



MSMEs Sales Information System by Papuan Children's in Nabire

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Abstract: Offline and online business developments continue to develop in the midst of the covid-19 outbreak that continues to hit, some are unable to adapt so that their business goes bankrupt and some are able to survive and also grow, for that the MSMEs (Micro Small and Medium Enterprises) sales information system of Karya Anak Papua must be able to understand the existing situation because technological developments continue to develop in every business sector. This situation has an impact on the local community, especially the local Papuan community, who with improvised conditions and minimal business strategies try to survive in any way so that their daily needs can be met, some have started to pick up technology by starting to market their work online, but some have also started to pick up technology by starting to market their work online. which have not been. The role of MSMEs (Micro Small and Medium Enterprises) for the country's economy is very important and strategic. This is supported by data on MSMEs (Micro Small and Medium Enterprises) macroeconomic indicators which are quite dominant in the Indonesian economy. In accordance with the economic development of the regions in Indonesia, there are many obstacles faced by the local government in developing MSMEs originating from internal and external. the best policy in developing MSMEs. This study wants to examine the development of MSMEs (Micro Small and Medium Enterprises) leading commodities in Nabire Regency.

Keywords: Business Development, Covid-19, MSMEs, National Economy, Sales Information System

1. Introduction

The role of MSMEs (Micro Small and Medium Enterprises) in the national economy is very important and has strategic meaning. These are supported by several data on MSMEs macroeconomic indicators which are quite dominant in the Indonesian economy. In accordance with regional economic developments, local governments face many obstacles in developing MSMEs from internal and external sources. carried out for this comprehensive assessment to provide information and advice, the right stakeholders can adopt the right policies Develop small, medium and micro enterprises. This study aims to examine the

development of MSMEs (Micro Small and Medium Enterprises) Leading Commodities in Nabire Regency. The method used in this research is AHP (AHP). See which KPJU is suitable to be developed in various fields.

The role of MSMEs (Micro Small and Medium Enterprises) (Micro Small and Medium Enterprises) in the national economy is very important and strategic. This is supported by several data on MSMEs (Micro Small and Medium Enterprises) macroeconomic indicators which are quite dominant in the Indonesian economy. MSMEs (Micro Small and Medium Enterprises) are the largest segment of

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national economic actors. According to data from the Ministry of Cooperatives and MSMEs, the number of MSMEs in 2007 reached 49.82 million units, increasing to 51.26 million units in 2008. By category, the largest portion is the micro business segment, which accounts for about 99 percent of the total number of MSMEs (Micro Small and Medium Enterprises). The number of MSMEs (Micro Small and Medium Enterprises) in Indonesia in 2009 reached 520,220 units (BPS, 2010). It is estimated that there will be 600,000 new MSMEs (Micro Small and Medium Enterprises) actors in 2010. The Central Statistics Agency also explained that the highest sector of investment made by MSMEs (Micro Small and Medium Enterprises) was in services (57 percent), trade (20 percent) and manufacturing (23 percent). The size of the MSMEs (Micro Small and Medium Enterprises) and Cooperative sector business is estimated to reach 54 percent of Gross Domestic Product (GDP). Such a large number shows that MSMEs (Micro Small and Medium Enterprises) have a major role in supporting the national economy. Therefore, the development of MSMEs should receive great attention. The rapid development of MSMEs also occurred in Nabire Regency, Papua. MSMEs (Micro Small and Medium Enterprises) in Nabire were 190 units in 2005 to 253 units in 2009 with an average increase of 7.58 percent per year (see Fig 1).

In terms of employment, this shows an increase from 93 people to 131 people or an increase of about 40.8 percent. This performance needs to be further improved. Judging from the income, it can be seen that the turnover value generated by MSMEs (Micro Small and Medium Enterprises) in Nabire Regency has increased, starting from Rp. 6.036 million in 2005 to Rp. 7.497 million in 2009. Thus, the existence of MSMEs (Micro Small and Medium Enterprises) needs to be supported in order to further strengthen the competitiveness of local governments.

