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The Role of Product Innovation, Accounting Competence, and Online Transactions (E-Commerce) in Increasing Competitiveness in MSMEs, Alalak District, Batola Regency, Indonesia

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Abstract

Improving this economic aspect by empowering the community's economy, namely MSMEs owned by the community by maximizing the role of MSMEs. Maximizing the role of MSMEs must be supported by business management aspects such as the application of product innovation, accounting competencies and online transactions (e-commerce) to increase the competitiveness of MSMEs. With the increasing competitiveness of MSMEs, it is expected to improve community welfare. This study aims to explore the Role of Product Innovation, Accounting Competence, and Online Transactions (e-Commerce) in increasing Competitiveness in MSMEs in Alalak District, Batola Regency Indonesia. Quantitative research methods were used in this study with PLS analysis techniques. Observation of indicators is carried out using instruments (questionnaires / questionnaires) that aim to find out the opinion of respondents about something. The results of this study reveal that product innovation, accounting competence, and online transactions (e-Commerce) can increase the competitiveness of MSMEs.

Keywords: product innovation, Accounting competence, e-Commerce, competitiveness, MSME's

1.Introduction

Competition in the business world faces an era of increasingly fierce competition, as well as Micro, Small and Medium Enterprises (MSMEs) that inevitably have to be able to maintain the market, so MSMEs will be able to develop and be able to retain their customers. A very tight competitive environment must be considered and handled so that sales can continue to increase, as well as high business opportunities in Indonesia causing many new businesses to emerge with more attractive concepts (Goca &; Promana, 2019). Increasingly fierce business competition requires MSMEs to implement superior and efficient business management processes in order to be able to encourage the

creation of products or services that meet market needs at a higher quality level than other companies (Fatmawati, 2016). Micro, Small and Medium Enterprises (MSMEs) must not only maintain competitiveness but also create superior products. In particular, there are several criteria of the products sold, namely: (1) must be used regularly and continuously, (2) the product must be of high quality and diverse, and (3) must change the product according to the needs and demands of different markets (Fatmawati 2016).

In South Kalimantan, especially at the location of research activities, Alalak sub-district is included in the priority of food insecurity. In general, Alalak District, Barito Kuala Regency, has superior potential, namely: agriculture, livestock, fisheries and industry. One of the favored sectors is the industrial sector because in Alalak District is the border area with Banjarmasin City so that there are at least 5 industries / companies that stand standing in East Berangas Village. In addition, the development of the MSME sector selling industrial, handicraft and food products is also growing rapidly in Alalak District. This is also supported by the existence of the Integrated Business Service Center (PLUT) MSME House located in the Handil Bhakti area.

This research activity is a form of support for the Food Independent Program, as conveyed in the 2012 Annual Report of the Food Security Agency, which aims to develop food independent villages, namely by improving food security and nutrition (reducing food and nutrition insecurity) of the community through the utilization of resources, institutions and local culture in rural areas. One of the efforts to improve community welfare can be achieved through improving economic aspects, although non-economic aspects also have a role, but this is not the main focus of this study. Improving this economic aspect by empowering the community's economy, namely MSMEs owned by the community by maximizing the role of MSMEs. Maximizing the role of MSMEs must be supported by business management aspects such as the application of product innovation, accounting competencies and online transactions (e-commerce) to increase the competitiveness of MSMEs. Therefore, it is very necessary to empower the community's economy by increasing the competitiveness of MSMEs so that they can increase the income of rural communities. This study aims to explore the Role of Product Innovation, Accounting Competence, and Online Transactions (e-Commerce) in increasing Competitiveness in MSMEs, Alalak District, Batola Regency, Indonesia

2.Literature Review

Product Innovation

The success of micro, small and medium enterprises (MSMEs) cannot be separated from the word product innovation, to keep running, MSMEs must always be able to develop product features. In addition, MSMEs must also pay attention to the design and packaging design they make. MSMEs must also prioritize the quality of the products made, the goal is that consumers feel satisfied and remain loyal to buy again (Dhewanto et al., 2015). Innovation in competitiveness is a skill possessed to obtain achievements in the form of competitive advantages. Innovation is also an expression of

entrepreneurial activities that can contribute with the aim of long-term survival of a business (Kraus et al., 2012). Every company must innovate with the aim of developing and maintaining their market share (Dhewanto et al., 2014). Furthermore (Dhewanto et al., 2015, pp. 108–109) there are several indicators in product innovation including: (1) Product Features. Product features can be capital when the product can compete to win consumer attention. Unique, special, and distinctiveness become a feature of the product and become an added value; (2) Product design and design. Design is a concept or way that can represent and illustrate a product image. Design contributes to the appearance but also the usefulness of the product. Product design aims to attract the attention of consumers, can also be a strategy to minimize production costs; (3) Product quality. Product quality is a level of product that is able to perform its functions to the fullest. The function in question is the durability of the product, reliability, and accuracy of the resulting product. Good product innovation will be carried out if you understand the best practices to be adopted as a product development process, then require practice to repeat a success and *maturity* process from the best performing company (Paulk et al., 1993)

Accounting Competence

Accounting is one field of science that is not enough to be studied in terms of theory alone, but, accounting is easier to understand with real accounting practice. Accounting provides knowledge and skills to students about one cycle of accounting activities in a company either manually or by using certain software programs. For MSMEs, financial statements are accounting information that plays an important role in business success. Because financial statements that can be used as material for reflection on financial decisions in MSME management are quality financial statements (Agustina, 2020). Several studies have reviewed the factors that influence the preparation of financial statements. According to Lohanda (2017); Auliah &; Kaukab (2019); Atika (2019); Yosida (2020); Dewi &; Yuniasih (2020); Posi &; Son (2021); Ayuningtyas (2021); Nurwanto et al (2022) accounting competence has a significant effect on the preparation of financial statements

E-Commerce

Ecommerce is the process of buying and selling transactions using electronic devices, such as telephone and internet. Shim et al. (2000) in Suyanto (2003) define e-commerce as a new concept that can be described as the process of buying and selling goods or services on the World Wide Web Internet. E-commerce has at least six positive impacts on a company's business operations (Widani, et al, 2019; Goddess). The six impacts are: increasing efficiency, saving costs, improving control over goods, improving the distribution chain (supply chain), helping companies maintain better relationships with customers and helping companies maintain better relationships with suppliers (suppliers). The obstacles faced, and a challenge for us today are regarding securities and payment methods (Pranata and Darma, 2014; Mahyuni et al, 2020).

UMKM Competitiveness

Competitive advantage is an edge over competitors gained through higher value or higher profits due to higher prices. Competitive advantage shows that one company can do better than another, even being in the same industry. Competitive advantage shows that one organization can outperform another, even when working in the same environment (Sunyoto, 2015). Competitive advantage is the advantage that exists when a firm owns and produces a product or service that is considered by the target market to be better than its closest competitors (Saiman, 2014, p. 124). Furthermore Saiman (2014) p. 124) says that there are several strategies towards competitive advantage: recognizing opportunities, choosing strategies to seize opportunities, and regulating the results of exploitation of opportunities

3.Methods

This research was conducted in Handil Bhakti Village, Alalak District, Barito Kuala Regency, South Kalimantan. This research is designed to be conducted by empowering quantitative approaches. Research in the field of social sciences, such as: management, psychology and sociology, generally formulates research variables as latent variables – that is, variables that cannot be measured directly – formed from observed dimensions or from observed indicators (Ghozali, 2013). Observation of indicators is carried out using instruments (questionnaires / questionnaires) that aim to find out the opinion of respondents about something. A commonly used scaling for research instruments is the Likert scale which generates ordinal data, which contains answer preferences: 1 for Strongly Disagree; 2 to Disagree; 3 for Doubt – Doubt or Neutral; 4 to Agree; and 5 to Strongly Agree. Related to the alias of data types, the data generated by the Likert Scale is expressed as ordinal data because each number has a higher or lower preference than the other. However, if the distance of the scale is equal or constant, the resulting data type becomes interval data. The data becomes input for instrument quality instrument tests, namely reliability and validity tests.

The research method is causal in nature which seeks to know and analyze the Role of Product Innovation, Accounting Competence, and Online Transactions (e-Commerce) in increasing Competitiveness in MSMEs Alalak District, Batola Regency – South Kalimantan Province. PLS techniques are used in predicting such influences. In order to obtain quality research data, data quality tests are carried out on the initial raw data to issue outlier data for variables so that the data tested for validity and reliability are normally distributed raw data that has met the z-score qualification used. Classical assumption tests are carried out to meet the requirements of hypothesis tests which are whether hypothesis tests are carried out prametrically or non-parametrically

4.Results and Discussion

Validity Test

This test is performed to test the validity of each statement item in measuring its variables. The correlation technique used to test the validity of statement items in this study is the Pearson Product Moment. If the value of the correlation coefficient of the statement item under test is greater than the critical value of 0.3, it can be concluded that the statement item is a valid construct. The results of the validity test show that all statement items have a validity coefficient greater than 0.3 rcritical. So that it can be concluded that all statement items that are declared valid can be used in the next analysis.

Reliability Test

Reliability testing is carried out by testing the instrument only once, then analyzed using the Alpha-Cronbach method. A questionnaire is said to be reliable if the reliability coefficient is greater than 0.7. Based on table 1, it is known that the reliability value of the statement item on the variable under study is greater than 0.7. These results show that the items on the questionnaire are reliable for measuring the variables. The results of the reliability test are as follows.

Tabel 1. Hasil Uji Reliabilitas Kuesioner Penelitian

Variabel	**Indeks Reliabilitas**	**Nilai Kritis**	**Keterangan**
Inovasi Produk (X1)	0,936	0,7	Reliabel
Kompetensi Akuntansi (X2)	0,909	0,7	Reliabel
Transaksi Online (X3)	0,982	0,7	Reliabel
Daya Saing (Y)	0,962	0,7	Reliabel

Tabel 2 Rekapitulasi Analisis Deksriptif Variabel Inovasi Produk (X1)

No	**Butir Pernyataan**		**Skor Jawaban Responden**					**Total Skor**	**Mean**
			5	**4**	**3**	**2**	**1**		
1	Pemilik Usaha menyediakan berbagai kreasi menu makanan dan minuman	F	29	14	4	3	0	219	4,38
		%	58,00%	28,00%	8,00%	6,00%	0,00%		
2	Pemilik Usaha memperhatikan setiap bahan-bahan dalam pengolahan makanan dan minuman atau produknya	F	26	18	2	4	0	216	4,32
		%	52,00%	36,00%	4,00%	8,00%	0,00%		

No	Butir Pernyataan		Skor Jawaban Responden					Total Skor	Mean
			5	4	3	2	1		
3	Pemilik Usaha menyediakan berbagai desain kemasan makanan dan minuman atau produk	F	16	26	4	4	0	204	4,08
		%	32,00%	52,00%	8,00%	8,00%	0,00%		
4	Pemilik Usaha memperhatikan cara menyajikan makanan dan minuman	F	27	17	3	3	0	218	4,36
		%	54,00%	34,00%	6,00%	6,00%	0,00%		
5	Pemilik Usaha berusaha menyajikan kualitas kesehatan makanan dan minuman atau produk yang baik	F	36	9	2	3	0	228	4,56
		%	72,00%	18,00%	4,00%	6,00%	0,00%		
6	Pemilik Usaha berusaha menyajikan gizi yang baik pada makanan dan minuman	F	32	13	2	3	0	224	4,48
		%	64,00%	26,00%	4,00%	6,00%	0,00%		
Total Skor dan Rata-rata								**1309**	**4,36**

Sumber: Pengolahan Data (2023)

Based on table 2, it can be known the average respondent response regarding the Product Innovation variable (X1). It can be known that the overall total score is 1309, and the average value of respondents' responses regarding the Product Innovation (X1) variable of 4.36 is included in the very good category.

Tabel 3. Rekapitulasi Analisis Deksriptif Variabel Kompetensi Akuntansi (X2)

No	Butir Pernyataan		Skor Jawaban Responden					Total Skor	Mean
			5	4	3	2	1		
1		F	21	23	5	1	0	214	4,28

	Melakukan pencatatan setiap transaksi	%	42,00%	46,00%	10,00%	2,00%	0,00%		
2	Dapat membedakan setiap transaksi apakah debet atau kredit	F	19	26	2	3	0	211	4,22
		%	38,00%	52,00%	4,00%	6,00%	0,00%		
3	Dapat membuat Nearaca Keuangan	F	10	29	7	3	1	194	3,88
		%	20,00%	58,00%	14,00%	6,00%	2,00%		
4	Dapat membuat laporan Rugi/Laba	F	14	26	6	3	1	199	3,98
		%	28,00%	52,00%	12,00%	6,00%	2,00%		
5	Dapat membuat Laporan Keuangan	F	18	23	5	3	1	204	4,08
		%	36,00%	46,00%	10,00%	6,00%	2,00%		
Total Skor dan Rata-rata								**1022**	**4,09**

Sumber: Pengolahan Data (2023)

Based on table 3, it can be known the average respondent response regarding the Accounting Competency variable (X2). It can be known that the overall total score is 1022, and the average value of respondents' responses regarding the Accounting Competency (X2) variable, which is 4.09, is included in the good category.

Tabel 4. Rekapitulasi Analisis Deksriptif Variabel Transaksi Online (X3)

No	**Butir Pernyataan**		**Skor Jawaban Responden**					**Total Skor**	**Mean**
			5	**4**	**3**	**2**	**1**		
1	Menggunakan transaksi online untuk mendapatkan pelanggan baru	F	23	20	2	3	2	209	4,18
		%	46,00%	40,00%	4,00%	6,00%	4,00%		
2	Menggunakan transaksi online untuk dapat mengakses (menjangkau) pasara yang lebih luas lagi	F	26	18	2	2	2	214	4,28
		%	52,00%	36,00%	4,00%	4,00%	4,00%		

No	Butir Pernyataan		Skor Jawaban Responden					Total Skor	Mean
			5	4	3	2	1		
3	Menggunakan transaksi online untuk mempromosikan produk	F	27	16	3	2	2	214	4,28
		%	54,00%	32,00%	6,00%	4,00%	4,00%		
4	Menggunakan transaksi online untuk membangun merk	F	17	25	2	3	3	200	4,00
		%	34,00%	50,00%	4,00%	6,00%	6,00%		
5	Menggunakan transaksi online untuk dapat bersaing dengan umkm lain	F	19	21	3	5	2	200	4,00
		%	38,00%	42,00%	6,00%	10,00%	4,00%		
6	Menggunakan transaksi online untuk dapat dekat dengan pelanggan	F	24	19	3	1	3	210	4,20
		%	48,00%	38,00%	6,00%	2,00%	6,00%		
7	Menggunakan transaksi online untuk dapat berkomunikasi lebih cepat dengan pelanggan	F	26	18	2	3	1	215	4,30
		%	52,00%	36,00%	4,00%	6,00%	2,00%		
8	Menggunakan transaksi online untuk dapat memuaskan pelanggan	F	19	23	3	3	2	204	4,08
		%	38,00%	46,00%	6,00%	6,00%	4,00%		
9	Menggunakan transaksi online untuk membantu transaksi bisnis	F	19	24	3	3	1	207	4,14
		%	38,00%	48,00%	6,00%	6,00%	2,00%		
10		F	17	27	1	4	1	205	4,10

No	Butir Pernyataan		Skor Jawaban Responden					Total Skor	Mean
			5	4	3	2	1		
	Menggunakan transaksi online untuk mendapatkan informasi dari pihak luar	%	34,00%	54,00%	2,00%	8,00%	2,00%		
11	Menggunakan transaksi online untuk menghemat biaya	F	20	25	1	2	2	209	4,18
		%	40,00%	50,00%	2,00%	4,00%	4,00%		
12	Menggunakan transaksi online untuk efisiensi proses bisnis	F	15	28	2	4	1	202	4,04
		%	30,00%	56,00%	4,00%	8,00%	2,00%		
Total Skor dan Rata-rata								**2489**	**4,15**

Sumber: Pengolahan Data (2023)

Based on table 4, it can be known the average respondent response regarding the Online Transaction variable (X3). It can be known that the overall total score is 2489, and the average value of respondents' responses regarding the Online Transaction variable (X3) of 4.15 is included in the good category.

Tabel 5 Rekapitulasi Analisis Deksriptif Variabel Daya Saing (Y)

No	Butir Pernyataan		Skor Jawaban Responden					Total Skor	Mean
			5	4	3	2	1		
1	Harga yang dimiliki oleh UMKM merupakan hal yang paling mempengaruhi dalam keunggulan bersaing	F	21	23	1	1	4	206	4,12
		%	42,00%	46,00%	2,00%	2,00%	8,00%		
2	Konsumen merasa tidak terbebani terhadap harga yang	F	19	24	2	3	2	205	4,10
		%	38,00%	48,00%	4,00%	6,00%	4,00%		

No	Butir Pernyataan		Skor Jawaban Responden					Total Skor	Mean
			5	4	3	2	1		
	sudah ditetapkan oleh UMKM								
3	Kualitas produk yang dimiliki oleh UMKM lebih unggul dari para pesaingnya	F	17	25	3	3	2	202	4,04
		%	34,00%	50,00%	6,00%	6,00%	4,00%		
4	Kualitas pelayanan pada UMKM lebih unggul dari para pesaingnya	F	21	22	1	3	3	205	4,10
		%	42,00%	44,00%	2,00%	6,00%	6,00%		
5	Kemampuan UMKM untuk mengirimkan produk tepat waktu	F	20	24	1	3	2	207	4,14
		%	40,00%	48,00%	2,00%	6,00%	4,00%		
6	UMKM menyediakan produk atau jasa sesuai dengan tipe yang diinginkan pelanggan	F	22	24	0	2	2	212	4,24
		%	44,00%	48,00%	0,00%	4,00%	4,00%		
7	UMKM memiliki inovasi produk yang luas dan mempengaruhi nilai dan pangsa pasar	F	23	21	1	4	1	211	4,22
		%	46,00%	42,00%	2,00%	8,00%	2,00%		
8	Semakin besar nilai inovasi yang akan diberiakan oleh pelanggan untuk sebuah produk atau jasa dapat memenuhi	F	24	21	1	2	2	213	4,26
		%	48,00%	42,00%	2,00%	4,00%	4,00%		

No	Butir Pernyataan		Skor Jawaban Responden					Total Skor	Mean
			5	4	3	2	1		
	kebutuhan pelanggan								
9	Sebuah UMKM merupakan dimensi yang penting dari keunggualan bersaing	F	20	24	1	3	2	207	4,14
		%	40,00%	48,00%	2,00%	6,00%	4,00%		
10	Sejauh mana sebuah UMKM mampu mengeluarkan produk baru yang cepat dari pesaingnya	F	17	27	2	3	1	206	4,12
		%	34,00%	54,00%	4,00%	6,00%	2,00%		
Total Skor dan Rata-rata								**2074**	**4,15**

Sumber: Pengolahan Data (2023)

Based on table 5, it can be known the average response of respondents regarding the variable Competitiveness (Y). It can be known that the overall total score is 2074, and the average value of respondents' responses regarding the Competitiveness (Y) variable of 4.15 is included in the good category.

Model Testing

Based on the results of model testing, results were obtained that showed that all manifests (observed variables) had a *loading factor* value greater than 0.70. So the SEM-PLS model is said to have good construct validity. The following is a table that shows the *loading factor* values in detail in the model.

