



Determinants of Female Labor Income in the TTN I Tobacco Industry: A Case Study in Pancakarya Village, Ajung, Jember

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Abstract

This study aims to examine the influence of education, age, working hours, and number of dependents on work productivity and income. The research method used is descriptive quantitative, with a sample of 48 female workers selected through purposive sampling. To test the hypotheses, path analysis was employed. The results of the study indicate that, first, working hours have a direct effect on income, second, working hours significantly influence work productivity, and third, working hours affect income indirectly through their impact on productivity.

Keywords: Female employees, Job efficiency, Income.

1. Introduction

Human resources (HR) play a central role in the success of an organization, making it essential to maintain good relationships with employees. To acquire high-quality human resources, attention must be given to career development, performance evaluation, job satisfaction, and employee commitment. Moreover, economic growth and development are key indicators used to assess a country's progress, with the primary goals of increasing real national income and productivity. Employment is crucial in both social and economic aspects, as it serves as a major objective of economic development through job creation and is considered a critical macroeconomic issue, given that labor is a primary factor of production alongside capital and technology.

Socioeconomic conditions describe an individual's position or status within their social environment. These conditions reflect a person's place within the surrounding social structure [1]. Furthermore, socioeconomic status is a socially regulated position that places individuals within a certain societal stratum, accompanied by specific rights and responsibilities [2]. In smaller communities, status is typically determined in simpler ways, and social status is closely tied to the lifestyle habits that are ingrained in individuals or groups [3]. These habits are reflected in patterns of social interaction that highlight differences in social rank or status. Socioeconomic status can also be interpreted as a condition that describes a family's financial capacity and material possessions, typically classified as good, adequate, or poor [4]. The growing participation of women across various employment sectors illustrates the diminishing restrictions on work roles based on gender. Numerous occupations that were once dominated by men are now increasingly accessible to women. This shift reflects the broader changes in the social and economic structures of society.

One of the key agricultural sectors in Indonesia is tobacco farming. Tobacco is a significant commodity contributing to agricultural activity in several regions, particularly in East Java Province. Jember Regency, in particular, is known as a center of premium tobacco production and is often referred to as the "metropolitan city of tobacco." Tobacco has been part of Java's long history, especially in Jember. Since the arrival of the Portuguese in the archipelago, tobacco from this region has been widely recognized. Jember has been one of the main tobacco-producing regions since colonial times. The most renowned variety from this area is Besuki Na-Oogst, known for its distinctive aroma and elasticity, making it a top-quality wrapper for cigars and giving it strong competitiveness in the international market.

The Agrobusiness Cooperative Tarutama Nusantara (KOPA TTN) is an independent cooperative engaged in the distribution and processing of tobacco. Over time, KOPA TTN has faced challenges in its information management system. These include issues such as manual and inaccurate data recording and unintegrated business processes, which have impacted production effectiveness and marketing efficiency. One of the business units under KOPA TTN is TTN I, which specifically manages

a type of tobacco known as Tembakau Bawah Naungan (TBN). TBN is selected due to its advantages over the traditionally processed Na-Oogst tobacco, offering superior quality and higher economic value.

The issues explored in this study stem from an interest in the conditions of women laborers working in the industrial sector, particularly in terms of their productivity and income. Consequently, the research problem is formulated to focus on several key aspects. First, whether education, age, number of family dependents, and working hours influence the productivity of female workers. Second, whether these same variables also affect the income of female laborers. Third, the extent to which work productivity relates to the income received by female workers. Fourth, whether education, age, number of family dependents, and working hours influence income indirectly through the mediation of work productivity. Based on these problem formulations, this research aims to analyze the influence of education, age, number of family dependents, and working hours on the productivity of female laborers. It also seeks to assess how these four variables directly affect their income. Additionally, the study intends to identify the relationship between work productivity and income. Finally, it examines whether education, age, family dependents, and working hours affect income through the mediation of work productivity.