2. Research Purpose

This study aims to measure the maximum and magnitude of the role of the success of MSMEs from the government in helping the economy of small businesses and also to provide information regarding the success of implementing MSMEs to help local entrepreneurs. There are many obstacles faced by the local government in developing MSMEs that come from internal and external. Therefore, a comprehensive assessment is carried out so that later they can provide the right information and recommendations to stakeholders to be able to take the best policies in developing MSMEs. This study wants to examine the development of MSME's leading commodities in Nabire Regency. The following table shows the number of recent MSMEs studies for comparison.

JENIS	2005	2006	2007	2008	2009
Jumlah UMKM (unit)	190	224	237	246	253
Nilai Modal Kerja & Investasi UMKM (Rp. Juta)	287	379	415	437	451
Nilai Omzet UMKM (Rp. Juta)	6.036	6.829	6.989	7.151	7.497
Penyerapan Tenaga Kerja UMKM (orang)	93	112	118	123	131

Sumber: Dinas Koperasi dan Nabire, 2010

Fig.1. Table of the latest MSMEs research numbers for comparison

Until this table is loaded. There has been no recent information regarding the developments, shortcomings or impacts of MSMEs that have been reported, but from the results of the survey itself and at the end I will include the results from my survey and the results of monitoring and conclusions related to how the sales and advertising system works as well as by the local community. as well as immigrant communities doing business in Nabire Regency.

3. Research Methods

The research method used in this research is The Analytic Hierarchy Process (AHP). AHP is a method for decision making that can help the human frame of mind. The main framework in this method is a functional hierarchy with the main input of human perception, the research is a gradual and long-term research so that the analysis obtained will be interrelated with one another.

Basically, AHP is a method that solves a complex but unstructured problem into groups, inserts numerical values as a substitute for human perception in making relative comparisons and in the end becomes a synthesis to determine which elements have the highest priority. The AHP method also assigns a weight to each factor, variable and indicator with a comparison between factors, a greater weight than other indicators indicates that the indicator is more important than other indicators when determining the leading KPJU of a region.

The three main stages carried out in this research are based on 3 rules with the AHP method, namely:

- **Weighting:**
 The weighting of factors, variables and indicators is carried out by 15 stakeholders (respondents) at the district level using the AHP method.
- the identity classification of each indicator which is the main goal or the main priority in this classification aims to find out what factors are the priority goals. Which is to achieve economic growth, job creation and increase foreign power.
- Determining the intensity value of each indicator and ranking to create criteria is intended to determine the criteria used in the development of MSMEs in Nabire district.

No	Variabel	Indikator
1	Tenaga kerja	Tingkat pendidikan
		Pelatihan
		Pengalaman kerja
2	Bahan baku	Ketersediaan (menggambarkan <i>networking</i> baku)
		Harga bahan baku
		Kesinambungan (menggambarkan <i>network</i> bahan baku)
		Mutu bahan baku
3	Modal	Kebutuhan investasi awal
		Kebutuhan modal kerja
		Aksesibilitas (menggambarkan <i>networking</i>)
4	Sarana produksi/usaha	Ketersediaan
		Harga
		Kemudahan
5	Teknologi	Ketersediaan
		Kemudahan
		Kesiapan penggunaan teknologi
6	Manajemen usaha	kemampuan manjerial
7	Ketersediaan pasar	Jaringan distribusi atau akses pasar
8	Harga	Keleluasaan menetapkan harga yaitu tingk yang bisa diterima pasar, dan marjin haroa

Fig.2. Research indicators and variables.

4. Result of Data Processing and General Discussion

Based on the results of the questionnaires distributed, FGDs and in-depth interviews, it was found that the development of MSMEs in Nabire is expected to be able to build and spur economic growth, increase competitiveness, and create jobs. The average weight of the largest MSMEs development goal is economic growth (27%). Economic growth is the main priority in the respondent's response because economic development is expected to increase the level of welfare of the community and society. Respondents saw that the business objective behind the agriculture, plantation, fisheries, industry, trade, tourism and service sectors is to improve welfare.

