Journal of Innovative and Creativity
Journal Homepage: https://joecy.org/index.php/joecy
e-mail: journaljoecy@gmail.com

Faculty of Education
University of Pahlawan Tuanku Tambusai
ISSN 2775-771X (Online)
ISSN 2962-570X (Printed)
5 (1) 2025, Page 142-155

Exploring the Future Workforce of Palm Oil Industry: A Study of Student Career Interests in Riau, Indonesia

Boris Kaido[1], Feri Agriani[2], Sri Oktika Syaputri[3], Afdhal Afdhal[4], Abdul Rahman Saili[5]
[1,2,3,4] Polytechnic of Kampar Indonesia, [5] University Technology Mara Malaysia
Corresponding Author: Boris Kaido, e-mail: boriskaido@poltek-kampar.ac.id

Published: March, 2025

ABSTRACT

The palm oil industry has significantly contributed to poverty alleviation and job creation, employing approximately 16 million workers in Indonesia. However, this economic opportunity is accompanied by a lack of interest among students in pursuing careers in this sector, primarily due to negative perceptions and the nature of the sector. This study examines students' perceptions and career interests in the palm oil industry, along with the factors shaping these interests, focusing on Kampar Regency, Riau—a major palm oil hub in Indonesia. Using proportional purposive sampling, 332 participants were selected from a population of 694. : In this research during the year 2023-2025, Kampar district is selected for the study. The research conducted a survey among students in Kampar district, Riau province, which is recognized as one of the major hubs for palm oil production in Indonesia, utilizing a proportional purposive sampling method. A total of 332 participants were selected from a population of 694 individuals. Descriptive analysis was used to fulfill the first objective, while logit regression analysis was performed to meet the second objective. The results revealed that most students come from rural backgrounds, and many of their parents are engaged in the palm oil industry. Parental palm oil land ownership is highest at 0-4 hectares, and parental income is highest at IDR 0-2 million. In summary, parents have the greatest influence on the career choices of students, and the only factor influencing students' interest in pursuing a future career in the palm oil plantation sector was the level of education of the father.

Keywords: Palm oil industry, career preferences, logistic regression analysis, IndonesiaKeywords: Palm oil industry, career preferences, logistic regression analysis, Indonesia

© The Author(s). 2021 Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. To view a copy of this licence, visit http://creativecommons.org/licenses/by/4.0

INTRODUCTION

Agriculture is the most important sector, contributing nearly 50% to the national economy. Up to 27.33% of Indonesians, or 33.4 million people, depend on the agricultural sector for their livelihood (BPS, 2020). One of the important agricultural commodities in Indonesia is palm oil since the expansion of the palm oil industry in Indonesia is attributable to a combination of government-led initiatives, the acquisition of vast tracts of land by international investors, and the proliferation of contract farming arrangements across the globe (Sequino and Magallon-Avenido., 2015). Global palm oil production increased by approximately 600% between 1990 and 2016, with Indonesia being the largest producer (Purnomo et al., 2020). The expansion of palm oil cultivation has been demonstrated

to enhance the living standards of those engaged in its production and processing, particularly in comparison with alternative cash crops (Euler et al. 2017; Dib et al., 2018; Gehrke and Kubitza, 2021).

Riau Province has the largest land area for palm oil plantations in Indonesia, and the rapid growth of this industry has fueled concerns over its environmental and social impacts (Syahza and Asmit, 2020). Kampar is one of the regencies in Riau Province, renowned as the site of the largest palm oil plantation in Indonesia. This plantation encompasses 279,720 ha, representing the largest palm oil plantation area in the Riau Province (BPS, 2011). Additionally, there has been an increase in the number of palm oil companies and mills in Riau Province. Consequently, Kampar district has the highest number of palm oil companies and the second highest number of palm oil mills (BPS, 2024).