Tabel 6. *Loading Factor*

Konstruk	***Loading Factor***	**R kritis**	**Kriteria (*Loading Factor* ≥ 0.70)**
DS1 <- Daya Saing (Y)	0,723	0,70	Valid
DS10 <- Daya Saing (Y)	0,866	0,70	Valid
DS2 <- Daya Saing (Y)	0,833	0,70	Valid

Konstruk	***Loading Factor***	**R kritis**	**Kriteria (*Loading Factor* ≥ 0.70)**
DS3 <- Daya Saing (Y)	0,884	0,70	Valid
DS4 <- Daya Saing (Y)	0,895	0,70	Valid
DS5 <- Daya Saing (Y)	0,922	0,70	Valid
DS6 <- Daya Saing (Y)	0,872	0,70	Valid
DS7 <- Daya Saing (Y)	0,868	0,70	Valid
DS8 <- Daya Saing (Y)	0,926	0,70	Valid
DS9 <- Daya Saing (Y)	0,868	0,70	Valid
IP1 <- Inovasi Produk (X1)	0,789	0,70	Valid
IP2 <- Inovasi Produk (X1)	0,798	0,70	Valid
IP3 <- Inovasi Produk (X1)	0,745	0,70	Valid
IP4 <- Inovasi Produk (X1)	0,859	0,70	Valid
IP5 <- Inovasi Produk (X1)	0,958	0,70	Valid
IP6 <- Inovasi Produk (X1)	0,962	0,70	Valid
KA1 <- Kompetensi Akuntansi (X2)	0,712	0,70	Valid
KA2 <- Kompetensi Akuntansi (X2)	0,795	0,70	Valid
KA3 <- Kompetensi Akuntansi (X2)	0,919	0,70	Valid
KA4 <- Kompetensi Akuntansi (X2)	0,907	0,70	Valid
KA5 <- Kompetensi Akuntansi (X2)	0,925	0,70	Valid
TO1 <- Transaksi Online (E-Commerce) (X3)	0,917	0,70	Valid
TO10 <- Transaksi Online (E-Commerce) (X3)	0,944	0,70	Valid
TO11 <- Transaksi Online (E-Commerce) (X3)	0,893	0,70	Valid
TO12 <- Transaksi Online (E-Commerce) (X3)	0,937	0,70	Valid
TO2 <- Transaksi Online (E-Commerce) (X3)	0,936	0,70	Valid
TO3 <- Transaksi Online (E-Commerce) (X3)	0,936	0,70	Valid
TO4 <- Transaksi Online (E-Commerce) (X3)	0,916	0,70	Valid
TO5 <- Transaksi Online (E-Commerce) (X3)	0,831	0,70	Valid
TO6 <- Transaksi Online (E-Commerce) (X3)	0,945	0,70	Valid
TO7 <- Transaksi Online (E-Commerce) (X3)	0,937	0,70	Valid
TO8 <- Transaksi Online (E-Commerce) (X3)	0,917	0,70	Valid
TO9 <- Transaksi Online (E-Commerce) (X3)	0,904	0,70	Valid

Sumber: Pengolahan Data (2023)

Table 6 shows the *loading factor* values for each construct of each variable. Based on the table it can be seen that the entire *loading factor* is more than 0.70. So it can be concluded that based on each construct in the study has good validity. Furthermore, average variance extracted (AVE) *testing will be carried out* to further strengthen the results of *convergent validity* with criteria if the AVE value ≥ 0.5 (Hair et al, 2019), then the construct used in the study is valid.

Tabel 7 Nilai *Average Variance Extracted*

Laten	***Average Variance Extracted* (AVE)**	**R kritis**	**Kriteria (*AVE* ≥ 0.5)**
Inovasi Produk (X1)	0,733	0,5	Valid
Kompetensi Akuntansi (X2)	0,732	0,5	Valid
Transaksi Online (E-Commerce) (X3)	0,843	0,5	Valid
Daya Saing (Y)	0,752	0,5	Valid

Sumber: Pengolahan Data (2023)

Based on Table 7, the results of convergent validity *can be known* based on the value of *average variance extracted.* These results show that all latent variables have AVE values greater than 0.5. This indicates that the indicators that form the latent construct have good *convergent validity* when viewed from the value of *average variance extracted.*

Discriminant Validity can be seen from the *cross loading value*. Fornell and Larcker (1981) in Ghozali (2014: 45) stated that the correlation value of indicators to their constructs must be greater than the correlation value between indicators and other constructs. The following are presented *discriminant validity* test results using the Smart PLS 3.0 program.

Tabel 8. Nilai Uji Validitas *Dikriminan Cross Loading*

	Inovasi Produk (X1)	**Kompetensi Akuntansi (X2)**	**Transaksi Online (E-Commerce) (X3)**	**Daya Saing (Y)**
IP1	**0,789**	0,127	0,103	0,053
IP2	**0,798**	0,059	0,118	0,062
IP3	**0,745**	0,332	0,009	0,045
IP4	**0,859**	0,313	0,133	0,078
IP5	**0,958**	0,250	0,126	0,264
IP6	**0,962**	0,255	0,164	0,266
KA1	0,096	**0,712**	0,461	0,549

KA2	0,165	**0,795**	0,488	0,613
KA3	0,259	**0,919**	0,423	0,618
KA4	0,274	**0,907**	0,426	0,554
KA5	0,326	**0,925**	0,426	0,537
TO1	0,144	0,552	**0,917**	0,651
TO2	0,178	0,533	**0,936**	0,615
TO3	0,173	0,497	**0,936**	0,635
TO4	0,151	0,613	**0,916**	0,714
TO5	0,096	0,427	**0,831**	0,661
TO6	0,225	0,554	**0,945**	0,689
TO7	0,143	0,489	**0,937**	0,632
TO8	0,128	0,477	**0,917**	0,675
TO9	0,078	0,393	**0,904**	0,637
TO10	0,082	0,426	**0,944**	0,648
TO11	0,123	0,358	**0,893**	0,586
TO12	0,053	0,412	**0,937**	0,651
DS1	0,112	0,338	0,491	**0,723**
DS2	0,157	0,488	0,522	**0,833**
DS3	0,220	0,637	0,595	**0,884**
DS4	0,254	0,629	0,590	**0,895**
DS5	0,263	0,645	0,720	**0,922**
DS6	0,224	0,682	0,665	**0,872**
DS7	0,175	0,530	0,587	**0,868**
DS8	0,232	0,662	0,707	**0,926**
DS9	0,130	0,496	0,596	**0,868**
DS10	0,110	0,656	0,625	**0,866**

Sumber: Pengolahan Data (2023)

Based on Table 8 it can be seen that all indicators have a high correlation to their construct compared to other constructs. So it can be concluded that the research model has good discriminant validity in *discriminant cross loading validity*.

Cronbach's Alpha and *Composite Reliability* to determine whether construct reliability is good or not. Each construct is *said to be reliable if it has Cronbach's Alpha and Composite Reliability greater than 0.70 (Hair et al, 2017)* it can be said to be reliable, but if Cronbach's *Alpha* and *Composite Reliability* greater than 0.60 it can still be said to be reliable. The following are presented reliability test results using the Smart PLS 3.0 program.

Tabel 9. Nilai *Cronbach's Alpha* dan *Composite Reliability*

Latent	*Cronbach's Alpha*	*Composite Reliability*
Inovasi Produk (X1)	0,936	0,942
Kompetensi Akuntansi (X2)	0,905	0,931
Transaksi Online (E-Commerce) (X3)	0,983	0,985
Daya Saing (Y)	0,963	0,968

Sumber: Pengolahan Data (2023)

Based on Table 9 it can be seen that there is a latent construct having a *Cronbach's alpha* value of more than 0.6, indicating that the latent construct has good *reliability*. In addition, the value of *composite reliability* of all latent constructs also has a value greater than 0.60. Based on *Cronbach's alpha* and *composite reliability* values obtained, it shows that the model has good reliability.

Structural Model Testing (*Inner Model)*

Inner model *evaluation* is an analysis of the results of relationships between constructs. Inner model testing consists of R square, f square, *Q-square predictive relevance*, and hypothesis test.

R Square

Tabel 10. R Square

	R *Square*	**Kuat Hubungan**
Daya Saing (Y)	0,634	Moderat

Sumber: Pengolahan Data (2023)

According to Chin (1998) in Yamin and Kurniawan (2011: 21), R Square with a value of 0.67 indicates a strong model, a value of 0.33 indicates a moderate model and a value of 0.19 indicates a weak model. From the results of Table 4.37, it can be seen that the R-Square for the variable Competitiveness (Y) of 0.634 means that Product Innovation (X1), Accounting Competence (X2), and Online Transactions (E-Commerce) (X3) simultaneously affect Competitiveness (Y) by 63.4%, while the remaining 36.6% is influenced by other variables that are not studied in this study.

f Square

Next is to look at the value of f *Square*. The f *Square* value of 0.02 indicates a small rating, Effect Size 0.15 indicates a medium rating and Effect Size 0.35 indicates a large rating (Cohen, 1988 in Yamin and Kurniawan (2011: 21). Based on the test results with SmartPLS 3, F Square results were obtained as follows.

Tabel 11. F Square

Variabel	**Effect Size**	**Rating**

Daya Saing (Y)		
Inovasi Produk (X1)	0,005	Kecil
Kompetensi Akuntansi (X2)	0,316	Menengah
Transaksi Online (E-Commerce) (X3)	0,474	Besar

Sumber: Pengolahan Data (2023)

Based on Table 11 shows that the variables Product Innovation (X1), Accounting Competence (X2), and Online Transactions (E-Commerce) (X3) each have an influence with small, medium and large categories in influencing the variable Competitiveness (Y).

Q2 *Predictive Relevance*

Q-square *testing* is used to measure how well the observation values are produced by the model and also the estimation of its parameters. The value *of Q-square is more different than 0 (zero) indicating that the model has a predictive relevance value, while* Q-square *less than 0 (zero) indicates that the model lacks* predictive relevance *(* Cohen, 1988 in Yamin and Kurniawan (2011: 21). The Q-square value obtained using the R2 value in the table above, obtained the following calculation results:

Tabel 12. Q^2 *Predictive Relevance*

Variabel	**R Square**	**1-R Square**
Daya Saing (Y)	0,634	0,366
Q^2 =	Q^2 = 1- (1-0,634) = 63,4%	
Galat =	Q^2 = 100% - 63,4% = 36,6%	

Sumber: Pengolahan Data (2023)

Based on the results of the calculation above, it is known that the value of *the Q square* is greater than 0, this means that the observed values have been reconstructed well so that the model has predictive relevance. This means that there is 0.634 or 63.4% of the relative effect of structural models on observational measurements for endogenous latent variables, and 36.6% is model error.

The Effect of Product Innovation (X1) on Competitiveness (Y)

From the results of Table 13, the *Original Sample* (O) value of 0.044 shows that the direction of influence of Product Innovation (X1) on Competitiveness (Y) is positive or unidirectional, meaning that the more product innovation increases, the more it increases competitiveness. The effect of Product Innovation (X1) on Competitiveness (Y) is insignificant, with a t-statistic value of 0.242 less than t table or 0.242 < 1.96, and a *p value* of 0.809 greater than alpha 5% (0.05). Thus, H1.1 is rejected, meaning that Product Innovation (X 1) has no significant effect on Competitiveness (Y).

Tabel 13. Koefisien Jalur dan t-hitung Pengaruh Inovasi Produk (X_1) terhadap Daya Saing (Y)

	***Original Sample* (O)**	**t-Statistik**	***p-value***	**Kesimpulan**

Inovasi Produk (X_1) terhadap Daya Saing (Y)	0,044	0,242	0,809	Terima $H_{0.1}$

Sumber: Pengolahan Data (2023)

Effect of Accounting Competence (X2) on Competitiveness (Y)

From the results of Table 14, the *Original Sample* (O) value of 0.409 shows that the direction of influence of Accounting Competence (X2) on Competitiveness (Y) is positive or unidirectional, meaning that the more product innovation increases, the more it increases competitiveness. The effect of Accounting Competence (X2) on Competitiveness (Y) is significant, with a t-statistic value of 3.129 greater than t table or 3.129 > 1.96, and a *p value* of 0.002 smaller than alpha 5% (0.05). Thus, H1.2 is accepted, meaning that Accounting Competence (X 2) has a significant effect on Competitiveness (Y).

Tabel 14. Koefisien Jalur dan t-hitung Pengaruh Kompetensi Akuntansi (X_2) terhadap Daya Saing (Y)

	***Original Sample* (O)**	**t-Statistik**	***p-value***	**Kesimpulan**
Kompetensi Akuntansi (X_2) terhadap Daya Saing (Y)	0,409	3,129	0,002	Tolak $H_{0.2}$

Sumber: Pengolahan Data (2023)

The Effect of Online Transactions *(E-Commerce*) (X3) on Competitiveness (Y)

From the results of Table 15, the *Original Sample* (O) value of 0.489 shows that the direction of influence of Online Transactions *(E-Commerce) (*X3) on Competitiveness (Y) is positive or unidirectional, meaning that the more product innovation increases, the more it increases competitiveness. The effect of Online Transactions *(E-Commerce*) (X3) on Competitiveness (Y) is significant, with a t-statistic value of 3.129 greater than t table or 4.597 > 1.96, and a *p value* of 0.000 smaller than alpha 5% (0.05). Thus, H1.2 is accepted, meaning that Online Transactions (*E-Commerce) (*X3) have a significant effect on Competitiveness (Y).

Tabel 15. Koefisien Jalur dan t-hitung Pengaruh Transaksi Online (*E-Commerce*) (X_3) terhadap Daya Saing (Y)

	***Original Sample* (O)**	**t-Statistik**	***p-value***	**Kesimpulan**

Transaksi Online (*E-Commerce*) (X_3) terhadap Daya Saing (Y)	0,489	4,597	0,000	Tolak $H_{0.3}$

Sumber: Pengolahan Data (2023)

5.Conclusion

Based on the results of research and discussions that have been carried out, the conclusions that can be drawn are as follows:

1. Product Innovation has no significant effect on Competitiveness;
2. Accounting Competence has a significant effect on Competitiveness;
3. Online Transactions (*E-Commerce*) have a significant effect on Competitiveness.

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Dear **Hastin Umi Anisah***,

Thank you for submitting the manuscript "**The Role of Product Innovation, Accounting Competency, and Online Transactions (E-Commerce) in Increasing Competitiveness in MSMEs, Alalak District, Batola Regency, Indonesia**" by "**Hastin Umi Anisah*, Sustinah Limarjani, Rifqi Novriyandana, Rasidah**" to Open Access Indonesia Journal of Social Sciences [OAIJSS]. The paper will be screened and reviewed by peer reviewers.

Thank you for considering this journal as a venue for your work.

Regards,

Editorial Team

Open Access Indonesia Journal of Social Sciences

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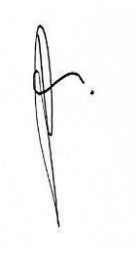
Peer Review Results

Dear author(s),

Hastin Umi Anisah*, Sustinah Limarjani, Rifqi Novriyandana, Rasidah has submitted the manuscript “TThe Role of Product Innovation, Accounting Competency, and Online Transactions (E-Commerce) in Increasing Competitiveness in MSMEs, Alalak District, Batola Regency, Indonesia“ to Open Access Indonesia Journal of Social Sciences. The decision : Revision Required.

Cordially,



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(*) Corresponding author

Reviewer Comment:

1→ Title of Manuscripts should be explained main review and declared type of literature review: narrative or systematic review.

2→ Keywords should be showed the main words of the study, the authors can use MeSH to develop keywords.

3→ Abstract should be showed the main of background, main of review and conclusion of study.

4→Introduction should be showed the urgency of study (epidemiology data), biological plausibility concept, and lack of knowledge in the study.

5→ Conclusion should more specific and not more showed more review.

6→ Authors must check the references for make update references. References should no more than 10 years.

The Role of Product Innovation, Accounting Competence, and Online Transactions (E-Commerce) in Increasing Competitiveness in MSMEs, Alalak District, Batola Regency, Indonesia

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Abstract

Improving this economic aspect by empowering the community's economy, namely MSMEs owned by the community by maximizing the role of MSMEs. Maximizing the role of MSMEs must be supported by business management aspects such as the application of product innovation, accounting competencies and online transactions (e-commerce) to increase the competitiveness of MSMEs. With the increasing competitiveness of MSMEs, it is expected to improve community welfare. This study aims to explore the Role of Product Innovation, Accounting Competence, and Online Transactions (e-Commerce) in increasing Competitiveness in MSMEs in Alalak District, Batola Regency Indonesia. Quantitative research methods were used in this study with PLS analysis techniques. Observation of indicators is carried out using instruments (questionnaires / questionnaires) that aim to find out the opinion of respondents about something. The results of this study reveal that product innovation, accounting competence, and online transactions (e-Commerce) can increase the competitiveness of MSMEs.

Keywords: product innovation, Accounting competence, e-Commerce, competitiveness, MSME's

1.Introduction

Competition in the business world faces an era of increasingly fierce competition, as well as Micro, Small and Medium Enterprises (MSMEs) that inevitably have to be able to maintain the market, so MSMEs will be able to develop and be able to retain their customers. A very tight competitive environment must be considered and handled so that sales can continue to increase, as well as high business opportunities in Indonesia causing many new businesses to emerge with more attractive concepts (Goca &; Promana, 2019). Increasingly fierce business competition requires MSMEs to implement superior and efficient business management processes in order to be able to encourage the creation of products or services that meet market needs at a higher quality level than other companies (Fatmawati, 2016). Micro, Small and Medium Enterprises (MSMEs) must not only maintain competitiveness but also create superior products. In particular, there are several criteria of the products sold, namely: (1) must be used regularly and continuously, (2) the product must be of high quality and diverse, and (3) must change the product according to the needs and demands of different markets (Fatmawati 2016).

In South Kalimantan, especially at the location of research activities, Alalak sub-district is included in the priority of food insecurity. In general, Alalak District, Barito Kuala Regency, has superior potential, namely: agriculture, livestock, fisheries and industry. One of the favored sectors is the industrial sector because in Alalak District is the border area with Banjarmasin City so that there are at least 5 industries / companies that stand standing in East Berangas Village. In addition, the development of the MSME sector selling industrial, handicraft and food products is also growing rapidly in Alalak District. This is also supported by the existence of the Integrated Business Service Center (PLUT) MSME House located in the Handil Bhakti area.

This research activity is a form of support for the Food Independent Program, as conveyed in the 2012 Annual Report of the Food Security Agency, which aims to develop food independent villages, namely by improving food security and nutrition (reducing food and nutrition insecurity) of the community through the utilization of resources, institutions and local culture in rural areas. One of the efforts to improve community welfare can be achieved through improving economic aspects, although non-economic aspects also have a role, but this is not the main focus of this study. Improving this economic aspect by empowering the community's economy, namely MSMEs owned by the community by maximizing the role of MSMEs. Maximizing the role of MSMEs must be supported by business management aspects such as the application of product innovation, accounting competencies and online transactions (e-commerce) to increase the competitiveness of MSMEs. Therefore, it is very necessary to empower the community's economy by increasing the competitiveness of MSMEs so that they can increase the income of rural communities. This study aims to explore the Role of Product Innovation, Accounting Competence, and Online Transactions (e-Commerce) in increasing Competitiveness in MSMEs, Alalak District, Batola Regency, Indonesia

2.Literature Review

Product Innovation

The success of micro, small and medium enterprises (MSMEs) cannot be separated from the word product innovation, to keep running, MSMEs must always be able to develop product features. In addition, MSMEs must also pay attention to the design and packaging design they make. MSMEs must also prioritize the quality of the products made, the goal is that consumers feel satisfied and remain loyal to buy again (Dhewanto et al., 2015). Innovation in competitiveness is a skill possessed to obtain achievements in the form of competitive advantages. Innovation is also an expression of entrepreneurial activities that can contribute with the aim of long-term survival of a business (Kraus et al., 2012). Every company must innovate with the aim of developing and maintaining their market share (Dhewanto et al., 2014). Furthermore (Dhewanto et al., 2015, pp. 108–109) there are several indicators in product innovation including: (1) Product Features. Product features can be capital when the product can compete to win consumer attention. Unique, special, and distinctiveness become a feature of the product and become an added value; (2) Product design and design. Design is a concept or way that can represent and illustrate a product image. Design contributes to the appearance but also the usefulness of the product. Product design aims to attract the attention of consumers, can also be a strategy to minimize production costs; (3) Product quality. Product quality is a level of product that is able to perform its functions to the fullest. The function in question is the durability of the product, reliability, and accuracy of the resulting product. Good product innovation will be carried out if you understand the best practices to be adopted as a product development process, then require practice to repeat a success and *maturity* process from the best performing company (Paulk et al., 1993)

Accounting Competence

Accounting is one field of science that is not enough to be studied in terms of theory alone, but, accounting is easier to understand with real accounting practice. Accounting provides knowledge and skills to students about one cycle of accounting activities in a company either manually or by using certain software programs. For MSMEs, financial statements are accounting information that plays an important role in business success. Because financial statements that can be used as material for reflection on financial decisions in MSME management are quality financial statements (Agustina, 2020). Several studies have reviewed the factors that influence the preparation of financial statements. According to Lohanda (2017); Auliah &; Kaukab (2019); Atika (2019); Yosida (2020); Dewi &; Yuniasih (2020); Posi &; Son (2021); Ayuningtyas (2021); Nurwanto et al (2022) accounting competence has a significant effect on the preparation of financial statements

E-Commerce

Ecommerce is the process of buying and selling transactions using electronic devices, such as telephone and internet. Shim et al. (2000) in Suyanto (2003) define e-commerce as a new concept that

can be described as the process of buying and selling goods or services on the World Wide Web Internet. E-commerce has at least six positive impacts on a company's business operations (Widani, et al, 2019; Goddess). The six impacts are: increasing efficiency, saving costs, improving control over goods, improving the distribution chain (supply chain), helping companies maintain better relationships with customers and helping companies maintain better relationships with suppliers (suppliers). The obstacles faced, and a challenge for us today are regarding securities and payment methods (Pranata and Darma, 2014; Mahyuni et al, 2020).

