

# Implementation of the Smart Economy Concept in Balikpapan City

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## Abstract

Smart Economy It is a concept of urban management innovation that is able to face economic competition in creating business opportunities, utilizing existing resources efficiently and improving the city's economy. This research aims to identify the implementation of the concept of Smart Economy through 6 indicators, namely economic growth in the leading sector, business licensing Online, small industry centers, MSMEs that are integrated with e-marketplace, a creative populist economy and a cashless. The data used in this study are secondary data and primary data with descriptive analysis methods. Based on the results of the analysis, it shows that the concept of Smart Economy has not been fully implemented and is still in the monitoring stage, but the researcher concluded that there are obstacles in the research, namely the completeness of data and the existence of obstacles in several programs so that further studies, government and private support are needed to maximize the concept Smart Economy towards Smart City in Balikpapan City.

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Cashless.

## 1. Introduction

In the current era of digitalization, effective and efficient management of urban development is needed through the use of *Information and Communication of Technology* (ICT) to encourage several major cities in the world to think and implement a concept of urban economic development through a smart concept, namely Smart Economy. The Smart Economy concept is one of the supporting components of Smart City, namely Smart Governance, Smart Branding, Smart Living, Smart Society and Smart Environment.

A frequent phenomenon that the implementation of the concept of Smart City based on the low understanding of the urban community towards the use of Information and Communication Technology (Setiawan & Tri Farah Aindita, 2022). Development based on Smart City, a city can solve various problems faced through the use of ICT as one of the supporting factors, one of which is through components Smart Economy to realize sustainable economic growth, improve the quality of life of the community through responsive government services, increase productivity and be competitive.

Smart Economy is the city's economic governance marked by creativity and productivity so that the realization of community economic activities that are in harmony with the region's leading economic sectors. Smart Economy characterized by the city's economy with the efficient and effective use of the city's natural resources and potentials (Hasibuan & Sulaiman, n.d.).

The city's economy can also be seen through the condition of regional economic growth which is considered to increase over a certain period of time, with good economic growth, it is closely related to the level of community welfare because of the factors that affect the city's economic growth, namely human resources (HR), natural resources (SDA), capital, socio-culture and the use of ICT.

The city of Balikpapan as one of the cities in Indonesia that has begun to prepare a program with the Indonesian Ministry of Communication and Information Technology (Kemenkonminfo RI), the Ministry of Home Affairs, the Ministry of Public Works and Housing, Bappenas and the Presidential Staff Office, namely the Movement Towards 100 Smart City in Indonesia (Kominfo, 2017). Seeing the great potential it has, the City of Balikpapan began to respond to the movement by trying to maximize the use of ICT to improve the efficiency of public services and catch up with other big cities that have prepared for implementation Smart City in the development of the city through the preparation of Masterplan Smart City Balikpapan City in 2021 which was ratified as a document for the Balikpapan City government and stakeholder which determines the programs to be achieved (Balikpapan City Government, 2021)

The main strategy in realizing the Smart Economy concept in Balikpapan City consists of 3 sub-pillars, namely competitive industry (*industry*), community welfare (*welfare*) and financial transactions (*transaction*). The indicators launched based on the strategic issue of Balikpapan City include 6 achievements, namely, 1) economic growth in leading sectors, 2) online public licensing system, 3) small industry centers, 4) MSMEs integrated with *e-marketplaces*, 5) creative people's economy, and 6) digital financial ecosystem towards a *cashless* society.

## 2. Method

The method used in this study is the descriptive analysis method, namely by collecting the required data, then the data is compiled, processed and analyzed to produce writing in a descriptive form that can describe the research, then concluded according to existing conditions.

The descriptive analysis method is a simple method presented in the form of tables, and narratives with the aim of making it easier for readers to describe the results obtained and can be concluded so that they know the implementation of the *Smart Economy concept* in the city of Balikpapan.

