

Workload Analysis Using Full Time Equivalent Method To Optimize Employee Performance At Pt. Xyz

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ARTICLEINFO

ABSTRACT

Keywords:
 Workload,
 Full Time Equivalent,
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PT. XYZ is the only state-owned company engaged in the telecommunications sector in providing telecommunications services with the largest network in Indonesia. At PT. XYZ has a legal settlement unit where human workers are to help realize company goals. The purpose of this study was to find out how the workload of the legal settlement unit and its support units was and to find out the optimal number of workers at PT. XYZ. This study uses qualitative methods, in this study it does not test hypotheses, but only describes and analyzes the data. This study also uses the Full Time Equivalent method, which is a workload analysis method that measures the length of time it takes to complete work. Based on the results of research using the Full Time Equivalent method, it is known that there is an imbalance in the workload of the 8 units. Where there are 6 units with excessive workload including the Legal settlement unit, 3 proposed workers are needed, PT. XYZ regional 3 requires 7 proposed workers, PT. XYZ regional 4 requires 4 workers, PT. XYZ regional 5 requires 3 proposed workers, PT. XYZ regional 6 requires 2 proposed workers, and PT. XYZ regional 7 requires 2 proposed workers, while only 2 units have a normal workload, namely PT. XYZ regional 1 and 2. After making improvements by balancing the workload of other units that are excessive by adding the proposed workforce. The result is that the total workload on all units can be carried out by 42 workers.

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INTRODUCTION

PT. XYZ is the only state-owned company engaged in the telecommunications sector in providing telecommunications services with the largest network in Indonesia. PT. XYZ currently serves millions of customers throughout Indonesia providing a complete range of telecommunications services including fixed wireline and fixed wireless telephone connections, cellular communications, network services and interconnection as well as internet, television-video and data communication services, at PT. . XYZ has a legal settlement unit where this unit is engaged in settlement or legal disputes, these problems can be resolved with the assistance of the State Attorney's Attorney. In the legal settlement unit there are human workers to help realize the company's goals.

Table 1. Number of Working Days and Effective Working Hours in the Unit
 Legal Settlements in 2021

CALCULATION	AMOUNT	UNIT
Workday 2021	249	Day
work week (5)	49,8	Sunday
Month of work (20)	12,45	Bulan

Total working days in hours (8)	1992	Jam
Recess	1	Jam
leeway factor	2	%
Average effectiveness factor	98	%

Source: PT. XYZ

Based on table 1, it is explained that in this unit there are 249 working days in 2021 in 1 year. In 1 working week there are 5 working days where in one year there are 49.8 weeks and in 1 working month there are 20 working days where in one year there are 12.45 months and the total working days in 1 day are 8 hours and in 1 year there are 1992 hours in a year, where in 1 day the number of effective working hours is 8 hours plus 1 hour rest time. As well as being given an allowance factor of 2% in a working day in the form of (going to the toilet, drinking, etc.). According to Matrio et al, (2021) a workload that is too heavy or too light will result in work inefficiency. Workload overload indicates that the number of workers employed is not in accordance with the workload received so that it can cause physical and psychological fatigue which results in decreased productivity due to work fatigue.

Humans have an important role in the sustainability of a company, so it is important for companies to focus more on the conditions of their workers in completing the work given by the company. According to Hasibuan (2017) states that Human Resource Management is the science and art of managing relationships and the role of the workforce so that it is effective and efficient in helping the realization of company, employee and community goals. Kurniawan (2020) Human resources need to be considered in a company, because HR is the most important factor in producing a quality product. Human resource planning is making decisions now about things to do in the future. Human resource planning, which is the focus of attention by management to further ensure that the organization has the right workforce available to occupy various positions, positions and the right workforce at the right time (Siagian, 2018).

Labor is an important thing in a company. The workforce is managed by one of the departments, namely HR. Matters related to employment within the company will be managed by the HR department. PT XYZ always implements every form of its policies related to human resources so that employees can work effectively and efficiently, but in reality, this has not been fully realized. The main reason is that workload measurement has not been implemented for each position in the Legal Settlement Unit, so there is a discrepancy between workload and the number of workers which results in work inefficiency as well as an increase in workload.