However, the data indicate a decline in the ongoing revitalization of the agricultural sector. The BPS agricultural census data (2013) demonstrate that farmers aged 45 years in Indonesia continue to constitute the majority of the workforce (60.8%). This trend is partly due to younger generations favouring non-agricultural careers and losing interest in farming. In 2014, it was noted that young individuals living in rural regions encounter numerous obstacles and restrictions in their pursuit of agricultural livelihoods. Insufficient access to credit, poor resource management, and various other factors have led to a decline in the appeal of agricultural professions for the youth, and these issues have indirectly caused a waning interest in agricultural science among younger generations (Leavy and Hossain, 2014).

Despite growth in the agricultural sector, there remains a shortage in this profession (Nettle et al., 2018). Concurrent with the decreasing workforce in the palm oil industry, primarily due to negative publicity and the sector's inherent characteristics, the land area for palm oil plantations expanded to 5.74 million hectares in 2016, a trend also observed in Malaysia. Simultaneously, there was a decline in the number of individuals seeking employment in agriculture, which exacerbated the shortage of labor for harvesting (Kushairi Din, 2017).

Several studies have investigated the motivation of young individuals to work in Indonesian agriculture. Hamyana (2017) found that young people in Batu city are reluctant to pursue agricultural careers because of their socioeconomic conditions. This finding is consistent with the observations by Makabori and Tapi (2019), who also identified a decline in the interest of young individuals in agriculture, linking this phenomenon to insufficient external support and fluctuating market conditions in the Manokwari district of West Papua province. However, there is currently no available research that examines university students' interest in pursuing a career in the palm oil plantation industry in Indonesia.

Therefore, this research will be carried out among undergraduate students in Indonesia, specifically in the Kampar district, to evaluate their inclination to pursue a career in the palm oil plantation sector post-graduation and to find out the determinants that influence their decision. This research aims to fill the existing gap by exploring not only the students' interest levels but also the

various factors such as economic incentives, environmental concerns, and educational background that may shape their perceptions of careers in this industry.

METHODS

Population and sampling

A purposeful sampling strategy was employed to choose participants who were enrolled at Kampar Polytechnic. This institution was chosen for the study because it is the largest vocational training center in Riau province. In addition, the vocational school has a diverse student body from nearly every province in Indonesia. Moreover, Kampar Polytechnic was selected to carry out the Indonesian Palm Oil Fund Management Agency (BPDPKS) scholarship program, which aims to enhance human resources in the palm oil plantation sector. For this study, we created an online survey using Google Forms to collect our sample. We distributed a link to the survey to students through their official group accounts (n = 694).

Measurement variables and logit regression model

The questionnaire served as a data collection instrument to obtain information on students' backgrounds, perceptions of the palm oil plantation sector, and their attitudes towards agricultural education, particularly the work culture in the palm oil sector. Perceptions regarding the characteristics of the palm oil plantation sector were assessed using a 5-point Likert scale. Cronbach's alpha was employed to measure the reliability of the instrument, yielding a value of 0.61. As suggested by Nunnaly (1978), the Cronbach's alpha value exceeded 0.60, indicating data consistency at the initial stage of the study. The data can be further analyzed through factor analysis, comprising dependent and independent variables. The independent variables consisted of students' impressions of the palm oil plantation sector, their backgrounds, and personal characteristics (determinants).

Fifteen questions (X12–X25) addressed the perception of the palm oil plantation sector in Indonesia, utilizing a Likert-type scale ranging from 1 to 5, with one indicating strong disagreement and five denoting strong agreement. Additionally, the students' ten personality traits (X1–X11) were evaluated. Logistic regression is a statistical method used to evaluate the relationship between a dependent variable (response variable) and a set of independent variables (predictor variables). The dependent variable was categorical (binary), with only two possible outcomes: yes or no. Conversely, a set of independent variables is commonly referred to as a covariate. To analyze the factors influencing students' interest in the palm oil industry as a future career, a logistic regression analysis was conducted using JASP 0.19.1 software. The logistic regression equation used in this study was as follows (Wulandari et al, 2023; Peng et al, 2002):

$$\text{Ln}\left(\frac{\text{Pi}}{1-\text{Pi}}\right) = a + \beta_1 X_1 + \beta_2 X_2 + +\beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \beta_{10} X_{10} + \beta_{11} X_{11} + \beta_{12} X_{12} + \beta_{13} X_{13} + \beta_{14} X_{14} + \beta_{15} X_{15} + \beta_{16} X_{16} + \beta_{17} X_{17} + \beta_{18} X_{18} + \beta_{19} X_{19} + \beta_{20} X_{20} + \beta_{21} X_{21} + \beta_{22} X_{22} + \beta_{23} X_{23} + \beta_{24} X_{24} + \beta_{25} X_{25} + \varepsilon \quad (1)$$

The description of the variables used is described in Table 1.