The types of data obtained by the researcher are primary data and secondary data. Primary data obtained through free interviews with informant sources or stakeholders, namely the Balikpapan City Development Planning, Research and Development Agency, Balikpapan City One-Stop Integrated Investment and Licensing Office, Balikpapan City Cooperatives and MSMEs Office. Secondary data in this study were obtained through Diskominfo, BPS, Balikpapan City Research and Development Planning Agency, Balikpapan City DKUMKMP and Balikpapan City DPMPSTP.

## 3. Results and Discussion

Based on the results of the research, the success of the *Smart Economy concept* in Balikpapan City is seen through the fulfillment of each existing indicator, whether the indicators have run well and

support the city's economic growth or still need to be evaluated so that it requires further research or study, the results of the research on *Smart Economy* indicators in Balikpapan City are as follows:

The first indicator is the economic growth of the leading sector, which has an important role in boosting the city's economy through the development of the potential of the base sector in Balikpapan City and outside its area.

The base sector is a regional flagship sector that can encourage an increase in the economic development of a region. Through local economic development based on leading sectors in Balikpapan City, it can be used as an acceleration of regional development. In an effort to increase the economic growth of Balikpapan City, it is necessary to know the amount of potential of a sector to its national territory, this can be identified through *location quotient analysis or Location Quotient (LQ)*, namely knowing the comparative advantages of the base and non-base sectors of Balikpapan City.

**Table 1. Results of LQ GDP of Balikpapan City in 2019-2023**

Numb.	Sector / Business Field	Average	Sector Potential
1	Agriculture, Forestry, and Fisheries	0,131	Nonbasis
2	Mining and Quarrying	0,001	Nonbasis
3	Processing Industry	2,856	Basis
4	Electricity and Gas Procurement	1,479	Basis
5	Water Procurement, Waste Management, Waste, and Recycling	1,391	Basis
6	Construction	1,648	Basis
7	Wholesale and Retail Trade; Car and Motorcycle Repair	1,445	Basis
8	Transportation and Warehousing	2,36	Basis
9	Provision of Accommodation and Meals	1,666	Basis
10	Information and Communication	2,179	Basis
11	Financial Services and Insurance	2,103	Basis
12	Royal State	1,837	Basis
13	Corporate Services	1,32	Basis
14	Government, Defense, and Compulsory Social Security Administration	0,667	Nonbasis
15	Educational Services	0,912	Nonbasis
16	Health Services and Social Activities	0,889	Nonbasis
17	Other Services	1,135	Basis

Source: BPS Data processed, 2024

Based on the results of the LQ analysis of Balikpapan City, a sector is stated to have 12 base sectors and 5 non-base sectors in Balikpapan City. As a base sector, if the  $LQ > 1$  result means that the potential of the sector can meet the city's commodity needs and be able to provide for other regions, while the non-base sector if the  $LQ < 1$  result indicates the potential of the sector to be unable to meet the needs of its regional commodities, and even has to import from outside the region.

By knowing the base and non-base sectors, the Balikpapan City Government can take steps in pursuing policies and development programs in sectors that have comparative advantages to increase the economic growth of Balikpapan City.