The method used in this study is workload analysis theory because it is suitable for analyzing the workload on the legal settlement sub-unit of PT. XYZ. According to Pranoto & Retnowati (2021) that "workload analysis is an action that aims to determine the amount of time needed by employees to complete a job". Workload analysis is very important to calculate exactly how much labor is needed to complete all tasks in a part or unit in the company. In this study, identification of the description of each worker's work activities, analyzing the workload for each worker and the number of labor requirements, the Legal Settlement unit section, namely by using the Full Time Equivalent method.

Based on the results of initial observations, there is a similarity in the value of the productive percentage in each unit. This happens because the number of activities and work methods carried out in each of these units is still the same. The legal settlement unit for 2021 has not yet calculated the workload, so it is necessary to calculate the workload to find out how much the workload is for the legal settlement sub-unit at PT. XYZ and its supporting sub units in handling legal cases.

Koesomowidjojo (2017) Workload analysis is a process for calculating the workload of a position or job as well as the human resource requirements to fill that position or job. Hudaningsih dan Prayoga (2019) Stating that Full Time Equivalent is one of the methods used in the workload analysis process. Full Time Equivalent is a workload analysis method that is carried out by comparing the time for completing work with the effectively available working time (Daud



et al, 2022). Full Time Equivalent itself is used to measure how many full time employees will be needed to complete the job.

Kasmir (2019) "Workload analysis is the workload carried by a position in accordance with predetermined work standards. Workload analysis needs to be done because it provides many benefits for the workforce and the company. In practice, there are benefits of workload analysis both from an HR and financial standpoint. According to Zikri & Susanty (2019) "Revealing that workload analysis is a set or number of activities that must be completed by an organizational unit or official within a certain time, workload measurement is defined as a technique to obtain information about the efficiency and effectiveness of work". Meanwhile, Pranoto and Retnowati (2021) workload analysis is a process for calculating the volume of work

Based on the above understanding, it can be concluded that workload analysis is one of the management techniques to obtain job information, through research and assessment processes carried out in the analysis. By doing a workload analysis it will be able to prevent stress or work pressure, not only excessive workload which is worried about making an employee have low performance. Time pressure and concentration on information will greatly affect employees in completing their work.

By doing this analysis, it is expected to know the number of workers needed to complete a job, both in work units, departments, divisions, and companies. Therefore, before carrying out a workload analysis, the party in charge of conducting workload analysis and the resources working in the company, the authorized party should understand the workload that is being supported by the workforce so that the workload of the workforce will become more effective and efficient.

Based on the background of the problem, the authors formulate several problems such as how to measure the workload on the Legal Settlement unit of PT. XYZ and its supporting sub-units in handling legal cases using the Full Time Equivalent method. How to determine the optimal number of labor requirements based on workload using the Full Time Equivalent for each work unit in the Legal Settlement sub-unit PT. XYZ.

Framework Of Thinking

Workload analysis is a method commonly used to determine the amount or quantity of labor required. An uneven workload can result in inefficiency at work because they feel that the workload they are carrying out is too excessive or even lacking, the workload imposed on workers occurs in three conditions, namely normal workload, excessive workload and workload that is too low (underload). Calculation of workload using the full time equivalent method is the time method used to complete various jobs compared to the effective working time available. full time equivalent aims to simplify work measurement by converting workload hours to the number of people needed to complete a particular job. One company that has not done workload calculations is PT. XYZ as seen from observations and results of interviews with managers and officers. To be able to optimize the workforce, companies need to calculate workload using the full time equivalent method so that the existing workforce at the company becomes effective and efficient.

The negative impacts that will occur if you do not carry out a workload analysis include, according to Koesomowidjojo (2017) "a workload that is too heavy or too light will result in work inefficiency. Excessive workload indicates that the number of workers employed is not in accordance with the workload received, which can cause physical and psychological fatigue which results in decreased productivity due to work fatigue. Meanwhile, a workload that is too low indicates that the number of workers employed is too much so that the company must allocate costs for the salaries of more employees with the same productivity. This causes work inefficiency.

