI	0.28
P-value	INT-ASST	<0.001
	INOV-ORI	<0.001
Effect Size	INT-ASST	0.089
	INOV-ORI	0.140

Table 5 can be explained as follows:

Hypothesis testing 1: Intangible assets have a positive effect on competitive advantage ³

Obtained indices values: Path coefficient (β) = 0.20, P value <0.001 (<α = 0.05), Effect Size (ES) = 0.089

- ES <0.02: no effect
- 0.02 <ES <0.15: level of influence is weak
- 0.15 <ES <0.35: moderate level of influence
- ES > 0.35: strong influence

These results indicate that intangible assets ³ have a

significant positive effect on competitive advantage with β = 0.20, and the level of influence is weak ⁴⁷

Hypothesis testing 2: Innovation orientation has a positive effect on competitive advantage ³

Obtained indices values: Path coefficient (β) = 0.28, P value <0.001 (<α = 0.05), Effect Size (ES) = 0.140. ³⁴ These results indicate that the Innovation Orientation has a significant positive effect on competitive advantage with β = 0.28, and the level of influence is Weak.

Multiple Regression Equations

⁴⁰ Based on the diagram above, the regression function can be derived as follows:

$$\emptyset Y_1 = 0.20X_1 + 0.28 X_2 + 0.32 X_3, \text{ with } R^2 = 0.42$$

$$\emptyset Y_2 = 0.46 Y_1, \text{ with } R^2 = 0.21$$

The two regression functions mentioned above can be interpreted as follows:

- ∅ The greater the intangible assets, the stronger the level ⁴² competitive advantage (β = 0.20)
- ∅ The higher the level of innovation, the stronger the group of competitive advantage (β = 0.28)

Table 6. Labor Productivity in Central Java

Year	Number of Workers (People)	GDRP (Million IDR)	Growth (%)	Labor Productivity (Million IDR per Worker)	Growth (%)
2011	15,822,765	656,268,130	5.04	41.48	5.21
2012	16,531,395	691,343,116	5.07	41.82	0.83
2013	16,469,960	726,655,118	4.86	44.12	5.50
2014	16,550,682	764,959,151	5.01	46.22	4.76
2015	16,435,142	806,765,092	5.18	49.09	6.21
2016	16,511,136	849,099,355	4.99	51.43	4.76
2017	17,186,674	893,750,296	5.00	52.00	1.12
2018	17,245,548	941,164,119	5.04	54.57	4.95
2019	17,441,153	992,105,788	5.13	56.88	4.23

Table 6 shows that even though labor productivity in Central Java experienced an overall rise throughout the period, the growth tended to drop. This might be due to the relatively slow growth in GDRP. Although the number of workers had an increasing trend, if the increase in GDP is not significant. It can be inferred that the efficiency of workers in Central Java is relatively low. This is closely related to human capital, mainly education. Mean years of schooling (MYS) in Central Java have been quiet, at least until the end of 2019. On average, citizens in Central Java complete just elementary school, shown in Table 7, where the MYS only ranged between 6.7 and 7.7 years. The expected years of schooling (EYS) have also been ranging from 11 to 13 years, which is still below post-school level.

Table 7. Expected Years of Schooling (EYS) and Mean Years of Schooling (MYS) in Central Java

Year	EYS	MYS
2011	11.18	6.74
2012	11.39	6.77
2013	11.89	6.80
2014	12.17	6.93
2015	12.38	7.03
2016	12.45	7.15
2017	12.57	7.27
2018	12.63	7.35
2019	12.68	7.53
2020	12.70	7.69

Labor-augmenting technological progress can occur when there are improvements in health and education. However, when education level is low, it can lead to workers being inefficient, hence the scarcity of innovation. This can eventually lower the competitive advantage of companies because competitiveness is closely related to innovation. SMEs, in Central Java, in particular, rely mostly on workers as they are labor-intensive rather than capital-intensive. If any of their workers is not highly

educated, SMEs would not gain competitive advantage.

5. Discussion

Based on the inferential statistical analysis results, innovation is known to have a significant impact on the competitive advantage. According to Damanpour [36], invention is the development of facilities, systems, legislation, products or services, a new technological manufacturing process, a new system or management structure, or a news organization's implementation plan. When paired with a succinct analysis of the outcomes, the contribution of creativity to the competitive advantage indicates that the indicators have been deemed to have the largest or most important contribution, since the innovation component is a calculation of technical innovation. This study shows that in Malang and Pasuruan, Indonesia, entrepreneurs and managers of small and medium-sized embroideries need to expand or develop in terms of products.

These results extend the work suggested by Dewi [37] to the assumption that there is a strong and important correlation between innovation and bersain excellence. Sulyanto [38] observed that learning orientation has a positive effect on technical innovation and managerial progress and that technical innovation has a positive effect on productivity. This correlation is likely because of its inherent nature. Though competition has become fiercer, accessing the means of doing business has become more comfortable [39].

6. Conclusions

This study aims to analyze the effect of Intangible Assets and Innovation Orientation on Competitive Advantages that impact the performance of Batik SME. To explore the relationship between these variables, this study uses Partial Least Square (PLS). Based on the

analysis and discussion in the previous section, the following conclusions can be drawn:

1. The first hypothesis test results show a direct and positive relationship between Intangible Assets and the Competitive Advantages of Batik SME. This means that the better Intangible Assets will improve the Batik SME Competitive Advantage.
2. The second hypothesis test results show a direct and positive relationship between Innovation Orientation and Competitive Advantage. This means that the Innovation Orientation owned by Batik SME will increase the Competitive Advantage of Batik SME.

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