Table 2 Shift-Share Analysis of Balikpapan City's GDP in 2019-2023

Sector	Average PR	</>	$\Delta Q_{ij}$	PS	DS
	City Balikpapan		Average		
Agriculture, Forestry, and Fisheries	82.262,69	>	15.295,33	-54144,46	-12822,89
Mining and Quarrying	3.958,54	>	120,03	-1616,44	-2222,07
Processing Industry	4.977.207,31	<	7.150.848,66	1.287.861,8	3.461.503,11
Electricity and Gas Procurement	7.986,28	<	26.387,88	20.495,62	-2.094,02
Water Procurement, Waste Management, Waste, and Recycling	6.200,41	<	12.413,40	9.824,40	-3.611,41
Construction	1.102.734,20	<	1.543.084,63	1.901.771,33	1.461.420,89
Wholesale and Retail Trade; Car and Motorcycle Repair	732.256,42	<	1.317.666,1	635.315,82	49.906,24
Transportation and Warehousing	659.436,33	<	819.825,54	454.244,60	293.855,39
Provision of Accommodation and Meals	140.926,53	>	70.624,99	39.585,17	-109.886,72
Information and Communication	312.429,95	<	1.000.948,23	683.400,73	5.117,55
Financial Services and Insurance	274.441,41	<	678.724,86	470.286,37	66.002,92
Royal State	148.941,25	>	58.530,71	-50.116,18	-40.294,36
Corporate Services	22.558,65	<	23.281,94	2.159,96	-1.436,67
Government, Defense, and Compulsory Social Security Administration	104.435,28	<	112.084,50	35.066,07	27.416,85
Educational Services	119.507,98	<	144.386,87	44.560,92	19.682,03
Health Services and Social Activities	45.494,78	<	245.503,61	182.412,39	17.596,44
Other Services	61.300,63	<	47.011,60	16.485,72	-30.774,75

Source: BPS Data processed, 2024

Based on the *shift-share* analysis, there are 3 main components, namely regional potential (PR), proportional shift (PS) and differential shift (DS). In the calculation of PR that has the potential to drive economic growth in Balikpapan City at the same level as the economic growth of East Kalimantan Province, the PS calculation shows the relative contribution of the growth of the regional sector to the total growth of the region, if the result is positive, the sector has an advantage in the region while if it is negative, it indicates that the sector is developing slower than the national average and in the DS calculation it shows that the sector which grows faster or slower than the national average against the overall growth of the region, this is due to factors that the region has good locational advantages, such as supporting natural resources.

Based on the results of research on the leading sectors that dominate the economic growth of Balikpapan City, namely the Processing Industry Sector, the second Construction and the third Wholesale and Retail Trade, by quickly recognizing the potential of the superior sectors in the region, of course it will make it easier for the Balikpapan City Government and the community to develop their development strategies. Researchers found that this indicator has not yet been regulated by the government for the development of Balikpapan City's leading sectors in the implementation of the *Smart Economy* concept. This is expected to be a follow-up study for the Balikpapan City government in developing superior sectors to support Balikpapan towards a *Smart City*.

The second indicator of the online licensing system, the Balikpapan City Government has supported the *Smart Economy* program through DPMPSTP in 2023, namely the innovation of launching an *online-based licensing system* through the Balikpapan City DPMPSTP Spontaneous website. This is in line with the vision of regional development (RPJMD) and Balikpapan City Regulation No. 6 of 2021-2026, which is to create an

open, productive and competitive digital society. The Spontaneous Launch also has a legal basis, namely the Regulation of the Mayor of Balikpapan No. 18 of 2017 concerning the Delegation of Licensing and Non-Licensing Service Authority to the DPMPTSP.