In line with the research objectives, this study is limited in scope to maintain focus and relevance. The research is specifically conducted on female laborers working at TTN I, located in Pancakarya Village, Ajung Subdistrict, Jember Regency. Furthermore, the study is confined to analyzing the variables of age, work experience, working hours, and number of family dependents as influencing factors on female laborers' income. The data collection and analysis period is limited to October 2024 through January 2025 to ensure that the data remains relevant and accurately reflects the actual conditions at the time of the research.

Literature Review

1. Factors Influencing the Contribution of Balinese Women to Family Income of Souvenir Traders at Kumbusari Market (Putu Aris Noviani, 2016, Faculty of Economics and Business, Udayana University, Bali) [5]. This study aimed to examine several factors affecting working hours and the contribution of Balinese women to family income. Variables analyzed included age, education, number of family dependents, and intensity of traditional and religious activities. The analysis of 89 respondents used a path analysis approach. The results showed that age, education level, and number of dependents had a positive and significant effect on working hours, while the intensity of traditional and religious activities did not show a negative effect. These variables also affected women's contribution to family income; however, working hours did not mediate the relationship between those variables and income contribution.
2. Factors Affecting Income through Working Hours of Housewives Crafting Bamboo in Bangli Regency (Ida Bagus Windu Wiyasa, 2016, Faculty of Economics and Business, Udayana University, Bali) [6]. This research was conducted in Sulahan Village, Susut Subdistrict, Bangli, to analyze the influence of certain factors on income through working hours. The sample consisted of 126 housewives who were members of a bamboo crafting group. The study used path analysis and the Sobel test. Findings revealed that age and traditional activity intensity had a significant negative impact on working hours, while the number of dependents showed a positive influence. Furthermore, age, traditional activity intensity, number of dependents, and working hours significantly affected income, with working hours acting as a significant mediating variable.
3. The Influence of Working Hours and Work Experience on Productivity and Income of Female Workers in the Brick Industry in Tulikup Village, Gianyar (Sang Ayu Putu Ratih Purnami, 2017, Department of Development Economics, Faculty of Economics and Business, Udayana University, Bali) [7]. This study investigated the relationship between working hours and work experience on productivity and its impact on the income of female workers in the brick industry. A total of 106 respondents were selected using proportional random sampling, and data were analyzed using path analysis. Results indicated that both working hours and work experience had a significant and positive influence on productivity, which in turn positively affected income. Productivity also partially mediated the effect of working hours and experience on income.
4. Factors Influencing Women Workers' Income in Supermarkets (Case Study in North Banjarmasin Subdistrict) (Prambudi Kiki Saputra, 2019, Lambung Mangkurat University) [8]. This study used a descriptive method to analyze the factors affecting female workers' income in supermarkets in

North Banjarmasin. Findings revealed that educational level, number of dependents, presence of toddlers, and worker's age influenced income received.

5. Analysis of Female Workers' Productivity in the Wig Industry (Fiki Dwi Aisyah, 2020, State University of Semarang) [9]. This study employed a descriptive quantitative method and multiple linear regression to determine factors influencing female workers' productivity in the wig industry in Purbalingga Regency. The analysis showed that wages, length of education, and work experience had significant and positive effects on productivity.
6. The Contribution of Women's Labor Income to Household Income (Siti Khoimah, 2020, University of North Sumatra) [10]. This research combined simple tabulation, multiple linear regression, and descriptive methods to measure women's income contribution to household income. It found that women's labor income contributed 53.8% to household income. Factors such as age, number of dependents, formal education, household status, and husband's income significantly influenced this contribution. The average working hours for women in this study were eight hours per day.
7. Factors Affecting Income of Female Workers in the Informal Trade Sector in Pangkal Pinang City (Nabila Shadrina, 2021, Baturaja University) [11]. Using a quantitative approach and descriptive method, this study examined the influence of demographic variables on the income of women in the informal trade sector. The analysis showed that migration status, education level, and age influenced income, while working hours and number of dependents had no significant effect. Age also showed a non-linear relationship with income.
8. Contribution of Female Labor to the Income of Households in the Processed Carica Candy Industry in Kertek Subdistrict, Wonosobo Regency (Siti Barkah, 2023, Wahid Hasyim University) [12]. This study used a descriptive approach to analyze the influence of women's labor in the carica candy production process on household income. Results showed that working time and production capacity significantly affected income. On average, women worked eight hours a day in this industry, contributing about 33.3% of the total working hours, and their contribution to household income reached 42%.

