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Improving Production Performance Through Brand Local and Augmented Reality: Evidence from Sumatera

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ABSTRACT

Abstract: *This research aims to discuss the performance relationships of small-medium enterprise production mediated by local brand empowerment and the role of technology adaptation of livelihood activities, fast-moving enterprise, and government policy support. Sampling several 115 respondent micro small business activists and medium in the Sumatran region. Random data collection instruments with surveys and discussions. A compound path test of SEM-PLS is used in this study to obtain data from the analysis of the path mediated by local brand empowerment, augmented reality preference, and acceptance adaptive technology moderation for production performance enhancement. Study findings show that fast-moving enterprise and government policy have a positive impact, while livelihood activities negatively impact local brand empowerment, and local brand empowerment negatively correlates to production performance. The direct stimulus of livelihood activities is meaningless, but government policy support is meaningful to the increased production of SMEs. The contribution of this study found in the conceptual model of the acceptance of technological adaptation and optimization capabilities of the use of augmented local brand applications empowerment to increase the production of small and medium enterprises.*

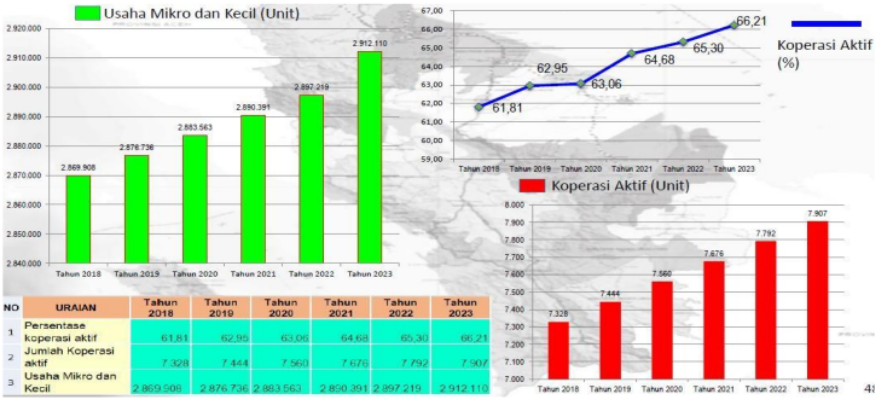
Keywords: Livelihood, Fast-moving enterprise, Government support policy, Brand local empowerment, Adaptive acceptance technology, Augmented reality preference, Product performance micro small business

INTRODUCTION

Indonesia's economy is entering an era of dynamic and coherent diffusion in optimizing production performance. Small and medium-sized micro-enterprises have individual resources that create new opportunities and resource empowerment (Alvarez & Busenitz, 2007) by growing the potential for entrepreneurial value creation (Amit & Zott, 2001) and (Hitt et al., 2001). The growth of MSMEs became the driving force behind the growth of commercial and social entrepreneurship (Austin et al., 2006; Mair et al., 2006) in particular relationship between technological adaptation, innovation, and entrepreneurship (Fowosire et al., 2017). Efforts to empower local communities with technology bases

play a key role in entrepreneurial talent and skills (Selladurai, 2016) . Therefore, the empowerment of local communities with inventions can stimulate the upgrading of the production performance of SMEs. Here is a look at one of the statistical data of MSME cooperative office in North Sumatra:

Figure 1. Projected MSMEs in North Sumatra Region



NO	URAIAN	Tahun 2018	Tahun 2019	Tahun 2020	Tahun 2021	Tahun 2022	Tahun 2023
1	Persentase koperasi aktif	61,81	62,95	63,06	64,68	65,30	66,21
2	Jumlah Koperasi aktif	7.328	7.444	7.560	7.676	7.792	7.907
3	Usaha Mikro dan Kecil	2.869.908	2.876.736	2.883.563	2.890.391	2.897.219	2.912.110