In the FGDs, competitiveness is more important than job creation for the following 3 reasons:

- Most of the respondents answered that so far their business has been limited to districts or districts and has not developed more broadly. They view that increasing competitiveness is a MSMEs development goal that deserves attention so that it can be expanded to a wider area.
- Respondents also saw that the development of MSMEs in Nabire was still mostly carried out by migrants compared to native Papuans, this was the main cause of unavoidable economic inequality, perceived competitiveness, in this case not only limited to commodity competitiveness, but also the competitiveness of human resources, especially indigenous people, this competitiveness is needed to expand the local business market but also to reduce economic disparities between

communities.

- Respondents think that competitiveness is more important than job creation, this perception arises because the average MSMEs in Nabire are on a small scale and tend to be household, micro or small businesses and still use only labor or employees. limited to family in sales regardless of the type of business.

AHP TUJUAN	RATA-RATA
Pertumbuhan ekonomi	0,3818
Penciptaan lapangan kerja	0,3000
Peningkatan daya saing	0,3182
TOTAL BOBOT	1,0000

Sumber: Data primer diolah

Fig.3. AHP weighting for development in terms of MSMEs

The purpose of developing medium-sized enterprises which are assisted by the government is the source of Primary Data Processed. MSMEs development cannot be separated from important things to pay attention to, in general, MSMEs development problems are related to skills, business management, capital, availability of raw materials, market availability, adaptability to technology and others. The results of the in-depth interview and FGD surveys show the results of the order based on the level of importance as follows:

AHP KRITERIA	RATA-RATA
Modal	0,18
Bahan baku	0,15
Tenaga kerja	0,14
Sarana produksi/usaha	0,12
Manajemen usaha	0,12
Ketersediaan pasar	0,10
Teknologi	0,70
Harga	0,70
Sumbangan terhadap perekonomian daerah	0,50
TOTAL BOBOT	1,00

Fig 4. Sales criteria according to standard AHP in determining merchandise criteria.

Based on respondents' views, the important thing that needs to be considered in the development of MSMEs in Nabire is capital, capital is seen as the most important problem to pay attention to because most people find it difficult to get capital, raw materials are the second thing that is considered important to pay attention to the development of MSMEs. . According to the survey, the labor aspect is important in the development of labor problems which are highlighted not in terms of job creation but more

on skills. In the West Nabire district, it was stated that the desire to utilize BLK has so far not functioned to develop HR skills. Human resource skills are habitual and are considered and acquired by learning by doing, although this is done because it is hereditary in nature, it is considered to cause business results, especially handicrafts, to not be able to develop optimally and have good competitiveness. Production/business facilities turned out to be a problem that was considered important, especially in the West Nabire, Wanggar and Makimi Districts. Production facilities not only support businesses (eg pesticides: fertilizers for farmer groups), but especially for provincial road infrastructure, such as the traditional problem of MSMEs throughout Indonesia is the absence of good business management. Market availability is considered to be an important factor in the development of MSMEs. If there is no market, then the business that is being run will not develop well.

In more detail, the weighting of the MSMEs development goals carried out by the stakeholders shows that the labor variable, a factor that is seen in Nabire Regency needs to make more training then followed by the level of education and work experience, the stakeholders stated that the Nabire Regency government needs to make more there is a lot of training for MSMEs development, because skilled workers are one of the main things if you want to develop MSMEs.

Meanwhile, in terms of raw materials, the stakeholders see that what needs to be developed is the continuity of raw material providers. This describes the networking of raw materials. The next thing that is no less important is the availability, the price of raw materials and finally the quality of the raw materials. To increase the network, of course, entrepreneurs cannot do it alone, the government must have a function as an enabler and initiator.

Another thing that deserves attention in developing MSMEs is capital, both in terms of working capital needs, access to capital and initial investment needs. The Nabire government needs to have deeper cooperation with banks. Cooperation, unfortunately, is not only incidental, but is a program that is included in the development plan. This needs attention for development because the development of MSMEs cannot be separated from capital, for that capital itself requires a scheme for working capital and investment with different governance. The following are the results of the AHP weighting with the aim of developing MSMEs.