UMKM Competitiveness

Competitive advantage is an edge over competitors gained through higher value or higher profits due to higher prices. Competitive advantage shows that one company can do better than another, even being in the same industry. Competitive advantage shows that one organization can outperform another, even when working in the same environment (Sunyoto, 2015). Competitive advantage is the advantage that exists when a firm owns and produces a product or service that is considered by the target market to be better than its closest competitors (Saiman, 2014, p. 124). Furthermore Saiman (2014) p. 124) says that there are several strategies towards competitive advantage: recognizing opportunities, choosing strategies to seize opportunities, and regulating the results of exploitation of opportunities

3.Methods

This research was conducted in Handil Bhakti Village, Alalak District, Barito Kuala Regency, South Kalimantan. This research is designed to be conducted by empowering quantitative approaches. Research in the field of social sciences, such as: management, psychology and sociology, generally formulates research variables as latent variables – that is, variables that cannot be measured directly – formed from observed dimensions or from observed indicators (Ghozali, 2013). Observation of indicators is carried out using instruments (questionnaires / questionnaires) that aim to find out the opinion of respondents about something. A commonly used scaling for research instruments is the Likert scale which generates ordinal data, which contains answer preferences: 1 for Strongly Disagree; 2 to Disagree; 3 for Doubt – Doubt or Neutral; 4 to Agree; and 5 to Strongly Agree. Related to the alias of data types, the data generated by the Likert Scale is expressed as ordinal data because each number has a higher or lower preference than the other. However, if the distance of the scale is equal or constant, the resulting data type becomes interval data. The data becomes input for instrument quality instrument tests, namely reliability and validity tests.

The research method is causal in nature which seeks to know and analyze the Role of Product Innovation, Accounting Competence, and Online Transactions (e-Commerce) in increasing Competitiveness in MSMEs Alalak District, Batola Regency – South Kalimantan Province. PLS techniques are used in predicting such influences. In order to obtain quality research data, data quality

tests are carried out on the initial raw data to issue outlier data for variables so that the data tested for validity and reliability are normally distributed raw data that has met the z-score qualification used. Classical assumption tests are carried out to meet the requirements of hypothesis tests which are whether hypothesis tests are carried out prametrically or non-parametrically

4.Results and Discussion

Validity Test

This test is performed to test the validity of each statement item in measuring its variables. The correlation technique used to test the validity of statement items in this study is the Pearson Product Moment. If the value of the correlation coefficient of the statement item under test is greater than the critical value of 0.3, it can be concluded that the statement item is a valid construct. The results of the validity test show that all statement items have a validity coefficient greater than 0.3 rcritical. So that it can be concluded that all statement items that are declared valid can be used in the next analysis.

Reliability Test

Reliability testing is carried out by testing the instrument only once, then analyzed using the Alpha-Cronbach method. A questionnaire is said to be reliable if the reliability coefficient is greater than 0.7. Based on table 1, it is known that the reliability value of the statement item on the variable under study is greater than 0.7. These results show that the items on the questionnaire are reliable for measuring the variables. The results of the reliability test are as follows.

Tabel 1. Hasil Uji Reliabilitas Kuesioner Penelitian

Variabel	**Indeks Reliabilitas**	**Nilai Kritis**	**Keterangan**
Inovasi Produk (X1)	0,936	0,7	Reliabel
Kompetensi Akuntansi (X2)	0,909	0,7	Reliabel
Transaksi Online (X3)	0,982	0,7	Reliabel
Daya Saing (Y)	0,962	0,7	Reliabel

Tabel 2 Rekapitulasi Analisis Deksriptif Variabel Inovasi Produk (X1)

No	**Butir Pernyataan**		**Skor Jawaban Responden**					**Total Skor**	**Mean**
			5	**4**	**3**	**2**	**1**		
1	Pemilik Usaha menyediakan berbagai kreasi menu makanan dan minuman	F	29	14	4	3	0	219	4,38
		%	58,00%	28,00%	8,00%	6,00%	0,00%		

No	Butir Pernyataan		Skor Jawaban Responden					Total Skor	Mean
			5	4	3	2	1		
2	Pemilik Usaha memperhatikan setiap bahan-bahan dalam pengolahan makanan dan minuman atau produknya	F	26	18	2	4	0	216	4,32
		%	52,00%	36,00%	4,00%	8,00%	0,00%		
3	Pemilik Usaha menyediakan berbagai desain kemasan makanan dan minuman atau produk	F	16	26	4	4	0	204	4,08
		%	32,00%	52,00%	8,00%	8,00%	0,00%		
4	Pemilik Usaha memperhatikan cara menyajikan makanan dan minuman	F	27	17	3	3	0	218	4,36
		%	54,00%	34,00%	6,00%	6,00%	0,00%		
5	Pemilik Usaha berusaha menyajikan kualitas kesehatan makanan dan minuman atau produk yang baik	F	36	9	2	3	0	228	4,56
		%	72,00%	18,00%	4,00%	6,00%	0,00%		
6	Pemilik Usaha berusaha menyajikan gizi yang baik pada makanan dan minuman	F	32	13	2	3	0	224	4,48
		%	64,00%	26,00%	4,00%	6,00%	0,00%		
Total Skor dan Rata-rata								**1309**	**4,36**

Sumber: Pengolahan Data (2023)

Based on table 2, it can be known the average respondent response regarding the Product Innovation variable (X1). It can be known that the overall total score is 1309, and the average value of

respondents' responses regarding the Product Innovation (X1) variable of 4.36 is included in the very good category.

Tabel 3. Rekapitulasi Analisis Deksriptif Variabel Kompetensi Akuntansi (X2)

No	Butir Pernyataan		Skor Jawaban Responden					Total Skor	Mean
			5	4	3	2	1		
1	Melakukan pencatatan setiap transaksi	F	21	23	5	1	0	214	4,28
		%	42,00%	46,00%	10,00%	2,00%	0,00%		
2	Dapat membedakan setiap transaksi apakah debet atau kredit	F	19	26	2	3	0	211	4,22
		%	38,00%	52,00%	4,00%	6,00%	0,00%		
3	Dapat membuat Nearaca Keuangan	F	10	29	7	3	1	194	3,88
		%	20,00%	58,00%	14,00%	6,00%	2,00%		
4	Dapat membuat laporan Rugi/Laba	F	14	26	6	3	1	199	3,98
		%	28,00%	52,00%	12,00%	6,00%	2,00%		
5	Dapat membuat Laporan Keuangan	F	18	23	5	3	1	204	4,08
		%	36,00%	46,00%	10,00%	6,00%	2,00%		
Total Skor dan Rata-rata								**1022**	**4,09**

Sumber: Pengolahan Data (2023)

Based on table 3, it can be known the average respondent response regarding the Accounting Competency variable (X2). It can be known that the overall total score is 1022, and the average value of respondents' responses regarding the Accounting Competency (X2) variable, which is 4.09, is included in the good category.

Tabel 4. Rekapitulasi Analisis Deksriptif Variabel Transaksi Online (X3)

No	Butir Pernyataan		Skor Jawaban Responden					Total Skor	Mean
			5	4	3	2	1		
1	Menggunakan transaksi online untuk mendapatkan pelanggan baru	F	23	20	2	3	2	209	4,18
		%	46,00%	40,00%	4,00%	6,00%	4,00%		
2		F	26	18	2	2	2	214	4,28

No	Butir Pernyataan		Skor Jawaban Responden					Total Skor	Mean
			5	4	3	2	1		
	Menggunakan transaksi online untuk dapat mengakses (menjangkau) pasara yang lebih luas lagi	%	52,00%	36,00%	4,00%	4,00%	4,00%		
3	Menggunakan transaksi online untuk mempromosikan produk	F	27	16	3	2	2	214	4,28
		%	54,00%	32,00%	6,00%	4,00%	4,00%		
4	Menggunakan transaksi online untuk membangun merk	F	17	25	2	3	3	200	4,00
		%	34,00%	50,00%	4,00%	6,00%	6,00%		
5	Menggunakan transaksi online untuk dapat bersaing dengan umkm lain	F	19	21	3	5	2	200	4,00
		%	38,00%	42,00%	6,00%	10,00%	4,00%		
6	Menggunakan transaksi online untuk dapat dekat dengan pelanggan	F	24	19	3	1	3	210	4,20
		%	48,00%	38,00%	6,00%	2,00%	6,00%		
7	Menggunakan transaksi online untuk dapat berkomunikasi lebih cepat dengan pelanggan	F	26	18	2	3	1	215	4,30
		%	52,00%	36,00%	4,00%	6,00%	2,00%		
8	Menggunakan transaksi online untuk dapat	F	19	23	3	3	2	204	4,08
		%	38,00%	46,00%	6,00%	6,00%	4,00%		

No	Butir Pernyataan		Skor Jawaban Responden					Total Skor	Mean
			5	4	3	2	1		
	memuaskan pelanggan								
9	Menggunakan transaksi online untuk membantu transaksi bisnis	F	19	24	3	3	1	207	4,14
		%	38,00%	48,00%	6,00%	6,00%	2,00%		
10	Menggunakan transaksi online untuk mendapatkan informasi dari pihak luar	F	17	27	1	4	1	205	4,10
		%	34,00%	54,00%	2,00%	8,00%	2,00%		
11	Menggunakan transaksi online untuk menghemat biaya	F	20	25	1	2	2	209	4,18
		%	40,00%	50,00%	2,00%	4,00%	4,00%		
12	Menggunakan transaksi online untuk efisiensi proses bisnis	F	15	28	2	4	1	202	4,04
		%	30,00%	56,00%	4,00%	8,00%	2,00%		
Total Skor dan Rata-rata								**2489**	**4,15**

Sumber: Pengolahan Data (2023)

Based on table 4, it can be known the average respondent response regarding the Online Transaction variable (X3). It can be known that the overall total score is 2489, and the average value of respondents' responses regarding the Online Transaction variable (X3) of 4.15 is included in the good category.

Tabel 5 Rekapitulasi Analisis Deksriptif Variabel Daya Saing (Y)

No	Butir Pernyataan		Skor Jawaban Responden					Total Skor	Mean
			5	4	3	2	1		
1	Harga yang dimiliki oleh UMKM merupakan hal yang paling	F	21	23	1	1	4	206	4,12
		%	42,00%	46,00%	2,00%	2,00%	8,00%		

No	Butir Pernyataan		Skor Jawaban Responden					Total Skor	Mean
			5	4	3	2	1		
	mempengaruhi dalam keunggulan bersaing								
2	Konsumen merasa tidak terbebani terhadap harga yang sudah ditetapkan oleh UMKM	F	19	24	2	3	2	205	4,10
		%	38,00%	48,00%	4,00%	6,00%	4,00%		
3	Kualitas produk yang dimiliki oleh UMKM lebih unggul dari para pesaingnya	F	17	25	3	3	2	202	4,04
		%	34,00%	50,00%	6,00%	6,00%	4,00%		
4	Kualitas pelayanan pada UMKM lebih unggul dari para pesaingnya	F	21	22	1	3	3	205	4,10
		%	42,00%	44,00%	2,00%	6,00%	6,00%		
5	Kemampuan UMKM untuk mengirimkan produk tepat waktu	F	20	24	1	3	2	207	4,14
		%	40,00%	48,00%	2,00%	6,00%	4,00%		
6	UMKM menyediakan produk atau jasa sesuai dengan tipe yang diinginkan pelanggan	F	22	24	0	2	2	212	4,24
		%	44,00%	48,00%	0,00%	4,00%	4,00%		
7	UMKM memiliki inovasi produk yang luas dan mempengaruhi nilai dan pangsa pasar	F	23	21	1	4	1	211	4,22
		%	46,00%	42,00%	2,00%	8,00%	2,00%		
8	Semakin besar nilai inovasi yang akan	F	24	21	1	2	2	213	4,26
		%	48,00%	42,00%	2,00%	4,00%	4,00%		

No	Butir Pernyataan		Skor Jawaban Responden					Total Skor	Mean
			5	4	3	2	1		
	diberiakan oleh pelanggan untuk sebuah produk atau jasa dapat memenuhi kebutuhan pelanggan								
9	Sebuah UMKM merupakan dimensi yang penting dari keunggualan bersaing	F	20	24	1	3	2	207	4,14
		%	40,00%	48,00%	2,00%	6,00%	4,00%		
10	Sejauh mana sebuah UMKM mampu mengeluarkan produk baru yang cepat dari pesaingnya	F	17	27	2	3	1	206	4,12
		%	34,00%	54,00%	4,00%	6,00%	2,00%		
Total Skor dan Rata-rata								**2074**	**4,15**

Sumber: Pengolahan Data (2023)

Based on table 5, it can be known the average response of respondents regarding the variable Competitiveness (Y). It can be known that the overall total score is 2074, and the average value of respondents' responses regarding the Competitiveness (Y) variable of 4.15 is included in the good category.

Model Testing

Based on the results of model testing, results were obtained that showed that all manifests (observed variables) had a *loading factor* value greater than 0.70. So the SEM-PLS model is said to have good construct validity. The following is a table that shows the *loading factor* values in detail in the model.

Tabel 6. *Loading Factor*

Konstruk	***Loading Factor***	**R kritis**	**Kriteria (*Loading Factor* ≥ 0.70)**
DS1 <- Daya Saing (Y)	0,723	0,70	Valid
DS10 <- Daya Saing (Y)	0,866	0,70	Valid
DS2 <- Daya Saing (Y)	0,833	0,70	Valid
DS3 <- Daya Saing (Y)	0,884	0,70	Valid
DS4 <- Daya Saing (Y)	0,895	0,70	Valid
DS5 <- Daya Saing (Y)	0,922	0,70	Valid
DS6 <- Daya Saing (Y)	0,872	0,70	Valid
DS7 <- Daya Saing (Y)	0,868	0,70	Valid
DS8 <- Daya Saing (Y)	0,926	0,70	Valid
DS9 <- Daya Saing (Y)	0,868	0,70	Valid
IP1 <- Inovasi Produk (X1)	0,789	0,70	Valid
IP2 <- Inovasi Produk (X1)	0,798	0,70	Valid
IP3 <- Inovasi Produk (X1)	0,745	0,70	Valid
IP4 <- Inovasi Produk (X1)	0,859	0,70	Valid
IP5 <- Inovasi Produk (X1)	0,958	0,70	Valid
IP6 <- Inovasi Produk (X1)	0,962	0,70	Valid
KA1 <- Kompetensi Akuntansi (X2)	0,712	0,70	Valid
KA2 <- Kompetensi Akuntansi (X2)	0,795	0,70	Valid
KA3 <- Kompetensi Akuntansi (X2)	0,919	0,70	Valid
KA4 <- Kompetensi Akuntansi (X2)	0,907	0,70	Valid
KA5 <- Kompetensi Akuntansi (X2)	0,925	0,70	Valid
TO1 <- Transaksi Online (E-Commerce) (X3)	0,917	0,70	Valid
TO10 <- Transaksi Online (E-Commerce) (X3)	0,944	0,70	Valid
TO11 <- Transaksi Online (E-Commerce) (X3)	0,893	0,70	Valid
TO12 <- Transaksi Online (E-Commerce) (X3)	0,937	0,70	Valid
TO2 <- Transaksi Online (E-Commerce) (X3)	0,936	0,70	Valid
TO3 <- Transaksi Online (E-Commerce) (X3)	0,936	0,70	Valid
TO4 <- Transaksi Online (E-Commerce) (X3)	0,916	0,70	Valid
TO5 <- Transaksi Online (E-Commerce) (X3)	0,831	0,70	Valid
TO6 <- Transaksi Online (E-Commerce) (X3)	0,945	0,70	Valid
TO7 <- Transaksi Online (E-Commerce) (X3)	0,937	0,70	Valid
TO8 <- Transaksi Online (E-Commerce) (X3)	0,917	0,70	Valid

Konstruk	*Loading Factor*	R kritis	Kriteria (*Loading Factor* ≥ 0.70)
TO9 <- Transaksi Online (E-Commerce) (X3)	0,904	0,70	Valid

Sumber: Pengolahan Data (2023)

Table 6 shows the *loading factor* values for each construct of each variable. Based on the table it can be seen that the entire *loading factor* is more than 0.70. So it can be concluded that based on each construct in the study has good validity. Furthermore, average variance extracted (AVE) *testing will be carried out* to further strengthen the results of *convergent validity* with criteria if the AVE value ≥ 0.5 (Hair et al, 2019), then the construct used in the study is valid.

Tabel 7 Nilai *Average Variance Extracted*

Laten	*Average Variance Extracted* (AVE)	R kritis	Kriteria (*AVE* ≥ 0.5)
Inovasi Produk (X1)	0,733	0,5	Valid
Kompetensi Akuntansi (X2)	0,732	0,5	Valid
Transaksi Online (E-Commerce) (X3)	0,843	0,5	Valid
Daya Saing (Y)	0,752	0,5	Valid

Sumber: Pengolahan Data (2023)

Based on Table 7, the results of convergent validity *can be known* based on the value of *average variance extracted.* These results show that all latent variables have AVE values greater than 0.5. This indicates that the indicators that form the latent construct have good *convergent validity* when viewed from the value of *average variance extracted.*

Discriminant Validity can be seen from the *cross loading value*. Fornell and Larcker (1981) in Ghozali (2014: 45) stated that the correlation value of indicators to their constructs must be greater than the correlation value between indicators and other constructs. The following are presented *discriminant validity* test results using the Smart PLS 3.0 program.

Tabel 8. Nilai Uji Validitas *Dikriminan Cross Loading*

	Inovasi Produk (X1)	Kompetensi Akuntansi (X2)	Transaksi Online (E-Commerce) (X3)	Daya Saing (Y)
IP1	**0,789**	0,127	0,103	0,053

IP2	**0,798**	0,059	0,118	0,062
IP3	**0,745**	0,332	0,009	0,045
IP4	**0,859**	0,313	0,133	0,078
IP5	**0,958**	0,250	0,126	0,264
IP6	**0,962**	0,255	0,164	0,266
KA1	0,096	**0,712**	0,461	0,549
KA2	0,165	**0,795**	0,488	0,613
KA3	0,259	**0,919**	0,423	0,618
KA4	0,274	**0,907**	0,426	0,554
KA5	0,326	**0,925**	0,426	0,537
TO1	0,144	0,552	**0,917**	0,651
TO2	0,178	0,533	**0,936**	0,615
TO3	0,173	0,497	**0,936**	0,635
TO4	0,151	0,613	**0,916**	0,714
TO5	0,096	0,427	**0,831**	0,661
TO6	0,225	0,554	**0,945**	0,689
TO7	0,143	0,489	**0,937**	0,632
TO8	0,128	0,477	**0,917**	0,675
TO9	0,078	0,393	**0,904**	0,637
TO10	0,082	0,426	**0,944**	0,648
TO11	0,123	0,358	**0,893**	0,586
TO12	0,053	0,412	**0,937**	0,651
DS1	0,112	0,338	0,491	**0,723**
DS2	0,157	0,488	0,522	**0,833**
DS3	0,220	0,637	0,595	**0,884**
DS4	0,254	0,629	0,590	**0,895**
DS5	0,263	0,645	0,720	**0,922**
DS6	0,224	0,682	0,665	**0,872**
DS7	0,175	0,530	0,587	**0,868**
DS8	0,232	0,662	0,707	**0,926**
DS9	0,130	0,496	0,596	**0,868**
DS10	0,110	0,656	0,625	**0,866**

Sumber: Pengolahan Data (2023)

Based on Table 8 it can be seen that all indicators have a high correlation to their construct compared to other constructs. So it can be concluded that the research model has good discriminant validity in *discriminant cross loading validity*.