Table 1: Description of variables

Variable	Measurement (Scale)
Student' interest in palm oil industry (Pi)	0 = not interested
	1 = interested
a	Intercept (constant)
β1, … β25	Coefficient for independent variable
Age (X1)	Year
Gender (X2)	0 = female
	1 = male
Subject (X3)	1 = Agriculture
	2 = Engineering
	3 = Social Science
Level (X4)	Year
Education of mother (X5)	Year of schooling
Education of father (X6)	Year of schooling
Living (X7)	0 = urban
	1 = rural area
Palm oil industry engagement (X8)	0 = non-engagement
	1 = engagement
Parents have a palm oil plantation (X9)	0 = Don't have
	1 = Own, 0-4 hectares
	2 = Own, 4-10 hectares
Parents' monthly income (X10)	1 = 0-2 million Indonesian rupiah (IDR)
	2 = 2-4 million Indonesian rupiah (IDR)
	3 = Above 4 million IDR
Scholarship recipient (X11)	0 = non-recipients
	1 = Recipients
X12-X25	Likert-type scale ranging from 1 to 5
ε	Random error

Source: Authors‘ development, 2024

Conceptual framework

The study examines various demographic factors, including age, gender, parental education, involvement in the palm oil industry, accessibility, culture, and the work environment in the palm oil industry. It was hypothesized that these factors significantly impact students' future career choice tendencies. Through logistic regression analysis, this study seeks to identify the key determinants of interest and provide insights for policymakers and stakeholders. The findings aim to inform strategies to promote the palm oil plantation sector as a viable and attractive future career for the younger generation. Furthermore, the results will contribute to the development of a sustainable palm oil plantation sector and the provision of skilled and young workers for the long-term sustainability of the palm oil industry in Indonesia.

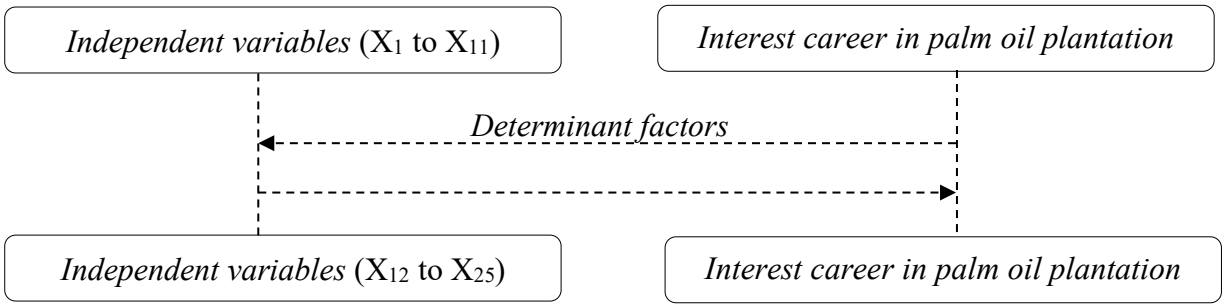


Figure 1: Conceptual framework of this study

Source: Authors‘ development, 2024

RESULTS AND DISCUSSIONS

Socio-demographic characteristics

Overall, a total of 332 out of 694 students from Polytechnic Kampar took part in this survey and Table 3 contains respondents’ sociodemographic characteristics. According to the results, the largest segment of participants (59%) fell within the age bracket of 0-20, followed by those aged 20-25 years (40.1%), a small percentage (0.6%) were aged over 30, and the remaining (0.3%) were between the ages of 26-30. There were more male participants (69.3%) compared to female participants (30.7%). This finding corresponds with the broader trend observed where males are more prevalent in pursuing higher education in Indonesia (Deolalikar, 1993). The biggest group (91.5%) of participants were agricultural engineering students, followed by those studying agriculture (6.9%) and social sciences (1.5%). This study found that students prefer engineering fields over areas like social sciences, supporting the research by Yilmaz et al. (2010), which shows that engineering attracts many students in Texas, USA.