2. Methods

This study employs a quantitative approach. The research population consists of female workers employed at TTN I, located in Pancakarya Village, Ajung Subdistrict, Jember Regency, totaling 159 individuals. The sample was selected using purposive sampling, a technique based on specific criteria or considerations aligned with the research objectives, as described by Sugiyono [13]. Based on these criteria, the sample size determined for this study is 48 female workers from TTN I. Data analysis was conducted using path analysis.

3. Results and Discussion

3.1 Sub-Structural Path 1

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.131	3.309		.644	.523
	X1	-.035	.134	-.034	-.261	.795
	X2	.121	.128	.134	.947	.349
	X3	.226	.152	.238	1.486	.145
	X4	.572	.130	.535	4.399	.000

a. Dependent Variable: Z1

Figure 1. Sub-Structural Path 1

3.2 Sub-Structural Path 2

Coefficients ^a					
Model		Unstandardized Coefficients		Standardized Coefficients	Sig.
		B	Std. Error	Beta	
1	(Constant)	2.884	2.818		1.023
	X1	.227	.133	.235	1.707
	X2	-.046	.109	-.056	.676
	X3	-.004	.132	-.004	.978
	X4	.462	.114	.497	.000
	Z1	.215	.129	.238	1.662

a. Dependent Variable: Y

Figure 1. Sub-Structural Path 2

Based on the two structural paths above, the following can be explained:

1. The hypothesis test results show that the Education variable (X1) has a significance value of 0.795 (> 0.05) and a t-value of -0.261 (< 1.682) in relation to Work Productivity (Z). Therefore, H1 is rejected, indicating that education does not have a significant positive effect on work productivity.
2. The test for the Age variable (X2) shows a significance value of 0.349 (> 0.05) and a t-value of 0.947 (< 1.682) toward Work Productivity (Z). Hence, H2 is rejected, meaning there is no significant positive effect of age on work productivity.
3. The Number of Family Dependents variable (X3) has a significance value of 0.145 (> 0.05) and a t-value of 1.486 (< 1.682) in relation to Work Productivity (Z). Thus, H3 is rejected, indicating no significant relationship between number of dependents and work productivity.
4. The analysis of Working Hours (X4) toward Work Productivity (Z) yields a significance value of 0.000 (< 0.05) and a t-value of 4.399 (> 1.682). Therefore, H4 is accepted, confirming that working hours have a significant positive effect on work productivity.
5. The Education variable (X1) in relation to Income (Y) shows a significance value of 0.095 (> 0.05) and a t-value of 1.707 (> 1.682). Although the t-value is slightly above the critical value, the significance level is still above 0.05, hence H5 is rejected. This indicates that education does not significantly influence income.
6. The Age variable (X2) toward Income (Y) yields a significance value of 0.676 (> 0.05) and a t-value of -0.420 (< 1.682), so H6 is rejected, meaning age has no significant positive effect on income.
7. The test of the Number of Family Dependents variable (X3) toward Income (Y) shows a significance value of 0.978 (> 0.05) and a t-value of -0.027 (< 1.682), hence H7 is rejected. There is no significant effect of family dependents on income.
8. The relationship between Working Hours (X4) and Income (Y) is significant, with a significance value of 0.000 (< 0.05) and a t-value of 4.061 (> 1.682). Therefore, H8 is accepted, meaning working hours significantly and positively influence income.
9. The influence of Work Productivity (Z) on Income (Y) results in a significance value of 0.104 (> 0.05) and a t-value of 1.662 (< 1.682), so H9 is rejected. This means there is no significant positive effect of productivity on income.
10. In the indirect path analysis, the effect of Education (X1) on Income (Y) through Productivity (Z) gives a t-value of 0.25, while the t-table value is 1.682. Since the t-value is less than the critical value, it can be concluded that there is no significant indirect effect. Thus, productivity does not mediate the relationship between education and income.
11. The indirect effect of Age (X2) on Income (Y) through Productivity (Z) results in a t-value of 0.813 < 1.682 , indicating no significant indirect effect. Productivity does not mediate the relationship between age and income.
12. For the indirect effect of Number of Family Dependents (X3) on Income (Y) through Productivity (Z), the t-value is 1.531 < 1.682 . Hence, there is no significant indirect effect, and productivity does not mediate the relationship between dependents and income.
13. The indirect effect of Working Hours (X4) on Income (Y) through Productivity (Z) yields a t-value of 3.834, which is greater than the t-table value of 1.682. Therefore, there is a significant indirect effect, indicating that work productivity effectively mediates the relationship between working hours and the income of female workers.