Variabel	Bobot Variabel	Indikator	Bobot Indikator
Tenaga kerja	Q,14	Tingkat pendidikan	0.04
		Pelatihan	0.065
		Pengalaman kerja	0.035
Bahan baku	Q,15	Ketersediaan (menggambarkan networking bahan baku)	0.04
		Harga bahan baku	0.035
		Kesinambungan (menggambarkan networking bahan baku)	0.05
Modal	Q,18	Mutu bahan baku	0.025
		Kebutuhan investasi awal	0.045
		Kebutuhan modal kerja	0.075
Sarana produksi/usaha	Q,12	Aksesibilitas (menggambarkan networking modal)	0.06
		Ketersediaan	0.06
		Harga	0.02
		Kemudahan	0.04

Variabel	Bobot Variabel	Indikator	Bobot Indikator
Teknologi	Q,07	Kemudahan	0.025
		Kesiapan penggunaan teknologi	0.045
Manajemen usaha	Q,12	kemampuan manjerial	0.12
Ketersediaan pasar	Q,10	Jaringan distribusi atau akses pasar	0.1
Harga	Q,07	Keleluasaan menetapkan harga yaitu tingkat harga yang bisa diterima pasar, dan margin harga	0.07
Sumbangan terhadap perekonomian daerah	Q,05	Backward dan forward linkages	0.03
		integrasi vertikal	0.02

Sumber: data primer yang diolah

Fig 5. Results of AHP weighting for MSMEs Development Goals

Another important factor to consider is managerial ability, the presence of distribution network and market access, freedom to set prices and problems linkages between MSMEs. These last four things can't be done alone either SMEs, because of its limitations. So the government needs to take serious steps through the relevant agencies to make a more comprehensive MSMEs development plan comprehensive. Sequencing results of factors that are important in the development of MSMEs are as follows.

Kesinambungan (menggambarkan networking bahan baku)	0.050
Kebutuhan investasi awal	0.045
Kesiapan penggunaan teknologi	0.045
Tingkat pendidikan	0.040
Ketersediaan (menggambarkan networking bahan baku)	0.040
Kemudahan	0.040
Pengalaman kerja	0.035
Harga bahan baku	0.035
Backward dan forward linkages	0.030
Mutu bahan baku	0.025
Kemudahan	0.025
Harga	0.020
integrasi vertikal	0.020

Fig 6. Important factors in the development of MSMEs

The processing results obtained from primary data show that not all districts have sub-sectors that can be developed. only Nabire district which has a complete sub-sector that can be developed and complete. But on the other hand, there is one factor that can be developed in the Uwapa district, namely the mining sub-sector. in more detail, there is Fig 7. which shows the development priorities chosen by each district

NABIRE	NABIRE BARAT	WANGGAR	UWAPA	MAKIMI	TELUK KIMI
Perdagangan	Tanaman pangan	Perkebunan	Tanaman pangan	Tanaman pangan	Tanaman pangan
Jasa-jasa	Perkebunan	Industri	Peternakan	Perkebunan	Perkebunan
Angkutan	Peternakan	Tanaman pangan	Perkebunan	Perikanan	Peternakan
Perikanan	Industri	Peternakan	pertambangan	Peternakan	Perikanan
Tanaman pangan	Perdagangan	Perdagangan	Industri	Industri	Jasa-jasa
Industri	Perikanan	Perikanan	Jasa-jasa	Perdagangan	Pariwisata
Pariwisata	Pariwisata	Pariwisata	Perikanan	Angkutan	Industri
Peternakan	Angkutan	Angkutan	Angkutan	Jasa-jasa	Perdagangan
Perkebunan	Jasa-jasa	Jasa-jasa	Perdagangan	Pariwisata	Angkutan
			Pariwisata		

Sumber: Data primer yang diolah

Fig.7. Priority subsector by District

Based on the results of in-depth interviews, questionnaires and FGDs, it was found that the main obstacles to the development of MSMEs and KPJUs in Nabire Regency were problems with capital, business management, market access and price volatility. The classic problems faced by MSMEs should get attention from the government so that MSMEs are able to compete.

5. Individual Data Processing Results

The following data are sales survey data based on the MSMEs sales information system method by Papuan Children in Nabire where the sales process is still very traditional, most of which still use relatives or acquaintances to market handicraft products. The work for the community from the government is very minimal and even almost non-existent because if you look at it from my point of view, when compared to the transmigrants in Papua, they are more able to develop the goods they sell because the goods they sell are goods. daily necessities such as food and household needs, while the local people are only able to sell their own hand-knitted products such as noken, clothes and other cultural tools.



