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## The Effect of Competences, Work Facilities, and Work Discipline against Work Productivity


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***ABSTRACT***

*This study aims to analyze the effect of Competence, Work Facilities, and Work Discipline to Work Productivity on Job Output in Ciledug District Employees. This research design is causal quantitative. With techniques for gathering primary and secondary information. Primary data acquired via internal information distributing questionnaires to Ciledug District employees who have been determined as samples. Meanwhile, secondary data was obtained from literature studies. The research sample encompassed all full-time staff at Ciledug Subdistrict, Tangerang City. The subset applied in this research consisted of 65 permanent employees. The sample collection technique used saturated samples, and the dataset was analyzed using the Smart PLS 4.0 software. The findings show that Competence, Work Facilities, and Compliance with Work Standards exerts a constructive and notable impact on Job Output, Discriminat Validity, AVE, Composite Reliability), along with inner model hypothesis evaluation ($R^2$, Model Fit, bootstrapping).*



***Keywords:*** *Work Productivity; Competence; Work Facilities; Work Discipline.*

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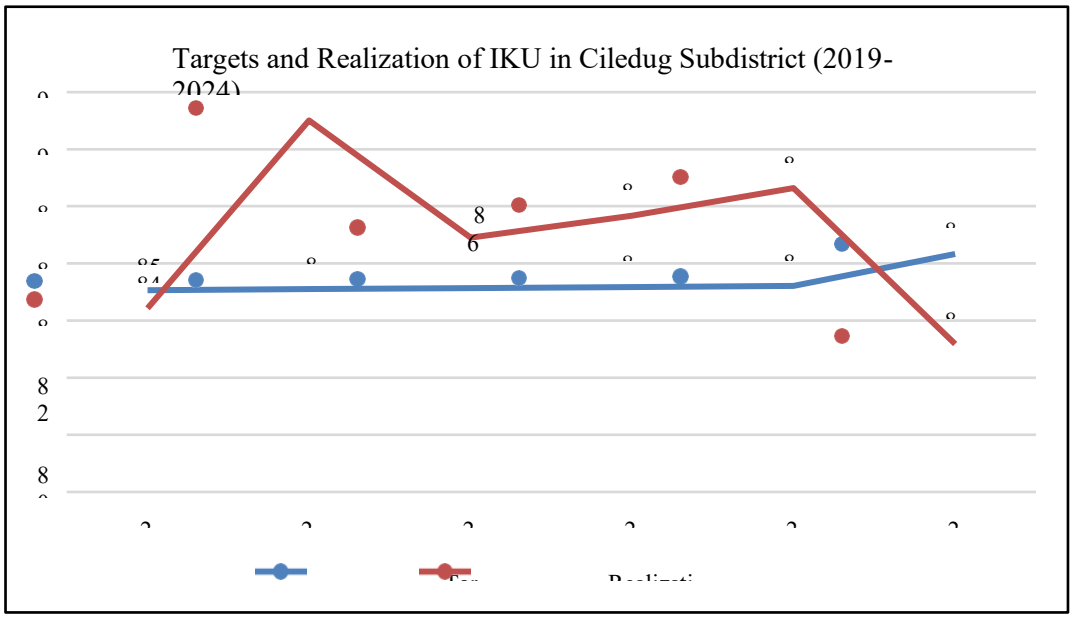
## INTRODUCTION

Organizational development in this era of globalization is very rapid and has made competition between organizations increasingly fierce. In order to survive, organizations need to have the capabilities and advantages to compete effectively (Yudhiansyah, 2023). Workforce plays a crucial role in organizations, companies, or institutions. Without the involvement of quality human resources, the implementation of various activities within the organization will not run optimally. Therefore, it is important for every organization to understand that success or failure in carrying out its duties and functions is highly dependent on the quality, performance, and productivity of its workforce.

In 2019, the IKU (Indikator Kinerja Utama) realization reached only 84.43 points out of the target of 85.06, indicating suboptimal productivity. In 2020, there was a significant increase with a realization of 91.01 points, exceeding the target of 85.10. However, in 2021, although the target of 86.90 points was achieved, there was a decrease of 4.11 points compared to the previous year. In 2022 and 2023, the achievement increased to 87.68 and 88.64 points, respectively, but in 2024 it dropped sharply to 83.18 points, below the target of 86.33, marking the lowest performance in the past six years and indicating a significant decline in productivity.

