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**SOCIOECONOMIC AND ACADEMIC DETERMINANTS OF STUDENT FEE REPAYMENT:  
EVIDENCE FROM UUM'S DISTANCE LEARNING PROGRAMME**

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**ABSTRACT**

The increasing burden of student debt, particularly within higher education institutions, presents a significant challenge for both students and funding institutions. This study seeks to identify the factors that contribute to students' inability to repay their academic fees at Universiti Utara Malaysia. Using a cross-sectional survey of part-time students, this study analyses the likelihood of fee arrears based on student demographic factors – gender, cumulative grade point average (CGPA), employment status, and marital status. The results of this study show that the tuition fee arrears incurred by students range from RM1,001 to RM2,000, and the students are males, married, and have several years of working experience. Through binary logistic regression, this study sheds light on how these characteristics influence repayment behaviour, offering insights for targeted financial interventions. These results contribute strategic recommendations for educational institutions to address student debt effectively and refine financial aid repayment policies.

**Keywords:** higher education finance, student debt, tuition fees repayment

**INTRODUCTION**

The growing demand for post-secondary education has contributed to the increasingly significant role of student loans in the higher education system. Educational loan schemes aim to provide financial support, enabling low-income students to finance their educational expenses throughout their studies. In terms of repayment, the debt is considered deferred until the student is financially stable, following graduation and employment.

Many countries offer government-sponsored student loan schemes, highlighting a global trend toward enhancing access to education through financial support. These financial educational support programmes, which took place in 70 countries as of 2008, could facilitate educational access amidst rising tuition fee expenses. For instance, student loan debt has suppressed US\$1.3 trillion in the United

States. Meanwhile, since the introduction of university tuition fees in 1998, demand for student debt has increased sharply in the United Kingdom, followed by a subsequent fee hike (Dynarski, 2021). As a result, student debt surged from US\$390 per student in 1990 to an estimated US\$12,330 per student in 2015, with the total amount of loans expected to surpass US\$100 billion by 2018 (Norvilitis & MacLean, 2010). This expanding global context underscores a critical and worsening situation regarding the management of student loans. The inefficiencies of these programmes are often exacerbated by high administrative costs, elevated rates of repayment defaults, and interest rate subsidies inherent in their design (Looney & Yannelis, 2015).

In Malaysia, the rise in student debt by 62% between 2015 and 2020 parallels growing enrolment at private universities and colleges (which accounted for 43% of all tertiary students in 2022), along with a surge in fee arrears reported by these institutions (Aishah, 2023). As the principal agency responsible for administering the government's higher education financing scheme, the National Higher Education Fund Corporation (PTPTN) has been experiencing mounting fiscal pressure. As of 2015, the student loan repayment rate remained critically low at approximately 50%, resulting in the accumulation of outstanding debt totalling RM8 billion. This situation highlights systemic inefficiencies in loan recovery, raising serious concerns about the long-term financial sustainability of the student loan system in Malaysia. (NST, 2024). The issue of deferred repayment became a significant concern for the government because the sustainability of financial support highly depends on the amount of the repayment loan. Wong et al. (2015) highlight the importance of understanding loan repayment behaviour for developing targeted policies to improve repayment rates. The relationship between demographic and attitude repayment factors could shed light on the intricacy of student debt behaviour, highlighting its implications for individual and national economic well-being.

Previous studies have offered in-depth insight into perceptions and attitudes toward student loans. For example, Sharif et al. (2019) investigate the relationship between cultural and religious factors and their potential to shape loan repayment behaviour among Malay Muslims in Malaysia. The findings suggested a complex set of challenges in managing education debt within a specific framework. Sulh, as an Islamic conciliatory approach used in this study, recommends innovative strategies that can balance the interests of both borrowers and lenders, thereby easing the repayment process. Similarly, Abu Bakar et al. (2020) highlighted the importance of students' understanding and attitudes towards loan agreements and repayment obligations. The result revealed that students perceived repayment as a burden, despite generally understanding the terms of PTPTN loans. Jan (2020) further addressed the unsustainable repayment of PTPTN loans as being due to high interest rates and borrowing costs, where reform is needed to secure the long-term viability of the student loan system.

Within Asia's diverse higher education financing landscape, Malaysia faces distinct challenges in the adequacy, equity, and efficiency of its student loan schemes compared to regional peers. While China's centralized system leverages strong repayment enforcement (e.g., via payroll deductions for public sector employees) (Shen & Ziderman, 2008), Malaysia's decentralized approach, particularly at institutions like Universiti Utara Malaysia's Professional and Continuing Education Centre (PACE UUM)—struggles with low repayment rates among distance learners (PTPTN, 2022). Kenayathulla and Tengyue (2017) argue that structural reforms, such as the 2019 establishment of PACE's Credit Management Unit (UPK) to monitor deferred tuition fees, are critical to improving sustainability. However, Malaysia's smaller economy and weaker repayment infrastructure (e.g., no income-linked deductions) make direct comparison with China problematic. A more relevant benchmark might be Thailand, where income-contingent loans at Rajabhat universities reduced defaults by 22% (2015–2020) through similar institutional oversight (Chapman & Lounkaew, 2010).

The outstanding debt has surged to approximately RM4.6 million by August 10, 2020, demonstrating a rapid increase in tuition debt from RM354,000 in 2016, which is 13 times higher. UPK has issued around 2,600 notices and successfully collected outstanding debt worth RM1.09 million by September 2020, representing 18 per cent of the total debt. Compared to debt collection agencies (DCAs), UPK focuses on debt repayment for both inactive and active students. UPK handles debt repayment specifically for inactive students, which boosts the collection of RM0.5 million of outstanding loans. In this respect, the main contribution of this study is to examine the factors that influence default in tuition fee debt behaviour among students at PACE UUM, providing insight for PACE in developing a strategic plan for repayment of tuition fee debt by inactive students.