A majority of the participants were in their first year (53.1%), followed by second-year students (23.6%), third-year students (20%), and finally, fourth-year students (3.3%). While a significant number of mothers had attained a higher secondary education level (42.9%), a similar

pattern was observed for fathers, with 43.7% also having a higher secondary education. Most students (89.9%) lived in rural regions, while 84% of their families were directly involved in the palm oil industry.

The findings show that 64% of the respondents' parents own a palm oil plantation, with a monthly income range of 0-2 million IDR. This aligns with the observation that smallholders own the second largest palm oil area in Indonesia (Glenday and Paoli, 2015). Conversely, the typical monthly income for households of palm oil plantation workers in South Kalimantan province exceeds 4 million IDR, indicating that the parental income of the respondents is comparatively lower (Munir, 2024). Additionally, it can be stated that 88.5% of the participants received scholarships.

Table 2: Socio-demographic characteristics of the participants

Independent variable (Scaling)	Frequency (*f*)	Percentage (%)
Age, years		
0-20	196	59
20-25	133	40.1
26-30	1	0.3
Above 30	2	0.6
Gender		
Male	230	69.3
Female	102	30.7
Subject		
Agriculture	23	6.9
Agricultural engineering	304	91.5
Social science	5	1.5
Level, year		
First	177	53.1
Second	78	23.6
Third	66	20
Fourth	11	3.3
Education of mother		
Illiterate	3	0.9
Primary	88	26.6
Secondary	72	21.8
Higher secondary	143	42.9
Bachelor	23	6.9

Independent variable (Scaling)	Frequency (*f*)	Percentage (%)
Master	3	0.9
Education of father		
Illiterate	4	1.2
Primary	92	27.7
Secondary	69	20.7
Higher secondary	145	43.7
Bachelor	18	5.4
Master	4	1.2
Living		
Urban area	34	10.2
Rural area	298	89.8
Palm oil industry engagement		
Engage	279	84
Non-engage	53	16
Parents have a palm oil plantation		
Don't have	103	31.1
Own, 0-4 hectares	212	64
Own, 4-10 hectares	17	5
Parents' monthly income, IDR (Indonesian Rupiah)		
0-2 million IDR	181	54.5
2-4 million IDR	131	39.5
Above 4 million IDR	20	6
Scholarship recipient		
Recipients	294	88.5
Non-recipients	38	11.4

Source: Authors‘ survey, 2024

Students’ willingness to work in palm oil plantation sector

Most students come from rural backgrounds, with their parents directly engaged in the palm oil plantation sector. Most students show a desire to work in the palm oil field after completing their

studies (Figure 2). Moreover, the information showing student interest in the palm oil industry indicates that 98.8% of students are likely to think about the oil palm plantation industry as their career choice.