Fig 8. An example of a place or shop selling traditional handicrafts.



Fig 9. An example of a kiosk in one of the places or shops selling daily necessities for transmigrants from outside Papua.

5.1. Problems

- Transactions are not smooth between sellers and consumers.
- The pandemic is a major obstacle to sales and a barrier to transactions.
- Prices of goods are relatively more expensive.
- Information is not evenly distributed to the public about what is being sold.
- Business competition is getting tougher and lack of knowledge about promising businesses and businesses that are not.
- Big shops selling the same products so small traders have to compete.

5.2. Data Analysis Information

INFORMASI ANALISIS DATA

No	Nama Data	Atribut Data	Deskripsi data
1.	Pemilik Toko	Mendata barang,level,mengatur admin, harga dan konsumen.	Pemilik tunggal yang bersiap dan selalu ada dalam pemantauan penjualan barangnya.
2.	Admin	Cek jumlah seluruh barang yang tersedia untuk dijual(jenis barang,bentuk barang.	Total harga barang persatuan,total harga barang yang terjual dan yang tidak terjual, mendata nama-nama barang.
3.	Konsumen	Data Nama,KTP,KK,NO HP, E-mail	Merupaka Pembeli atau pengunjung yang datang setiap hari dan yang jarang datang
4.	Tempat	Tampak Depan, Tampak belakang, Tampak ATas Tampak bawah,tampak dalam dan Luar	Tempat merupakan wilayah tempat penjualan barangnya.
5.	Transaksi	Total penjualan, total pemasukan keuntungan, total kerugian, total jumlah barang yang di beli.	Jumlah barang-barang yang sudah terjual dan yang belum terjual

Fig 10. Data on the results of monitoring the seller's and buyer's information system

Information Analysis of this data is based on short interviews and random questions to local indigenous Papuans and transmigrants regarding shop owners, places, managers or admins, consumers to the transaction process and it can be concluded that for the transaction process and sales, both local and immigrants are all still in the area. do it by meeting sellers and buyers where they all have not maximized the use of technology due to the lack of government's role in guiding and guiding local businesses in developing local food wealth and handicrafts as well as the process of selling household necessities such as those sold by transmigrants.

INFORMASI PROSES DATA

NO	Nama Proses	Deskripsi proses	Masukan Data/Input Data	ACTOR
1.	Proses Pemilik Toko	Pemasuka Data	Nama,no hp, KTP,Alamat	Owner/Pemilik
2.	Pengelola Toko	Pendataan Barang.	Proses pengisian Daftar Harga barang yang terjual dan belum Terjual.	Admin
3.	Barang Toko	Proses pendataan Barang yang masuk ke Toko	Nm brg,jnis brg,hrg jual,hrg beli.	Admin
4.	Barang	pencarian yang dilakukan oleh konsumen	Nm brg,jml brg,brg yg di beli.	Admin/Konsumen.
5.	Transaksi	Proses Pemesanan Yang dilakukan oleh konsumen	Input spesifikasi.	Konsumen/Kasir
6.	Rekapian Akhir/Laporan	Pelaporan Data	Data kredit,Tgl beli, tgl, Nota penjualan,nota pembelian	Admin

Fig 11. Sales data process information

According to monitoring and brief interviews with local sellers, local sellers admit that buyers of handicrafts they sell are mostly done by acquaintances of the seller such as friends and relatives, while outsiders (transmigrants) or tourists still rarely buy them, so I can concluded that this is also the government's negligence in guiding the community so

that people do not really understand the tricks of selling or promoting their handicrafts even though the results are sometimes very good. To transmigrant sellers, the buyers vary because everything they sell is the needs of native Papuans and immigrants, so it can be concluded that the buyers come from native Papuans and immigrants with an average distribution of 50-50.