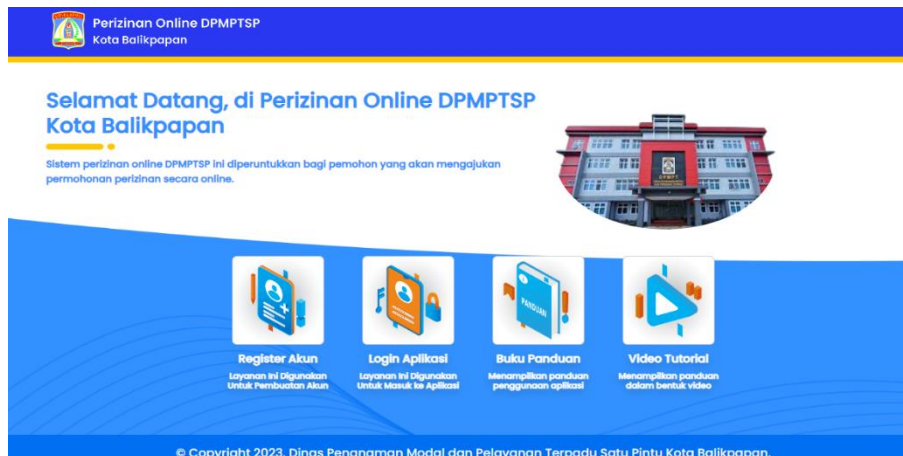


Figure 1. Balikpapan City Spontaneous Page

Spontaneous is one of the forms of innovation available at DPMPTSP or Public Service Mall (MPP) Balikpapan City, a website that is specially designed according to the needs of the people of Balikpapan City who want to apply for permits digitally, transparently to be efficient and save costs. Currently, the Spontaneous licensing service has also been integrated through the *Online Single Submission* (OSS) service that has been provided by the Indonesian government agency Investment Coordinating Board (BKPM) whose implementation has been regulated in Government Regulation No. 24 of 2018.

Based on the results of the research, the government has launched *the Spontan website* as a licensing system to facilitate public access or business actors in licensing matters. The obstacles to this indicator are internet connection disruptions on the *web*, applicants who are not suitable in entering files and lack of employee competence. One of the government's efforts to socialize this Spontaneous is by distributing brochures on the DPMPTSP page and through social media.

The third indicator of the small industry center which is based on the results of research by the Sember Small Industry Center (SIKS) of Balikpapan City is an area focusing on the development of small-scale industries based on soybean commodities that produce tofu, tempeh and chips products. Since its establishment in 2003 until 2022, there have been 80 small and medium industries (SMEs) of tempeh tofu managed by the Indonesian Tempeh Producers Cooperative Primary (PRIMKOPTI) under the auspices of the Balikpapan City MSME and Industry Cooperative Office (DKUMKMP).

The purpose of SIK development is to relocate the small tofu tempeh industry spread across Balikpapan City into an industrial area with an environmentally friendly technology development program, the addition of production houses for tofu tempeh business actors in SIK, the development of small businesses in the context of empowering the people's economy, and realizing small industrial estates as centers of economic activities.

The government also provides production houses for tofu and tempeh business actors in SIKS Balikpapan City, the addition of production houses to business actors is one of the successes of the *Smart Economy concept* to help the quality of product processing, community economic empowerment, which can help increase the competitiveness of small industries in Balikpapan City.



Figure 2. Rice Cooker at the Somber Small Industry Center, Balikpapan City

Researchers found that through the use of technology, DKUMKMP launched digital payments, namely Digital Payments for Regional Wealth Levies (Rice Pots) at the Balikpapan City Industrial Center. Periuk Nasi is an innovation launched in 2020 through the use of *Quick Response Code Indonesian Standard* (Qris) for the payment of levies or rents of production houses to direct regional cash accounts and as an effective transaction method to reduce money circulation and realize the *Smart Economy* concept in Balikpapan City through *cashless* financial transactions and also contributed to the target of the Balikpapan City Regional Digitalization Expansion Acceleration Team.



Figure 3. Production process at the Somber Small Industry Center, Balikpapan City

It is known in Figure 3, above, the researcher found that the processing of tofu and tempeh in this center still uses traditional tools, in this case the Balikpapan City Government immediately seeks the production process at SIKS using appropriate technology for the hygiene of tofu and tempeh processing and the development of industrial centers to expand the scope of other industries. After passing through the production, tofu and tempeh are then marketed by business actors to stalls and markets in Balikpapan City. The obstacles that affect the development of SIKS are the limitations of the latest technological updates in product processing, SMEs do not have large capital for expansion to the update of processing technology.

The fourth indicator of MSMEs that are integrated with *the e-marketplace* is one of the important elements in encouraging economic growth can be based on MSMEs, in this indicator the researcher found that the development of MSMEs is supported through the local *e-marketplace* in the Balikpapan City area.