Source: North Sumatra Cooperative and MSME Office

In the image above, from the projected data the problems that still arise in addition to the literacy of technology adaptation are also related to the empowerment of local brands from the activity of accessing household resources, the desire of businesses to grow fast and of course the support of government policies in improving business production performance. From previous research by (Uchehara, 2017; Zada et al., 2019) the utilization of resources as livelihoods opens up rural areas of developing economies on improving the production performance of MSMEs, but different that is said (Samah & Shaffril, 2018). By intensifying their livelihood assets, each volunteer organization has its own power towards different climatic adaptation measures. Another thing discussed in this study is the relationship between the desire of companies that want to move quickly to grow can be found from one's entrepreneurial spirit. According to (Mishra & Zachary, 2015) the process of entrepreneurial progress movement using a value creation framework consisting of two stages namely First stage of the framework of business, entrepreneurs are driven by a desire for entrepreneurial intentions and the second stage by incorporating entrepreneurial competencies to improve production performance. Similar things are also expressed (Acs et al., 2013) choosing to become an entrepreneur because of the desire to move forward and (Dyer et al., 2008) trigger cognitive processes to generate new business ideas. This differs according to (Hill et al., 2002) entrepreneurial barriers occurring when SMEs are compelled to search new opportunities to create, expand client base and promote deeper abilities thru the extra financial support. Therefore, this study contributes to offering the

concept of community empowerment with the adaptation of local brand technology to mediate or fill the gap.

In addition to life strategies and companies moving forward, another thing discussed is the support of government policy to improve the production performance of MSMEs. Government support provides positive stimulus in technology development assistance according to (Doh & Kim, 2014; Howell et al., 2019) and (Hadiyati, 2015; Mizrahi, 2017) improved the production performance of MSMEs through the formulation of marketing planning strategies contributing to national economic growth. According to the research findings (Tang et al., 2007) government support through marketing, R&D strategies in the business became positively related to the business performance of small companies. But from research (Chaston et al., 1999) that the introduction of organizational learning into the MSME sector is a very interesting proposition only applies in large companies. In addition according to (Fornes et al., 2012) for companies that are already labor-intensive funding, support for government policies is not crucial in regional , national and international expansion because it is better able to expand into international markets. From the inconsistency of the study, the gap provides conceptual solutions through government policy support needed for large and small scales, especially mediated by local brand empowerment and moderation analysis of technological adaptations to MSME production performance.

Livelihood activities as individual strategies in maintaining the existence of livelihood, then the living strategy can utilize the social infrastructure that develops in society with technological adaptation. (Beaudry & Pinsonneault, 2005, 2010) and (Robinson et al., 2005) explains the acceptance of technology is very useful in increasing sales, knowledge and performance of jobs in the field. Similar points are expressed (Luan et al., 2019; Rahman & Mannan, 2018) increasingly often consumers are bombarded with information technology media the greater the influence of technology adoption to influence consumers on perception and product decision making. However, Consequences resulting from the connection of users to a virtual world will affect a person's actions in environmental adaptation (Bystrom et al., 1999; McCreery et al., 2013; Nowak & Biocca, 2003; Witmer & Singer, 1998). To fill this research gap, a real-time information technology adaptation service is required to offer dynamic engagement with connected consumers (Buhalis & Sinarta, 2019; Sinarta & Buhalis, 2018) and augmented reality media are useful in managing MSME actors more efficiently and more precisely in planning product promotion costs (Bolesnikov et al., 2019) as well as giving rise to a sense of embodiment or confidence that can interfere with feelings to influence purchasing decisions (Slater et al., 2020). Therefore the benefits of this research provide breakthroughs in MSME productivity by contributing to technological adaptation and integrated into augmented reality applications for operational cost savings or product or service promotion costs.