**Figure 1** Indikator Kinerja Utama Ciledug Subdistrict




*Source: Kec.Ciledug.go.id*

Figure 1 shows that Ciledug Subdistrict consistently set IKU targets within a stable range from 2019 to 2024. However, the actual realizations of these IKUs fluctuated significantly throughout the period. The Ciledug Subdistrict government needs to thoroughly evaluate the factors behind this decline. Efforts to adapt and improve public services are essential to maintaining citizen satisfaction and achieving KPI targets consistently. Raising awareness of the importance of efficient public service and improving management systems can be key strategies to enhance performance outcomes in the future.

To identify the factors affecting workforce output, the investigator carried out a pre-survey of 15 respondents who were employees of Ciledug Subdistrict. This pre-survey used

five variables, namely work discipline, work facilities, leadership, communication skills, and competence, to identify the factors that most influence employee productivity in the subdistrict. Based on the pre-survey results, there are three variables that show the most weaknesses, namely competence, work facilities, and work discipline.

This research relates to Sustainable Development Goal (SDG) 8, which highlights the importance of decent work and economic growth. This goal emphasizes the creation of decent jobs, promotes inclusive economic growth, and ensures adequate social protection for all workers. The higher the productivity level, the higher the contribution of the workforce to national economic growth, which ultimately can improve the well-being of society and the nation's competitiveness on the global stage.

This study is expected to provide applicable and academic benefits to the Ciledug Subdistrict. Practically, The study results may serve as a guideline for the subdistrict in improving manpower quality quality. improving work culture, and as a reference for further research related to employee implementation in the local government environment. Theoretically, this study is expected to enrich the literature on work productivity, particularly in the government sector or public organizations such as subdistricts.

## LITERATURE REVIEW

### Human Resources Management

According to Sinambela (2016)**,** HRM refers to overseeing all aspects concerning staff, laborers, executives, and other personnel in order to support the organization's actions in fulfilling its set objectives. According to Kaswan (2017), Human Resource Management (HRM) is a field of management that encompasses planning, organizing, directing, and various other aspects. HRM is responsible for managing human resources and optimizing their abilities to contribute to the achievement of stakeholder goals.

### Work Productivity

According to Heizer (2016), productivity refers to the proportion of outcomes to resources utilized). Productivity is also defined as the ratio of the price of inputs to outputs, the difference between the total expenditure and inputs expressed in a common unit. According to Adiwijaya (2023), Work productivity is an evaluation of the effectiveness and efficiency of a worker in achieving work results within a certain period of time, based on the quality and quantity of work produced using available resources.

### Competence

According to Wibowo (2017), Competence the capability to execute duties grounded in expertise and understanding, reinforced by the necessary work ethic. Based on research Sari & Ubaidillah (2024), employee proficiency positively and significantly influences job output at PT Multi Teknik Telaga Indonesia, Sidoarjo.

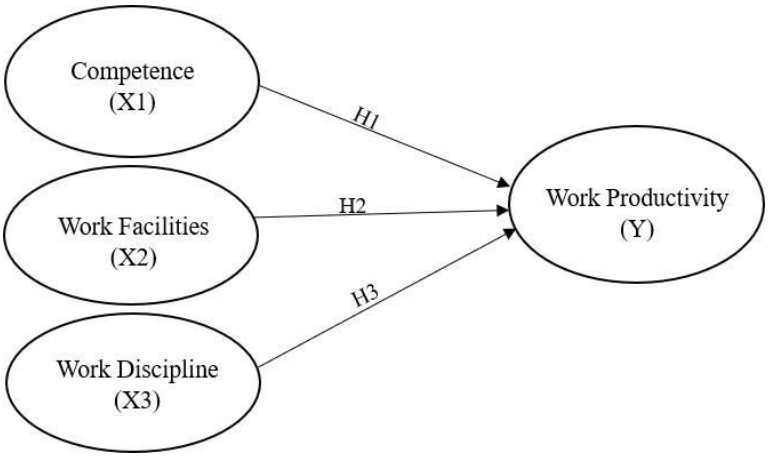
### Work Facilities

According to Asnawi (2019), Work facilities are physical means of support for the Company's activities, as well as physical means of support for the Company's activities applied in routine corporate operations, with enduring utility and future advantages. Based on research Septiady & Padilah (2022), Work facilities have a positive and significant effect on work productivity of employees at PT. Haleyora Power Area Garut.