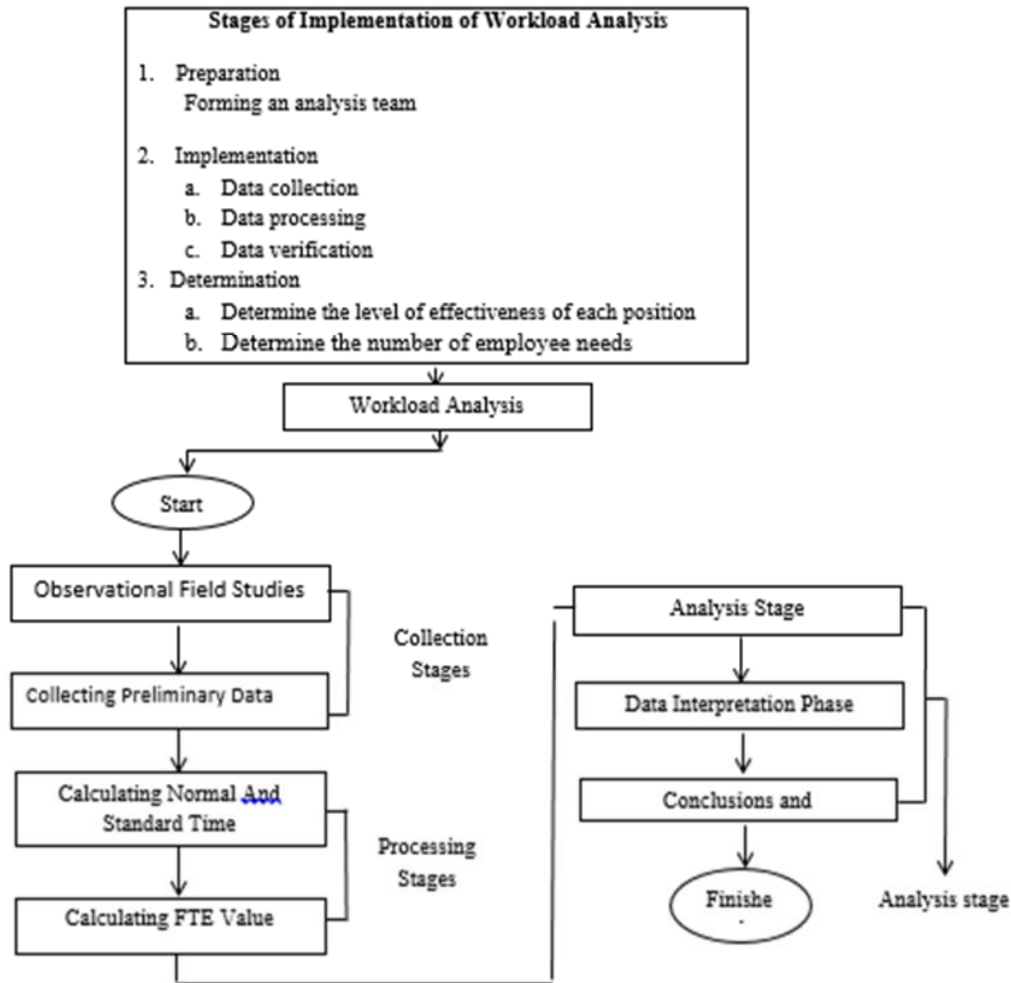


Figure 1. Framework

METHOD

This research uses a descriptive qualitative research method with a case study design. According to Sugiyono (2019) argues that qualitative research is a research method based on postpositivism or enterpretive philosophy that is used to research on natural object conditions, where the researcher is the key instrument. Data collection techniques were carried out using triangulation (a combination of observation, interviews and documentation), the data obtained tended to be qualitative data, data analysis was inductive or qualitative in nature, and the results of the research were to understand meaning, understand uniqueness, construct phenomena, and find hypotheses. As for the informants in this study, to obtain data regarding workload analysis at the legal settlement unit of PT. XYZ Consists of 2 categories of informants, namely Managers and Officers in each unit and sub unit of PT. XYZ.