This study differs from previous researchers because previous researchers discussed more increasing business productivity supported only by using capital (Baños-Caballero et al., 2010; García-Teruel & Martínez-Solano, 2007; Pais & Gama, 2015) and human resources (Aragón-Correa et al., 2008; Hayton, 2003; Ogunyomi & Bruning, 2016; Onkelinx et al., 2016; Sheehan, 2014), the purpose of this research certainly wants to contribute that the ability of SMEs to have a life strategy, move quickly in the business and support government policies moderated by technology adaptation can increase the empowerment of local brands of communities mediated by augmented reality applications can increase resources other than human beings with additional technological science in increasing selling value and have competitive advantages.

LITERATURE REVIEW

Impact of Livelihood Activities, Fast Moving Entreprise, and Goverment Policy on Brand Local Empowerement

The livelihood takes the form of the capacity, property, and initial effort for life methods (such as social and cultural reserves. Livelihood activities is a livelihood activity that is used as a job opportunity to make a living, in order to achieve survival. Carter & May, 1999 mentioned, activities based on the expansion of distribution networks such as peddling, production of small commodities such as clothing and handicraft manufacturing, and activities in the service sector such as childcare, money lending, and agricultural services contracts. The total amount of an exercise of livelihood is the value of all the goods and advantageous due before the first fee is subtracted (Crookes, 2003)

Interior aspects and external influences limit Sustainability, such as environmental support, competition, and government policy (Eniola & Entebang, 2015). Every government needs to attach a potential contribution from MSMEs to economic performance as emerging innovations diminish the importance in various activities of economy of scale (Ashley et al., 2007; Doh & Kim, 2014). The industry would not be able to flourish and sustain when the state culture, schooling, state regulators, financial institutions, vocations and massive business industries lack compassion with SMEs. Therefore, stakeholders need to facilitate and support entrepreneurship as a key component in the world of equal playing fields and a solid foundation for corporate culture.

The movement of accelerated business, record SMEs that already have an entrepreneurial spirit and will transform into large and sustainable businesses. Developing and growing the company begins with an entrepreneurial spirit and talent that is an indispensable personal item or property to grow the business (Eneh & Okezie, 2017). Innovation is one of the major elements in the corporation's velocity. The optimize the flow requires a lot of skills in method and production strategy reorganization, improved employee training and skills, enhancements in

R&D and enhanced economic skills , knowledge and education. (Mpele Lekhanya et al., 2017).

Brands play an important role, especially to improve the lives of consumers and increase the financial value of the company. Empowerment involves a person or group being more able to make informed decisions and turn these ideas into actions and results (Gibson & Woolcock, 2008). Based on this, the empowerment of local brands can be interpreted as a process of empowerment of improvisation, brand local to remain able to exist, survive and improve to compete with various forms of business units. Based on these arguments we propose Hypotheses 1, 2, and 3 namely:

H1. Livelihood Activities has a significant impact on Brand Local Empowerment on UMKM

H2. Fast Moving Enterprise has a significant impact on Brand Local on UMKM

H3. Goverment Policy has a significant impact on Brand Local Empowerement on UMKM

Effect of Acceptance Adaptive Technology Moderation on Livelihood Activities and Government Policy Support on Brand Local Empowerment

Customers will be able to move in order by adopting a technology (Venkatesh et al., 2003, 2012)). The technology adoption plays an important role throughout pre - acceptance decision making: the awareness of functionality (extrinsic rewards) and simplicity of use (inherent effort) (Beaudry & Pinsonneault, 2005; Burton-Jones & Grange, 2013; Mandal, 2012; Venkatesh et al., 2011). Iannacci et al., 2020 provides an adaptive acceptability notion that is in accordance with the norms selection programs' evolving environment. The extent to which SME B2B (Business to Business) immediately accepts and adapt to "resolve and react promptly" the continuing social networking legislative changes (Weick & Sutcliffe, 2008).