Cronbach's Alpha and *Composite Reliability* to determine whether construct reliability is good or not. Each construct is *said to be reliable if it has Cronbach's Alpha and Composite Reliability greater than 0.70 (Hair et al, 2017)* it can be said to be reliable, but if Cronbach's *Alpha* and *Composite Reliability* greater than 0.60 it can still be said to be reliable. The following are presented reliability test results using the Smart PLS 3.0 program.

Tabel 9. Nilai *Cronbach's Alpha* dan *Composite Reliability*

Latent	***Cronbach's Alpha***	***Composite Reliability***
Inovasi Produk (X1)	0,936	0,942
Kompetensi Akuntansi (X2)	0,905	0,931
Transaksi Online (E-Commerce) (X3)	0,983	0,985
Daya Saing (Y)	0,963	0,968

Sumber: Pengolahan Data (2023)

Based on Table 9 it can be seen that there is a latent construct having a *Cronbach's alpha* value of more than 0.6, indicating that the latent construct has good *reliability*. In addition, the value of *composite reliability* of all latent constructs also has a value greater than 0.60. Based on *Cronbach's alpha* and *composite reliability* values obtained, it shows that the model has good reliability.

Structural Model Testing (*Inner Model)*

Inner model *evaluation* is an analysis of the results of relationships between constructs. Inner model testing consists of R square, f square, *Q-square predictive relevance*, and hypothesis test.

R Square

Tabel 10. R Square

	R *Square*	**Kuat Hubungan**
Daya Saing (Y)	0,634	Moderat

Sumber: Pengolahan Data (2023)

According to Chin (1998) in Yamin and Kurniawan (2011: 21), R Square with a value of 0.67 indicates a strong model, a value of 0.33 indicates a moderate model and a value of 0.19 indicates a weak model. From the results of Table 4.37, it can be seen that the R-Square for the variable Competitiveness (Y) of 0.634 means that Product Innovation (X1), Accounting Competence (X2), and Online Transactions (E-Commerce) (X3) simultaneously affect Competitiveness (Y) by 63.4%, while the remaining 36.6% is influenced by other variables that are not studied in this study.

f Square

Next is to look at the value of f *Square*. The f *Square* value of 0.02 indicates a small rating, Effect Size 0.15 indicates a medium rating and Effect Size 0.35 indicates a large rating (Cohen, 1988

in Yamin and Kurniawan (2011: 21). Based on the test results with SmartPLS 3, F Square results were obtained as follows.

Tabel 11. F Square

Variabel	**Effect Size**	**Rating**
Daya Saing (Y)		
Inovasi Produk (X1)	0,005	Kecil
Kompetensi Akuntansi (X2)	0,316	Menengah
Transaksi Online (E-Commerce) (X3)	0,474	Besar

Sumber: Pengolahan Data (2023)

Based on Table 11 shows that the variables Product Innovation (X1), Accounting Competence (X2), and Online Transactions (E-Commerce) (X3) each have an influence with small, medium and large categories in influencing the variable Competitiveness (Y).

Q2 *Predictive Relevance*

Q-square *testing* is used to measure how well the observation values are produced by the model and also the estimation of its parameters. The value *of Q-square is more different than 0 (zero) indicating that the model has a predictive relevance value, while* Q-square *less than 0 (zero) indicates that the model lacks* predictive relevance *(* Cohen, 1988 in Yamin and Kurniawan (2011: 21). The Q-square value obtained using the R2 value in the table above, obtained the following calculation results:

Tabel 12. Q^2 *Predictive Relevance*

Variabel	**R Square**	**1-R Square**
Daya Saing (Y)	0,634	0,366
Q^2 =	Q^2 = 1- (1-0,634) = 63,4%	
Galat =	Q^2 = 100% - 63,4% = 36,6%	

Sumber: Pengolahan Data (2023)

Based on the results of the calculation above, it is known that the value of *the Q square* is greater than 0, this means that the observed values have been reconstructed well so that the model has predictive relevance. This means that there is 0.634 or 63.4% of the relative effect of structural models on observational measurements for endogenous latent variables, and 36.6% is model error.

The Effect of Product Innovation (X1) on Competitiveness (Y)

From the results of Table 13, the *Original Sample* (O) value of 0.044 shows that the direction of influence of Product Innovation (X1) on Competitiveness (Y) is positive or unidirectional, meaning that the more product innovation increases, the more it increases competitiveness. The effect of Product Innovation (X1) on Competitiveness (Y) is insignificant, with a t-statistic value of 0.242 less than t table

or 0.242 < 1.96, and a *p value* of 0.809 greater than alpha 5% (0.05). Thus, H1.1 is rejected, meaning that Product Innovation (X 1) has no significant effect on Competitiveness (Y).

Tabel 13. Koefisien Jalur dan t-hitung Pengaruh Inovasi Produk (X_1) terhadap Daya Saing (Y)

	***Original Sample* (O)**	**t-Statistik**	***p-value***	**Kesimpulan**
Inovasi Produk (X_1) terhadap Daya Saing (Y)	0,044	0,242	0,809	Terima $H_{0.1}$

Sumber: Pengolahan Data (2023)

Effect of Accounting Competence (X2) on Competitiveness (Y)

From the results of Table 14, the *Original Sample* (O) value of 0.409 shows that the direction of influence of Accounting Competence (X2) on Competitiveness (Y) is positive or unidirectional, meaning that the more product innovation increases, the more it increases competitiveness. The effect of Accounting Competence (X2) on Competitiveness (Y) is significant, with a t-statistic value of 3.129 greater than t table or 3.129 > 1.96, and a *p value* of 0.002 smaller than alpha 5% (0.05). Thus, H1.2 is accepted, meaning that Accounting Competence (X 2) has a significant effect on Competitiveness (Y).

Tabel 14. Koefisien Jalur dan t-hitung Pengaruh Kompetensi Akuntansi (X_2) terhadap Daya Saing (Y)

	***Original Sample* (O)**	**t-Statistik**	***p-value***	**Kesimpulan**
Kompetensi Akuntansi (X_2) terhadap Daya Saing (Y)	0,409	3,129	0,002	Tolak $H_{0.2}$

Sumber: Pengolahan Data (2023)

The Effect of Online Transactions *(E-Commerce)* (X3) on Competitiveness (Y)

From the results of Table 15, the *Original Sample* (O) value of 0.489 shows that the direction of influence of Online Transactions *(E-Commerce)* (X3) on Competitiveness (Y) is positive or unidirectional, meaning that the more product innovation increases, the more it increases competitiveness. The effect of Online Transactions *(E-Commerce*) (X3) on Competitiveness (Y) is significant, with a t-statistic value of 3.129 greater than t table or 4.597 > 1.96, and a *p value* of 0.000 smaller than alpha 5% (0.05). Thus, H1.2 is accepted, meaning that Online Transactions (*E-Commerce)* (X3) have a significant effect on Competitiveness (Y).

Tabel 15. Koefisien Jalur dan t-hitung Pengaruh Transaksi Online (*E-Commerce*) (X_3) terhadap Daya Saing (Y)

	***Original Sample* (O)**	**t-Statistik**	***p-value***	**Kesimpulan**
Transaksi Online (*E-Commerce*) (X_3) terhadap Daya Saing (Y)	0,489	4,597	0,000	Tolak $H_{0.3}$

Sumber: Pengolahan Data (2023)

5.Conclusion

Based on the results of research and discussions that have been carried out, the conclusions that can be drawn are as follows:

1. Product Innovation has no significant effect on Competitiveness;
2. Accounting Competence has a significant effect on Competitiveness;
3. Online Transactions (*E-Commerce*) have a significant effect on Competitiveness.

6.References

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Reviewer Comment:

1→ Title of Manuscripts should be explained main review and declared type of literature review: narrative or systematic review.

2→ Keywords should be showed the main words of the study, the authors can use MeSH to develop keywords.

3→ Abstract should be showed the main of background, main of review and conclusion of study.

4→Introduction should be showed the urgency of study (epidemiology data), biological plausibility concept, and lack of knowledge in the study.

5→ Conclusion should more specific and not more showed more review.

6→ Authors must check the references for make update references. References should no more than 10 years.

The Role of Product Innovation, Accounting Competence, and Online Transactions (E-Commerce) in Increasing Competitiveness in MSMEs, Alalak District, Batola Regency, Indonesia

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Abstract

Improving this economic aspect by empowering the community's economy, namely MSMEs owned by the community by maximizing the role of MSMEs. Maximizing the role of MSMEs must be supported by business management aspects such as the application of product innovation, accounting competencies and online transactions (e-commerce) to increase the competitiveness of MSMEs. With the increasing competitiveness of MSMEs, it is expected to improve community welfare. This study aims to explore the Role of Product Innovation, Accounting Competence, and Online Transactions (e-Commerce) in increasing Competitiveness in MSMEs in Alalak District, Batola Regency Indonesia. Quantitative research methods were used in this study with PLS analysis techniques. Observation of indicators is carried out using instruments (questionnaires / questionnaires) that aim to find out the opinion of respondents about something. The results of this study reveal that product innovation, accounting competence, and online transactions (e-Commerce) can increase the competitiveness of MSMEs.

Keywords: product innovation, Accounting competence, e-Commerce, competitiveness, MSME's

1.Introduction

Competition in the business world faces an era of increasingly fierce competition, as well as Micro, Small and Medium Enterprises (MSMEs) that inevitably have to be able to maintain the market, so MSMEs will be able to develop and be able to retain their customers. A very tight competitive environment must be considered and handled so that sales can continue to increase, as well as high business opportunities in Indonesia causing many new businesses to emerge with more attractive concepts (Goca &; Promana, 2019). Increasingly fierce business competition requires MSMEs to implement superior and efficient business management processes in order to be able to encourage the creation of products or services that meet market needs at a higher quality level than other companies (Fatmawati, 2016). Micro, Small and Medium Enterprises (MSMEs) must not only maintain competitiveness but also create superior products. In particular, there are several criteria of the products sold, namely: (1) must be used regularly and continuously, (2) the product must be of high quality and diverse, and (3) must change the product according to the needs and demands of different markets (Fatmawati 2016).

In South Kalimantan, especially at the location of research activities, Alalak sub-district is included in the priority of food insecurity. In general, Alalak District, Barito Kuala Regency, has superior potential, namely: agriculture, livestock, fisheries and industry. One of the favored sectors is the industrial sector because in Alalak District is the border area with Banjarmasin City so that there are at least 5 industries / companies that stand standing in East Berangas Village. In addition, the development of the MSME sector selling industrial, handicraft and food products is also growing rapidly in Alalak District. This is also supported by the existence of the Integrated Business Service Center (PLUT) MSME House located in the Handil Bhakti area.

This research activity is a form of support for the Food Independent Program, as conveyed in the 2012 Annual Report of the Food Security Agency, which aims to develop food independent villages, namely by improving food security and nutrition (reducing food and nutrition insecurity) of the community through the utilization of resources, institutions and local culture in rural areas. One of the efforts to improve community welfare can be achieved through improving economic aspects, although non-economic aspects also have a role, but this is not the main focus of this study. Improving this economic aspect by empowering the community's economy, namely MSMEs owned by the community by maximizing the role of MSMEs. Maximizing the role of MSMEs must be supported by business management aspects such as the application of product innovation, accounting competencies and online transactions (e-commerce) to increase the competitiveness of MSMEs. Therefore, it is very necessary to empower the community's economy by increasing the competitiveness of MSMEs so that they can increase the income of rural communities. This study aims to explore the Role of Product Innovation, Accounting Competence, and Online Transactions (e-Commerce) in increasing Competitiveness in MSMEs, Alalak District, Batola Regency, Indonesia

2.Literature Review

Product Innovation

The success of micro, small and medium enterprises (MSMEs) cannot be separated from the word product innovation, to keep running, MSMEs must always be able to develop product features. In addition, MSMEs must also pay attention to the design and packaging design they make. MSMEs must also prioritize the quality of the products made, the goal is that consumers feel satisfied and remain loyal to buy again (Dhewanto et al., 2015). Innovation in competitiveness is a skill possessed to obtain achievements in the form of competitive advantages. Innovation is also an expression of entrepreneurial activities that can contribute with the aim of long-term survival of a business (Kraus et al., 2012). Every company must innovate with the aim of developing and maintaining their market share (Dhewanto et al., 2014). Furthermore (Dhewanto et al., 2015, pp. 108–109) there are several indicators in product innovation including: (1) Product Features. Product features can be capital when the product can compete to win consumer attention. Unique, special, and distinctiveness become a feature of the product and become an added value; (2) Product design and design. Design is a concept or way that can represent and illustrate a product image. Design contributes to the appearance but also the usefulness of the product. Product design aims to attract the attention of consumers, can also be a strategy to minimize production costs; (3) Product quality. Product quality is a level of product that is able to perform its functions to the fullest. The function in question is the durability of the product, reliability, and accuracy of the resulting product. Good product innovation will be carried out if you understand the best practices to be adopted as a product development process, then require practice to repeat a success and *maturity* process from the best performing company (Paulk et al., 1993)

Accounting Competence

Accounting is one field of science that is not enough to be studied in terms of theory alone, but, accounting is easier to understand with real accounting practice. Accounting provides knowledge and skills to students about one cycle of accounting activities in a company either manually or by using certain software programs. For MSMEs, financial statements are accounting information that plays an important role in business success. Because financial statements that can be used as material for reflection on financial decisions in MSME management are quality financial statements (Agustina, 2020). Several studies have reviewed the factors that influence the preparation of financial statements. According to Lohanda (2017); Auliah &; Kaukab (2019); Atika (2019); Yosida (2020); Dewi &; Yuniasih (2020); Posi &; Son (2021); Ayuningtyas (2021); Nurwanto et al (2022) accounting competence has a significant effect on the preparation of financial statements

E-Commerce

Ecommerce is the process of buying and selling transactions using electronic devices, such as telephone and internet. Shim et al. (2000) in Suyanto (2003) define e-commerce as a new concept that

can be described as the process of buying and selling goods or services on the World Wide Web Internet. E-commerce has at least six positive impacts on a company's business operations (Widani, et al, 2019; Goddess). The six impacts are: increasing efficiency, saving costs, improving control over goods, improving the distribution chain (supply chain), helping companies maintain better relationships with customers and helping companies maintain better relationships with suppliers (suppliers). The obstacles faced, and a challenge for us today are regarding securities and payment methods (Pranata and Darma, 2014; Mahyuni et al, 2020).

UMKM Competitiveness

Competitive advantage is an edge over competitors gained through higher value or higher profits due to higher prices. Competitive advantage shows that one company can do better than another, even being in the same industry. Competitive advantage shows that one organization can outperform another, even when working in the same environment (Sunyoto, 2015). Competitive advantage is the advantage that exists when a firm owns and produces a product or service that is considered by the target market to be better than its closest competitors (Saiman, 2014, p. 124). Furthermore Saiman (2014) p. 124) says that there are several strategies towards competitive advantage: recognizing opportunities, choosing strategies to seize opportunities, and regulating the results of exploitation of opportunities

3.Methods

This research was conducted in Handil Bhakti Village, Alalak District, Barito Kuala Regency, South Kalimantan. This research is designed to be conducted by empowering quantitative approaches. Research in the field of social sciences, such as: management, psychology and sociology, generally formulates research variables as latent variables – that is, variables that cannot be measured directly – formed from observed dimensions or from observed indicators (Ghozali, 2013). Observation of indicators is carried out using instruments (questionnaires / questionnaires) that aim to find out the opinion of respondents about something. A commonly used scaling for research instruments is the Likert scale which generates ordinal data, which contains answer preferences: 1 for Strongly Disagree; 2 to Disagree; 3 for Doubt – Doubt or Neutral; 4 to Agree; and 5 to Strongly Agree. Related to the alias of data types, the data generated by the Likert Scale is expressed as ordinal data because each number has a higher or lower preference than the other. However, if the distance of the scale is equal or constant, the resulting data type becomes interval data. The data becomes input for instrument quality instrument tests, namely reliability and validity tests.

The research method is causal in nature which seeks to know and analyze the Role of Product Innovation, Accounting Competence, and Online Transactions (e-Commerce) in increasing Competitiveness in MSMEs Alalak District, Batola Regency – South Kalimantan Province. PLS techniques are used in predicting such influences. In order to obtain quality research data, data quality

tests are carried out on the initial raw data to issue outlier data for variables so that the data tested for validity and reliability are normally distributed raw data that has met the z-score qualification used. Classical assumption tests are carried out to meet the requirements of hypothesis tests which are whether hypothesis tests are carried out prametrically or non-parametrically

4.Results and Discussion

Validity Test

This test is performed to test the validity of each statement item in measuring its variables. The correlation technique used to test the validity of statement items in this study is the Pearson Product Moment. If the value of the correlation coefficient of the statement item under test is greater than the critical value of 0.3, it can be concluded that the statement item is a valid construct. The results of the validity test show that all statement items have a validity coefficient greater than 0.3 rcritical. So that it can be concluded that all statement items that are declared valid can be used in the next analysis.

Reliability Test

Reliability testing is carried out by testing the instrument only once, then analyzed using the Alpha-Cronbach method. A questionnaire is said to be reliable if the reliability coefficient is greater than 0.7. Based on table 1, it is known that the reliability value of the statement item on the variable under study is greater than 0.7. These results show that the items on the questionnaire are reliable for measuring the variables. The results of the reliability test are as follows.

Tabel 1. Hasil Uji Reliabilitas Kuesioner Penelitian

Variabel	**Indeks Reliabilitas**	**Nilai Kritis**	**Keterangan**
Inovasi Produk (X1)	0,936	0,7	Reliabel
Kompetensi Akuntansi (X2)	0,909	0,7	Reliabel
Transaksi Online (X3)	0,982	0,7	Reliabel
Daya Saing (Y)	0,962	0,7	Reliabel

Tabel 2 Rekapitulasi Analisis Deksriptif Variabel Inovasi Produk (X1)

No	**Butir Pernyataan**		**Skor Jawaban Responden**					**Total Skor**	**Mean**
			5	**4**	**3**	**2**	**1**		
1	Pemilik Usaha menyediakan berbagai kreasi menu makanan dan minuman	F	29	14	4	3	0	219	4,38
		%	58,00%	28,00%	8,00%	6,00%	0,00%		

No	Butir Pernyataan		Skor Jawaban Responden					Total Skor	Mean
			5	4	3	2	1		
2	Pemilik Usaha memperhatikan setiap bahan-bahan dalam pengolahan makanan dan minuman atau produknya	F	26	18	2	4	0	216	4,32
		%	52,00%	36,00%	4,00%	8,00%	0,00%		
3	Pemilik Usaha menyediakan berbagai desain kemasan makanan dan minuman atau produk	F	16	26	4	4	0	204	4,08
		%	32,00%	52,00%	8,00%	8,00%	0,00%		
4	Pemilik Usaha memperhatikan cara menyajikan makanan dan minuman	F	27	17	3	3	0	218	4,36
		%	54,00%	34,00%	6,00%	6,00%	0,00%		
5	Pemilik Usaha berusaha menyajikan kualitas kesehatan makanan dan minuman atau produk yang baik	F	36	9	2	3	0	228	4,56
		%	72,00%	18,00%	4,00%	6,00%	0,00%		
6	Pemilik Usaha berusaha menyajikan gizi yang baik pada makanan dan minuman	F	32	13	2	3	0	224	4,48
		%	64,00%	26,00%	4,00%	6,00%	0,00%		
Total Skor dan Rata-rata								**1309**	**4,36**

Sumber: Pengolahan Data (2023)

Based on table 2, it can be known the average respondent response regarding the Product Innovation variable (X1). It can be known that the overall total score is 1309, and the average value of

respondents' responses regarding the Product Innovation (X1) variable of 4.36 is included in the very good category.

