

## THE PERFORMANCE AND EFFICIENCY OF XYZ BANK WORK UNITS

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### Article history:

Received  
21 February 2022

Revised  
9 May 2022

Accepted  
26 May 2022

Available online  
31 May 2022

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**Abstract:** Bank is an institution or business entity that has a big role in the financial system in the world, especially in Indonesia. The banking industry, which consists of government-owned banks and private banks with sharia and conventional systems, are mutually exclusive to survive the current tough competition. There have been various ways that have been done to attract attention to its customers. Bank XYZ realizes that the competition between companies is getting bigger, therefore the management of XYZ Bank issued a policy by building a new work unit. The operational sustainability of XYZ Bank in the Indonesian banking industry is closely related to the ability to maintain high competitiveness. Bank competitiveness can be reflected in the level of operational efficiency. This study uses secondary data from the XYZ Bank work unit and is analyzed by Data Envelopment Analysis. It is known that in the Bogor work unit, from the 17 times studied, 5 of them experienced inefficient conditions, while the Yogyakarta work unit was known to have 6 times that were inefficient.

**Keywords:** data envelopment analysis, efficiency, work unit, banking industry, bank competitiveness

**Abstrak:** Bank merupakan salah satu lembaga atau badan bisnis yang memiliki peranan besar dalam sistem keuangan di dunia khususnya di Indonesia. Industri perbankan yang terdiri dari Bank yang dimiliki pemerintah serta Bank Swasta dengan sistem syariah serta konvensional saling bersaing untuk tetap bertahan dikerasnya persaingan saat ini. Tercatat telah beragam cara yang dilakukan guna menarik perhatian pada nasabahnya. Bank XYZ menyadari bahwa persaingan antara perusahaan semakin besar, maka dari itu manajemen dari Bank XYZ mengeluarkan kebijakan dengan membangun unit kerja baru. Kelangsungan operasional dari Bank XYZ di industri perbankan Indonesia sangat terkait dengan kemampuan dalam mempertahankan daya saing yang tinggi. Daya saing perbankan dapat tercermin dari tingkat efisiensi operasional. Penelitian ini menggunakan data sekunder dari unit kerja Bank XYZ dan dianalisis dengan Data Envelopment Analysis. Diketahui bahwa pada unit kerja Bogor dari 17 waktu yang diteliti terdapat 5 diantaranya mengalami kondisi tidak efisien, sementara unit kerja Yogyakarta diketahui terdapat 6 waktu yang mengalami tidak efisien.

**Kata kunci:** data envelopment analysis, efisiensi, unit kerja, industri perbankan, daya saing perbankan

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## INTRODUCTION

Bank is an institution or business entity that has a big role in the financial system in the world, especially in Indonesia. The advancement of a country's economy can also be caused by the progress of banks in that country, where the bigger the country, the greater the potential for banks to contribute in boosting the economy of the country and its people. This is in line with the objectives and role of the Bank in Law No. 7 of 1992 regarding the function of banks to collect funds from the public in the form of deposits, and to channel them back to the public in the form of credit or other forms in order to improve the standard of living of the people at large. The development of banking in Indonesia grew significantly, especially for conventional banks. This is clearly illustrated by the growth in the total assets of all banking companies in Indonesia, in Figure 1

The banking industry, which consists of banks owned by the government and private banks with a conventional system, are mutually exclusive to survive the current tough competition. There have been various ways that have been done to attract attention to its customers. Where one of them is by improving operational performance in order to continue to maintain the ratios of financial performance. It can be seen the ratio comparison of several indicators in Table 1.

Based on Table 1, it is explained that there are differences in the two types of banks. This is explained by Cerovic et al. (2017); Nisa et al. (2018) that the banking base has an impact on real differences that are reflected in

each ratio indicator. Mamahit et al. (2016) ; Nugroho *etal* (2017) have stated that the conventional basis is better than the Islamic banking system, besides that it is known that state-owned conventional banks have better performance than private-owned conventional banks. Bank XYZ is one of the conventional-based bank companies owned by the government which has the same as other banks, namely to support and encourage the Indonesian economy better.