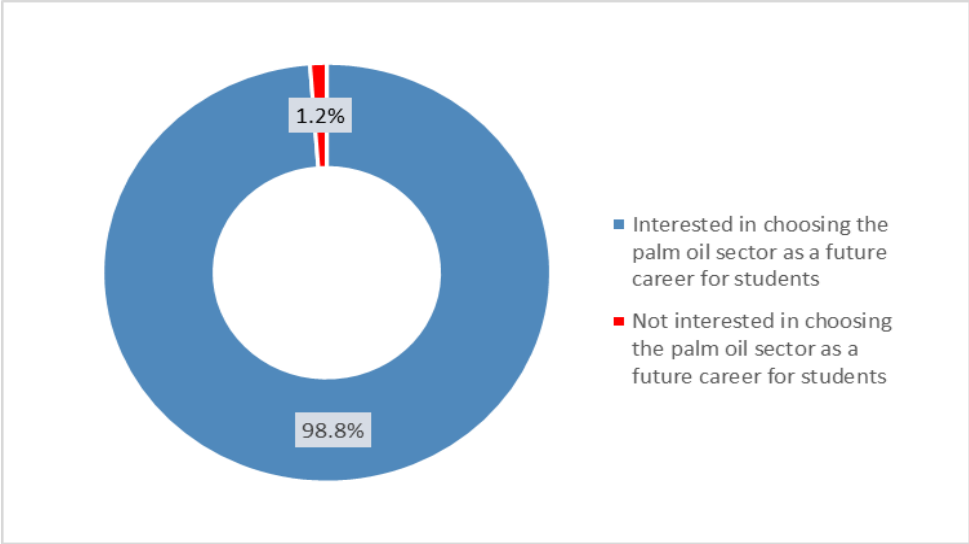


Figure 2: Students' interest in the palm oil sector

Source: Authors‘ development, 2024

The perceptions of the palm oil plantation sector among students are shown in the Table 3. Table 3 lists the mean and standard deviation (SD) scores for each of the fourteen variables that impact students’ choice of palm oil plantation as their future career. The highest mean score of 4.54. with a low degree of variability (SD = 0.93), indicates that the respondents had a generally positive opinion of the palm oil sector creating more job opportunities. On the other hand, gender dominance (men only) in working in the palm oil plantation sector is less favorably perceived despite the relatively low variability of responses (SD = 1.00). The answers were very different and mostly agreed on a few variables. These variables were the palm oil industry pays a good salary (mean = 4.20, SD = 0.78), the Palm oil industry promising for the future (mean = 4.43, SD = 0.69), palm oil companies are very open to youth (mean =4.32, SD = 0.76). Thus, most of the students agree with this statement.

Table 3: Students' perceptions of the palm oil plantation sector in Indonesia

Reason for willingness to work in palm oil industry	Mean	SD
The palm oil industry pays a good salary (X12)	4.20	0.78
Palm oil companies harm the environment (X13)	2.05	1.06
Palm oil companies create more jobs (X14)	4.54	0.64
Palm oil industry promising for the future (X15)	4.43	0.69
A job in a palm oil company requires specialised skills (X16)	4.00	0.89
Palm oil company jobs require high GPA (X17)	3.29	1.03

Reason for willingness to work in palm oil industry	Mean	SD
Only men work in palm oil companies (X18)	1.71	1.00
Palm oil company's location far from the city (X19)	3.42	1.1
Work in palm oil companies close to violence (X20)	2.26	1.13
Competition for palm oil jobs is fierce (X21)	3.75	1.01
Palm oil companies accept more agriculture and engineering students (X22)	4.02	0.86
Palm oil companies face many conflicts with communities (X23)	2.65	1.12
Palm oil companies are very open to youth/graduates (X24)	4.32	0.76
Palm oil companies prefer experienced workers/graduates (X25)	3.47	1.13

Source: Authors‘ calculations, 2024

Factors influencing students' decision to choose the palm oil sector as a future career

The Nagelkerke R2 value stands at 0.468, indicating that the 25 factors collectively account for 46.8% of the variation in student choices regarding palm oil plantation sectors as potential careers, while the remaining 53.2% of the unexplained variance can be attributed to the error term; the findings from the logistic regression analysis are displayed in Table 4 below.

Table 5: Logistic regression test results

Variable	Estimate	odds ratio	*p*-value
Age (X1)	-1.512	0.221	0.226
Gender (X2)	0.89	2.436	0.444
Subject (X3)	-16.739	5.373×10^{-8}	0.996
Level (X4)	1.601	4.956	0.156
Education of mother (X5)	-0.03	0.97	0.962
Education of father (X6)	-1.929	0.145	0.02
Living (X7)	0.802	2.23	0.585
Palm oil industry engagement (X8)	-25.95	5.370×10^{-12}	0.996
Parents have a palm oil plantation (X9)	-0.815	0.443	0.49
Parents' monthly income (X10)	1.989	7.309	0.093
Scholarship recipient (X11)	-20.72	1.003×10^{-9}	0.997
The palm oil industry pays a good salary (X12)	0.662	1.94	0.506
Palm oil companies harm the environment (X13)	-0.806	0.446	0.086
Palm oil companies create more jobs (X14)	-1.561	0.21	0.2
Palm oil industry promising for the future (X15)	0.837	2.309	0.41