Trustworthiness is ensuring validation and reliability in qualitative research. One way to get Trustworthiness is to do triangulation by comparing data from interviews conducted by researchers and revalidating the results of existing interviews. The level of trust from the research results can be achieved if the researcher adheres to four principles, namely: the degree of trust (credibility), dependability (dependability), transferability (transferability), and certainty (confirmability).

In this test, researchers conducted interviews with several different sources to find out the problems studied.

RESULTS AND DISCUSSION

To calculate the workload, it requires the company's working time. The following is the number of days that will be used in calculating employee workload as shown in Table 2.

Table 2. Number of Company Working Days in 2021

Calculation	Amount	Unit
1 Day	8	O'clock
1 Sunday	5	Day
1 month	20	Day
1 year	249	Day

Sumber: PT XYZ

Based on table 3 of the calculation of national holidays, weekends, leave and permits that have been done above, the working hours in one year are as follows:

Table 3. Calculation of Effective Working Hours in 2021

Calculation	Amount	Unit
1 day	249	Hari
Annual Working Hours	1992	Jam
Work effectiveness	92	%
Total effective hours per year	1992	Jam

Source: PT XYZ

Based on table 3, it is known that the effective hours of each work unit in one year are 1992 hours/year. In fact, units and sub-units often restart work after an hourly break, resulting in work effectiveness of 98%. The total work effectiveness time is obtained from reducing the leeway value, namely $100\% - 2\% = 98\%$. After doing the calculations, the effective working hours are only 1952.16 hours/year.

Table 4. Unit Overall Cycle Time Table

Sub Units	time period	Working time	N	N'	Information
<i>Legal settlement</i>	yearly	15198	8	279.3920714	Enough
PT. XYZ Regional 1	yearly	5518.8	8	279.3920714	Enough
PT. XYZ Regional 2	yearly	8145	8	279.3920714	Enough
PT. XYZ Regional 3	yearly	18174	8	279.3920714	Enough
PT. XYZ Regional 4	yearly	12154.7	8	279.3920714	Enough
PT. XYZ Regional 5	yearly	10536.8	8	279.3920714	Enough
PT. XYZ Regional 6	yearly	6294.8	8	279.3920714	Enough
PT. XYZ Regional 7	yearly	8192.6	8	279.3920714	Enough

Source: Researcher

Data Adequacy and Uniformity Test

At this stage of data processing, the first thing to do is to test the data adequacy. In the data adequacy test, there are 2 influencing factors, namely the level of confidence (k) and the level of accuracy (s). The level of confidence used is 95% or equal to 2 and the level of accuracy used is 20% or 0.2. The data adequacy test formula is as follows:

$$N' = \frac{k / s \sqrt{(N \cdot \sum x^2) - (\sum x)^2}}{\sum x}$$

Where:

N' = The actual number of measurements required

N = The number of preliminary measurements that have been carried out

X = The observed settling time during the measurements that have been made

K = Price index whose magnitude depends on the level of confidence

The value of K is determined based on the level of confidence and the desired level of accuracy, respectively, as follows:

K = 99% confidence level, then $k = 2.58 = 3$

If the confidence level is 95%, then $k = 1.96 = 2$

If the level of confidence is 68%, then $k = 1$

S = Degree of accuracy

Finding the upper control limit (BKA)

Finding the lower control limit (BKB)

Table 5. Data Uniformity Test and Data Adequacy Test

Sub Units	Working time	BKA	BKB	N	N'
<i>Legal settlement</i>	15198	45.9163	2.5837	8	279.3920714
PT. XYZ Regional 1	5518.8	45.9163	2.5837	8	279.3920714
PT. XYZ Regional 2	8145	45.9163	2.5837	8	279.3920714
PT. XYZ Regional 3	18174	45.9163	2.5837	8	279.3920714
PT. XYZ Regional 4	12154.7	45.9163	2.5837	8	279.3920714
PT. XYZ Regional 5	10536.8	45.9163	2.5837	8	279.3920714
PT. XYZ Regional 6	6294.8	45.9163	2.5837	8	279.3920714
PT. XYZ Regional 7	8192.6	45.9163	2.5837	8	279.3920714

Table 5 explains the adequacy and uniformity test of data for each sub-unit. Data uniformity testing is a useful test to ensure that the data collected comes from the same system. Through testing it can be seen that there are differences in data outside the control limits (out of control) which can be depicted on the control chart. The calculation data for the adequacy test and data uniformity per unit in detail.