The sustainable livelihood approach was introduced as a more practical approach, especially in general situations where communities and individuals sustain themselves with a variety of activities rather than separate work (Tao & Wall, 2009). A sustainable livelihood means that basic needs are met every day and in the long run (Wisner, 2004). Therefore, the government support programmes, whilst also bolstering business strategies, assist MSMEs to surmount financial and nonfinancial restrictions that hamper business operations. Politicians design technological innovations to better case skills and access to network architecture like financial services to generate jobs and to more quickly and effectively create business potential (Dennis, 2011; Nakku et al., 2020).

Local brands are designed and based on local global economy 's distinctive wishes and desires (Dimofte et al., 2011). Although described as "only available in certain geographic regions", The strong points of local brands include the conceptions of the distinctiveness, inventiveness and glory of the local store (Özsomer, 2012). Thus, we propose Hypotheses 4 and 5 namely:

H4 : Acceptance Adaptive Technology has a moderating effect on Livelihood

H5: Acceptance Adaptive Technology has a moderating effect on Government Policy on Local Empowerment Brand on MSMEs

Impact of Augmented Reality and Local Brand Empowerment on Product Performance

The first and widely recognized definition of AR was developed by Azuma, 1997 which defined that The AR app provides three various structures: physical and virtual, immersive and real-time combination and 3D combination. Klopfer & Squire, 2008 propose a wider scope of "a situation where a cohesive area or context-sensitive virtual detailed information significantly covers the modern world framework." thus acknowledging AR creates immersive experience-mediated technologies, real and virtual world places. AR applies to all technologies that meaningfully incorporate physical and virtual data; it suggests that AR is not a form of device but instead a notion. Dunleavy et al., 2009 & Sun et al., 2013 supports this perspective, recommending it as the most practical and constructive way to look at AR. A brand image is indeed not only possible. People are generally the product of a massive-term strategy that directs the management and level of customer service (Zanuddin & Mukhtar, 2019).

Production is a core value-added process especially for SME producers for survival and growth (Ahmed & Sun, 2012). According to Gits, (1992) Production is among the organization's core and best approach features. Huang et al., 2003 said, firms must be effective, operate to enhance and boost productivity levels. (Muchiri & Pintelon, 2008) considered that failures in production led to a reduction in achieved due to ineffectual supply chains. According to Skinner, (1974) Process approach can easily address the problems of production and improved expenses. Bunse et al., 2011 Recommended that manufacturing performance appraisal provides continue providing data regarding the current state of manufacturing, and the management team use this results to better its manufacturing process. Based on the above we propose Hypotheses 6, 7, and 8 as follows, namely:

H6 : Brand Local Empowerment has a significant influence on Augmented Reality Preference on MSMEs

H7 : Augmented Reality Preference has a significant impact on Product Performance on MSMEs

H8 : Brand Local Empowerment has a significant impact on Product Performance in MSMEs

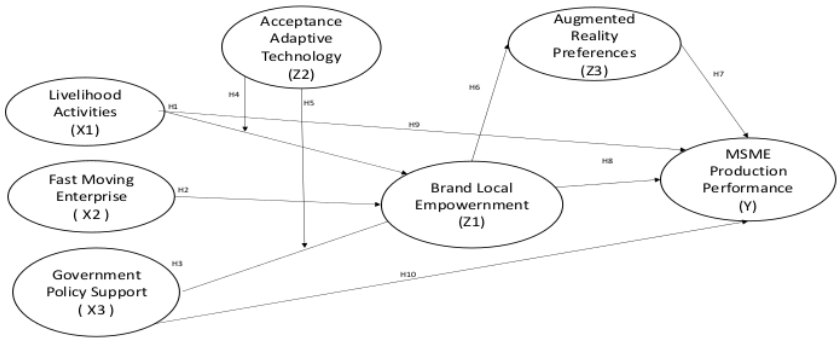


Figure 2. Conceptual Framework

METHODS

Approaches and Variables

This study uses an explanatory approach to test the influence between individual variables. Independent variables consist of livelihood activities, fast-moving enterprise, government policy support, brand local empowerment, and augmented reality preference. Meanwhile, dependent variables are SME production performance as well as acceptance adaptive technology mediation. As for the operating definition of independent, dependent, and mediation variables, and can be viewed in Table 1. All variables use a Likert Point-5 scale (1= strongly disagree, 5=strongly agree).