No	Hubungan Variabel	t hitung	t tabel (1,682)	Sig.	Keputusan	Keterangan
1	Pendidikan → Produktivitas	-0,261	< t tabel	0,795	H1 ditolak	Tidak berpengaruh signifikan
2	Usia → Produktivitas	0,947	< t tabel	0,349	H2 ditolak	Tidak berpengaruh signifikan
3	Tanggungan Keluarga → Produktivitas	1,486	< t tabel	0,145	H3 ditolak	Tidak berpengaruh signifikan
4	Jam Kerja → Produktivitas	4,399	> t tabel	0,000	H4 diterima	Berpengaruh signifikan
5	Pendidikan → Pendapatan	1,707	> t tabel*	0,095	H5 ditolak	Signifikansi tidak terpenuhi
6	Usia → Pendapatan	-0,420	< t tabel	0,676	H6 ditolak	Tidak berpengaruh signifikan
7	Tanggungan Keluarga → Pendapatan	-0,027	< t tabel	0,978	H7 ditolak	Tidak berpengaruh signifikan
8	Jam Kerja → Pendapatan	4,061	> t tabel	0,000	H8 diterima	Berpengaruh signifikan
9	Produktivitas → Pendapatan	1,662	< t tabel	0,104	H9 ditolak	Tidak berpengaruh signifikan

Table 1. Results of Hypothesis Testing on the Influence of Variables on the Productivity and Income of Female Workers

No	Jalur Mediasi	t hitung	t tabel (1,682)	Keputusan	Keterangan
10	Pendidikan → Produktivitas → Pendapatan	0,25	< t tabel	Tidak Signifikan	Tidak ada pengaruh tidak langsung
11	Usia → Produktivitas → Pendapatan	0,813	< t tabel	Tidak Signifikan	Tidak ada pengaruh tidak langsung
12	Tanggungan Keluarga → Produktivitas → Pendapatan	1,531	< t tabel	Tidak Signifikan	Tidak ada pengaruh tidak langsung
13	Jam Kerja → Produktivitas → Pendapatan	3,834	> t tabel	Signifikan	Terdapat pengaruh tidak langsung positif

Table 2. Results of Indirect Effect Testing (Mediation by Work Productivity)

4. Conclusion

1) The variables of education level, age, and number of family dependents do not show a significant effect on the work productivity of female workers at TTN I. In contrast, working hours have a significant influence on their work productivity. 2) The analysis results indicate that education, age, and number of family dependents do not significantly affect the income of female workers at TTN I. However, working hours have a positive and significant impact on their income. 3) Work productivity does not show a significant relationship with the income received by female workers at TTN I. 4) Indirectly, education, age, and number of family dependents do not influence income through work productivity as a mediating variable. On the other hand, working hours are proven to significantly affect income through work productivity, which means that productivity mediates the relationship between working hours and income of female workers at TTN I.

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