The following is the calculation of the workload for the legal settlement unit.

Table 6. Value of Full Time Equivalent Unit Legal Settlement

No	Name of activity intensity	time period	Frequency	Duration	Annual	FTE
1	Compile OKR documents	Yearly	1	4	4	16
2	Formulate legal aid policies	Yearly	54	90	1	4860
3	Ensuring case handling	Yearly	32	102	1	3264
4	Ensuring a letter of subpoena	Yearly	9	54	1	486
5	Conduct analysis, assistance and legal recommendations	Yearly	54	8	1	432
6	Ensure document analysis	Yearly	32	16	1	512
7	Ensuring legal document analysis	Yearly	9	24	1	216
8	Make legal aid recommendations	Yearly	54	6	1	324
9	Create a lawsuit analysis document	Yearly	32	18	1	576
10	Coordinate social control	Yearly	32	18	1	576
11	Supervise requests for legal assistance	Yearly	54	6	1	324
12	Coordinate with related parties	Yearly	32	18	1	576
13	Documenting lawsuit analysis	Yearly	32	18	1	576
14	Coordinate social control	Yearly	9	18	1	162
15	Coordinating legal aid	Yearly	54	6	1	324
16	Compile a lawsuit response worksheet	Tahunan	32	18	1	576
17	Coordinate related to non-litigation security	Yearly	9	18	1	162



18	Compile a legal aid plan document	Yearly	54	6	1	324
19	Develop a work program plan	Yearly	76	12	1	912
Total						15198

The following is an example of the calculation to get the FTE value for the Jakarta legal settlement unit element 1.

Total element hours = activity frequency X duration (hours) X Days of the year

FTE = $\frac{\text{(Total element hours worked per year)} + \text{Allowance}}{\text{effective working hours per year}}$

$$\text{FTE} = \frac{15198 + 2\% (15198)}{1992}$$

$$\text{FTE} = \frac{15198 + 303,96}{1992}$$

$$\text{FTE} = \frac{15501,96}{1992}$$

$$\text{FTE} = 7.78210$$

Table 6 explains that the legal settlement unit gets more workload or Overload where the workforce in this unit totals 5 employees with a total FTE value of all activity elements of 7.78210. so that in order for the workforce to be effective and efficient, 3 more proposed workforces are needed so that it can be easier to do work according to the existing needs of the company, because the company has determined the standard workload of its employees.

Prefix Condition Number of Units and Proposed Units

Table 7. Prefix Condition Number of Units

Sub Unit	Nilai FTE	FTE Normal
Unit legal settlement	7.78	1.28
PT. XYZ Regional 1	2.82	1.28
PT. XYZ Regional 2	4.17	1.28
PT. XYZ Regional 3	9.30	1.28
PT. XYZ Regional 4	6.22	1.28
PT. XYZ Regional 5	5.39	1.28
PT. XYZ Regional 6	3.22	1.28
PT. XYZ Regional 7	4.11	1.28
43.01		

Table 8. Proposed Condition Number of Units

Sub Unit	FTE value	Previous workforce	The workforce should be	FTE Normal
Unit legal settlement	0.97	5	8	1.28
PT. XYZ Regional 1	0.94	3	3	1.28
PT. XYZ Regional 2	1.04	4	4	1.28
PT. XYZ Regional 3	1.03	2	9	1.28
PT. XYZ Regional 4	1.03	2	6	1.28
PT. XYZ Regional 5	1.07	2	5	1.28
PT. XYZ Regional 6	1.07	1	3	1.28
PT. XYZ Regional 7	1.02	2	4	1.28
Amount	8.17	21	42	

Workload balance graph

Table 9. Unit-wide Prefix FTE Value

Sub Unit	Nilai FTE	FTE Normal
Unit legal settlement	7.78	1.28
PT. XYZ Regional 1	2.82	1.28
PT. XYZ Regional 2	4.17	1.28
PT. XYZ Regional 3	9.30	1.28
PT. XYZ Regional 4	6.22	1.28
PT. XYZ Regional 5	5.39	1.28
PT. XYZ Regional 6	3.22	1.28
PT. XYZ Regional 7	4.11	1.28
	43.01	