Table 1.

Variable Measurement Instruments

Variabel/Dimension	Indicator	Sources
Livelihood Activities	Human Capital Natural Resources Social Capital Finansial Capital Physical Capital	(Chambers & Conway, 1992a)
Fast Moving Enterprise	Entrepreneurial spirit Transformation into a big business	(Al-Aali & Teece, 2014)
Goverment Policy Support	Local raw material resources MsME intervention and escort Academic policy Applicative policy	(Doh & Kim, 2014)
Brand Local Empowerment	Consumer ethnocentrism Consumer patriotism Consumer nasionalism	(Batra et al., 2000), (Steenkamp &

		Baumgartner, 1998)
Augmented Reality Preference	Quality and quality of information Communication process efficiency Flexibility, flexibility and tolerant of uncertainty from dynamic environments Sustainability of business productivity Work environment in business	(Pascoal et al., 2018)
Acceptance Adaptive Technology	Projecting virtual objects into reality Turn a catalog into a visual medium Transformation of promotional media Technology development adaptation Transactions through technology	("Technol. Adapt. Aging," 2004)
Production Performance SME	Production management Marketing management Financial management Business management Business continuity	(Hudson et al., 2001)

Data Collection and Sample Techniques

Questionnaires are used as the main instrument of research. To ensure the quality of our instruments conducts trials, validity, and reliability tests. Original English questionnaires and Indonesian translations, the items are carefully examined by the author to ensure that the author still retains the original meaning of the questionnaire. Samples in MSME research in Sumatra from all fields. To produce strong statistical power, the rule of thumbs in Hair et al., 2011, says that the sample in the study was at least 45 (for 5 independent variables). Thus, the total sample used in this study is 115 MSMEs. Questionnaires were distributed using structured surveys during the period October 2021 to December 2021 to 115 respondents, namely MSMEs in Sumatra. We use purposive sampling techniques in selecting respondents with MSME business criteria already issued products. The questionnaire consists of two parts. The first section contains questions about the demographic characteristics of respondents including age, gender, income, business type, and so on. The second section contains details of statements about livelihood activities, fast-moving enterprise, government policy support, brand local empowerment, augmented reality preference, acceptance adaptive technology, and production performance SME. The data obtained is then processed using the Structural Equational Modelling-PLS method.

ANALYSIS

Participants

Based on the results of the processing of research data, the characteristics respondents are drawn in Table 2 below, namely:

Tabel 2.

Characteristics of Respondents

Characteristics of Respondents	Amount	Percentage
Business Type		
Creative Industries	9	7,8
Trade	54	47
Services	27	23,5
Manufacturing (Raw Material	5	4,3
Processing)	20	17,4
Other	115	100
Total		
Last Education		
Senior High School	35	30,4
Bachelor Degree	28	24,3
Magister	42	36,5
Other	10	8,7
Total	115	100
Business Length		
<1 Years	37	32,2
1-5 Years	48	41,7
5-10 Years	10	8,7
>10 Years	20	17,4
Total	115	100
Average Operating Income Per		
Month	78	67,8
< Rp5.000.000,-	26	22,6
Rp5.000.001,- Rp25.000.000,-	6	5,2
Rp25.000.001,- Rp50.000.000,-	5	4,3
>Rp50.000.000,-	115	100
Total		

Based on Table 2, it can be known that the majority of MSMEs are in the field of trade (47%). MSME actors were eliminated by respondents with the last s2 education of 36.5%. Meanwhile, judging by the length of the business, many MSMEs are only standing around 1-5 years (41.7%), with the majority of MSMEs earning a small amount of <Rp5,000,000,- per month (67.8%).