Tabel 3. Rekapitulasi Analisis Deksriptif Variabel Kompetensi Akuntansi (X2)

No	Butir Pernyataan		Skor Jawaban Responden					Total Skor	Mean
			5	4	3	2	1		
1	Melakukan pencatatan setiap transaksi	F	21	23	5	1	0	214	4,28
		%	42,00%	46,00%	10,00%	2,00%	0,00%		
2	Dapat membedakan setiap transaksi apakah debet atau kredit	F	19	26	2	3	0	211	4,22
		%	38,00%	52,00%	4,00%	6,00%	0,00%		
3	Dapat membuat Nearaca Keuangan	F	10	29	7	3	1	194	3,88
		%	20,00%	58,00%	14,00%	6,00%	2,00%		
4	Dapat membuat laporan Rugi/Laba	F	14	26	6	3	1	199	3,98
		%	28,00%	52,00%	12,00%	6,00%	2,00%		
5	Dapat membuat Laporan Keuangan	F	18	23	5	3	1	204	4,08
		%	36,00%	46,00%	10,00%	6,00%	2,00%		
Total Skor dan Rata-rata								**1022**	**4,09**

Sumber: Pengolahan Data (2023)

Based on table 3, it can be known the average respondent response regarding the Accounting Competency variable (X2). It can be known that the overall total score is 1022, and the average value of respondents' responses regarding the Accounting Competency (X2) variable, which is 4.09, is included in the good category.

Tabel 4. Rekapitulasi Analisis Deksriptif Variabel Transaksi Online (X3)

No	Butir Pernyataan		Skor Jawaban Responden					Total Skor	Mean
			5	4	3	2	1		
1	Menggunakan transaksi online untuk mendapatkan pelanggan baru	F	23	20	2	3	2	209	4,18
		%	46,00%	40,00%	4,00%	6,00%	4,00%		
2		F	26	18	2	2	2	214	4,28

No	Butir Pernyataan		Skor Jawaban Responden					Total Skor	Mean
			5	4	3	2	1		
	Menggunakan transaksi online untuk dapat mengakses (menjangkau) pasara yang lebih luas lagi	%	52,00%	36,00%	4,00%	4,00%	4,00%		
3	Menggunakan transaksi online untuk mempromosikan produk	F	27	16	3	2	2	214	4,28
		%	54,00%	32,00%	6,00%	4,00%	4,00%		
4	Menggunakan transaksi online untuk membangun merk	F	17	25	2	3	3	200	4,00
		%	34,00%	50,00%	4,00%	6,00%	6,00%		
5	Menggunakan transaksi online untuk dapat bersaing dengan umkm lain	F	19	21	3	5	2	200	4,00
		%	38,00%	42,00%	6,00%	10,00%	4,00%		
6	Menggunakan transaksi online untuk dapat dekat dengan pelanggan	F	24	19	3	1	3	210	4,20
		%	48,00%	38,00%	6,00%	2,00%	6,00%		
7	Menggunakan transaksi online untuk dapat berkomunikasi lebih cepat dengan pelanggan	F	26	18	2	3	1	215	4,30
		%	52,00%	36,00%	4,00%	6,00%	2,00%		
8	Menggunakan transaksi online untuk dapat	F	19	23	3	3	2	204	4,08
		%	38,00%	46,00%	6,00%	6,00%	4,00%		

No	Butir Pernyataan		Skor Jawaban Responden					Total Skor	Mean
			5	4	3	2	1		
	memuaskan pelanggan								
9	Menggunakan transaksi online untuk membantu transaksi bisnis	F	19	24	3	3	1	207	4,14
		%	38,00%	48,00%	6,00%	6,00%	2,00%		
10	Menggunakan transaksi online untuk mendapatkan informasi dari pihak luar	F	17	27	1	4	1	205	4,10
		%	34,00%	54,00%	2,00%	8,00%	2,00%		
11	Menggunakan transaksi online untuk menghemat biaya	F	20	25	1	2	2	209	4,18
		%	40,00%	50,00%	2,00%	4,00%	4,00%		
12	Menggunakan transaksi online untuk efisiensi proses bisnis	F	15	28	2	4	1	202	4,04
		%	30,00%	56,00%	4,00%	8,00%	2,00%		
Total Skor dan Rata-rata								**2489**	**4,15**

Sumber: Pengolahan Data (2023)

Based on table 4, it can be known the average respondent response regarding the Online Transaction variable (X3). It can be known that the overall total score is 2489, and the average value of respondents' responses regarding the Online Transaction variable (X3) of 4.15 is included in the good category.

Tabel 5 Rekapitulasi Analisis Deksriptif Variabel Daya Saing (Y)

No	Butir Pernyataan		Skor Jawaban Responden					Total Skor	Mean
			5	4	3	2	1		
1	Harga yang dimiliki oleh UMKM merupakan hal yang paling	F	21	23	1	1	4	206	4,12
		%	42,00%	46,00%	2,00%	2,00%	8,00%		

No	Butir Pernyataan		Skor Jawaban Responden					Total Skor	Mean
			5	4	3	2	1		
	mempengaruhi dalam keunggulan bersaing								
2	Konsumen merasa tidak terbebani terhadap harga yang sudah ditetapkan oleh UMKM	F	19	24	2	3	2	205	4,10
		%	38,00%	48,00%	4,00%	6,00%	4,00%		
3	Kualitas produk yang dimiliki oleh UMKM lebih unggul dari para pesaingnya	F	17	25	3	3	2	202	4,04
		%	34,00%	50,00%	6,00%	6,00%	4,00%		
4	Kualitas pelayanan pada UMKM lebih unggul dari para pesaingnya	F	21	22	1	3	3	205	4,10
		%	42,00%	44,00%	2,00%	6,00%	6,00%		
5	Kemampuan UMKM untuk mengirimkan produk tepat waktu	F	20	24	1	3	2	207	4,14
		%	40,00%	48,00%	2,00%	6,00%	4,00%		
6	UMKM menyediakan produk atau jasa sesuai dengan tipe yang diinginkan pelanggan	F	22	24	0	2	2	212	4,24
		%	44,00%	48,00%	0,00%	4,00%	4,00%		
7	UMKM memiliki inovasi produk yang luas dan mempengaruhi nilai dan pangsa pasar	F	23	21	1	4	1	211	4,22
		%	46,00%	42,00%	2,00%	8,00%	2,00%		
8	Semakin besar nilai inovasi yang akan	F	24	21	1	2	2	213	4,26
		%	48,00%	42,00%	2,00%	4,00%	4,00%		

No	Butir Pernyataan		Skor Jawaban Responden					Total Skor	Mean
			5	4	3	2	1		
	diberiakan oleh pelanggan untuk sebuah produk atau jasa dapat memenuhi kebutuhan pelanggan								
9	Sebuah UMKM merupakan dimensi yang penting dari keunggualan bersaing	F	20	24	1	3	2	207	4,14
		%	40,00%	48,00%	2,00%	6,00%	4,00%		
10	Sejauh mana sebuah UMKM mampu mengeluarkan produk baru yang cepat dari pesaingnya	F	17	27	2	3	1	206	4,12
		%	34,00%	54,00%	4,00%	6,00%	2,00%		
Total Skor dan Rata-rata								**2074**	**4,15**

Sumber: Pengolahan Data (2023)

Based on table 5, it can be known the average response of respondents regarding the variable Competitiveness (Y). It can be known that the overall total score is 2074, and the average value of respondents' responses regarding the Competitiveness (Y) variable of 4.15 is included in the good category.

Model Testing

Based on the results of model testing, results were obtained that showed that all manifests (observed variables) had a *loading factor* value greater than 0.70. So the SEM-PLS model is said to have good construct validity. The following is a table that shows the *loading factor* values in detail in the model.

Tabel 6. *Loading Factor*

Konstruk	***Loading Factor***	**R kritis**	**Kriteria (*Loading Factor* ≥ 0.70)**
DS1 <- Daya Saing (Y)	0,723	0,70	Valid
DS10 <- Daya Saing (Y)	0,866	0,70	Valid
DS2 <- Daya Saing (Y)	0,833	0,70	Valid
DS3 <- Daya Saing (Y)	0,884	0,70	Valid
DS4 <- Daya Saing (Y)	0,895	0,70	Valid
DS5 <- Daya Saing (Y)	0,922	0,70	Valid
DS6 <- Daya Saing (Y)	0,872	0,70	Valid
DS7 <- Daya Saing (Y)	0,868	0,70	Valid
DS8 <- Daya Saing (Y)	0,926	0,70	Valid
DS9 <- Daya Saing (Y)	0,868	0,70	Valid
IP1 <- Inovasi Produk (X1)	0,789	0,70	Valid
IP2 <- Inovasi Produk (X1)	0,798	0,70	Valid
IP3 <- Inovasi Produk (X1)	0,745	0,70	Valid
IP4 <- Inovasi Produk (X1)	0,859	0,70	Valid
IP5 <- Inovasi Produk (X1)	0,958	0,70	Valid
IP6 <- Inovasi Produk (X1)	0,962	0,70	Valid
KA1 <- Kompetensi Akuntansi (X2)	0,712	0,70	Valid
KA2 <- Kompetensi Akuntansi (X2)	0,795	0,70	Valid
KA3 <- Kompetensi Akuntansi (X2)	0,919	0,70	Valid
KA4 <- Kompetensi Akuntansi (X2)	0,907	0,70	Valid
KA5 <- Kompetensi Akuntansi (X2)	0,925	0,70	Valid
TO1 <- Transaksi Online (E-Commerce) (X3)	0,917	0,70	Valid
TO10 <- Transaksi Online (E-Commerce) (X3)	0,944	0,70	Valid
TO11 <- Transaksi Online (E-Commerce) (X3)	0,893	0,70	Valid
TO12 <- Transaksi Online (E-Commerce) (X3)	0,937	0,70	Valid
TO2 <- Transaksi Online (E-Commerce) (X3)	0,936	0,70	Valid
TO3 <- Transaksi Online (E-Commerce) (X3)	0,936	0,70	Valid
TO4 <- Transaksi Online (E-Commerce) (X3)	0,916	0,70	Valid
TO5 <- Transaksi Online (E-Commerce) (X3)	0,831	0,70	Valid
TO6 <- Transaksi Online (E-Commerce) (X3)	0,945	0,70	Valid
TO7 <- Transaksi Online (E-Commerce) (X3)	0,937	0,70	Valid
TO8 <- Transaksi Online (E-Commerce) (X3)	0,917	0,70	Valid

Konstruk	***Loading Factor***	**R kritis**	**Kriteria (*Loading Factor* ≥ 0.70)**
TO9 <- Transaksi Online (E-Commerce) (X3)	0,904	0,70	Valid

Sumber: Pengolahan Data (2023)

Table 6 shows the *loading factor* values for each construct of each variable. Based on the table it can be seen that the entire *loading factor* is more than 0.70. So it can be concluded that based on each construct in the study has good validity. Furthermore, average variance extracted (AVE) *testing will be carried out* to further strengthen the results of *convergent validity* with criteria if the AVE value ≥ 0.5 (Hair et al, 2019), then the construct used in the study is valid.

Tabel 7 Nilai *Average Variance Extracted*

Laten	***Average Variance Extracted* (AVE)**	**R kritis**	**Kriteria (*AVE* ≥ 0.5)**
Inovasi Produk (X1)	0,733	0,5	Valid
Kompetensi Akuntansi (X2)	0,732	0,5	Valid
Transaksi Online (E-Commerce) (X3)	0,843	0,5	Valid
Daya Saing (Y)	0,752	0,5	Valid

Sumber: Pengolahan Data (2023)

Based on Table 7, the results of convergent validity *can be known* based on the value of *average variance extracted.* These results show that all latent variables have AVE values greater than 0.5. This indicates that the indicators that form the latent construct have good *convergent validity* when viewed from the value of *average variance extracted.*

Discriminant Validity can be seen from the *cross loading value*. Fornell and Larcker (1981) in Ghozali (2014: 45) stated that the correlation value of indicators to their constructs must be greater than the correlation value between indicators and other constructs. The following are presented *discriminant validity* test results using the Smart PLS 3.0 program.

Tabel 8. Nilai Uji Validitas *Dikriminan Cross Loading*

	Inovasi Produk (X1)	**Kompetensi Akuntansi (X2)**	**Transaksi Online (E-Commerce) (X3)**	**Daya Saing (Y)**
IP1	**0,789**	0,127	0,103	0,053

IP2	**0,798**	0,059	0,118	0,062
IP3	**0,745**	0,332	0,009	0,045
IP4	**0,859**	0,313	0,133	0,078
IP5	**0,958**	0,250	0,126	0,264
IP6	**0,962**	0,255	0,164	0,266
KA1	0,096	**0,712**	0,461	0,549
KA2	0,165	**0,795**	0,488	0,613
KA3	0,259	**0,919**	0,423	0,618
KA4	0,274	**0,907**	0,426	0,554
KA5	0,326	**0,925**	0,426	0,537
TO1	0,144	0,552	**0,917**	0,651
TO2	0,178	0,533	**0,936**	0,615
TO3	0,173	0,497	**0,936**	0,635
TO4	0,151	0,613	**0,916**	0,714
TO5	0,096	0,427	**0,831**	0,661
TO6	0,225	0,554	**0,945**	0,689
TO7	0,143	0,489	**0,937**	0,632
TO8	0,128	0,477	**0,917**	0,675
TO9	0,078	0,393	**0,904**	0,637
TO10	0,082	0,426	**0,944**	0,648
TO11	0,123	0,358	**0,893**	0,586
TO12	0,053	0,412	**0,937**	0,651
DS1	0,112	0,338	0,491	**0,723**
DS2	0,157	0,488	0,522	**0,833**
DS3	0,220	0,637	0,595	**0,884**
DS4	0,254	0,629	0,590	**0,895**
DS5	0,263	0,645	0,720	**0,922**
DS6	0,224	0,682	0,665	**0,872**
DS7	0,175	0,530	0,587	**0,868**
DS8	0,232	0,662	0,707	**0,926**
DS9	0,130	0,496	0,596	**0,868**
DS10	0,110	0,656	0,625	**0,866**

Sumber: Pengolahan Data (2023)

Based on Table 8 it can be seen that all indicators have a high correlation to their construct compared to other constructs. So it can be concluded that the research model has good discriminant validity in *discriminant cross loading validity*.

Cronbach's Alpha and *Composite Reliability* to determine whether construct reliability is good or not. Each construct is *said to be reliable if it has Cronbach's Alpha and Composite Reliability greater than 0.70 (Hair et al, 2017)* it can be said to be reliable, but if Cronbach's *Alpha* and *Composite Reliability* greater than 0.60 it can still be said to be reliable. The following are presented reliability test results using the Smart PLS 3.0 program.

Tabel 9. Nilai *Cronbach's Alpha* dan *Composite Reliability*

Latent	***Cronbach's Alpha***	***Composite Reliability***
Inovasi Produk (X1)	0,936	0,942
Kompetensi Akuntansi (X2)	0,905	0,931
Transaksi Online (E-Commerce) (X3)	0,983	0,985
Daya Saing (Y)	0,963	0,968

Sumber: Pengolahan Data (2023)

Based on Table 9 it can be seen that there is a latent construct having a *Cronbach's alpha* value of more than 0.6, indicating that the latent construct has good *reliability*. In addition, the value of *composite reliability* of all latent constructs also has a value greater than 0.60. Based on *Cronbach's alpha* and *composite reliability* values obtained, it shows that the model has good reliability.

Structural Model Testing (*Inner Model)*

Inner model *evaluation* is an analysis of the results of relationships between constructs. Inner model testing consists of R square, f square, *Q-square predictive relevance*, and hypothesis test.

R Square

Tabel 10. R Square

	R *Square*	**Kuat Hubungan**
Daya Saing (Y)	0,634	Moderat

Sumber: Pengolahan Data (2023)

According to Chin (1998) in Yamin and Kurniawan (2011: 21), R Square with a value of 0.67 indicates a strong model, a value of 0.33 indicates a moderate model and a value of 0.19 indicates a weak model. From the results of Table 4.37, it can be seen that the R-Square for the variable Competitiveness (Y) of 0.634 means that Product Innovation (X1), Accounting Competence (X2), and Online Transactions (E-Commerce) (X3) simultaneously affect Competitiveness (Y) by 63.4%, while the remaining 36.6% is influenced by other variables that are not studied in this study.

f Square

Next is to look at the value of f *Square*. The f *Square* value of 0.02 indicates a small rating, Effect Size 0.15 indicates a medium rating and Effect Size 0.35 indicates a large rating (Cohen, 1988

in Yamin and Kurniawan (2011: 21). Based on the test results with SmartPLS 3, F Square results were obtained as follows.

Tabel 11. F Square

Variabel	**Effect Size**	**Rating**
Daya Saing (Y)		
Inovasi Produk (X1)	0,005	Kecil
Kompetensi Akuntansi (X2)	0,316	Menengah
Transaksi Online (E-Commerce) (X3)	0,474	Besar

Sumber: Pengolahan Data (2023)

Based on Table 11 shows that the variables Product Innovation (X1), Accounting Competence (X2), and Online Transactions (E-Commerce) (X3) each have an influence with small, medium and large categories in influencing the variable Competitiveness (Y).

Q2 *Predictive Relevance*

Q-square *testing* is used to measure how well the observation values are produced by the model and also the estimation of its parameters. The value *of Q-square is more different than 0 (zero) indicating that the model has a predictive relevance value, while* Q-square *less than 0 (zero) indicates that the model lacks* predictive relevance *(* Cohen, 1988 in Yamin and Kurniawan (2011: 21). The Q-square value obtained using the R2 value in the table above, obtained the following calculation results:

Tabel 12. Q^2 *Predictive Relevance*

Variabel	**R Square**	**1-R Square**
Daya Saing (Y)	0,634	0,366
Q^2 =	Q^2 = 1- (1-0,634) = 63,4%	
Galat =	Q^2 = 100% - 63,4% = 36,6%	

Sumber: Pengolahan Data (2023)

Based on the results of the calculation above, it is known that the value of *the Q square* is greater than 0, this means that the observed values have been reconstructed well so that the model has predictive relevance. This means that there is 0.634 or 63.4% of the relative effect of structural models on observational measurements for endogenous latent variables, and 36.6% is model error.

The Effect of Product Innovation (X1) on Competitiveness (Y)

From the results of Table 13, the *Original Sample* (O) value of 0.044 shows that the direction of influence of Product Innovation (X1) on Competitiveness (Y) is positive or unidirectional, meaning that the more product innovation increases, the more it increases competitiveness. The effect of Product Innovation (X1) on Competitiveness (Y) is insignificant, with a t-statistic value of 0.242 less than t table

or 0.242 < 1.96, and a *p value* of 0.809 greater than alpha 5% (0.05). Thus, H1.1 is rejected, meaning that Product Innovation (X 1) has no significant effect on Competitiveness (Y).

Tabel 13. Koefisien Jalur dan t-hitung Pengaruh Inovasi Produk (X_1) terhadap Daya Saing (Y)

	***Original Sample* (O)**	**t-Statistik**	***p-value***	**Kesimpulan**
Inovasi Produk (X_1) terhadap Daya Saing (Y)	0,044	0,242	0,809	Terima $H_{0.1}$

Sumber: Pengolahan Data (2023)

Effect of Accounting Competence (X2) on Competitiveness (Y)

From the results of Table 14, the *Original Sample* (O) value of 0.409 shows that the direction of influence of Accounting Competence (X2) on Competitiveness (Y) is positive or unidirectional, meaning that the more product innovation increases, the more it increases competitiveness. The effect of Accounting Competence (X2) on Competitiveness (Y) is significant, with a t-statistic value of 3.129 greater than t table or 3.129 > 1.96, and a *p value* of 0.002 smaller than alpha 5% (0.05). Thus, H1.2 is accepted, meaning that Accounting Competence (X 2) has a significant effect on Competitiveness (Y).

Tabel 14. Koefisien Jalur dan t-hitung Pengaruh Kompetensi Akuntansi (X_2) terhadap Daya Saing (Y)

	***Original Sample* (O)**	**t-Statistik**	***p-value***	**Kesimpulan**
Kompetensi Akuntansi (X_2) terhadap Daya Saing (Y)	0,409	3,129	0,002	Tolak $H_{0.2}$

Sumber: Pengolahan Data (2023)

The Effect of Online Transactions *(E-Commerce)* (X3) on Competitiveness (Y)

From the results of Table 15, the *Original Sample* (O) value of 0.489 shows that the direction of influence of Online Transactions *(E-Commerce)* (X3) on Competitiveness (Y) is positive or unidirectional, meaning that the more product innovation increases, the more it increases competitiveness. The effect of Online Transactions *(E-Commerce*) (X3) on Competitiveness (Y) is significant, with a t-statistic value of 3.129 greater than t table or 4.597 > 1.96, and a *p value* of 0.000 smaller than alpha 5% (0.05). Thus, H1.2 is accepted, meaning that Online Transactions (*E-Commerce)* (X3) have a significant effect on Competitiveness (Y).