**Work Discipline**

According to Sinambela (2016), Discipline is compliance with rules or orders established by the organization. Manullang et al (2022), Work discipline is respect for the guidelines and benchmarks established by the organization, which is instilled in employees so that they voluntarily comply with these rules and standards. Based on research Marlapa (2023), Adherence to workplace rules contributes positively and significantly to employees' job performance at PT. Denso Indonesia.

**Figure 2** Conceptual Framework




Description:

1. Predictor variables, symbolized as (X), are factors whose values are unaffected directly by other factors, such as:
   X1 : Competence
   X2 : Work
   Facilit
   X3 : Work Discipline
2. The outcome variable, marked as (Y), is a factor whose result is influenced by other variables.
   Y : Work Productivity

## METHOD

**Time and Place of reseacrh**

The research began with identifying problems at the research site, formulating problems, gathering supporting theories for the variables, developing methods and instruments for data collection, and determining the statistical analysis techniques to be used. The research period for this process was from April 2024 to June 2025. The researchers conducted their research in the Ciledug District, located at Jl. KH. Hasyim Ashari No. 02 RT 001/RW 004, Sudimara Barat Village, Ciledug District, Tangerang City, Banten.

**Research Design**

The research method constitutes a systematic scientific method used to collect data to achieve specific objectives and provide benefits. This study uses a quantitative causality

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research design, intended to identify the causal linkage between one variable and another (Sugiyono, 2019). The research seeks to evaluate the stated hypothesis regarding the influence of one or more variables on another variable through statistical analysis. The focus is to assess the extent to which capability, workplace infrastructure, and adherence to rules influence employees' productivity in the Ciledug District.

**Population and Sample**

The population refers to the generalised area that includes entities or individuals possessing specific attributes and traits selected by the researcher for investigation, so that conclusions can be drawn (Sugiyono, 2019). In this research, the population is 65 permanent employees of the Ciledug sub-district. This research applies a saturated sampling approach, often termed a census, in which every member of the population is included in the sample (Sugiyono, 2019). The sample used in this study is the entire population, namely 65 permanent employees of Ciledug Subdistrict.

**Data Collection Technique**

The research employs both primary and secondary data sources. Primary information was gathered directly from the source through questionnaires distributed to respondents using a survey method, in which written questions were given to a sample taken from the research population. Meanwhile, supplementary data was sourced from secondary materials including literature, scholarly publications, and papers, and relevant literature that supported the research.

**Data Analysis Method**

Data analysis was performed with SmartPLS SEM (Partial Least Squares – Structural Equation Modeling) application. According to Ghozali (2021), the PLS method is used to describe latent variables measured through their indicators. The selection of this method was based on the characteristics of the study, which involved latent variables that could be measured through related indicators.

## RESULT AND DISCUSSION

### Data Quality Test Results

1. **Outer Model**
   a. **Convergent Validity**

In construct measurement models, convergent validity is evaluated through the correlation of item or component scores with the computed construct scores using partial least squares. Individual indicators with correlation values above 0.7 are considered reliable. The relationship linking indicators and constructs is displayed in the table and structural figure below based on the output results obtained below :

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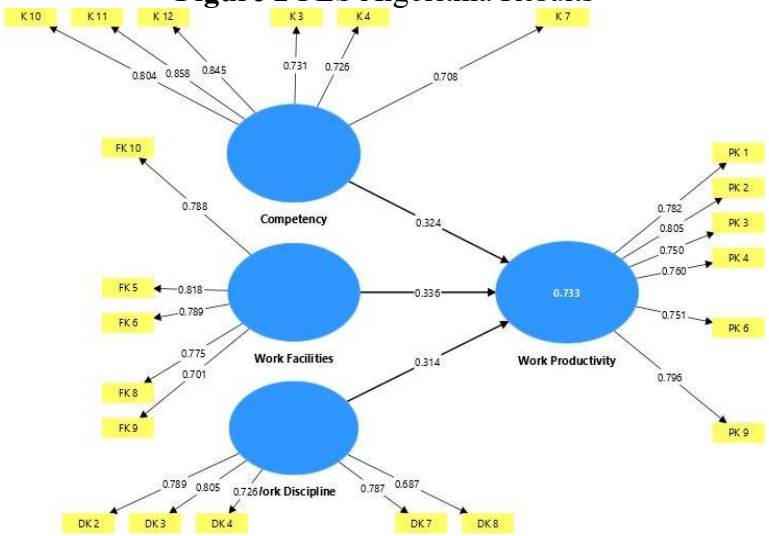
**Figure 2** PLS Algoritma Results