Reflective-Measurement Models Results

Internal Consistency Realiability, Indicator Reliability, Convergent Validity dan Discriminant Validity

Referring to Hair et al., 2011 reflective model bending consists of internal consistency reliability, indicator reliability, convergent validity, and discriminant validity. Internal consistency reliability, composite reliability should be higher than 0.70 (in exploration research, 0.60 to 0.70 is considered acceptable). Indicator reliability, the value of others loading the intended variable indicator should be higher than 0.70. Convergent validity, AVE must be higher than 0.50. Discriminant validity, using HTMT criteria to assess the validity of discrimination in PLS-SEM where the trust interval of HTMT statistics should not include a value of 1 for all construction combinations. Based on Table 3 it appears that the model-reflective errant model meets the specified rule of thumb. To obtain the appropriate rule of thumb, several indicators are not included for further analysis (e.g. X1.2, X1.4, X1.5, X3.1, X3.2, X3.3, Z3.4, and Y1.4).

Table 3. Reflective-Measurement Models Results

Latent Variable	*Indi-kator*	*Convergent Validity*			*Internal Consistency Realiability*	*Discriminant Validity*
		Loa-dings	*Indicator Reliability*	*AVE*	*Composite Relability*	*HTMT confidence interval does not include 1*
		>0,70	**>0,50**	**>0,50**	**0,60-0,90**	
Adaptive Technology (Z2)	Z2.1	0,924	0,924	0,772	0,944	Yes
	Z2.2	0,868	0,868			
	Z2.3	0,921	0,921			
	Z2.4	0,922	0,922			
	Z2.5	0,745	0,745			
Augmented Reality (Z3)	Z3.1	0,949	0,949	0,890	0,960	Yes
	Z3.2	0,962	0,962			
	Z3.3	0,919	0,919			

Brand Local (Z1)	Z1.1	0,838	0,838	0,780	0,914	Yes
	Z1.2	0,927	0,927			
	Z1.3	0,882	0,882			
Fast Mooving Enterprise (X2)	X2.1	0,983	0,983	0,814	0,897	Yes
	X2.2	0,813	0,813			
Government Policy (X3)	X3.4	0,950	0,950	0,577	0,713	Yes
Livelihood Activities (X1)	X1.1	0,781	0,781	0,547	0,827	Yes
	X1.3	0,835	0,835			
Product Performance (Y1)	Y1.1	0,936	0,936	0,657	0,900	Yes
	X1.2	0,919	0,919			
	X1.4	0,821	0,821			
	X1.5	0,854	0,854			

Source: data processed 2021

Structural Model Results
Collinearity Rating

Collinearity rating is based on VIF (inner VIF) value. The VIF value for each predictor should be higher than 0.20 (lower than 5) (Hair et al., 2017). In particular, in this study, several constructs act as predictors that will be assessed collinearity: (1) Livelihood Activities (X1), Fast Moving Enterprise (X2), and Government Policy (X3) as predictors of Brand Local (Z1); (2) Brand Local (Z) as a predictor of Augmented Reality (Z3); and (3) Brand Local (Z), and Augmented Reality (Z3) as predictors of Product Performance (Y1). As seen in Table 4 all VIF values are already above 0.20 and below the threshold of 5. Therefore, linearity among predictor construction is not a critical problem in structural models.

Table 4. Inner VIF Rating

	Adaptive Technology (Z2)	***Augmented Reality (Z3)***	***Brand Local (Z1)***	***Fast Moving Enterprise (X2)***	***Government Policy (X3)***	***Livelihood Activities (X1)***	***Product Perfor-mance (Y1)***

Adaptive Technology (Z2)		2,766		
Augmented Reality (Z3)				2,367
Brand Local (Z1)	1,000			2,591
Fast Moving Enterprise (X2)		2,416		
Government Policy (X3)		1,636		2,380
Livelihood Activities (X1)		3,328		1,400
Product Performance (Y1)				

Source: data processed 2021

Structural Model Path Coefficients Rating

Path Coefficients Model

Bootstrap standard error allows calculation of t values and p values for all structural path coefficients. When the t values are greater than the critical value, we conclude that the coefficient is statistically significant in the probability of a particular error (that is, the level of significance). Table 5 shows that six hypotheses have t values greater than p values, so six hypotheses (H1, H2, H3, H6, H7, and H8) are supported. Meanwhile, two (2) other hypotheses were rejected, namely Hypothesis 4 and Hypothesis 5.