Tabel 15. Koefisien Jalur dan t-hitung Pengaruh Transaksi Online (*E-Commerce*) (X_3) terhadap Daya Saing (Y)

	***Original Sample* (O)**	**t-Statistik**	***p-value***	**Kesimpulan**
Transaksi Online (*E-Commerce*) (X_3) terhadap Daya Saing (Y)	0,489	4,597	0,000	Tolak $H_{0.3}$

Sumber: Pengolahan Data (2023)

5.Conclusion

Based on the results of research and discussions that have been carried out, the conclusions that can be drawn are as follows:

1. Product Innovation has no significant effect on Competitiveness;
2. Accounting Competence has a significant effect on Competitiveness;
3. Online Transactions (*E-Commerce*) have a significant effect on Competitiveness.

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The Role of Product Innovation, Accounting Competency, and Online Transactions (E-Commerce) in Increasing Competitiveness in MSMEs, Alalak District, Batola Regency, Indonesia

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A B S T R A C T

Improving this economic aspect is by empowering the community economy, namely MSMEs owned by the community by maximizing the role of MSMEs. Maximizing the role of MSMEs must be supported by business management aspects such as the application of product innovation, accounting competencies, and online transactions (e-commerce) to increase MSMEs' competitiveness. By increasing the competitiveness of MSMEs, it is hoped that it can improve community welfare. This research aims to explore the role of product innovation, accounting competency and online transactions (e-commerce) in increasing competitiveness in MSMEs. Alalak District, Batola Regency, Indonesia. Quantitative research methods were used in this research with the PLS analysis technique. Observation of indicators is carried out using instruments (questionnaires) which aim to find out respondents' opinions about something. The results of this research reveal that product innovation, accounting competence, and online transactions (e-Commerce) can increase the competitiveness of MSMEs.

1. Introduction

Competition in the business world is facing an era of increasingly fierce competition, as well as micro, small, and medium enterprises (MSMEs), which inevitably have to be able to maintain the market so MSMEs will be able to develop and retain their customers. The very tight competitive environment must be considered and handled so that sales can continue to increase, as well as the high business opportunities in Indonesia causing many new businesses to emerge with more attractive concepts (Goca, 2019). Increasingly tight business competition demands that MSMEs implement superior and efficient business management processes in order to encourage the creation of products or services that meet market needs at a higher quality level than other companies (Fatmawati, 2016). Micro, small, and medium enterprises (MSMEs) must not only maintain competitiveness but also create superior products. In particular, there are several criteria for the products being sold, namely: (1) they must be used regularly and continuously, (2) the products must be of high quality and varied, and (3) the products must be changed according to different market needs and

demands (Fatmawati, 2016).

In South Kalimantan, especially at the location of research activities, Alalak District is a district with priority areas that are vulnerable to food insecurity. In general, Alalak District, Barito Kuala Regency, has superior potential, namely agriculture, animal husbandry, fisheries, and industry. One of the sectors that is favored is the industrial sector because Alalak District is a border area with Banjarmasin City, so there are at least 5 industries/companies that are established in East Berangas Village. Apart from that, the development of the MSME sector selling industrial products, crafts, and food is also growing rapidly in Alalak District. This is also supported by the existence of the Integrated Business Service Center (PLUT) MSME House located in the Handil Bhakti area.

This research activity is a form of support for the Food Independent Program, as stated in the 2012 Annual Report of the Food Security Agency, which aims to develop food-independent villages, namely by increasing food and nutrition security (reducing food and nutritional insecurity) in the community through resource and institutional utilization. and local culture in rural areas. One effort to improve community welfare can be achieved through improving economic aspects. Although non-economic aspects also have a role, this is not the main focus of this research. Improving this economic aspect is by empowering the community economy, namely MSMEs owned by the community by maximizing the role of MSMEs. Maximizing the role of MSMEs must be supported by business management aspects such as the application of product innovation, accounting competencies and online transactions (e-commerce) to increase the competitiveness of MSMEs. Therefore, it is very necessary to empower the community's economy by increasing the competitiveness of MSMEs so that they can increase the income of village communities. This research aims to explore the role of product innovation, accounting competency and online transactions (e-commerce) in increasing competitiveness in MSMEs. Alalak District, Batola Regency, Indonesia.

2. Literature Review

Product innovation

The success of micro, small, and medium enterprises (MSMEs) cannot be separated from the word product innovation. To keep running, MSMEs must always be able to develop product features. Apart from that, MSMEs must also pay attention to the design and design of the packaging they make. MSMEs must also prioritize the quality of the products they make, with the aim being that consumers feel satisfied, remain loyal, and return to buy (Dhewanto et al., 2015). Innovation in competitiveness is a skill possessed to achieve achievement in the form of competitive advantage. Innovation is also an expression of entrepreneurial activity that can contribute to the long-term survival of a business (Kraus et al., 2012). Every company must innovate with the aim of developing and maintaining its market share (Dhewanto et al., 2014). Furthermore, (Dhewanto et al., 2015) there are several indicators of product innovation, including (1) Product Features. Product features can be a source of capital for the product to compete to win consumer attention. Unique, special, and distinctive are the features of the product and add value; (2) Product design and design. Design is a concept or way that can represent and illustrate a product image. Design contributes to the appearance but also to the usability of the product. Product design aims to attract consumer attention, and can also be a strategy to minimize production costs; (3) Product quality. Product quality is the level of a product that is able to perform its function as optimally as possible. The function in question is product durability, reliability and accuracy of the product produced. Good product innovation will be implemented if you understand the best practices to

be adopted as a product development process, then require practice to repeat a success and process. maturity from companies that have the best performance (Paulk et al., 1993).

Accounting competency

Accounting is a field of science that is not enough to study from a theoretical perspective. However, accounting is easier to understand with real accounting practice. Accounting provides students with knowledge and skills about a cycle of accounting activities in a company, either manually or using certain software programs. For MSMEs, financial reports are accounting information that plays an important role in business success. Because financial reports that can be used as material for reflection on financial decisions in managing MSMEs are quality financial reports (Agustina, 2020). Several studies have examined the factors that influence the preparation of financial reports. According to Lohanda (2017); Auliah (2019); Atika (2019); Yosida (2020); Dewi (2020); Posi (2021); Ayuningtyas (2021); Nurwanto et al (2022) accounting competency has a significant effect on the preparation of financial reports.

E-commerce

E-commerce is the process of buying and selling transactions using electronic devices, such as telephones and the Internet. Shim et al. (2000) in Suyanto (2003) define e-commerce as a new concept that can be described as the process of buying and selling goods or services on the World Wide Web Internet. E-commerce has at least six positive impacts on a company's business operations (Widani, et al, 2019; Dewi, 2014). These six impacts are increasing efficiency, saving costs, improving control over goods, improving the distribution chain (supply chain), helping companies maintain better relationships with customers, and helping companies maintain better relationships with suppliers. The obstacles faced, and which are a challenge for us now, are regarding securities and payment methods (Pranata, 2014; Mahyuni et al, 2020).

MSME competitiveness

Competitive advantage is an advantage over competitors obtained through higher value or higher profits due to higher prices. Competitive advantage indicates that one company can do better than others, even in the same industry. Competitive advantage shows that one organization can outperform others, even when working in the same environment (Sunyoto, 2015). Competitive advantage is an advantage that exists when a company has and produces a product or service that is considered by the target market to be better than its closest competitors (Saiman, 2014). Furthermore, Saiman (2014) says that there are several strategies for competitive advantage: recognizing opportunities, choosing strategies to capture opportunities, and managing the results of exploiting opportunities

3. Methods

This study was carried out in Handil Bhakti Village, Alalak District, Barito Kuala Regency, South Kalimantan. This research was designed to be carried out using a quantitative approach. Research in the social sciences, such as management, psychology, and sociology, generally formulates research variables as latent variables - namely, variables that cannot be measured directly - formed from observed dimensions or observed indicators (Ghozali, 2013). Observation of indicators is carried out using instruments (questionnaires/questionnaires) which aim to find out respondents' opinions about something. The scaling generally used for research instruments is a Likert scale, which produces ordinal data containing answer preferences: 1 for Strongly Disagree; 2 to Disagree; 3 for Undecided – Undecided or Neutral; 4 for Agree; and 5 for Strongly Agree. Regarding the quality of the data type, the data produced by the Likert Scale is stated

as ordinal data because each number has a higher or lower preference than the others. However, if the scale distance is the same size or constant, the resulting data type is interval data. This data becomes input for instrument quality testing, namely reliability and validity testing.

The research method is causal in nature and seeks to determine and analyze the role of product innovation, accounting competency, and online transactions (e-commerce) in increasing competitiveness in MSMEs. Alalak District, Batola Regency – South Kalimantan Province. The PLS technique is used to predict this influence. In order to obtain quality research data, a data quality test is carried out on the initial raw data to remove outlier data for variables so that the data tested for validity and reliability is normally distributed raw data that meets the z-value qualifications (z-score) used. The classical assumption test is carried out to fulfill the requirements for hypothesis testing, namely whether the hypothesis test is carried out parametrically or non-parametrically

4. Results and Discussion

Validity test

This test is carried out to test the validity of each statement item in measuring the variable. The correlation technique used to test the validity of statement items in this research is Pearson Product Moment. If the correlation coefficient value of the statement items being tested is greater than $r_{critical}$ of 0.3, it can be concluded that the statement item is a valid construct. The validity test results show that all statement items have a validity coefficient greater than $r_{critical}$ 0.3. So it can be concluded that all statement items stated are valid which can be used in further analysis.

Reliability test

Reliability testing was carried out by testing the instrument only once and then analyzing it using the Alpha-Cronbach method. A questionnaire is said to be reliable if the reliability coefficient is greater than 0.7. Based on Table 1, it is known that the reliability value of the statement items on the variable being studied is greater than 0.7. These results indicate that the statement items in the questionnaire are reliable for measuring the variables. The results of the reliability test are as follows.

Table 1. Research questionnaire reliability test results.

Variable	Reliability index	Critical value	Information
Product innovation (X1)	0,936	0,7	Reliable
Accounting competency (X2)	0,909	0,7	Reliable
Online transactions (X3)	0,982	0,7	Reliable
Competitiveness (Y)	0,962	0,7	Reliable

Table 2. Recapitulation of descriptive analysis of product innovation variables (X1).

No	Statement items		Respondent answer score					Total score	Mean
			5	4	3	2	1		
1	Business owners provide various creative food and drink menu	F	29	14	4	3	0	219	4,38
		%	58,00%	28,00%	8,00%	6,00%	0,00%		
2	Business owners pay attention to every ingredient in processing food and drinks or their products	F	26	18	2	4	0	216	4,32
		%	52,00%	36,00%	4,00%	8,00%	0,00%		
3	Business owners provide various food and beverage or product packaging designs	F	16	26	4	4	0	204	4,08
		%	32,00%	52,00%	8,00%	8,00%	0,00%		
4	Business owners pay attention to how to serve food and drinks	F	27	17	3	3	0	218	4,36
		%	54,00%	34,00%	6,00%	6,00%	0,00%		
5	Business owners try to provide good quality healthy food and drinks or products	F	36	9	2	3	0	228	4,56
		%	72,00%	18,00%	4,00%	6,00%	0,00%		
6	Business owners try to provide good	F	32	13	2	3	0	224	4,48

No	Statement items		Respondent answer score					Total score	Mean
			5	4	3	2	1		
	nutrition in food and drinks	%	64,00%	26,00%	4,00%	6,00%	0,00%		
Total score and average								**1309**	**4,36**

Source: Data Processing (2023).

Based on Table 2, the average response of respondents regarding the product innovation variable (X1) can be seen. It can be seen that the overall total score is 1309, and the average value of respondents' responses regarding the product innovation variable (X1) is 4.36, which is in the very good category.

Table 3. Recapitulation of descriptive analysis of accounting competency variables (X2).

No	Statement items		Respondent answer score					Total score	Mean
			5	4	3	2	1		
1	Record every transaction	F	21	23	5	1	0	214	4,28
		%	42,00%	46,00%	10,00%	2,00%	0,00%		
2	Can differentiate each transaction, whether debit or credit	F	19	26	2	3	0	211	4,22
		%	38,00%	52,00%	4,00%	6,00%	0,00%		
3	Can create a balance sheet	F	10	29	7	3	1	194	3,88
		%	20,00%	58,00%	14,00%	6,00%	2,00%		
4	Can create loss/profit reports	F	14	26	6	3	1	199	3,98
		%	28,00%	52,00%	12,00%	6,00%	2,00%		
5	Can make financial reports	F	18	23	5	3	1	204	4,08
		%	36,00%	46,00%	10,00%	6,00%	2,00%		
Total score and average								**1022**	**4,09**

Source: Data Processing (2023).

Based on Table 3, the average response of respondents regarding the Accounting Competency variable (X2) can be seen. It can be seen that the overall total score is 1022, and the average value of respondents' responses regarding the accounting competency variable (X2) is 4.09, which is in the good category.

Table 4. Recapitulation of descriptive analysis of online transaction variables (X3).

No	Statement items		Respondent answer score					Total score	Mean
			5	4	3	2	1		
1	Using online transactions to get new customers	F	23	20	2	3	2	209	4,18
		%	46,00%	40,00%	4,00%	6,00%	4,00%		
2	Using online transactions to be able to access (reach) a wider market	F	26	18	2	2	2	214	4,28
		%	52,00%	36,00%	4,00%	4,00%	4,00%		
3	Using online transactions to promote products	F	27	16	3	2	2	214	4,28
		%	54,00%	32,00%	6,00%	4,00%	4,00%		
4	Using online transactions to build a brand	F	17	25	2	3	3	200	4,00
		%	34,00%	50,00%	4,00%	6,00%	6,00%		
5	Using online transactions to be able to compete with other MSMEs	F	19	21	3	5	2	200	4,00
		%	38,00%	42,00%	6,00%	10,00%	4,00%		
6	Using online transactions to be close to customers	F	24	19	3	1	3	210	4,20
		%	48,00%	38,00%	6,00%	2,00%	6,00%		
7	Using online transactions to be able to communicate more quickly with customers	F	26	18	2	3	1	215	4,30
		%	52,00%	36,00%	4,00%	6,00%	2,00%		
8	Using online transactions to satisfy customers	F	19	23	3	3	2	204	4,08
		%	38,00%	46,00%	6,00%	6,00%	4,00%		
9	Using online transactions to help business transactions	F	19	24	3	3	1	207	4,14
		%	38,00%	48,00%	6,00%	6,00%	2,00%		
10	Using online transactions to obtain information from outside parties	F	17	27	1	4	1	205	4,10
		%	34,00%	54,00%	2,00%	8,00%	2,00%		
11	Use online transactions to save costs	F	20	25	1	2	2	209	4,18
		%	40,00%	50,00%	2,00%	4,00%	4,00%		

12	Using online transactions for business process efficiency	F	15	28	2	4	1	202	4,04
		%	30,00%	56,00%	4,00%	8,00%	2,00%		
Total Score and Average								2489	4,15

Source: Data Processing (2023).

Based on Table 4, the average response of respondents regarding the online transaction variable (X3) can be seen. It can be seen that the overall total score is 2489, and the average value of respondents' responses regarding the online transaction variable (X3) is 4.15, which is in the good category.

Table 5. Recapitulation of descriptive analysis of competitiveness variables (Y).

No	Statement items		Respondent answer score					Total score	Mean
			5	4	3	2	1		
1	The price of MSMEs is the thing that most influences competitive advantage	F	21	23	1	1	4	206	4,12
		%	42,00%	46,00%	2,00%	2,00%	8,00%		
2	Consumers do not feel burdened by the prices set by MSMEs	F	19	24	2	3	2	205	4,10
		%	38,00%	48,00%	4,00%	6,00%	4,00%		
3	The quality of products owned by MSMEs is superior to its competitors	F	17	25	3	3	2	202	4,04
		%	34,00%	50,00%	6,00%	6,00%	4,00%		
4	The quality of service for MSMEs is superior to its competitors	F	21	22	1	3	3	205	4,10
		%	42,00%	44,00%	2,00%	6,00%	6,00%		
5	The ability of MSMEs to deliver products on time	F	20	24	1	3	2	207	4,14
		%	40,00%	48,00%	2,00%	6,00%	4,00%		
6	MSMEs provide products or services according to the type customers want	F	22	24	0	2	2	212	4,24
		%	44,00%	48,00%	0,00%	4,00%	4,00%		
7	MSMEs have extensive product innovation and influence market value and share	F	23	21	1	4	1	211	4,22
		%	46,00%	42,00%	2,00%	8,00%	2,00%		
8	The greater the innovation value that customers will provide for a product or service, the more it can meet customer needs	F	24	21	1	2	2	213	4,26
		%	48,00%	42,00%	2,00%	4,00%	4,00%		
9	An MSME is an important dimension of competitive advantage	F	20	24	1	3	2	207	4,14
		%	40,00%	48,00%	2,00%	6,00%	4,00%		
10	The extent to which an MSME is able to release new products more quickly than its competitors	F	17	27	2	3	1	206	4,12
		%	34,00%	54,00%	4,00%	6,00%	2,00%		
Total score and average								**2074**	**4,15**

Source: Data Processing (2023).

Based on Table 5, the average response of respondents regarding the Competitiveness variable (Y) can be seen. It can be seen that the overall total score is 2074, and the average value of respondents' responses regarding the competitiveness (Y) variable is 4.15, which is in the good category.

Model testing

Based on the results of model testing, results were obtained which showed that all manifests (observed

variables) had a value loading factor greater than 0.70. So, the SEM-PLS model is said to have good construct validity. Below is a table showing the values loading factor on the model in detail.

Table 6. Loading factor.

Construct	Loading factor	R critical	Criteria (Loading factor > 0.70)
DS1 <- Competitiveness (Y)	0,723	0,70	Valid
DS10 <- Competitiveness (Y)	0,866	0,70	Valid
DS2 <- Competitiveness (Y)	0,833	0,70	Valid
DS3 <- Competitiveness (Y)	0,884	0,70	Valid
DS4 <- Competitiveness (Y)	0,895	0,70	Valid
DS5 <- Competitiveness (Y)	0,922	0,70	Valid
DS6 <- Competitiveness (Y)	0,872	0,70	Valid
DS7 <- Competitiveness (Y)	0,868	0,70	Valid
DS8 <- Competitiveness (Y)	0,926	0,70	Valid
DS9 <- Competitiveness (Y)	0,868	0,70	Valid
IP1 <- Product innovation (X1)	0,789	0,70	Valid
IP2 <- Product innovation (X1)	0,798	0,70	Valid
IP3 <- Product innovation (X1)	0,745	0,70	Valid
IP4 <- Product innovation (X1)	0,859	0,70	Valid
IP5 <- Product innovation (X1)	0,958	0,70	Valid
IP6 <- Product innovation (X1)	0,962	0,70	Valid
KA1 <- Accounting competency (X2)	0,712	0,70	Valid
KA2 <- Accounting competency (X2)	0,795	0,70	Valid
KA3 <- Accounting competency (X2)	0,919	0,70	Valid
KA4 <- Accounting Competency (X2)	0,907	0,70	Valid
KA5 <- Accounting competency (X2)	0,925	0,70	Valid
TO1 <- Online transaction (E-Commerce) (X3)	0,917	0,70	Valid
TO10 <- Online transaction (E-Commerce) (X3)	0,944	0,70	Valid
TO11 <- Online transaction (E-Commerce) (X3)	0,893	0,70	Valid
TO12 <- Online transaction (E-Commerce) (X3)	0,937	0,70	Valid
TO2 <- Online transaction (E-Commerce) (X3)	0,936	0,70	Valid
TO3 <- Online transaction (E-Commerce) (X3)	0,936	0,70	Valid
TO4 <- Online transaction (E-Commerce) (X3)	0,916	0,70	Valid
TO5 <- Online transaction (E-Commerce) (X3)	0,831	0,70	Valid
TO6 <- Online transaction (E-Commerce) (X3)	0,945	0,70	Valid
TO7 <- Online transaction (E-Commerce) (X3)	0,937	0,70	Valid
TO8 <- Online transaction (E-Commerce) (X3)	0,917	0,70	Valid
TO9 <- Online transaction (E-Commerce) (X3)	0,904	0,70	Valid

Source: Data Processing (2023).