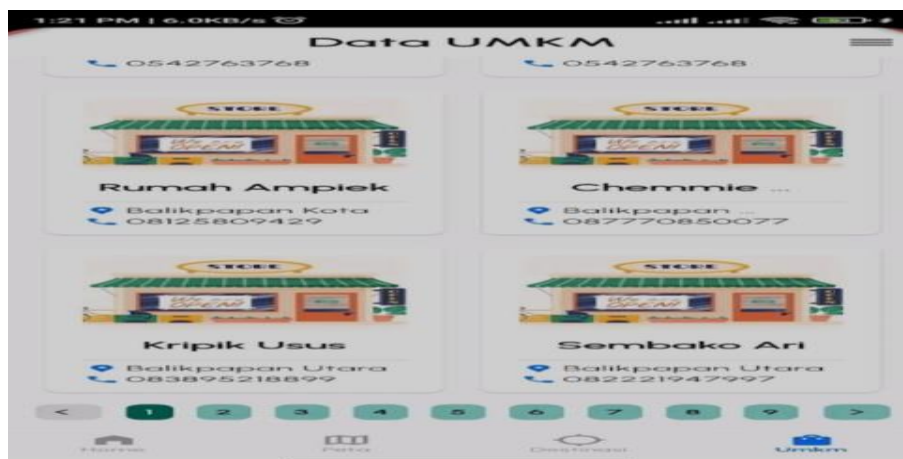


**Table 3. Total MSMEs in Balikpapan City in 2019-2022**

District	Year				Total MSMEs
	2019	2020	2021	2022	
South Balikpapan	407	1.337	3.655	7.884	
Balikpapan City	162	68	2.560	2.461	
East Balikpapan	206	386	3.134	2.407	
North Balikpapan	206	2.194	3.095	5.679	
West Balikpapan	195	141	3.942	1.443	
Central Balikpapan	271	563	3.126	2.639	
<b>UMKM</b>	<b>1447</b>	<b>4.689</b>	<b>19.512</b>	<b>22.513</b>	<b>48.161</b>

Source: Balikpapan City in 2023 Figures

Based on the data obtained, the number of active MSMEs in Balikpapan City from 2019 to 2022 continues to increase positively, this is an achievement of the MSME and Industry Cooperative Office (DKUMKMP) as a stakeholder in the development of MSMEs in Balikpapan City. The Government's policy to support MSME actors is to provide a local *e-marketplace*, namely Balikpapan City MSME Friends

**Figure 4. Balikpapan City MSME Friends Application**

Balikpapan City MSME Friends is a digital product provided by DKUMKMP in the form of an e-marketplace application and intended for local MSME actors in Balikpapan City. MSME friends aim to strengthen the sales capacity of MSME products in Balikpapan City through an online application. The purpose of this e-marketplace is also to open up the network and collaboration of MSME owners to product buyers, thereby increasing wider market access.

Currently, the researcher found that the Sobat UMKM application is in the development stage by the DKUMKMP and the switch of the server to the Balikpapan City Communication and Information Service (Diskominfo), so that the Sobat UMKM application is temporarily inaccessible. However, the DKUMKMP has also prepared a website for MSME friends which can also be accessed directly by the public and MSME business actors in Balikpapan City. The following is an attachment to the website of Balikpapan City MSME friends:

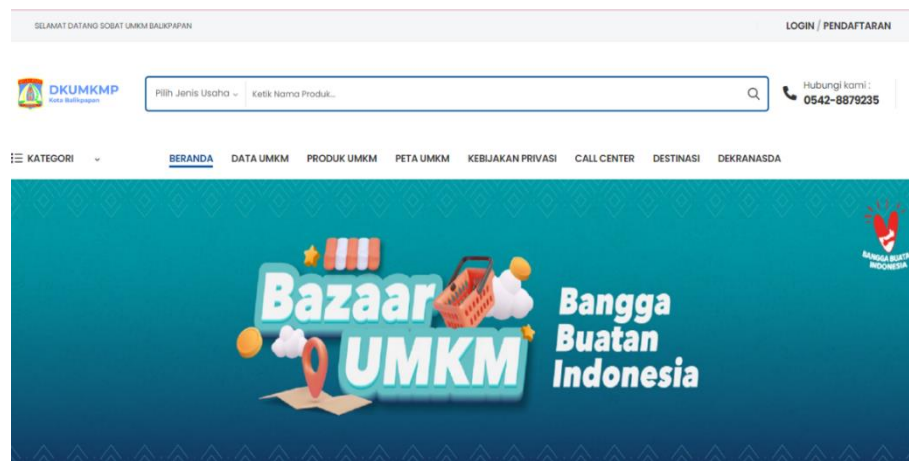


Figure 5. Balikpapan City MSME Friends Website

Through Balikpapan City MSME friends, the researcher found several MSMEs that market their products, consisting of 38 business categories and 1,596 products that are integrated with various MSME actors in Balikpapan City. Based on the results of the study, it shows that of the total number of 48,161 MSMEs in Balikpapan City, 3.31% are integrated in the Sobat MSME e-marketplace.

The obstacles that are obstacles for MSME actors in running a business using digital are the lack of knowledge in using the internet and digital marketing promotion of their products, so that the role of the government in providing online-based assistance and initiatives for MSME actors to have competitiveness so that MSME actors can increase the sales value of products.

It is hoped that the development of MSMEs integrated with e-marketplaces can make it easier for local MSME actors in Balikpapan City who want to distribute their products through digital and increase the productivity and competitiveness of local economic actors in moving towards Balikpapan *Smart City*.

The fifth indicator is a creative populist economy, which is an economic activity that focuses on opportunities for local communities to participate in managing existing economic resources, this is through micro, small and medium enterprises (MSMEs) as drivers of the local economy of the region.

The populist economy is based on the principle of empowering the community and local potential in a creative way, including creating jobs for the welfare of the community. The diversity of the people's economy includes various sectors such as the economy, agriculture, handicrafts to local services and so on.

The creative populist economy and the participation of MSMEs have a close relationship in the welfare of the people of Balikpapan City, the populist economy also provides a framework for MSMEs in developing their businesses and MSMEs as business actors contribute to the development of a creative populist economy with collaboration as an effort to strengthen the local economy of Balikpapan City.

In line with the development vision and Mission of the Smart City of Balikpapan City in 2021-2026, namely developing a creative people's economic ecosystem through the Balikpapan City MSME and Industry Cooperative Office (DKUMKMP), the researcher found that the implementation of this indicator is that the government encourages and facilitates the community through the implementation of training programs for the independence of MSME actors in realizing a creative people's economy. The researcher obtained the results of the implementation of the activity program that has been organized by the Balikpapan City DKUMKMP as a government effort to encourage a creative people's economy as follows:





Figure 6. Balikpapan City MSME Acceleration Collaboration Training

In encouraging MSMEs to participate in the creative community economic development program, DKUMKMP Balikpapan City opened a digitalization training in collaboration with Grab Indonesia, this is a good step to continue to encourage the capacity of MSMEs in Balikpapan City.

The training was held on December 20-21, 2023 and was attended by several MSMEs fostered by DKUMKMP and a number of related agencies in Balikpapan City. The activity program focuses on digital *marketing* training, sales introduction integrated with e-money, providing qris codes and product development to prepare MSME actors to face digitalization in marketing their businesses comprehensively.

With the collaboration of the government and the private sector on creative community programs, it certainly supports MSME actors in entering the digital ecosystem to open wide access to their businesses and develop the local economy of Balikpapan City.

It's just that in this program, at least there are still problems, one of which is the limitation of quotas and budgets, so that this has an impact on the number of MSMEs who have not had the opportunity to take part in the training. Departing from this, the Balikpapan City Government should provide its own priority scale credit regarding programs and training for MSME actors in Balikpapan City so that later this can increase the productivity of MSME actors through the trainings held.



Figure 7. UKM Center Balikpapan City

In addition to providing training, the Balikpapan City government through the Regional National Crafts Council (Dekranasda) provides infrastructure in the form of SME Center Outlets at Balikpapan City International Airport to accommodate each superior product of Balikpapan City MSME actors as a typical Balikpapan souvenir.