The figure above shows the results of modifications to the structural model resulting from SmartPLS analysis, which illustrates the connection among Competency, Work Facilities, and Work Discipline and Work Productivity. The outer loading values of all indicators are ≥ 0.7, thus meeting the criteria for convergent validity. Indicators with values below 0.7 were removed at an earlier stage because they did not adequately represent the construct

**Table 1** Convergent Validity Test Results (modified)

| Variable | Indicator | Outer Loading | Description |
|---|---|---|---|
| Work Productivity (Y) | PK 1 | 0.782 | Valid |
| | PK 2 | 0.805 | Valid |
| | PK 3 | 0.748 | Valid |
| | PK 4 | 0.759 | Valid |
| | PK 6 | 0.754 | Valid |
| | PK 9 | 0.796 | Valid |
| Competence (X1) | K 10 | 0.804 | Valid |
| | K 11 | 0.858 | Valid |
| | K 12 | 0.845 | Valid |
| | K 3 | 0.731 | Valid |
| | K 4 | 0.726 | Valid |
| | K 7 | 0.708 | Valid |
| Work Facilities (X2) | FK 10 | 0.788 | Valid |
| | FK 5 | 0.818 | Valid |
| | FK 6 | 0.789 | Valid |
| | FK 8 | 0.775 | Valid |
| | FK 9 | 0.702 | Valid |
| | DK 2 | 0.766 | Valid |

| | | | |
|---|---|---|---|
| Work Discipline (X3) | DK 3 | 0.801 | Valid |
| | DK 4 | 0.751 | Valid |
| | DK 5 | 0.802 | Valid |
| | DK 7 | 0.776 | Valid |

*Source: Output PLS, 2025*

The modified test results showed that all measures satisfied the convergent validity standard, indicated by a loading factor exceeding 0.7. Thus, each variable could be analyzed in greater depth and used to support the next stage of analysis.

**b. Dicriminant Validity**

Discriminant validity testing is used to test the correlation between indicators of one variable and another variable. Discriminant validity aims to determine the extent to which a construct demonstrates adequate discrimination, by examining its loading values where the loading values in the target construct are greater than the variable values.

**Table 2** Discriminant Validity (Cross Loadings)

| | Work Discipline | Work Productivity | Competence | Work Productivity |
|---|---|---|---|---|
| DK 2 | 0.766 | 0.445 | 0.448 | 0.578 |
| DK 3 | 0.801 | 0.503 | 0.537 | 0.653 |
| DK 4 | 0.751 | 0.400 | 0.600 | 0.552 |
| DK 5 | 0.802 | 0.535 | 0.632 | 0.584 |
| DK 7 | 0.776 | 0.564 | 0.591 | 0.618 |
| FK 10 | 0.402 | 0.788 | 0.441 | 0.582 |
| FK 5 | 0.540 | 0.818 | 0.477 | 0.606 |
| FK 6 | 0.559 | 0.789 | 0.599 | 0.554 |
| FK 8 | 0.531 | 0.775 | 0.495 | 0.622 |
| FK 9 | 0.401 | 0.702 | 0.517 | 0.515 |
| K 10 | 0.487 | 0.443 | 0.804 | 0.510 |
| K 11 | 0.630 | 0.674 | 0.858 | 0.700 |
| K 12 | 0.601 | 0.514 | 0.845 | 0.575 |
| K 3 | 0.656 | 0.485 | 0.731 | 0.604 |
| K 4 | 0.426 | 0.394 | 0.726 | 0.533 |
| K 7 | 0.533 | 0.483 | 0.708 | 0.603 |
| PK 1 | 0.589 | 0.681 | 0.583 | 0.782 |
| PK 2 | 0.662 | 0.523 | 0.558 | 0.805 |
| PK 3 | 0.509 | 0.504 | 0.658 | 0.748 |
| PK 4 | 0.510 | 0.491 | 0.615 | 0.759 |
| PK 6 | 0.653 | 0.691 | 0.524 | 0.754 |

The results in Table 2 above show that the indicators in each construct have the highest cross-loading scores for their own constructs relative to others, thereby meeting discriminant

validity standards.

Discriminate validity assessment can additionally be conducted using the Average Variance Extracted (AVE) metric which reflects the proportion of variance in the indicators that can be explained by the construct. A construct is achieving adequate convergent validity requires an AVE value above 0.5.