Variable	Estimate	odds ratio	*p*-value
A job in a palm oil company is skilled (X16)	0.433	1.541	0.506
Palm oil company jobs require high GPA (X17)	-0.159	0.853	0.782
Only men work in palm oil companies (X18)	0.677	1.969	0.32
Palm oil company's location far from the city (X19)	-1.048	0.351	0.137
Work in palm oil companies close to violence (X20)	0.019	1.019	0.973
Competition for palm oil jobs is fierce (X21)	-0.622	0.537	0.362
Palm oil companies accept more agriculture and engineering students (X22)	0.168	1.183	0.87
Palm oil companies face many conflicts with communities (X23)	0.761	2.14	0.159
Palm oil companies are very open to youth/graduates (X24)	0.15	1.162	0.895
Palm oil companies prefer experienced workers/graduates (X25)	0.093	1.097	0.844

Model summary: Nagelkerke $R^2 = 0.468$; Cox and Snell $R^2 = 0.096$

Source: Authors‘ calculations, 2024

The results showed that, apart from the father's education factor (X6) with a p-value of 0.02, none of the other factors were significant. This implies that jobs in the plantation sector are very appealing to educated young individuals. In the general agriculture sector, this finding contradicts earlier studies which indicated that agriculture is often viewed as unappealing, dirty, and lacking in prestige (Janaćković and Dimitrijević, 2024). The father's education (X6) influences students' career choices in palm oil plantations. This is due to their fathers having low educational backgrounds and working in physically strenuous jobs within the plantation sector. As a result, they tend to seek office roles that are less physically demanding. This finding generally aligns with other studies in this field that connect parental influence to their children's career aspirations among Delta State University students in Nigeria (Onoshakpokaiye, 2023).

These factors include: palm oil companies negatively impacting the environment (X13) with a p-value of 0.086, the location of palm oil companies being far from urban areas (X19) with a p-value of 0.137, working in palm oil companies near violent areas (X20) with a p-value of 0.973, and palm oil companies facing numerous conflicts with local communities (X23) with a p-value of 0.159. This suggests that students' views on the negative aspects of the palm oil industry do not prevent them from seeking careers in this field. Contrary to previous findings, young people have shared their perspectives and motivations regarding the sector (Stapa et al., 2021). The poor image of the industry among youth arises from various factors, including environmental and social issues. The reasons for

wanting to work in the palm oil sector, which highlight its benefits (X12, X14, and X15), show SD values close to 1, indicating that the data distribution with mean values is nearing the average, with mean values usually above 2.

The findings of this study indicate that student interest in careers in the palm oil industry is quite strong. Factors often linked to negative views of the palm oil plantation sector (X13, X18, X20, and X23) show very low SD values close to similarly low mean values, indicating that negative perceptions about the palm oil industry do not dissuade students from pursuing careers in this sector after graduation. This conclusion contrasts with the strong enthusiasm shown by students towards agricultural careers, as explained in the research by Roy (2023), which highlighted that many graduates avoid agricultural jobs, even though those studying agriculture are more inclined to enter such fields, and agriculture is often seen as a last resort profession.

The logistic regression analysis results indicate that only factor X6 (Father's Education) significantly affects students' views on their career paths after graduation. In contrast, the other factors had no significant effect on students' willingness to work in the palm oil sector, including various elements that capture the negative aspects of the palm oil industry (X13, X16, X17, X18, X19, X20, X21, and X23). This finding aligns with the research by Afriyanti et al. (2016), which argues that the palm oil industry has significant potential for future growth. However, this potential is often overshadowed by environmental issues and ethical concerns that continue to influence public perception and student career choices. The contrast between the industry's growth potential and its ethical implications highlights the need for thorough educational programs that address these issues, providing students with a well-rounded understanding of both opportunities and challenges in the palm oil sector. The study's results offer insights into the future workforce of the palm oil industry in Riau, Indonesia. The positive views and interest shown by students towards careers in the palm oil sector suggest that the industry will likely keep attracting a consistent supply of qualified labor in the future. Furthermore, it is crucial to emphasize that the sustainable management of palm oil plantations must remain a priority, as the industry has encountered criticism related to environmental degradation and biodiversity loss.