XYZ Bank realizes that the competition between companies is getting bigger, therefore the management of XYZ Bank issued a policy by building a new work unit. The operational sustainability of XYZ Bank in the Indonesian banking industry is closely related to the ability to maintain high competitiveness. Bank competitiveness can be reflected in the level of operational efficiency. The importance of efficiency for banks to maintain competitiveness and business development. Jasman (2018); Sun and Chang (2011) explain that the importance of implementing efficiency in banking institutions is expected to improve banking functions more optimally and to guard against unexpected things (risk mitigation).

Work units are important in supporting the business operations of each bank, especially Bank XYZ. The establishment of a work unit is expected to be a means to get closer to customers, in addition to being a competitive advantage with other banks. The description of the work unit growth of XYZ bank is in Table 2.

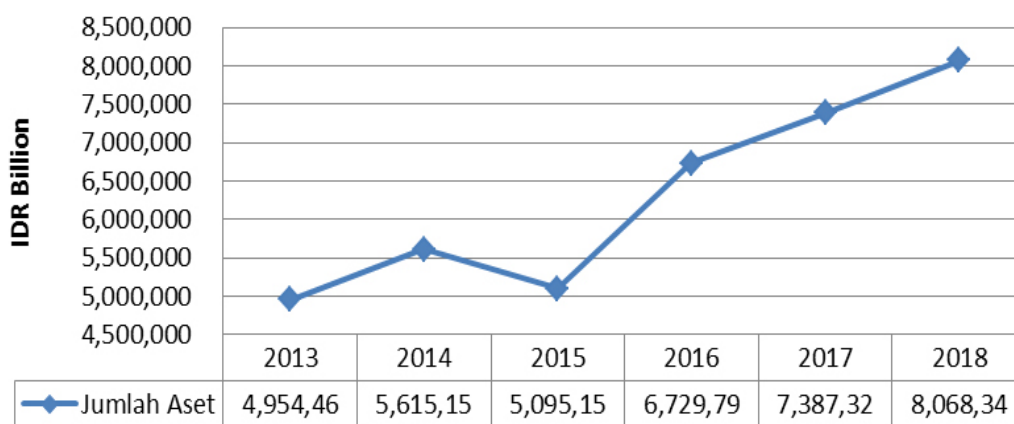


Figure 1 Trend of Bank Asset Growth in Indonesia (Financial Services Authority, 2019)

Table 1. Comparison of conventional bank performance

Indicator	Conventional Bank		
	2016	2017	2018
ROA	2.2	2.4	2.5
CAR	22.6	23.3	22.9
NIM	1.2	5.3	5.1
BOPO	82.8	78.7	79.1

Table 2. Growth of XYZ Bank Work Units

Description	2014	2015	2016	2017	2018
Branch office	461	467	467	468	468
Branch office	584	603	609	610	609
Unit	5,293	5,360	5,380	5,382	5,381
Cash office	971	983	984	992	964

Table 2 explains that the work units of Bank XYZ continue to increase with different numbers in each section except for cash offices, which causes efficiency. Currently XYZ Bank has covered all regions of Indonesia. Bank XYZ through its work unit as the front guard for its operational activities is demanded to continue to be able to provide the best performance. On the other hand, a formula is needed to determine the differences in the performance of each work unit, this is done to obtain information related to the extent of differences in the performance of each work unit.

Sub-Branch Offices are work units under Branch Offices, with almost functions the same as the Branch Office. Sub-branch offices are usually located in areas that are not covered by branch offices due to geographical and efficiency problems. Bank XYZ for the last 5 years (2012-2015) has built Sub-Branch Offices in various regions. Growth can be grouped by island as in Table 3.