**Table 3** AVE Results

| Variable | Average Variance Extracted (AVE) | Description |
|---|---|---|
| Work Productivity | 0.600 | Reliable |
| Competence | 0.610 | Reliable |
| Work Facilities | 0.601 | Reliable |
| **Variable** | **Average Variance Extracted (AVE)** | **Description** |
| | | |
| Work Discipline | 0.608 | Reliable |

*Source: Smart PLS, 2025*

Based on Table 4 above, it can be seen that all Average Variance Extracted (AVE) values in this study are above 0.5, so that each variable meets the convergent validity criteria and is declared reliable.

**Table 4** Discriminant Validity Test Results (Fornell Lacker Criterion)

| | Work Discipline | Work Facilities | Competence | Work Productivity |
|---|---|---|---|---|
| **Work Discipline** | **0.779** | | | |
| **Work Facilities** | 0.630 | **0.775** | | |
| **Competence** | 0.719 | 0.650 | **0.781** | |
| **Work Productivity** | 0.768 | 0.745 | 0.761 | **0.774** |

*Source: Smart PLS, 2025*

Based on Table 4, each construct has a larger AVE square root value compared to its relationship with different constructs in the model. Thus, each construct shows an AVE value that exceeds the correlation between constructs, so that this model has met the criteria for discriminant validity.

**c. Composite Reliability and Cronbach's Alpha**

The construct reliability test was conducted using Composite Reliability and Cronbach's Alpha. Both measures are considered good if they have a value above 0.7, which indicates the consistency of the indicators in accurately representing the construct.

**Table 5** Composite Reliability & Cronbach's Alpha Test Results

| Variable | *Cronbach's Alpha* | *Composite Reliability* | Description |
|---|---|---|---|
| Work Productivity | 0.838 | 0.886 | Reliable |

| | | | |
|---|---|---|---|
| Competence | 0.833 | 0.882 | Reliable |
| Work Facilities | 0.870 | 0.903 | Reliable |
| Work Discipline | 0.866 | 0.900 | Reliable |

*Source: Smart PLS, 2025*

Based on Table 4.14, all variables in this study showed reliable results because they had the Cronbach's Alpha coefficient and Composite Reliability score above 0.70, which is the minimum threshold for demonstrating internal consistency.

**2. Inner Model**

Inner models or structural modeling predicts causal linkages among latent variables, which are inherently unobservable. These models are constructed based on theoretical foundations and describe the cause–effect associations among latent constructs in a study.

**a. R-Square**

**Table 6** Variable R Square

| Variable | R-square | R-Square Adjusted |
|---|---|---|
| Work Productivity | 0.739 | 0.726 |

*Source: Smart PLS, 2025*

From Table 5, the $R^2$ score for Work Productivity is 0.739, signifying that the structural framework lies within the strong category. This implies that 73.9% of the variability in the Work Productivity variable can be accounted for by the predictor variables applied in the model. Meanwhile, the remaining 26.1% is influenced by other variables outside the model that were not analyzed. The adjusted R-Square value of 0.726 also supports the model's suitability in explaining the relationship between latent constructs.

**b. Goodness of Fit (GoF)**

To assess the overall validity of the model (combining the outer model and inner model), testing was conducted using the GoF value. The GoF value ranges from 0 to 1, with the following interpretations: 0.1 indicates low GoF, 0.25 indicates moderate GoF, and 0.36 indicates high GoF. The GoF value is calculated as follows :

Gof $= \sqrt{AVEx\ R^2}$

GoF $= \sqrt{0.600 + 0.610 + 0.601 + 0.608/4\ x\ 0{,}739}$

Gof $= \sqrt{0{,}60475\ x\ 0{,}739}$

Gof $= 0{,}5746$

The calculation results show a Goodness of Fit (GoF) value of 0.5746, which is above the minimum limit of 0.36. This figure demonstrates that the study model is in the good category, has high feasibility, and is able to explain the relationship between variables as

a whole strongly. Thus, this model is declared feasible for use in the next stage of analysis.