Table 5. ***Structural Model Path Coefficients***

	Path Coefficients	***t Values***	***p Values***	***95% Confidence Intervals***	***Significance (p < 0.05)***
H1. ***Livelihood Activities (X) -> Brand Local (Z1)***	-0,167	1,334	0,183	[-0,371; 0,072]	No
H2. ***Fast Moving Enterprise (X2) -> Brand Local (Z1)***	0,266	2,101	0,036	[0,022; 0,466]	Yes
H3. ***Government Policy (X3) -> Brand Local (Z1)***	0,367	5,616	0,000	[0,224; 0,490]	Yes

H4. ***Efek Moderasi 1 -> Brand Local (Z1)***	-0,062	0,895	0,371	[-0,211; 0,083]	No
H5. ***Efek Moderasi 2 -> Brand Local (Z1)***	-0,089	1,385	0,167	[-0,212; 0,066]	No
H6. ***Brand Local (Z1) -> Augmented Reality (Z3)***	0,695	7,130	0,000	[0,447; 0,836]	Yes
H7. ***Augmented Reality (Z3) -> Product Performance (Y)***	0,226	2,687	0,007	[0,068; 0,386]	Yes
H8. ***Brand Local (Z1) -> Product Performance (Y)***	0,675	8,159	0,000	[0,526; 0,812]	Yes

Source: data processed 2021

Coefficient of Determination (R^2 Value)

The most common measure used to evaluate structural models is the coefficient of determination (R^2 value). This coefficient is a measure of the model's predictive power and is calculated as the quadratic correlation between the actual and predicted values of a particular endogenous construct. The R^2 value ranges from 0 to 1, with a higher level indicating a higher level of prediction accuracy. It is difficult to provide a rule of thum for the value of R2, because it depends on the complexity of the research model and the research discipline. While the R2 value of 0.20 is considered high in disciplines such as consumer behavior. In scientific research that focuses on marketing problems, the R2 value is 0.75; 0.50 or 0.25 for endogenous latent variables were used as benchmarks with high, moderate, or weak degrees (Hair et al., 2011; Henseler et al., 2009; Mueller et al., 2016). In this study, augmented reality (Z3) is influenced by the local brand (Z1) by 48.3%. Livelihood activities (X1), fast moving enterprise (X2), and government policy (X3) affect the local brand (Z1) by 73.5%. In addition, augmented reality (Z3) and local brand (Z1) have an effect on product performance (Y1) by 75.1%. Thus, it can be concluded that exogenous constructs affect endogenous constructs with moderate and high scales (see Table 6).

Tabel 6. ***R Square***

	R Square	**Level**
Augmented Reality (Z3)	0,483	Medium
Brand Local (Z1)	0,735	Medium
Product Performance (Y)	0,751	High

Source : data processed 2021

Result of f^2 *Effect Size*

f2 effect size enables the assessment of exogenous construct contributions to endogenous latent variable R2 squares. f2 effect size has values of 0.02, 0.15, and 0.35 indicating a small, medium, or large effect of exogenous constructs on endogenous construction. Table 7 shows the f2 effect size.