In 9 is the result of the overall workload of all units, the results of the workload are not evenly distributed in all units, the results are almost entirely not, the workload unit is classified as overload, which means it works inefficiently because it is too heavy and there is 1 unit that is normal (fit), namely in the PT unit. XYZ Regional 1 and 2. To calculate the workload balance for each unit. Line efficiency which is the ratio of total working time divided by cycles multiplied by the amount of work or the amount of work efficiency divided by the amount of work.

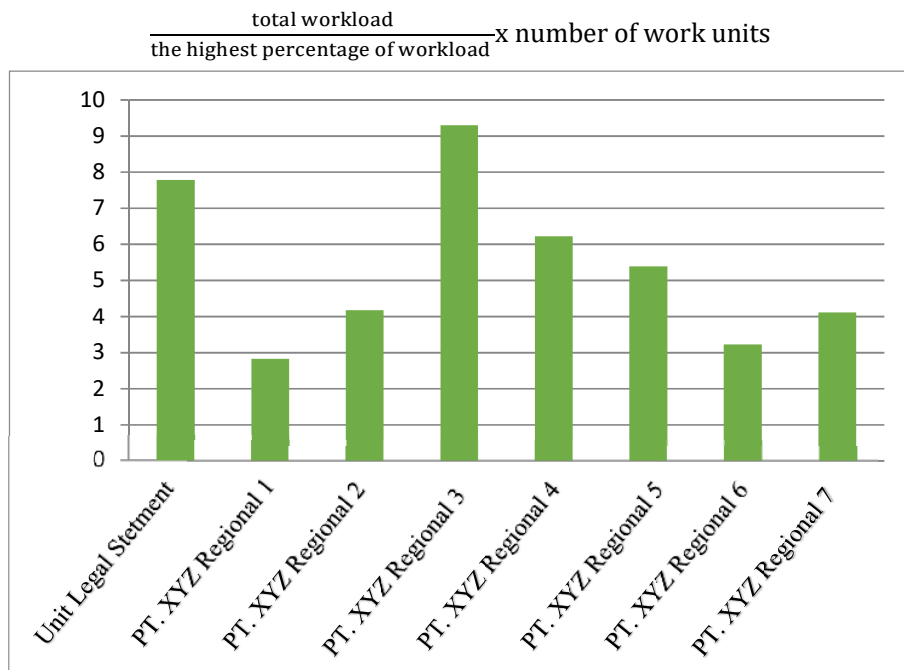


Figure 2. Prefix Workload Balancing

In Figure 2, the graph of the initial workload balance for all units and the balance result is 5%, which is obtained from the calculation of the total FTE value / (FTE normal * number of units).

$$= 43.01 / (1.28 * 8)$$

$$= 5 \%$$

Graph of Proposed Workload Balance

Table 10. Proposed Overall FTE score results

Sub Unit	FTE value	Proposed workforce	Normal FTE
legal settlement unit	0.97	8	1.28
PT. XYZ Regional 1	0.94	3	1.28
PT. XYZ Regional 2	1.04	4	1.28
PT. XYZ Regional 3	1.03	9	1.28
PT. XYZ Regional 4	1.03	6	1.28
PT. XYZ Regional 5	1.07	5	1.28
PT. XYZ Regional 6	1.07	3	1.28
PT. XYZ Regional 7	1.02	4	1.28
Jumlah	8.17	42	

In table 10 For the legal settlement unit where there are already 5 employees and it is proposed that 3 additional employees with a workload of 0.97 for each worker, for PT. XYZ regional 1 and 2 are normal with FTE values of 0.94 and 1.04, for PT. XYZ regional 3 where there are already 2 employees and it is highly recommended to add 7 additional employees with a workload of 1.03 for each workforce, PT. XYZ regional 4 already has 2 employees and it is also highly recommended to add 4 proposed employees with a workload of 1.03 for each workforce, PT. XYZ Regional 5 already has 2 employees and it is also highly recommended to add 3 proposed employees with a workload of 1.07, PT. XYZ regional 6 only has 1 employee and it is highly recommended to add 2 proposed employees with a workload of 1.07, and for Telkom regional 7 there are already 2 employees and it is also proposed to add 2 more employees with an FTE value of 1.02.