Based on Table 3, it is known that the island of Java is an area that has the greatest growth than other islands. The growth of sub-branches in an area can be used as a benchmark for economic development in an area. Central Bureau of Statistics (2018) states that Java Island is an island that has a big contribution to the nation's economy. XYZ Bank management is also aware of the construction of a Branch OfficeMaid will not only give additional potential benefits for the company, but it will also increase the uncertainty for the company. The company has set a target of each investment decisions which must provide  $\pm 2$  years of profit from the decision. Java Island is known

to have an average of 1.65 years or 19 months. It is known that Java Island consists of 7 regions which differ in performance from one another. The objectives of this study: Analyzing the characteristics of the XYZ Bank work units in the Yogyakarta and Bogor regions; Analyzing the financial performance of the XYZ Bank work units in the Yogyakarta and Bogor regions; Analyze the performance and efficiency positions of the two work units of Bank XYZ.

## METHODS

The research was conducted in two work units of Bank XYZ located in Bogor and Yogyakarta Regencies. The object selection was due to the two work units being new work units, the existing problems with the objects, the availability of data. The research period was conducted from May 2019 to October 2019. This study used secondary data. Where secondary data is available in various forms, this data is generally in the form of notes, evidence or compiled historical reports that are published or unpublished (Moehar, 2002; Al Parisi, 2021). Secondary data used in this study comes from the financial statements of the two work units of Bank Rakyat Indonesia, the Central Bureau of Statistics, Bank Indonesia and other credible sources. This study uses two approaches, namely the productivity approach and the profitability approach. The summary of the approach is shown in Table 4.

The explanation of each input used in the study is as follows: Savings (Savings are funds collected by parties that focus on the short term or have low interest costs); Interest expense (Expenses paid to customers or other parties related to fundraising activities. This fee is the largest portion of the total bank fees); Labor costs (A fee that will be incurred to pay employees and employees who work at a particular company); Credit given (Provision of money or equivalent claims based on a loan agreement between the bank and another party which requires the borrowing party to pay off the debt after a certain period of time with the amount of interest in return or profit sharing); Total Assets (Total assets known as assets refers to the total amount of assets / assets owned by a company); Interest income (Profits obtained from banks or other financial institutions where this income is obtained from the additional value of credit or customer loans, which is better known as interest).

Table 3. Growth of the number of sub-branches each year by island

Description	2012	2013	2014	2015	Total
Java	24	18	13	14	69
Sumatra	19	4	7	8	38
Borneo	3	3	2	1	9
Bali	3	2	2	0	7
Sulawesi	7	0	2	2	11
Papua	1	0	1	0	2

Table 4. Input and Output

Input	Output
Savings	Asset
Interest expense	Interest income
Labor costs	
Credit given	

Descriptive analysis is a method according to which functions to describe or provide an overview of the object under study through data or samples that have been collected as is without analyzing and making general conclusions (Sugiyono, 2010). The Data Envelopment Analysis analysis method is used to calculate technical efficiency in all business units. The calculation is assisted by the Banxia 4.0 software. Calculations with software are intended to measure the level of efficiency. The efficiency score obtained from each unit is relative, depending on the level of efficiency of each unit in the sample. Each unit in the sample is considered to have a positive level of efficiency so that it can be between the values of 0 to 1. Anggraita (2012) explains that the Data Envelopment Analysis (DEA) method is a non-parametric analysis method specifically used to measure the efficiency of a unit of economic activity called the Decision Making Unit (DMU), while according to Purwantoro in Anggraita (2012), DEA is a mathematical programming technique. which is used to evaluate the relative efficiency of a set of decision-making units in managing inputs to outputs. Malmquist index is a method used to process non-parametric panel data. Malmquist index is often used to map two things the sample hopes to achieve. The index value in this study is decomposed into productivity and efficiency. The Malmquist approach is a very commonly used approach for output comparisons.

