

## Research Article

# Readiness of Village-Owned Enterprise's to Respond to the Industrial Revolution 4.0 and the COVID-19 in Wangisagara Village, West Java

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## Abstract.

Village-owned enterprise (BUMDes), Niagara, located in Wangisagara Village, have an important role in realizing the village development index as an independent village in the Bandung Regency. The long history of the establishment of BUMDes shows indications of BUMDes governance that can adapt to the times. In the era of the industrial revolution 4.0, many businesses will lose due to automation. In addition, the COVID-19 pandemic has caused a decline in economic activity due to restrictions on businesses in the village. The purpose of the study was to identify the governance pattern of BUMDes Niagara in responding to the industrial revolution 4.0 era as a form of assessing the readiness of BUMDes to respond to technological developments. The research method was carried out using a mixed approach of quantitative and qualitative data sources using primary surveys in the form of questionnaires and interviews as well as observations and secondary data in the form of village data collection. The results of the study indicated that the policy, planning, R&D, secretariat, capital, and human resource governance are categorized as good enough but have not been equipped with business feasibility analysis and online submissions. Meanwhile, the dimensions of production, logistics, and marketing governance still use manual systems.

**Keywords:** Village Own Enterprises (BUMDes), Governance, Industry Revolution 4.0, Pandemic Covid, Technology

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## 1. INTRODUCTION

Since the release [1] of 2016 regarding the industrial revolution 4.0, entering the digital world provides various threats as well as opportunities in the business world. Threats occur due to the emergence of digital technology developments that will cause the loss of 52.6 million types of occupations [2]–[4]. McKinsey says 45% of jobs will shift to automation while the Pricewaterhouse Copper report says nearly 40% of American jobs could be replaced by robots, also reported 30% of UK jobs and 35% of Germany jobs and 21% In Japan [5]. However, the opportunity to increase the number of new jobs is increasing along with the number of jobs that rely on IT. OECD 2020 [6], once studied

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that the German government will lose 500000 jobs but 900000 jobs will emerge new ones.

In 2019, since the emergence of covid 19, the local and global economies have been significantly impacted by both retail and non-retail. Many large companies such as giant, sun, etc., finally chose to close their stores because they could no longer run their operational costs [7]. Not only the private sector, but the government sector through government revenues from the tax sector also cannot be achieved because of the many subsidies that must be given during the pandemic [8]. Not a few people are ultimately affected because many companies choose to terminate their employment [9], [10]. Meanwhile, most workers come from rural areas so that many immigrants do not have access to jobs in urban areas.

Villages have a strategic role in the national economic recovery (PEN) due to the pandemic and job disruption in the era of the industrial revolution 4.0. The trend of allocation of village funds from the central government increases every year with an average of 960 million each village in 2020 [11]. This is a hope for the village to take a role in providing solutions to the problems of unemployment, poverty, and village underdevelopment. One of the strategic village institutions that can be favored is BUMDes. In 2021, BUMDes has been specifically regulated in Government Regulation No. 11 of 2021 concerning Village-Owned Enterprises (BUMDes) which changes some of the governance in the previous regulation, namely BUMDes has legal certainty as a business entity that can move swiftly after being registered with the ministry of law and national security. BUMDes has a significant impact on improving the government's economy, improving skills and improving people in poor conditions [12].

BUMDes Niagara which is part of Wangisagara Village has a long history. Niagara BUMDes started its business in 2002, long before the Village Law was issued. BUMDes whose village regulations have been updated to become Perdes No. 5 of 2013 concerning the establishment of village-owned enterprises (BUMDes) has succeeded in increasing the progress of Wangisagara village. Annually, there are 500 million -700 million contributed to the village. Niagara BUMDes always moves in tune with efforts to increase village sources of original income, driving community economic activities where the role of BUMDes as an umbrella institution is to overshadow it. This effort is also important in the context of reducing the role of *free-riders* who often increase transaction costs in community economic activities through practices *rent-seeking* [13].