Table 7. *f^2 Effect Size*

	Adaptive Technology (Z2)	*Augmented Reality (Z3)*	*Brand Local (Z1)*	*Fast Moving Enterprise (X2)*	*Government Policy (X3)*	*Livelihood Activities (X1)*	*Product Performance (Y1)*
Adaptive Technology (Z2)			0,155				
Augmented Reality (Z3)							0,087
Brand Local (Z1)		0,935					0,707
Fast Moving Enterprise (X2)			0,111				
Government Policy (X3)			0,310				0,009
Livelihood Activities (X1)			0,032				0,044
Product Performance (Y1)							

Source : data processed 2021

DISCUSSION

This research provides empirical evidence about the influence of local brand empowerment on the optimization of MSME production performance in Sumatra. Based on the results of the structural model path coefficient test (Table 5) it appears that livelihood activities, fast-moving enterprise, and government policy have a positive and significant influence on local brand empowerment. Livelihood activities are sustainable if he can overcome and recover from pressures and shocks, maintain

or enhance his abilities and assets, while not damaging the natural resources base (Chambers & Conway, 1992b; Scoones, 1998). This affects the empowerment of local brands in MSMEs in Sumatera. The movement of accelerated business, record SMEs who already have an entrepreneurial spirit, and will transform into large and sustainable businesses that help increase local brand empowerment. In line with Nguyen et al., 2015 who mentioned that government policy has an impact on the growth factor of MSMEs. In line with that, government support will also increase the empowerment of local brands by MSMEs in Sumatra.Another empirical evidence presented by this study is that the increase in the cultivation of local brands also affects the increase in augmented reality and production performance. Zanuddin & Mukhtar, 2019 stated that the ability of entrepreneurs in understanding customer needs is key to business sustainability. Local brand empowerment and complementary augmented reality understanding in understanding customer needs, which will ultimately improve the production performance of MSMEs in Sumatra.

In addition to producing the above two empirical findings groups, this study does not support the moderation of adaptive acceptance of the technology on livelihood activities and government support for increased local branding. Adaptive acceptance of technology is seen as something dynamic that MSMEs must also follow themselves. This indicates that adaptive acceptance of technology does not interfere with the causal relationship of livelihood activities and government support for increased branding.

CONCLUSIONS

This study examines the relationship between livelihood activities, accelerated business movement, and government policy support on optimizing the production performance of small and medium-sized businesses mediated by the empowerment of local brands. The acceptance of adaptive technology in the research of this conceptual model moderates the relationship of community livelihood activities and government policy support on local brand empowerment efforts and augmented reality preferences into mediation that is expected to contribute to the production performance of MSMEs. The desire of MSMEs to move quickly is positive and government policy support is contributing positively to empowering the use of local brands. The results of the data are based on demographic factors of MSMEs, community livelihood activities spread across Sumatra region there is an insignificant negative relationship to the empowerment of local brands and a direct relationship to the production performance of MSMEs. Uneven dissemination of technological adaptation based on human, financial, natural, social and physical indicators is a consideration in the ability to moderate adaptation relationships and government policy support on local brand empowerment, but local brand empowerment occurs positive relationships in optimizing the production performance of MSMEs with mediated use of augmented reality applications. The

development of application technology is growing widely to assist MSME businesses in creating a competitive advantage in product marketing performance amid the surge of outside brands in global competition.

The development of micro and small and medium enterprises has been widespread around the world, so the limitations of this research data taken are only focused on some areas of Sumatra. Other limitations in this conceptual model need to be more in-depth research on the development of augmented application implementation based on a longer time span and the durability of application features can be adjusted to the level of need and development of the latest information quality. For further researchers expected from the above limitations, this study can be continued by expanding variables with augmented reality technology relationships that affect innovation capabilities, local brand confidence in marketing optimization performance. Some variables that can be used as a reference for moderation are price factors, marketing strategies, or information systems. In addition, important advice in the dissemination of technology dissemination is about improving the quality of human resources for MSME actors, because the limitations of literacy in technology learning have not been evenly distributed and differences in educational demographic background, social strata, physical and financial between regions scattered in Sumatra. This is in order to be an important concern for the empowerment of advanced local technology literacy to improve the standard of their lives – each of the resources owned.

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