## RESULTS

### XYZ Bank Work Unit Financial Performance

Comparison of financial performance is carried out in the two work units to determine the amount of change each time, besides this this is a basis for analyzing the efficiency conditions of the two work units. The performance conditions can be described as in Table 5.

Table 5 provides information that the performance development of the two work units is different. The highest growth of third party assets and funds occurred in the Bogor work unit. These findings indicate that the Bogor work unit is able to grow and has large funds. This condition indicates that the behavior of customers in the Bogor work unit has a behavior that likes to save more than in the Yogyakarta work unit. Interest income has to do with loans granted to customers. It is known that the revenue in the Yogyakarta unit has much higher growth than that in the Bogor work unit. The findings are proven when interest income has high growth, it will be accompanied by high credit growth. The interest expense condition in the Bogor work unit has a smaller average growth than in the Yogyakarta work unit. This finding clearly gives an indication that the Bogor work unit is able to manage its interest expense than in the Yogyakarta work unit or can indicate that the Bogor work unit management does not sell too high interest which can increase costs.

### XYZ Bank Work Unit Efficiency Analysis

Comparison of efficiency conditions is very important to do to determine the extent to which the conditions for comparing the input output with the output obtained Permono (2000); Purba & Darmawan (2018) explains that efficiency is an important thing that is known to determine bank performance through the given input and output, in this way so that bank management can provide the best recommendations in managing the company. In this study, using input-oriented and constant return to scale approach. Saputra (2009); Priyatmoko (2014) explains that the input approach is an approach that can be used to determine the accuracy of the input that is issued to get the output at that level, in this case management can first manage the input it has in order to provide efficient performance (Sukirno, 2006; Susilo, 2006).

The efficiency of each work unit is reviewed for 17 times to find out the differences in each condition in time stages. Cahyadi et al. (2018); Kustanti and Indriani (2016) explained that to determine the condition of efficiency, it needs to be reviewed from time to time, this is intended to get the best recommendations for the company. Sa'diyah (2016); Lulus et al. (2014) explains that the magnitude of the efficiency value is between one and zero, which is a description of the condition of the company. The efficiency conditions of the Bogor and Yogyakarta work units are presented in Table 6.

The condition of the bank is known to change all the time, this indicates that management needs to prepare a system for running the business in each work unit. Based on the approach of Firdaus and Hosen (2013); Richmond (1974), classify it into 4 levels of efficiency. In Table 14 it is known that there are only two classifications through this grouping. It is known that in the Bogor work unit, there is an infection at T1, T2, T4, T6, T7 and in the Yogyakarta Bogor work unit, there is an infection at T1, T2, T4, T6, T7 and T8. The inefficiency condition that occurs can be an information for work unit managers in the two regions as well as other work units if they have the same pattern, so that similar conditions can be avoided. The inputs that need to be managed are presented in Table 7 and Table 8.

Tables 7 and 8 provide an overview of the excess inputs that need to be managed by the management of each Bogor and Yogyakarta work unit. Gardener et al. (2011) explains that efficiency at the bank has a big impact on the bank's business, besides it is related to proper business management. In general, the excess input needs to be adjusted according to the management as follows:

#### Savings and interest expenses

Savings and interest expenses are a unit that needs to be managed properly. When the amount of savings from customers is small, it can have an impact on the level of liquidity, this condition can have implications for decreased interest income. In the case of the Bogor and Yogyakarta work units there is an excess of savings that need to be utilized in the form of loans to customers. The savings that are used will have an impact on increasing interest income in each work unit and increasing the productivity of the work unit and the company.