UKM Center is a typical souvenir outlet of Balikpapan City, including Kalimantan batik, food, drinks and souvenirs. The system that applies at the SME Center is that MSME actors entrust their

business products for sale and the products sold are directly paid to MSME owners through digital payments. As an effort to encourage and facilitate MSME actors in Balikpapan City, the existence of the SME Center is a forum for MSME actors to introduce products nationally and internationally.

The sixth indicator of the financial ecosystem towards society *cashless*, (Diskominfo Kaltim, 2021) stated that he wants all people to live prosperously through a safe, efficient and smooth digitalization process, one of which is to create a cashless society so that the digital economy and finance are integrated with each other so that they can contribute to balanced and sustainable economic growth.

Based on the results of the research, the realization of the digital financial ecosystem in realizing a *cashless* society is Sepinggan Airport and Balikpapan Super Blcok (BSB). This *cashless* program aims to improve services to parking service users, reduce operational costs, increase the speed of payment transactions, thus *the cashless* program not only increases comfort and efficiency for parking service users but also plays an important role in building a more transparent and innovative Smart Economy concept.



Figure 8. *e-parking* at Sepinggan Airport using *Qris*

Based on the results of the attached research, the researcher has implemented this program, namely the use of *Qris* and *tapcash*. As for the obstacles in the use of *Qris*, namely an unstable network, to overcome these obstacles, the government is still trying to find alternative solutions to use *Qris* as a reliable transaction method.



Figure 9. *e-parking* at BSB using *tapcash*

It can be seen in figure 8 and figure 9 is one of the manifestations of a *cashless* society in parking payments in Balikpapan City. This program is still running for approximately 1 year and is still in the monitoring stage

On the indicator of building a cashless society, the researcher found that this program is still in the monitoring stage, with the renewal of this system, it certainly requires community adaptation and requires further socialization efforts to the community in order to reduce cash transactions and be able to contribute to the cashless payment program so that efficiency when carrying out economic activities. It can be said that programs in realizing a cashless society still have to be developed for the implementation of *the Smart Economy* concept in Balikpapan City.

#### 4. Conclusion

Based on the results of research and descriptive analysis, the researcher draws the conclusion that the *Smart Economy* concept in Balikpapan City has been implemented, although it has not run optimally on each indicator, this is because it is still in the monitoring and evaluation stage of the program to be achieved, and data limitations, so it is expected that there is a need for further studies and official and clear standardization of the measure of success of *Smart Economy* indicators.

It is hoped that the next researcher can present more complete data so that it can provide a strong foundation related to the implementation of the *Smart Economy* concept has been maximally achieved in order to support the City of Balikpapan towards a *Smart City*.

Based on the conclusion, several things that can be used as suggestions from the results of this study as evaluation material are, in the first indicator the need for further studies on indicators that have not been maximized, so as not to hinder the success of other indicators in achieving the *Smart Economy* concept in Balikpapan City, the second indicator with technology used the need for special training for employees related to the ICT field, the provision of technicians who are quick to respond to solve problems related to the technology used, and the need for short-term evaluation on the *Spontan website* to reduce failures in the program, and in the face of changes the Government is expected to increase socialization to the public to introduce the *Spontan* program.

The third indicator is that the Government provides subsidies for the purchase of new technological equipment for the processing of tofu and tempeh or collaborates with the private sector in opening access to new technologies. In the fourth indicator, the Balikpapan City Government can provide activity facilities or programs for local MSME actors in managing digital-based products and sales.

The fifth indicator is the need for an additional budget for the next training program by the Balikpapan City Government, so that the equitable distribution of development for MSME actors who have not been able to participate and the sixth indicator educates the public regarding the innovations that have been carried out both in the development of *cashless* concepts, *tapcash*, *e-parking*, other electronic payments, and the equitable use of the *Wifi* network to achieve the maximization of digitalization in the *Smart Economy* concept in Balikpapan City.

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