### c. Hypothesis Testing Results

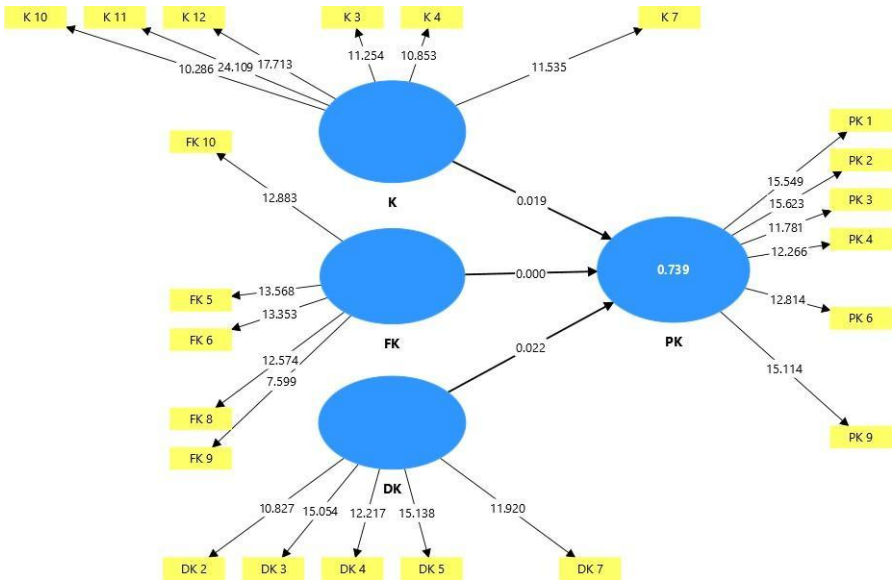
To evaluate the extent to which the relationships linkages in the structural framework are statistically significant, and bootstrapping method is used. This technique assesses significance by referring to parameter coefficient values and T-statistics. When the T- statistic exceeds 1.96, the relationship is deemed significant. Moreover, if the resulting p- value is less than 0.05, the hypothesis is accepted.

**Table 7** Hypothesis Testing Results

| | Original Sample (O) | T - Statistics | P values | Description |
|---|---|---|---|---|
| Competency -> Work Productivity | 0.294 | 4.153 | 0.019 | Positive – Significant |
| Work Facilities -> Work Productivity | 0.338 | 2.343 | 0.000 | Positive – Significant |
| Work Discipline -> Work Productivity | 0.344 | 2.283 | 0.022 | Positive – Significant |

*Source: Smart PLS, 2025*

**Figure 3** Bootstrapping




### d. Discussion

**The Influence of Competence on Work Productivity**

Hypothesis testing results reveal that the competence–productivity path records an original sample score of 0.294, which means there is a positive relationship. With a T-statistic of 4.153 exceeding 1.96 and a P-value of 0.019 under 0.05, indicating that this relationship is statistically significant. Thus, employee competence positively and significantly influences work productivity. This result aligns with previous studies by Sendi and Heryanda (2022) and Pahmi Saroja (2023), indicating that competence exerts a significant and favorable influence

on productivity.

**The Influence of Work Facilities on Work Productivity**

Hypothesis testing outcomes reveal an original sample of 0.338, signifying a positive impact between work facilities and work productivity. A T-statistic of 2.343 exceeds 1.96, and the P-value of 0.000 is well below 0.05. This indicates that workplace facilities exert a favorable and notable impact on enhancing employee work productivity. This finding aligns with the research by Patmarina et al. (2021) and Eldo Wijaya et al. (2022), which show that facilities have a significant positive effect on work productivity.

**The Influence of Work Discipline on Work Productivity**

Based on the results of hypothesis testing, the work discipline variable showed an original sample of 0.344, reflecting a favorable association. The T-statistic of 2.283 exceeded 1.96, and the P-value of 0.022 was below 0.05. Thus, work discipline yields a beneficial and meaningful impact on employee productivity. These results are reinforced by prior studies (Eri Marlapa, 2020) asserting that workplace discipline exerts a beneficial and notable influence on productivity. Additionally, research by (Burmana & Angga, 2023) also states that work discipline has a significant positive effect on employee productivity at PT. Fimaha Serang.

## CONCLUSION

From the outcomes of analysis and interpretation described in the previous section, the following conclusions can be drawn :

1. Capability positively and significantly influences productivity. The results of this study indicate that the higher the level of competence possessed by employees, the higher the work productivity achieved.
2. Work facilities have a positive and significant impact on work productivity. The results of this study indicate that the better the work facilities provided by the institution for its employees, the higher the extent of employee job output.
3. Compliance with workplace rules positively and significantly influences productivity. This finding indicates that the higher the level of discipline possessed by employees, the more optimal the work productivity demonstrated.

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