Table 5. Comparison of average work unit performance development (percent)

Parameter	Bogor	Yogyakarta
Asset	16.31	11.32
Savings	14.42	17.41
Interest income	33.91	52.84
Interest expense	40.67	41.31
Labor costs	35.38	52.95
Credit Given	4.44	18.28

Table 6. Efficiency conditions of bank XYZ in Bogor and Yogyakarta work units

Time	Bogor		Yogyakarta	
	Score	Information	Score	Information
T1	0.74	Not efficient	0.77	Not efficient
T2	0.76	Not efficient	0.77	Not efficient
T3	0.81	Efficient	0.83	Efficient
T4	0.78	Not efficient	0.79	Not efficient
T5	0.84	Efficient	0.88	Efficient
T6	0.76	Not efficient	0.73	Not efficient
T7	0.73	Not efficient	0.73	Not efficient
T8	0.83	Efficient	0.76	Not efficient
T9	0.97	Efficient	0.98	Efficient
T10	0.93	Efficient	0.97	Efficient
T11	0.92	Efficient	0.81	Efficient
T12	0.81	Efficient	0.8	Efficient
T13	0.92	Efficient	0.88	Efficient
T14	0.85	Efficient	0.86	Efficient
T15	0.86	Efficient	0.9	Efficient
T16	0.94	Efficient	0.89	Efficient
T17	0.89	Efficient	0.89	Efficient

Table 7. Bogor Work Unit Input Management (Million Rupiah)

Input	T1	T2	T4	T6	T7
Savings	502	1238	1652	2146	2416
Interest expense	1.4	4.7	8.2	23.1	26.2
Labor costs	10.7	47.2	65.1	81.4	93.2
Credit given	1241	1345	1652	1872	2059

Table 8. Management of inputs for Yogyakarta work unit (Million Rupiah)

Input	T1	T2	T4	T6	T7	T8
Savings	786	1644	1789	1876	1984	1876
Interest expense	2.5	4.1	15.2	25.6	24.1	41.6
Labor costs	5.3	13.2	6.7	28.7	45.2	87.5
Credit given	104	98	103	248	294	337

Interest expense is related to the amount of costs borne from all customer funds. In this case it is known that both work units have an interest expense that needs to be reduced by not selling cheaply or by providing high interest rates to customers. On the other hand, XYZ Bank is a bank that has a good image related to the safety of funds from customers so that it can provide interest in accordance with the market.

#### Labor costs

Labor costs are an input that needs to be managed by each manager in the work unit. These findings indicate that in some time the work unit cannot accommodate the workforce it has properly. Conditions that have occurred only in a limited time, cannot provide conclusions for reducing employees. This condition strives for managers to be able to optimize all their resources so that they can work faster, better and consistently smarter. It is known that the composition of labor costs needs to be redesigned so that it can benefit both parties (employees and companies).

#### Credit given

Credit provided by banks needs to be increased so that the income received by each work unit can increase according to or exceed the target. The high level of credit given can have a good impact on the work unit as shown by the increase in company revenue, while when the credit is large and is not accompanied by a good mechanism it can have an impact on increasing risk.

#### Grouping of Bank Unit Performance Achievement

Performance achievement analysis is calculated using the DEAP approach through the calculation of the malmquist index. Rusydiana (2018) explains that productivity and efficiency can be measured using the Malmquist index, which can later provide an overview through quadrants. Camanho and Dyson (2006) explain that in malmquist there are 4 quadrants, namely quadrant 1 provides information related to “high productivity

and high efficiency”, quadrant 2 provides information “low productivity but high efficiency”, quadrant 3 “high productivity but low efficiency And quadrant 4 “low productivity and low efficiency”. The depiction using the scater plot is presented in groups based on the bank as presented in Figure 2.

Figure 2 provides information that the two work units (Bogor and Yogyakarta) are in quadrant 1 and 2, this is because quadrants 3 and 4 are below the value of 0.8. When the work unit is below 0.8 it indicates that the work unit is not yet efficient. It is known that the productivity of the Yogyakarta work unit does not exceed 0.85 which is the limit set by best practice. These findings provide evidence that the Yogyakarta work unit needs to improve its performance to reach above 0.85. This can be done by better managing inputs, particularly in regulating the composition of savings and credit extended to customers. Bogor work units are required to be able to maintain performance related to productivity and efficiency.