Table 6 shows the values of the loading factor for each construct of each variable. Based on this table, it can be seen that the loading factor is worth more than 0.70. So, it can be concluded that, based on each construct in the research, it has good validity. Next, testing will be carried out on average variance extracted (AVE) to further strengthen the results of convergent validity with criteria when the AVE value> 0.5 (Hair et al., 2019), then the construct used in the research is valid.

Table 7. Average variance extracted value.

Latent	Average variance extracted (AVE)	R critical	Criteria (AVE ≥ 0.5)
Product innovation (X1)	0,733	0,5	Valid
Accounting competency (X2)	0,732	0,5	Valid

Online transaction (E-commerce) (X3)	0,843	0,5	Valid
Competitiveness (Y)	0,752	0,5	Valid

Source: Data Processing (2023).

Based on Table 7, the results can be seen as convergent validity based on the value average variance extracted. These results show that all latent variables have an AVE value of more than 0.5. This indicates that the indicators that form the latent construct have convergent validity, which is good when seen from the value average variance extracted.

Discriminant Validity can be seen from the value cross-loading. Fornell and Larcker (1981) in Ghozali (2014:45) stated that the correlation value of indicators with their constructs must be greater than the correlation values between indicators and other constructs. Below are presented the test results and discriminant validity using the Smart PLS 3.0 program.

Table 8. Cross-loading discriminant validity test value.

	Product innovation (X1)	**Accounting competency (X2)**	**Online transaction (E-commerce) (X3)**	**Competitiveness (Y)**
IP1	**0,789**	0,127	0,103	0,053
IP2	**0,798**	0,059	0,118	0,062
IP3	**0,745**	0,332	0,009	0,045
IP4	**0,859**	0,313	0,133	0,078
IP5	**0,958**	0,250	0,126	0,264
IP6	**0,962**	0,255	0,164	0,266
KA1	0,096	**0,712**	0,461	0,549
KA2	0,165	**0,795**	0,488	0,613
KA3	0,259	**0,919**	0,423	0,618
KA4	0,274	**0,907**	0,426	0,554
KA5	0,326	**0,925**	0,426	0,537
TO1	0,144	0,552	**0,917**	0,651
TO2	0,178	0,533	**0,936**	0,615
TO3	0,173	0,497	**0,936**	0,635
TO4	0,151	0,613	**0,916**	0,714
TO5	0,096	0,427	**0,831**	0,661
TO6	0,225	0,554	**0,945**	0,689
TO7	0,143	0,489	**0,937**	0,632
TO8	0,128	0,477	**0,917**	0,675
TO9	0,078	0,393	**0,904**	0,637
TO10	0,082	0,426	**0,944**	0,648
TO11	0,123	0,358	**0,893**	0,586
TO12	0,053	0,412	**0,937**	0,651
DS1	0,112	0,338	0,491	**0,723**
DS2	0,157	0,488	0,522	**0,833**
DS3	0,220	0,637	0,595	**0,884**
DS4	0,254	0,629	0,590	**0,895**
DS5	0,263	0,645	0,720	**0,922**
DS6	0,224	0,682	0,665	**0,872**
DS7	0,175	0,530	0,587	**0,868**

DS8	0,232	0,662	0,707	**0,926**
DS9	0,130	0,496	0,596	**0,868**
DS10	0,110	0,656	0,625	**0,866**

Source: Data Processing (2023).

Based on Table 8, it can be seen that all indicators have a high correlation with their constructs compared to other constructs. So, it can be concluded that the research model has good discriminant validity cross-loading.

Cronbach's alpha and composite reliability to find out whether the construct reliability is good or not. Each construct is said to be reliable if it has Cronbach's alpha and composite reliability greater than 0.70 (Hair et al., 2017) can be said to be reliable, but if Cronbach's Alpha and Composite Reliability, something greater than 0.60 can still be said to be reliable. Below are presented the test results reliability using the Smart PLS 3.0 program.

Table 9. Values Cronbach's alpha and composite reliability.

Latent	**Cronbach's alpha**	**Composite reliability**
Product innovation (X1)	0,936	0,942
Accounting competency (X2)	0,905	0,931
Online transaction (E-commerce) (X3)	0,983	0,985
Competitiveness (Y)	0,963	0,968

Source: Data Processing (2023).

Based on Table 9, it can be seen that there are latent constructs that have a value of Cronbach's alpha of more than 0.6; this indicates that the latent construct has the reliability of the good one. Apart from that on value composite reliability, all latent constructs also have values greater than 0.60. Based on the value of Cronbach's alpha and composite reliability obtained, it shows that the model has good reliability.

Structural model testing (inner model)

The inner model evaluation is an analysis of the results of the relationship between constructs. Inner model testing consists of R square, f square, Q-square predictive relevance, and hypothesis testing.

Table 10. R Square.

	R Square	**Strong relationships**
Competitiveness (Y)	0,634	Moderate

Source: Data Processing (2023).

According to Chin (1998) in Yamin and Kurniawan (2011:21), R Square with a value of 0.67 indicates a strong model, a value of 0.33 indicates a moderate model, and a value of 0.19 indicates a weak model. From the results of Table 4.37, it can be seen that the R-Square for the Competitiveness variable (Y) is 0.634, which means that Product Innovation (X_1), accounting competency (X_2), and online transactions (E-commerce) (X_3) simultaneously influences Competitiveness (Y) by 63.4%, while the remaining 36.6% is influenced by other variables not examined in this research.

f Square

Next is to look at the value of f Square. The f Square value of 0.02 indicates a small rating, an effect size of 0.15 indicates a medium rating and an effect size of 0.35 indicates a large rating (Cohen, 1988 in Yamin and Kurniawan (2011). Based on the test results with SmartPLS 3, F Square results were obtained as follows.

Table 11. F square.

Variable	Effect size	Rating
Competitiveness (Y)		
Product innovation (X1)	0,005	Small
Accounting competency (X2)	0,316	Intermediate
Online transactions (E-commerce) (X3)	0,474	Large

Source: Data Processing (2023).

Table 11 shows that the Product Innovation variable (X1), Accounting Competency (X2), and Online Transactions (E-Commerce) (X3) each have an influence in the small, medium, and large categories in influencing the Competitiveness variable (Y).

Q^2 predictive relevance

Q-square testing is used to measure how well the observation values are produced by the model and also the estimation of its parameters. The value of the Q-square is more different than 0 (zero), indicating that the model has a predictive relevance value, while a Q-square less than 0 (zero) indicates that the model lacks predictive relevance (Cohen, 1988 in Yamin and Kurniawan (2011: 21). The Q-square value obtained using the R2 value in the table above, obtained the following calculation results:

Table 12. Q^2 predictive relevance.

Variable	R Square	1-R Square
Competitiveness (Y)	0,634	0,366
Q^2 =	Q^2 = 1- (1-0,634) = 63,4%	
Error =	Q^2 = 100% - 63,4% = 36,6%	

Source: Data Processing (2023).

Based on the results of the calculation above, it is known that the value of the Q square is greater than 0. This means that the observed values have been reconstructed well so that the model has predictive relevance. This means that there is 0.634 or 63.4% of the relative effect of structural models on observational measurements for endogenous latent variables, and 36.6% is a model error.

Influence of product innovation (X_1) to competitiveness (Y)

From the results of Table 13, the original sample (O) value of 0.044 shows that the direction of influence of product innovation (X1) on competitiveness (Y) is positive or unidirectional, meaning that the more product innovation increases, the more it increases competitiveness. The effect of product innovation (X1) on competitiveness (Y) is insignificant, with a t-statistic value of 0.242 smaller than the t table or 0.242 < 1.96, and a p-value of 0.809 greater than alpha 5% (0.05). Thus, H1.1 is rejected, meaning that product innovation (X1) does not have a significant effect on competitiveness (Y).

Table 13. Path coefficient and t-count of the effect of product innovation (X1) on competitiveness.

	Original sample (O)	t-Statistics	p-value	Conclusion
Product innovation (X_1) to competitiveness (Y)	0,044	0,242	0,809	$H_{0.1}$ accepted

Source: Data Processing (2023).

Influence of accounting competency (X_2) to competitiveness (Y)

From the results of Table 14, values obtained from the original sample (O), which is 0.409, show that the direction of influence of accounting competency (X_2) on competitiveness (Y) is positive or in the same direction, meaning that the more product innovation increases, the more competitiveness increases. The influence of accounting competency (X2) on competitiveness (Y) is significant, with a t-statistic value of 3.129 greater than the t table or 3.129 > 1.96, as well as a p-value of 0.002, which is smaller than alpha 5% (0.05). Thus, $H_{1.2}$ Accepted means accounting competency (X_2) has a significant effect on competitiveness (Y).

Table 14. Path coefficient and t-count of the influence of accounting competency (X2) to competitiveness (Y).

	Original sample (O)	t-Statistics	p-value	Conclusion
Accounting competency (X_2) to competitiveness (Y)	0,409	3,129	0,002	$H_{0.2}$ rejected

Source: Data Processing (2023).

Effect of online transactions (E-commerce) (X_3) to competitiveness (Y)

From the results of Table 15, values obtained from the original sample (O), which is 0.489, show that the direction of influence from online transactions (E-commerce) (X_3) on competitiveness (Y) is positive or in the same direction, meaning that the more product innovation increases, the more competitiveness increases. The effect of online transactions (E-commerce) (X_3) on competitiveness (Y) is significant, with a t-statistic value of 3.129 greater than the t table or 4.597 > 1.96, as well as a value p-value of 0.000 is smaller than alpha 5% (0.05). Thus, $H_{1.2}$ accepted means online transactions (e-commerce) (X3) have a significant effect on competitiveness (Y).

Table 15. Path coefficient and t-calculation of the effect of online transactions (E-commerce) (X3) on competitiveness (Y).

	Original sample (O)	t-Statistics	p-value	Conclusion
Online transactions (E-commerce) (X_3) to competitiveness (Y)	0,489	4,597	0,000	$H_{0.3}$ rejected

Source: Data Processing (2023).

5. Conclusion

Based on the results of the research and discussions that have been carried out, the conclusions that can be drawn are as follows: 1) Product innovation does not have a significant effect on competitiveness. 2) Accounting competency has a significant effect on competitiveness. 3) Online transactions (E-commerce) have a significant effect on competitiveness.

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Letter of Acceptance

Dear **Hastin Umi Anisah***,

Manuscript "**The Role of Product Innovation, Accounting Competency, and Online Transactions (E-Commerce) in Increasing Competitiveness in MSMEs, Alalak District, Batola Regency, Indonesia**" by "**Hastin Umi Anisah*, Sustinah Limarjani, Rifqi Novriyandana, Rasidah**", has been accepted to publish in Open Access Indonesia Journal of Social Sciences [OAIJSS] Volume 7 Issue 2 in February 2024.

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The Role of Product Innovation, Accounting Competency, and Online Transactions (E-Commerce) in Increasing Competitiveness in MSMEs, Alalak District, Batola Regency, Indonesia

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A B S T R A C T

Improving this economic aspect is by empowering the community economy, namely MSMEs owned by the community by maximizing the role of MSMEs. Maximizing the role of MSMEs must be supported by business management aspects such as the application of product innovation, accounting competencies, and online transactions (e-commerce) to increase MSMEs' competitiveness. By increasing the competitiveness of MSMEs, it is hoped that it can improve community welfare. This research aims to explore the role of product innovation, accounting competency and online transactions (e-commerce) in increasing competitiveness in MSMEs. Alalak District, Batola Regency, Indonesia. Quantitative research methods were used in this research with the PLS analysis technique. Observation of indicators is carried out using instruments (questionnaires) which aim to find out respondents' opinions about something. The results of this research reveal that product innovation, accounting competence, and online transactions (e-Commerce) can increase the competitiveness of MSMEs.

1. Introduction

Competition in the business world is facing an era of increasingly fierce competition, as well as micro, small, and medium enterprises (MSMEs), which inevitably have to be able to maintain the market so MSMEs will be able to develop and retain their customers. The very tight competitive environment must be considered and handled so that sales can continue to increase, as well as the high business opportunities in Indonesia causing many new businesses to emerge with more attractive concepts (Goca, 2019). Increasingly tight business competition demands that MSMEs implement superior and efficient business management processes in order to encourage the creation of products or services that meet market needs at a higher quality level than other companies (Fatmawati, 2016). Micro, small, and medium enterprises (MSMEs) must not only maintain competitiveness but also create superior products. In particular, there are several criteria for the products being sold, namely: (1) they must be used regularly and continuously, (2) the products must be of high quality and varied, and (3) the products must be changed according to different market needs and demands (Fatmawati, 2016).

In South Kalimantan, especially at the location of

research activities, Alalak District is a district with priority areas that are vulnerable to food insecurity. In general, Alalak District, Barito Kuala Regency, has superior potential, namely agriculture, animal husbandry, fisheries, and industry. One of the sectors that is favored is the industrial sector because Alalak District is a border area with Banjarmasin City, so there are at least 5 industries/companies that are established in East Berangas Village. Apart from that, the development of the MSME sector selling industrial products, crafts, and food is also growing rapidly in Alalak District. This is also supported by the existence of the Integrated Business Service Center (PLUT) MSME House located in the Handil Bhakti area.

This research activity is a form of support for the Food Independent Program, as stated in the 2012 Annual Report of the Food Security Agency, which aims to develop food-independent villages, namely by increasing food and nutrition security (reducing food and nutritional insecurity) in the community through resource and institutional utilization. and local culture in rural areas. One effort to improve community welfare can be achieved through improving economic aspects. Although non-economic aspects also have a role, this is not the main focus of this research. Improving this economic aspect is by empowering the community economy, namely MSMEs owned by the community by maximizing the role of MSMEs. Maximizing the role of MSMEs must be supported by business management aspects such as the application of product innovation, accounting competencies and online transactions (e-commerce) to increase the competitiveness of MSMEs. Therefore, it is very necessary to empower the community's economy by increasing the competitiveness of MSMEs so that they can increase the income of village communities. This research aims to explore the role of product innovation, accounting competency and online transactions (e-commerce) in increasing competitiveness in MSMEs. Alalak District, Batola Regency, Indonesia.

2. Literature Review

Product innovation

The success of micro, small, and medium enterprises (MSMEs) cannot be separated from the word product innovation. To keep running, MSMEs must always be able to develop product features. Apart from that, MSMEs must also pay attention to the design and design of the packaging they make. MSMEs must also prioritize the quality of the products they make, with the aim being that consumers feel satisfied, remain loyal, and return to buy (Dhewanto et al., 2015). Innovation in competitiveness is a skill possessed to achieve achievement in the form of competitive advantage. Innovation is also an expression of entrepreneurial activity that can contribute to the long-term survival of a business (Kraus et al., 2012). Every company must innovate with the aim of developing and maintaining its market share (Dhewanto et al., 2014). Furthermore, (Dhewanto et al., 2015) there are several indicators of product innovation, including (1) Product Features. Product features can be a source of capital for the product to compete to win consumer attention. Unique, special, and distinctive are the features of the product and add value; (2) Product design and design. Design is a concept or way that can represent and illustrate a product image. Design contributes to the appearance but also to the usability of the product. Product design aims to attract consumer attention, and can also be a strategy to minimize production costs; (3) Product quality. Product quality is the level of a product that is able to perform its function as optimally as possible. The function in question is product durability, reliability and accuracy of the product produced. Good product innovation will be implemented if you understand the best practices to be adopted as a product development process, then require practice to repeat a success and process.

maturity from companies that have the best performance (Paulk et al., 1993).

Accounting competency

Accounting is a field of science that is not enough to study from a theoretical perspective. However, accounting is easier to understand with real accounting practice. Accounting provides students with knowledge and skills about a cycle of accounting activities in a company, either manually or using certain software programs. For MSMEs, financial reports are accounting information that plays an important role in business success. Because financial reports that can be used as material for reflection on financial decisions in managing MSMEs are quality financial reports (Agustina, 2020). Several studies have examined the factors that influence the preparation of financial reports. According to Lohanda (2017); Auliah (2019); Atika (2019); Yosida (2020); Dewi (2020); Posi (2021); Ayuningtyas (2021); Nurwanto et al (2022) accounting competency has a significant effect on the preparation of financial reports.

E-commerce

E-commerce is the process of buying and selling transactions using electronic devices, such as telephones and the Internet. Shim et al. (2000) in Suyanto (2003) define e-commerce as a new concept that can be described as the process of buying and selling goods or services on the World Wide Web Internet. E-commerce has at least six positive impacts on a company's business operations (Widani, et al, 2019; Dewi, 2014). These six impacts are increasing efficiency, saving costs, improving control over goods, improving the distribution chain (supply chain), helping companies maintain better relationships with customers, and helping companies maintain better relationships with suppliers. The obstacles faced, and which are a challenge for us now, are regarding securities and payment methods (Pranata, 2014; Mahyuni et al, 2020).

MSME competitiveness

Competitive advantage is an advantage over competitors obtained through higher value or higher profits due to higher prices. Competitive advantage indicates that one company can do better than others, even in the same industry. Competitive advantage shows that one organization can outperform others, even when working in the same environment (Sunyoto, 2015). Competitive advantage is an advantage that exists when a company has and produces a product or service that is considered by the target market to be better than its closest competitors (Saiman, 2014). Furthermore, Saiman (2014) says that there are several strategies for competitive advantage: recognizing opportunities, choosing strategies to capture opportunities, and managing the results of exploiting opportunities

3. Methods

This study was carried out in Handil Bhakti Village, Alalak District, Barito Kuala Regency, South Kalimantan. This research was designed to be carried out using a quantitative approach. Research in the social sciences, such as management, psychology, and sociology, generally formulates research variables as latent variables - namely, variables that cannot be measured directly - formed from observed dimensions or observed indicators (Ghozali, 2013). Observation of indicators is carried out using instruments (questionnaires/questionnaires) which aim to find out respondents' opinions about something. The scaling generally used for research instruments is a Likert scale, which produces ordinal data containing answer preferences: 1 for Strongly Disagree; 2 to Disagree; 3 for Undecided – Undecided or Neutral; 4 for Agree; and 5 for Strongly Agree. Regarding the quality of the data type, the data produced by the Likert Scale is stated as ordinal data because each number has a higher or lower preference than the others. However, if the scale

distance is the same size or constant, the resulting data type is interval data. This data becomes input for instrument quality testing, namely reliability and validity testing.

The research method is causal in nature and seeks to determine and analyze the role of product innovation, accounting competency, and online transactions (e-commerce) in increasing competitiveness in MSMEs. Alalak District, Batola Regency – South Kalimantan Province. The PLS technique is used to predict this influence. In order to obtain quality research data, a data quality test is carried out on the initial raw data to remove outlier data for variables so that the data tested for validity and reliability is normally distributed raw data that meets the z-value qualifications (z-score) used. The classical assumption test is carried out to fulfill the requirements for hypothesis testing, namely whether the hypothesis test is carried out parametrically or non-parametrically

4. Results and Discussion

Validity test

This test is carried out to test the validity of each statement item in measuring the variable. The correlation technique used to test the validity of statement items in this research is Pearson Product Moment. If the correlation coefficient value of the statement items being tested is greater than $r_{critical}$ of 0.3, it can be concluded that the statement item is a valid construct. The validity test results show that all statement items have a validity coefficient greater than $r_{critical}$ 0.3. So it can be concluded that all statement items stated are valid which can be used in further analysis.

Reliability test

Reliability testing was carried out by testing the instrument only once and then analyzing it using the Alpha-Cronbach method. A questionnaire is said to be reliable if the reliability coefficient is greater than 0.7. Based on Table 1, it is known that the reliability value of the statement items on the variable being studied is greater than 0.7. These results indicate that the statement items in the questionnaire are reliable for measuring the variables. The results of the reliability test are as follows.

Table 1. Research questionnaire reliability test results.

Variable	Reliability index	Critical value	Information
Product innovation (X1)	0,936	0,7	Reliable
Accounting competency (X2)	0,909	0,7	Reliable
Online transactions (X3)	0,982	0,7	Reliable
Competitiveness (Y)	0,962	0,7	Reliable

Table 2. Recapitulation of descriptive analysis of product innovation variables (X1).