CONCLUSION AND RECOMMENDATION

The study highlights the strong appeal of palm oil careers among young, educated individuals, particularly males from rural areas (89%), with 98.8% expressing interest in plantation jobs post-graduation. Logistic regression revealed that only paternal education ($p=0.02$) significantly influenced career choices, suggesting parental roles shape preferences—possibly due to fathers' lower education and labor-intensive jobs driving children toward office-based roles. Students prioritized industry

benefits (competitive salaries, job creation, future prospects) over negative perceptions, indicating media critiques have minimal impact.

To attract graduates, educational programs should align with industry demands, emphasizing sustainability and economic benefits. A key limitation is reliance on self-reported data; future research should include Kalimantan and Sulawesi for broader insights. Policymakers and educators must promote the sector's advantages to sustain workforce development.

ACKNOWLEDGMENTS

The research work was funded by Polytechnic of Kampar's internal grant period I fiscal year 2024 under young lecturer research scheme (Grant number: 005/KP-P3M/03/2024). We extend our sincere appreciation to all the students who participated in this research endeavor. Moreover, we wish to convey our profound gratitude to Centre for Research and Community Service (P3M) of the Polytechnic of Kampar for granting us access to the data collection pertaining to the survey.

REFERENCES

Afriyanti, D., Kroeze, C., and Saad, A. (2016). Indonesia palm oil production without deforestation and peat conversion by 2050. Science of The Total Environment. 557–558, 562–570. https://doi.org/10.1016/j.scitotenv.2016.03.032

BPS (2011). Riau Province in Figures 2011. Available at: www.bps.go.id

BPS (2013). Indonesian agricultural census. Available at: www.bps.go.id

BPS (2020). Indonesian agricultural census. Available at: www.bps.go.id

BPS (2024). Riau Province in Figures 2024. Available at: www.bps.go.id

Deolalikar, A. B. (1993). Gender Differences in the Returns to Schooling and in School Enrollment Rates in Indonesia. The Journal of Human Resources, 28(4), 899. https://doi.org/10.2307/146297

Dib, J. B., Krishna, V. V., Alamsyah, Z., and Qaim, M. (2018). Land-use change and livelihoods of non-farm households: The role of income from employment in oil palm and rubber in rural Indonesia. Land use policy, 76, 828-838. https://doi.org/10.1016/j.landusepol.2018.03.020

Euler, M., Krishna, V., Schwarze, S., Siregar, H., and Qaim, M. (2017). Oil palm adoption, household welfare, and nutrition among smallholder farmers in Indonesia. World Development, 93, 219-235. https://doi.org/10.1016/j.worlddev.2016.12.019

Gehrke, E., and Kubitza, C. (2021). Agricultural productivity and fertility: Evidence from the oil palm boom in Indonesia. Available at: https://doi.org/10.31219/osf.io/y8wa6

Glenday, S., and Paoli, G. (2015). Overview of Indonesian Oil Palm Smallholder Farmers: A Typology of Organizational Models, Needs, and Investment Opportunities. Jakarta. Available at: https://www.daemeter.org/category/publications

Hamyana, H. (2017). Young generation's work motives in agriculture: A phenomenological study of the motives for working in agriculture in a group of young farmers in Batu city. Mediapsi, 3(1), 34-42. https://doi.org/10.21776/ub.mps.2017.003.01.5
Janaćković, M., and Dimitrijević, O. (2024). Research on the Attitude of Young People Regarding the Attractiveness of Agriculture: A Case Study of Serbia. Economics of Agriculture, 71(2), 365-380. https://doi.org/10.59267/ekoPolj2402365J