The presence of the industrial revolution 4.0 and the pandemic is not just a matter of new technology, but rather a matter of building new ideas. Access to digitization has spread to remote villages. Like it or not, the village community must be technology

literate and actively participate in it. A progressive and innovative mindset must be built based on the principle of recognition and the principle of village subsidiarity. Do not let the presence of the industrial revolution 4.0 make villages become advanced but lose their identity. Industrial revolution 4.0 will facilitate the connection between traditional markets and global markets through *e-commerce*.

Considering that Niagara BUMDes can survive and continue to contribute to the village's original income, which is quite high, it is necessary to explore the formation of Niagara BUMDes governance which is being carried out and will be carried out. Therefore, the purpose of this paper is to assess the governance of BUMDes in responding to the industrial revolution 4.0 with a case study of BUMDes Niagara Wangisagara Village.

## 2. METHODS

On the assessment of BUMDes governance in the face of the industrial revolution and pandemic era in Wangisagara Village, Bandung Regency uses a qualitative as well as quantitative approach. With secondary data sources in the form of village profile data collection and literature studies. In addition, a primary survey was conducted in the form of semi-structured interviews, with the respondent selection method, namely purposive sampling, where respondents were selected to meet the stated objectives [14]. The total respondents needed are 16 respondents consisting of the head of the West Java DPMD service, the Head of the Village Community Economic Empowerment DPMD Bandung Regency, the Head of Community Empowerment in the Majalaya District, the Wangisagara Village Head, the Wangisagara Village BPD Head, the Wangisagara Village BUMdes Director, 3 Unit Heads. the efforts of BUMDes Wangisagara, 3 BUMDes partners, and observation.

The analytical method in this study was carried out by assessing the achievement of indicators in each dimension in BUMDes governance. Both indicators of general governance, as well as indicators that influence the industrial revolution 4.0. The results of the synthesis of achievement were carried out by triangulation of data, both triangulation of respondents' sources and triangulation of types of data collection.

## 3. RESULTS AND DISCUSSION

Wangisagara Village is one of the villages categorized as Independent Villages in Bandung Regency. The contribution of BUMDes in Village Original Income (PADes) has continued to increase, especially since 2012-2019. In 2019, the contribution of the

village’s original income sourced from BUMDes was Rp. 710,629,271. With various types of business activities ranging from village markets, savings, and loans, and trading. The following table 1 is a profile of BUMDes Niagara Wangisagara Village.

TABLE 1: Profile of BUMDes Niagara (BUMDes Reporting, 2020).

Identities	Information
Name	: BUMDes Niagara
Legality	: Perdes 06 of 2002 replaced by Perdes no 5 of 2013
Year of Establishment	: 2002
Type of Business	: Savings and Loans Trading Village Market
Location	: Wangisagara Village, Majalaya District, Bandung Regency
Number of Employees	: 19 people
Gross Income	: 3 billion (2020)
Donations to PADes	: 710,629,271 (2019)



Figure 1: BUMDes Niagara governance result.

Governance in Niagara BUMDes can be said to be quite good, but there are still indicators that must be improved to continue to encourage maximum activities in Wangisagara Village. Therefore, this assessment is formulated into several dimensions

and indicators obtained from the results of a literature study related to the assessment of BUMDes governance to create a competent institution. The following Figure 1 is a figure for the assessment of the Niagara BUMDes indicator. graph below illustrates the results of the processing that has been carried out.

In addition, research is also carried out in response to governance BUMDes in anticipation of the revolutionary era 4.0 with ratings as in table 2:

**Dimension Indicators Achievement Indicators**

**Description Achievement Rev Ind 4.0**

(WFH) because it is still a manual for

Capital, Asset and Financial Management and Secretariat

There is an incentive allowance system

Archives of meeting attendance etc.

0

1 Not yet done openly to the public.

Not done online (system and human resources are not yet available)

Routine financial audit 1

hour of work carried out from 08-14 hours, more than that is considered overtime

Financial reporting application

0 - No

There is a system of overtime and year-end bonuses that are taken 10% of the remaining operating results

only carried out by BUMDes internal supervisors every 2 years

Production Governance

Ease of accessing raw materials

Availability of operational vehicles

1

1. Only for BUMDes social media

Production Facility 0

Production Strategy 0

Do not have a NPWP and have not paid taxes

There is no strategy for using the internet to optimize production

TABLE 2: Recapitulation of BUMDes Niagara (BUMDes Reporting, 2020).