All suggestions are highly expected so that the workload on each unit becomes effective and efficient as well as evenly distributed in work and can obtain a normal FTE value (fit).

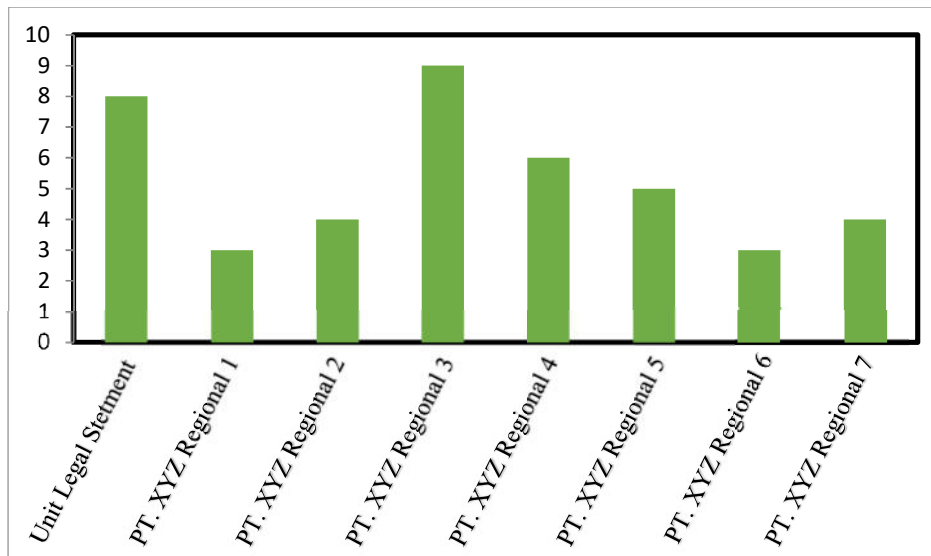


Figure 3. Graph of Proposed FTE Balancing

In Figure 3, the graph of the workload balance of all proposals in all units and the balance result is 80%, which is obtained from the calculation of the total value of FTE/ (Normal FTE * Number of units)
 $= 8.17 / (1.28 * 8)$
 $= 80\%$

Based on the calculations, it can be seen that there is an increase in the value of the FTE balance before and after the proposal. It is known that the FTE value before the proposal was 5% and after the proposal greatly increased to 80%. This means that there is an increase in the value of the FTE balance by 75%.

CONCLUSION

Based on the research that has been conducted on the legal settlement unit and its supporting units, it can be concluded that the workload received by each unit for each job is in the normal category at PT. XYZ regional 1 and PT. XYZ regional 2, namely for PT. XYZ regional 1 with a total of 3 workers the workload is 2.82 and for PT. XYZ regional 2 with a total of 4 workers, the workload is 4.14. For other units, the results of the workload are classified as underload, for the legal settlement unit there are 5 workers, the result of the legal settlement unit workload is 7.78, PT. XYZ Regional 3 there are 2 workers from the workload of PT. XYZ regional 3 is 9.30, PT. XYZ regional 4 there are 2 workers from the workload of PT. XYZ Regional 4 is 6.22, PT. XYZ regional 5 there are 2 workers from the workload of PT. XYZ Regional 5 is 5.39, PT. XYZ Regional 6 there is 1 workforce resulting from the workload of PT. XYZ Regional 6 is 3.22, and PT. XYZ regional 7 there are 2 workers the result of the workload is 4.11.

The results of the full time equivalent calculation show that the workload of the 8 units is still not balanced. Where there are 6 regions with excessive workload, while only 2 units have normal workload. After making improvements by balancing the workload of other units that are excessive by adding the proposed workforce. The result is that the total workload on all units can be carried out by 42 workers. And then the workload balance value greatly increased from the previous 5% to 80%.

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