No	Statement items		Respondent answer score					Total score	Mean
			5	4	3	2	1		
1	Business owners provide various creative food and drink menu	F	29	14	4	3	0	219	4,38
		%	58,00%	28,00%	8,00%	6,00%	0,00%		
2	Business owners pay attention to every ingredient in processing food and drinks or their products	F	26	18	2	4	0	216	4,32
		%	52,00%	36,00%	4,00%	8,00%	0,00%		
3	Business owners provide various food and beverage or product packaging designs	F	16	26	4	4	0	204	4,08
		%	32,00%	52,00%	8,00%	8,00%	0,00%		
4	Business owners pay attention to how to serve food and drinks	F	27	17	3	3	0	218	4,36
		%	54,00%	34,00%	6,00%	6,00%	0,00%		
5	Business owners try to provide good quality healthy food and drinks or products	F	36	9	2	3	0	228	4,56
		%	72,00%	18,00%	4,00%	6,00%	0,00%		
6	Business owners try to provide good nutrition in food and drinks	F	32	13	2	3	0	224	4,48
		%	64,00%	26,00%	4,00%	6,00%	0,00%		

No	Statement items		Respondent answer score					Total score	Mean
			5	4	3	2	1		
Total score and average								**1309**	**4,36**

Source: Data Processing (2023).

Based on Table 2, the average response of respondents regarding the product innovation variable (X1) can be seen. It can be seen that the overall total score is 1309, and the average value of respondents' responses regarding the product innovation variable (X1) is 4.36, which is in the very good category.

Table 3. Recapitulation of descriptive analysis of accounting competency variables (X2).

No	Statement items		Respondent answer score					Total score	Mean
			5	4	3	2	1		
1	Record every transaction	F	21	23	5	1	0	214	4,28
		%	42,00%	46,00%	10,00%	2,00%	0,00%		
2	Can differentiate each transaction, whether debit or credit	F	19	26	2	3	0	211	4,22
		%	38,00%	52,00%	4,00%	6,00%	0,00%		
3	Can create a balance sheet	F	10	29	7	3	1	194	3,88
		%	20,00%	58,00%	14,00%	6,00%	2,00%		
4	Can create loss/profit reports	F	14	26	6	3	1	199	3,98
		%	28,00%	52,00%	12,00%	6,00%	2,00%		
5	Can make financial reports	F	18	23	5	3	1	204	4,08
		%	36,00%	46,00%	10,00%	6,00%	2,00%		
Total score and average								**1022**	**4,09**

Source: Data Processing (2023).

Based on Table 3, the average response of respondents regarding the Accounting Competency variable (X2) can be seen. It can be seen that the overall total score is 1022, and the average value of respondents' responses regarding the accounting competency variable (X2) is 4.09, which is in the good category.

Table 4. Recapitulation of descriptive analysis of online transaction variables (X3).

No	Statement items		Respondent answer score					Total score	Mean
			5	4	3	2	1		
1	Using online transactions to get new customers	F	23	20	2	3	2	209	4,18
		%	46,00%	40,00%	4,00%	6,00%	4,00%		
2	Using online transactions to be able to access (reach) a wider market	F	26	18	2	2	2	214	4,28
		%	52,00%	36,00%	4,00%	4,00%	4,00%		
3	Using online transactions to promote products	F	27	16	3	2	2	214	4,28
		%	54,00%	32,00%	6,00%	4,00%	4,00%		
4	Using online transactions to build a brand	F	17	25	2	3	3	200	4,00
		%	34,00%	50,00%	4,00%	6,00%	6,00%		
5	Using online transactions to be able to compete with other MSMEs	F	19	21	3	5	2	200	4,00
		%	38,00%	42,00%	6,00%	10,00%	4,00%		
6	Using online transactions to be close to customers	F	24	19	3	1	3	210	4,20
		%	48,00%	38,00%	6,00%	2,00%	6,00%		
7	Using online transactions to be able to communicate more quickly with customers	F	26	18	2	3	1	215	4,30
		%	52,00%	36,00%	4,00%	6,00%	2,00%		
8	Using online transactions to satisfy customers	F	19	23	3	3	2	204	4,08
		%	38,00%	46,00%	6,00%	6,00%	4,00%		
9	Using online transactions to help business transactions	F	19	24	3	3	1	207	4,14
		%	38,00%	48,00%	6,00%	6,00%	2,00%		
10	Using online transactions to obtain information from outside parties	F	17	27	1	4	1	205	4,10
		%	34,00%	54,00%	2,00%	8,00%	2,00%		
11	Use online transactions to save costs	F	20	25	1	2	2	209	4,18
		%	40,00%	50,00%	2,00%	4,00%	4,00%		
12	Using online transactions for business	F	15	28	2	4	1	202	4,04

	process efficiency	%	30,00%	56,00%	4,00%	8,00%	2,00%		
Total Score and Average								2489	4,15

Source: Data Processing (2023).

Based on Table 4, the average response of respondents regarding the online transaction variable (X3) can be seen. It can be seen that the overall total score is 2489, and the average value of respondents' responses regarding the online transaction variable (X3) is 4.15, which is in the good category.

Table 5. Recapitulation of descriptive analysis of competitiveness variables (Y).

No	Statement items		Respondent answer score					Total score	Mean
			5	4	3	2	1		
1	The price of MSMEs is the thing that most influences competitive advantage	F	21	23	1	1	4	206	4,12
		%	42,00%	46,00%	2,00%	2,00%	8,00%		
2	Consumers do not feel burdened by the prices set by MSMEs	F	19	24	2	3	2	205	4,10
		%	38,00%	48,00%	4,00%	6,00%	4,00%		
3	The quality of products owned by MSMEs is superior to its competitors	F	17	25	3	3	2	202	4,04
		%	34,00%	50,00%	6,00%	6,00%	4,00%		
4	The quality of service for MSMEs is superior to its competitors	F	21	22	1	3	3	205	4,10
		%	42,00%	44,00%	2,00%	6,00%	6,00%		
5	The ability of MSMEs to deliver products on time	F	20	24	1	3	2	207	4,14
		%	40,00%	48,00%	2,00%	6,00%	4,00%		
6	MSMEs provide products or services according to the type customers want	F	22	24	0	2	2	212	4,24
		%	44,00%	48,00%	0,00%	4,00%	4,00%		
7	MSMEs have extensive product innovation and influence market value and share	F	23	21	1	4	1	211	4,22
		%	46,00%	42,00%	2,00%	8,00%	2,00%		
8	The greater the innovation value that customers will provide for a product or service, the more it can meet customer needs	F	24	21	1	2	2	213	4,26
		%	48,00%	42,00%	2,00%	4,00%	4,00%		
9	An MSME is an important dimension of competitive advantage	F	20	24	1	3	2	207	4,14
		%	40,00%	48,00%	2,00%	6,00%	4,00%		
10	The extent to which an MSME is able to release new products more quickly than its competitors	F	17	27	2	3	1	206	4,12
		%	34,00%	54,00%	4,00%	6,00%	2,00%		
Total score and average								**2074**	**4,15**

Source: Data Processing (2023).

Based on Table 5, the average response of respondents regarding the Competitiveness variable (Y) can be seen. It can be seen that the overall total score is 2074, and the average value of respondents' responses regarding the competitiveness (Y) variable is 4.15, which is in the good category.

Model testing

Based on the results of model testing, results were obtained which showed that all manifests (observed variables) had a value loading factor greater than 0.70. So, the SEM-PLS model is said to have good construct

validity. Below is a table showing the values loading factor on the model in detail.

Table 6. Loading factor.

Construct	Loading factor	R critical	Criteria (Loading factor ≥ 0.70)
DS1 <- Competitiveness (Y)	0,723	0,70	Valid
DS10 <- Competitiveness (Y)	0,866	0,70	Valid
DS2 <- Competitiveness (Y)	0,833	0,70	Valid
DS3 <- Competitiveness (Y)	0,884	0,70	Valid
DS4 <- Competitiveness (Y)	0,895	0,70	Valid
DS5 <- Competitiveness (Y)	0,922	0,70	Valid
DS6 <- Competitiveness (Y)	0,872	0,70	Valid
DS7 <- Competitiveness (Y)	0,868	0,70	Valid
DS8 <- Competitiveness (Y)	0,926	0,70	Valid
DS9 <- Competitiveness (Y)	0,868	0,70	Valid
IP1 <- Product innovation (X1)	0,789	0,70	Valid
IP2 <- Product innovation (X1)	0,798	0,70	Valid
IP3 <- Product innovation (X1)	0,745	0,70	Valid
IP4 <- Product innovation (X1)	0,859	0,70	Valid
IP5 <- Product innovation (X1)	0,958	0,70	Valid
IP6 <- Product innovation (X1)	0,962	0,70	Valid
KA1 <- Accounting competency (X2)	0,712	0,70	Valid
KA2 <- Accounting competency (X2)	0,795	0,70	Valid
KA3 <- Accounting competency (X2)	0,919	0,70	Valid
KA4 <- Accounting Competency (X2)	0,907	0,70	Valid
KA5 <- Accounting competency (X2)	0,925	0,70	Valid
TO1 <- Online transaction (E-Commerce) (X3)	0,917	0,70	Valid
TO10 <- Online transaction (E-Commerce) (X3)	0,944	0,70	Valid
TO11 <- Online transaction (E-Commerce) (X3)	0,893	0,70	Valid
TO12 <- Online transaction (E-Commerce) (X3)	0,937	0,70	Valid
TO2 <- Online transaction (E-Commerce) (X3)	0,936	0,70	Valid
TO3 <- Online transaction (E-Commerce) (X3)	0,936	0,70	Valid
TO4 <- Online transaction (E-Commerce) (X3)	0,916	0,70	Valid
TO5 <- Online transaction (E-Commerce) (X3)	0,831	0,70	Valid
TO6 <- Online transaction (E-Commerce) (X3)	0,945	0,70	Valid
TO7 <- Online transaction (E-Commerce) (X3)	0,937	0,70	Valid
TO8 <- Online transaction (E-Commerce) (X3)	0,917	0,70	Valid
TO9 <- Online transaction (E-Commerce) (X3)	0,904	0,70	Valid

Source: Data Processing (2023).

Table 6 shows the values of the loading factor for each construct of each variable. Based on this table, it can be seen that the loading factor is worth more than 0.70. So, it can be concluded that, based on each construct in the research, it has good validity. Next, testing will be carried out on average variance extracted (AVE) to further strengthen the results of convergent validity with criteria when the AVE value> 0.5 (Hair et al., 2019), then the construct used in the research is valid.

Table 7. Average variance extracted value.

Latent	Average variance extracted (AVE)	R critical	Criteria (AVE ≥ 0.5)
Product innovation (X1)	0,733	0,5	Valid
Accounting competency (X2)	0,732	0,5	Valid
Online transaction (E-commerce) (X3)	0,843	0,5	Valid

Competitiveness (Y)	0,752	0,5	Valid

Source: Data Processing (2023).

Based on Table 7, the results can be seen as convergent validity based on the value average variance extracted. These results show that all latent variables have an AVE value of more than 0.5. This indicates that the indicators that form the latent construct have convergent validity, which is good when seen from the value average variance extracted.

Discriminant Validity can be seen from the value cross-loading. Fornell and Larcker (1981) in Ghozali (2014:45) stated that the correlation value of indicators with their constructs must be greater than the correlation values between indicators and other constructs. Below are presented the test results and discriminant validity using the Smart PLS 3.0 program.

Table 8. Cross-loading discriminant validity test value.

	Product innovation (X1)	**Accounting competency (X2)**	**Online transaction (E-commerce) (X3)**	**Competitiveness (Y)**
IP1	**0,789**	0,127	0,103	0,053
IP2	**0,798**	0,059	0,118	0,062
IP3	**0,745**	0,332	0,009	0,045
IP4	**0,859**	0,313	0,133	0,078
IP5	**0,958**	0,250	0,126	0,264
IP6	**0,962**	0,255	0,164	0,266
KA1	0,096	**0,712**	0,461	0,549
KA2	0,165	**0,795**	0,488	0,613
KA3	0,259	**0,919**	0,423	0,618
KA4	0,274	**0,907**	0,426	0,554
KA5	0,326	**0,925**	0,426	0,537
TO1	0,144	0,552	**0,917**	0,651
TO2	0,178	0,533	**0,936**	0,615
TO3	0,173	0,497	**0,936**	0,635
TO4	0,151	0,613	**0,916**	0,714
TO5	0,096	0,427	**0,831**	0,661
TO6	0,225	0,554	**0,945**	0,689
TO7	0,143	0,489	**0,937**	0,632
TO8	0,128	0,477	**0,917**	0,675
TO9	0,078	0,393	**0,904**	0,637
TO10	0,082	0,426	**0,944**	0,648
TO11	0,123	0,358	**0,893**	0,586
TO12	0,053	0,412	**0,937**	0,651
DS1	0,112	0,338	0,491	**0,723**
DS2	0,157	0,488	0,522	**0,833**
DS3	0,220	0,637	0,595	**0,884**
DS4	0,254	0,629	0,590	**0,895**
DS5	0,263	0,645	0,720	**0,922**
DS6	0,224	0,682	0,665	**0,872**
DS7	0,175	0,530	0,587	**0,868**
DS8	0,232	0,662	0,707	**0,926**
DS9	0,130	0,496	0,596	**0,868**

DS10	0,110	0,656	0,625	**0,866**

Source: Data Processing (2023).

Based on Table 8, it can be seen that all indicators have a high correlation with their constructs compared to other constructs. So, it can be concluded that the research model has good discriminant validity cross-loading.

Cronbach's alpha and composite reliability to find out whether the construct reliability is good or not. Each construct is said to be reliable if it has Cronbach's alpha and composite reliability greater than 0.70 (Hair et al., 2017) can be said to be reliable, but if Cronbach's Alpha and Composite Reliability, something greater than 0.60 can still be said to be reliable. Below are presented the test results reliability using the Smart PLS 3.0 program.

Table 9. Values Cronbach's alpha and composite reliability.

Latent	**Cronbach's alpha**	**Composite reliability**
Product innovation (X1)	0,936	0,942
Accounting competency (X2)	0,905	0,931
Online transaction (E-commerce) (X3)	0,983	0,985
Competitiveness (Y)	0,963	0,968

Source: Data Processing (2023).

Based on Table 9, it can be seen that there are latent constructs that have a value of Cronbach's alpha of more than 0.6; this indicates that the latent construct has the reliability of the good one. Apart from that on value composite reliability, all latent constructs also have values greater than 0.60. Based on the value of Cronbach's alpha and composite reliability obtained, it shows that the model has good reliability.

Structural model testing (inner model)

The inner model evaluation is an analysis of the results of the relationship between constructs. Inner model testing consists of R square, f square, Q-square predictive relevance, and hypothesis testing.

Table 10. R Square.

	R Square	**Strong relationships**
Competitiveness (Y)	0,634	Moderate

Source: Data Processing (2023).

According to Chin (1998) in Yamin and Kurniawan (2011:21), R Square with a value of 0.67 indicates a strong model, a value of 0.33 indicates a moderate model, and a value of 0.19 indicates a weak model. From the results of Table 4.37, it can be seen that the R-Square for the Competitiveness variable (Y) is 0.634, which means that Product Innovation (X_1), accounting competency (X_2), and online transactions (E-commerce) (X_3) simultaneously influences Competitiveness (Y) by 63.4%, while the remaining 36.6% is influenced by other variables not examined in this research.

f Square

Next is to look at the value of f Square. The f Square value of 0.02 indicates a small rating, an effect size of 0.15 indicates a medium rating and an effect size of

0.35 indicates a large rating (Cohen, 1988 in Yamin and Kurniawan (2011). Based on the test results with SmartPLS 3, F Square results were obtained as follows.

Table 11. F square.

Variable	Effect size	Rating
Competitiveness (Y)		
Product innovation (X1)	0,005	Small
Accounting competency (X2)	0,316	Intermediate
Online transactions (E-commerce) (X3)	0,474	Large

Source: Data Processing (2023).

Table 11 shows that the Product Innovation variable (X1), Accounting Competency (X2), and Online Transactions (E-Commerce) (X3) each have an influence in the small, medium, and large categories in influencing the Competitiveness variable (Y).

Q^2 predictive relevance

Q-square testing is used to measure how well the observation values are produced by the model and also the estimation of its parameters. The value of the Q-square is more different than 0 (zero), indicating that the model has a predictive relevance value, while a Q-square less than 0 (zero) indicates that the model lacks predictive relevance (Cohen, 1988 in Yamin and Kurniawan (2011: 21). The Q-square value obtained using the R2 value in the table above, obtained the following calculation results:

Table 12. Q^2 predictive relevance.

Variable	R Square	1-R Square
Competitiveness (Y)	0,634	0,366
Q^2 =	Q^2 = 1- (1-0,634) = 63,4%	
Error =	Q^2 = 100% - 63,4% = 36,6%	

Source: Data Processing (2023).

Based on the results of the calculation above, it is known that the value of the Q square is greater than 0. This means that the observed values have been reconstructed well so that the model has predictive relevance. This means that there is 0.634 or 63.4% of the relative effect of structural models on observational measurements for endogenous latent variables, and 36.6% is a model error.

Influence of product innovation (X_1) to competitiveness (Y)

From the results of Table 13, the original sample (O) value of 0.044 shows that the direction of influence of product innovation (X1) on competitiveness (Y) is positive or unidirectional, meaning that the more product innovation increases, the more it increases competitiveness. The effect of product innovation (X1) on competitiveness (Y) is insignificant, with a t-statistic value of 0.242 smaller than the t table or 0.242 < 1.96, and a p-value of 0.809 greater than alpha 5% (0.05). Thus, H1.1 is rejected, meaning that product innovation (X1) does not have a significant effect on competitiveness (Y).

Table 13. Path coefficient and t-count of the effect of product innovation (X1) on competitiveness.

	Original sample (O)	t-Statistics	p-value	Conclusion

Product innovation (X_1) to competitiveness (Y)	0,044	0,242	0,809	$H_{0.1}$ accepted

Source: Data Processing (2023).

Influence of accounting competency (X_2) to competitiveness (Y)

From the results of Table 14, values obtained from the original sample (O), which is 0.409, show that the direction of influence of accounting competency (X_2) on competitiveness (Y) is positive or in the same direction, meaning that the more product innovation increases, the more competitiveness increases. The influence of accounting competency (X2) on competitiveness (Y) is significant, with a t-statistic value of 3.129 greater than the t table or 3.129 > 1.96, as well as a p-value of 0.002, which is smaller than alpha 5% (0.05). Thus, $H_{1.2}$ Accepted means accounting competency (X_2) has a significant effect on competitiveness (Y).

Table 14. Path coefficient and t-count of the influence of accounting competency (X2) to competitiveness (Y).

	Original sample (O)	**t-Statistics**	**p-value**	**Conclusion**
Accounting competency (X_2) to competitiveness (Y)	0,409	3,129	0,002	$H_{0.2}$ rejected

Source: Data Processing (2023).

Effect of online transactions (E-commerce) (X_3) to competitiveness (Y)

From the results of Table 15, values obtained from the original sample (O), which is 0.489, show that the direction of influence from online transactions (E-commerce) (X_3) on competitiveness (Y) is positive or in the same direction, meaning that the more product innovation increases, the more competitiveness increases. The effect of online transactions (E-commerce) (X_3) on competitiveness (Y) is significant, with a t-statistic value of 3.129 greater than the t table or 4.597 > 1.96, as well as a value p-value of 0.000 is smaller than alpha 5% (0.05). Thus, $H_{1.2}$ accepted means online transactions (e-commerce) (X3) have a significant effect on competitiveness (Y).

Table 15. Path coefficient and t-calculation of the effect of online transactions (E-commerce) (X3) on competitiveness (Y).

	Original sample (O)	**t-Statistics**	**p-value**	**Conclusion**
Online transactions (E-commerce) (X_3) to competitiveness (Y)	0,489	4,597	0,000	$H_{0.3}$ rejected

Source: Data Processing (2023).

5. Conclusion

Based on the results of the research and discussions that have been carried out, the conclusions that can be drawn are as follows: 1) Product innovation does not have a significant effect on competitiveness. 2) Accounting competency has a significant effect on competitiveness. 3) Online transactions (E-commerce) have a significant effect on competitiveness.

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