Dimension	Indicators	Achievement Indicators	Description	Achievement Rev Ind 4.0
	Legality BUMDES	1	Village Law updated previously No. 3 in 2003 to village regulation no 5 of 2013	-
	AD ART included Perdes in	1	beginning of the establishment of BUMDes without AD/ART, only in 2007 began to include AD/ART	-
	The existence of a set of SOP documents	1	Each unit already has an SOP	Not accommodating disruptive era yet the
	Clarity of Business Capital Source	0	Villages give to BUMDes in the form of village market assets (not nominalized), the rest can be taken from the rest of the BUMDes business results	-
	Strategic planning based on Community Participation	1	Yes, village officials, RT, RW, PKK elements, Community Social Workers (PSM) and leaders (education, religion, culture, and youth)	-
Policy, planning and Kelitbangan				
	There is a Feasibility Analysis of the business	0	There is no standard document, but it is only an excel calculation of the expenditure and income plan	-
	Routine Meeting	1	Conducted 2 a for year. times Monthly each evaluation business unit	Routine meetings are still conducted face-to-face (offline)
	Utilization of Big Data to find new products and new consumers	0	-	No human resources who can operationalize
	Feedback from BUMDes stakeholders (consumers, suppliers, communities)	0	-	Nothing specifically
HR The	Governance completeness of BUMDes management structure is the	0	only in the form of bookkeeping of financial statements.	-
	BUMDes Management Education	0	only sees social media feedback without a special form created	-
	BUMDes manager recruitment mechanism	1	Standard structure	-
	Rules for working hours for BUMDes managers	1		Not yet ready to do Work from Home

Production Capacity 1 Land status is owned by the village

Business Development 1 Plan

Currently, there are still many who depend on outside the village

Community Needs Survey 0

**Dimension Indicators Achievement Indicators**

**Description Achievement Rev Ind 4.0**

Logistics and Warehousing Governance

SOP Procurement of goods 1 1 car (pickup) and 4 motorbikes and services

Not paying attention to the influence of industrial rev 4.0

SOP Distribution of goods 0 is and services

Terms of Method and

carried out directly at the location of business partners

Not paying attention to the influence of industrial rev 4.0

Not paying attention to

Shipping Costs 1 Effective word of mouth

the influence of industrial rev 4.0

Availability of storage

1. There is an increase in PADes

Sales Governance Market

surveys, only relies on complaints/inputs from consumers

optimal because there is no special admin for

BUMDes Partnership 0 Focus on villages only, no special plans to build new partnerships

Clarity market 0 segmentation

Product identity (branding, 1 packaging, attributes, etc.)

SOP has been running but standard documents are not obtained

There is already a brand that has been recognized by PDKI Indonesia

Product pricing analysis 1 SOP has been running but standard documents are not obtained

Implementation of promotions

1 Delivered to your home or buy at BUMDes. For outside the village, done via courier (RPX, JNE / J&T)

Not yet utilizing digital marketing

e-commerce 0 There is no special warehouse because all goods must be picked up on the same day

limited use of the marketplace

Source: Results of analysis 2021

## 4. CONCLUSION

The development of digital technology encourages BUMDes to be better prepared to anticipate the occurrence of bankruptcy in BUMDes. Villages through BUMDes have a strategic role in national economic recovery so that aspects of BUMDes governance are important and relevant for study.

The dimensions used in the assessment of BUMDes governance include Policies, planning and R&D, HR Governance, Capital Management, Assets and Finance and Secretariat, Production Management, Logistics and Warehousing Governance and Marketing and Sales Governance. The research findings show that the governance of BUMDes Niagara Wangisagara Village, in facing the era of the industrial revolution 4.0 in the dimensions of policy, planning and R&D, secretariat, capital and human resource management is categorized as good enough but not yet equipped with business feasibility analysis, online submission. Meanwhile, the dimensions of production, logistics and marketing governance still use manual systems.

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