#### Managerial Implications

Current bank management can use the Bogor and Yogyakarta work units as models to be emulated in other work units. Where can manage input and output accordingly, so as to provide efficient results. Bank management can specify the four important inputs (third party funds, interest expense, labor load and loans).

There are several steps that can be taken by management, including 1) Making the best third party fund composition associated with marketing segmentation. 2) Management of interest expenses by not selling cheap bank interest to customers, while maintaining good liquidation. 3) Manpower load needs to be managed by making proper employee planning, improving the bank’s wage system, where this can be achieved by implementing a remuneration system. 4) Loans granted to customers need to be managed by increasing the funds distributed to customers but still applying the SOP for disbursement of funds.

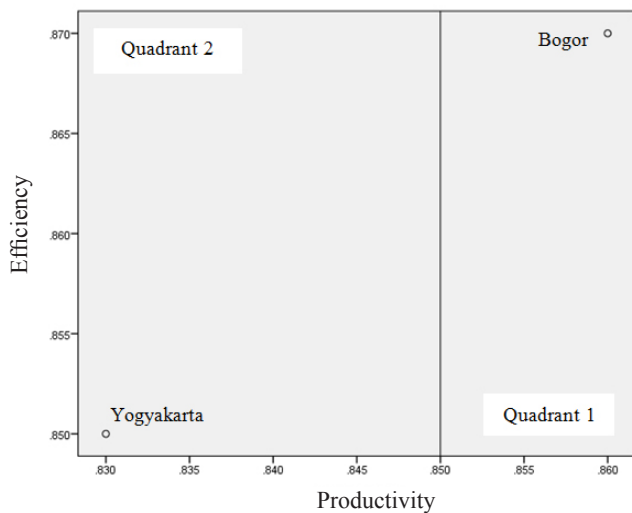


Figure 2. Malmquist Index

The regulator plays the role of the party guarding the running of the banking industry. In this case, the regulator could be represented by Bank Indonesia, the Financial Services Authority and the Government. Regulators are required to be able to make a policy that can support the performance of each bank unit or it can be said that the bank's performance in general. Economic stimulus policies, keeping inflation and interest rates stable

## CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

Company assets are known to have increased by the Bogor work unit 16.3 percent and the Yogyakarta work unit 11.3 percent. Company savings increased by the Bogor work unit by 14.4 percent and the Yogyakarta work unit by 17.4 percent, Interest income increased by the Bogor work unit 33.9 percent and the Yogyakarta work unit by 52.9 percent, the interest expense increased by the Bogor work unit 40.7 percent and the Yogyakarta work unit 41.3 percent, The work unit increased by 35.4 percent and the Yogyakarta work unit by 52.9 percent and the credit extended by the Bogor work unit by 4.4 percent and the Yogyakarta work unit 19.9 percent.

The processing results show that the two work units (Bogor and Yogyakarta) have different efficiency values in each time. It is known that in the Bogor work unit, out of the 17 times studied, 5 of them experienced inefficient conditions, while the Yogyakarta work unit was known to have 6 times that were inefficient. The

mapping of work productivity in Yogyakarta is known to have been efficient but has not yet reached the expected productivity, while the Bogor work unit has achieved the expected productivity and efficiency. This has an impact on future policies that will be taken by managers in the unit.

### Recommendations

The management of XYZ Bank is currently considered to be able to manage efficiently in both units (Bogor and Yogyakarta), in this case the two units can be used as examples for adoption in other units. During the research period, the two work units were considered to have appropriate performance in terms of efficiency, but in this case it is a demand to continue to be able to manage input and output properly to be efficient. Further studies are needed by focusing on analyzing the factors that affect the efficiency of the work unit and adding other variables in both input and output.

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