Kushairi Din, A. 2017. "Malaysian Oil Palm Industry Performance 2016 and Prospects for 2017." Presentation for the Malaysian Palm Oil Board at the Pullman Kuala Lumpur City Centre, Malaysia on 17 January 2017. Available at: https://web.archive.org/web/20180810060944/http://www.mpob.gov.my/images/stories/pdf/2017/2017_Dr.KushairiPALMEROS2017.pdf

Leavy, J., and Hossain, N. (2014). Who wants to farm? Youth aspirations, opportunities and rising food prices. IDS Working Papers, 2014(439), 1-44. https://doi.org/10.1111/j.2040-0209.2014.00439.x

Magallon-avenido, J., & Sequiño, A. C. (2015). The World's Leader in the Palm Oil Industry: Indonesia. IAMURE International Journal of Ecology and Conservation, 13(1), 1-1. http://dx.doi.org/10.7718/ijec.v13i1.1074

Makabori, Y., and Tapi, T. (2019). Young Generation and Employment in the Agricultural Sector: Perception and Interest Factors (Case Study of Manokwari Agricultural Development Polytechnic Students). Triton's Journal, 10(2), 1-20. Retrieved from https://jurnal.polbangtanmanokwari.ac.id/index.php/jt/article/view/46

Munir, M. (2024). Contribution of Oil Palm (Elaesis Gineensis Jacq) Farming Income to Household Income in Tanjung Village, Bajuin District, Tanah Laut District (Doctoral dissertation, Kalimantan Islamic University MAB). https://eprints.uniska-bjm.ac.id/id/eprint/24887

Nettle, R., Kuehne, G., Lee, K., and Armstrong, D. (2018). A new framework to analyse workforce contribution to Australian cotton farm adaptability. Agronomy for Sustainable Development, 38, 1-19. https://doi.org/10.1007/s13593-018-0514-6

Nunnaly, J.C (1978), Psychometric Theory (2nd ed) New York. McGrawhill.

Onoshakpokaiye, O. E. (2023). The Influence of Parents on Students'choice of Career in These Present Occupational Challenges. IJIET (International Journal of Indonesian Education and Teaching), 7(1), 1-7. https://doi.org/10.24071/ijiet.v7i1.4968

Peng CY, Lee KL, Ingersoll GM. An introduction to logistic regression analysis and reporting. J Educ Res. 2002;96(1):3–14. https://doi.org/10.1080/00220670209598786

Purnomo, H., Okarda, B., Dermawan, A., Ilham, Q. P., Pacheco, P., Nurfatriani, F., and Suhendang, E. (2020). Reconciling oil palm economic development and environmental conservation in Indonesia: A value chain dynamic approach. Forest Policy and Economics, 111, 102089. https://doi.org/10.1016/j.forpol.2020.102089

Roy, S. K. (2023). Influencing factors for pursuing agriculture as a career for agriculture undergraduates: a two-stage approach. Entrepreneurship Education, 6(2), 169–203. https://doi.org/10.1007/s41959-023-00096-0

Stapa, S. H., Bakar, K. A., and Hashim, F. (2021). Engaging and Sustaining the Interest of Malaysian Youth towards the Palm Oil Industry. International Journal of Asian Social Science, 11(10), 490-499. https://doi.org/10.18488/journal.1.2021.1110.490.499
Syahza, A., and Asmit, B. (2020). Development of palm oil sector and future challenge in Riau Province, Indonesia. Journal of Science and Technology Policy Management, 11(2), 149-170. https://doi.org/10.1108/JSTPM-07-2018-0073

Wulandari, E., Karyani, T., Ernah, and Alamsyah, R. T. P. (2023). What makes farmers record farm financial transactions? Empirical Evidence from Potato Farmers in Indonesia. International Journal of Financial Studies, 11(1), 19. https://doi.org/10.3390/ijfs11010019

Yilmaz, M., Coleman, J., Ren, J., and Custer, S. (2010). Hands-On Summer Camp to Attract K–12 Students to Engineering Fields. IEEE Transactions on Education, 53(1), 144–151. https://doi.org/10.1109/te.2009.2026366