5.3. Use case diagram

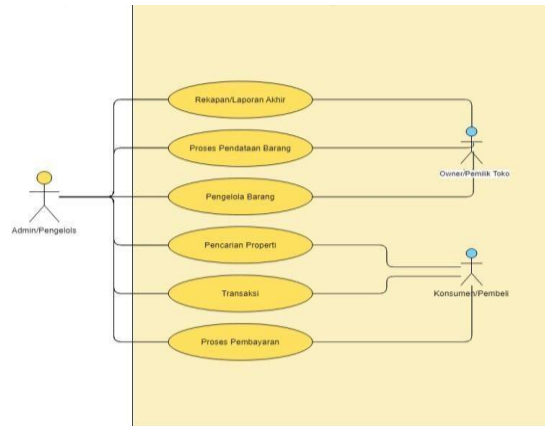


Fig 12. Example of a Use Case Diagram

The admin or manager intentionally left me because he is the manager and owner who manages and processes each sale himself to make it easy because it is impossible for a use case diagram to be made with only one actor, here I separate it outside the yellow box to make it easier to sort out how it works and easier in the way he processes the goods until finally he can transact with the buyer. Hopefully this can be accepted so that it can be useful to be applied in the future.

5.4. Class diagram

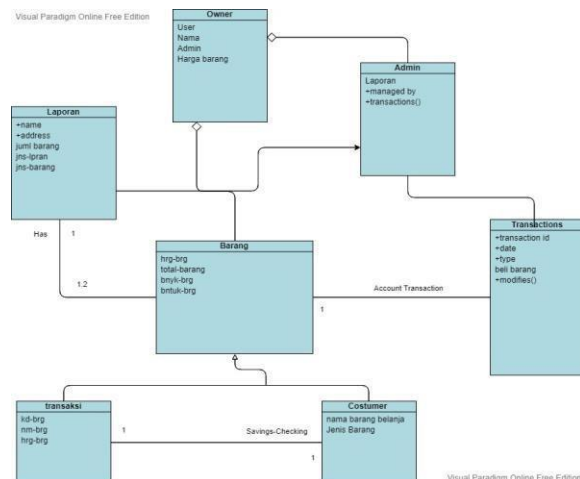


Fig 13. Example of a Class Diagram image. Class

diagram has several functions, but its main function is to describe the structure of a system or

other functions by clearly showing the structure of a system and increasing understanding of the general description or schema of a program, so in the class diagram above it can be seen that the process distribution of goods to the sale of goods can be grouped according to their functions so that later they can be sorted and corrected if something is not optimal and maximizes its work function. For traditional Papuan entrepreneurs, the class diagram above is sufficient for data collection.

6. Conclusion

Nabire Regency is a district that is able to develop well even though the utilization of MSMEs is not optimal if it is supported by developing MSMEs properly and correctly. So based on public opinion, the thing that is rarely considered in the development of community empowerment MSMEs is guidance to business people as a whole. Nabire is capital, then with raw materials to labor and product facilities as well as educators in business management.

In the end, it was found that based on the AHP, there were 5 main factors that were very necessary and urgent to be considered in the development of MSMEs, especially in Nabire Regency, namely:

1. Distribution network
2. Market Access

3. Working Capital Needs
4. Freedom to Set Prices
5. training and accessibility of capital.

Of course, all of the data above is not fully appropriate because there are still many regions with long distances with different selling goods by selling different ways and different target markets due to ethnic differences that are almost in various districts with different traditional handicrafts or handicrafts, however It is hoped that this research can be a reference for the development of MSMEs.

References

- Central Bureau of Statistics of Nabire Regency, *Nabire District in 2009 Figures*. BPS Nabire Regency, 2009.
- Central Bureau of Statistics of Nabire Regency, *Results of the Regency Population Census Nabire: Provisional Figures*. Nabire Regency BPS, 2010.
- Cooperative Industry and Trade Office of Nabire Regency, *Number of Cooperatives and MSMEs in the District Nabire*, 2010.
- FAO, *The State of Agricultural Commodity Markets*, 2009.
- K. Prihatman, *Management Information System for Rural Development*. BAPPENAS, 2000.
- U. K. Anggoro, *Guidelines for the Implementation of SL-PTT 2011*. DIRJEN Food Crops, 2011.