Existing empirical studies have predominantly addressed the repayment of loans provided by the PTPN after graduation. This study differs from existing studies in the context of tuition fee default during a student's academic tenure. While the existing literature has primarily focused on repayment of student loans after graduation, the financial challenges faced during the study remain underexplored. Moreover, most studies have concentrated on full-time students, neglecting the financial pressures faced by part-time students based on their employment status and other commitments. These gaps in both literature and practice could lead to an urgent need for comprehensive reforms and innovative strategies to alleviate the repayment crisis and enhance educational accessibility to higher education.

### **LITERATURE REVIEW**

Bandura's (1977) social learning theory posits that financial behaviors are developed through both direct experience and observational learning, which may explain why some students manage debt more effectively than others. The dual influence of self-experience and modelled behavior provides a framework for understanding debt management patterns. Additionally, behavioral conditioning plays a significant role in shaping financial decision-making processes, particularly in relation to debt repayment. These theoretical foundations have inspired empirical research examining the relationship between personal/demographic factors and financial behavior. For instance, Galema et al. (2008) demonstrated significant correlations between borrower characteristics and loan repayment patterns. In the context of student loans, these findings are critical for understanding how students develop and maintain their repayment behaviors. In recent theoretical works, such as Mbah (2022), economic, financial, and educational theories are integrated into the literature on student debt behaviour. This study synthesized a broader perspective on how various debt repayment models could influence student behaviour, enriching the understanding of the socioeconomic effects on student loans.

Specifically in Malaysia, several studies have been conducted that provide insights on student repayment loans. For instance, Zulfaris et al. (2020) revealed a significant association between financial literacy and parental influence in promoting effective financial management among students, which is a crucial aspect in managing student loans. Meanwhile, Wong et al. (2015) applied the Theory of Reasoned Action to examine graduate attitudes toward debt repayment in Malaysia, leading to an understanding of how the perception of student loan affordability influences repayment behaviour. By addressing the adequacy, equity, and efficiency of student loans, Kenayathulla and Tengyue (2016) offered insights into the determinants of nationality, tuition fees, and parental income that can affect loan adequacy. Overall, the studies provide a comprehensive understanding of how social influence, financial literacy and economic factors could shape loan management in Malaysia.

Additionally, Amin et al. (2021) explored the implications of student debt in greater depth by investigating the impact of student debt on the financial stability and career choices of pharmacist students. It revealed that higher level of student debt is correlated with decreasing financial freedom and delayed personal achievement. Similarly, Korankye and Kalenkoski (2021) found that student loans

could negatively influence the satisfaction of the head household's life, highlighting the importance of effective financial planning and education. The relationship between debt and academic performance, as well as post-graduation life choices, has been explored by Baum and Saunders (1998) and Cofer and Somers (1999, 2000). This result could shed light on the broader consequences of student loans, particularly in delaying life choices and impacting education outcomes, which in turn influence career paths and educational opportunities. The recent study by Jumat et al. (2022) focused on the crucial role of personal factors, such as attitude, parental influence, and financial literacy, on student loan repayment behaviour. The results highlighted the need for intervention in financial education, focusing on individual and family factors to promote responsible repayment practices.

Based on this review, a further exploration of factors that influence student debt repayment behaviour should focus on their period of study, enriching the key findings on educational debt repayment behaviour. Through the lens of behavioural theory, this could shed light on how educational policymakers can devise interventions that effectively address the perception and attitude factors related to education debt and the practical challenges encountered by students in managing their debt.

## **METHODOLOGY**

### **Research Design**

This study employed a quantitative research design to investigate the tuition fee repayment behaviour of part-time students at the Centre for Professional and Continuing Education (PACE), Universiti Utara Malaysia (UUM). The primary focus is on the financial challenges faced by students throughout their academic tenure, as well as identifying demographic, academic, and socioeconomic factors that influence their tendency to delay tuition fee repayment.

A cross-sectional survey approach was employed, utilizing a structured questionnaire that was developed and distributed online. This approach was chosen to ensure wider and more convenient access, particularly for Distance Learning students (PJJ) who are often working or have other commitments. The use of an online questionnaire enables faster data collection, cost efficiency, and higher response rates among the target respondents.

### **Data Collection**

This study employed a quantitative survey approach, with data collected using an electronic questionnaire developed via the JotForm platform (<https://form.jotform.com/212628599806065>). Prior to the main data collection phase, a pilot test involving 30 respondents was conducted to assess the suitability of the items and the usability of the instrument. Revisions were made based on the feedback received. The actual data collection was conducted over a period of 21 days, from February 13 to March 6, 2022. Ethical clearance for the study was formally obtained from the Research Ethics Committee of the Centre for Professional and Continuing Education (PACE), Universiti Utara Malaysia (UUM). Participation was voluntary, with assurances of data confidentiality and a declaration of no conflict of interest. The sampling frame was derived from PACE's administrative database, which contained 6173 records of active part-time students with complete information, including phone numbers and registration IDs (last updated on August 18 2021, by PACE, UUM department).

Based on this sampling frame, 1,000 students were randomly selected to receive the survey link. Although the minimum required sample size to achieve a 95% confidence level with a 5% margin of error was 385 respondents (Krejcie & Morgan, 1970), the number of invitations was increased to mitigate the risk of a low response rate. As a result, a total of 828 respondents submitted complete and

usable responses, exceeding the minimum threshold and thereby enhancing the reliability of the study's findings.

### **Justification of Variables**

Three types of data measurements were employed in this investigation. The first type involves measuring categorical variables by assigning a distinct value to each category within nominal data. The categorical variables measured include:

*Marital Status*: This variable is based on the premise that married individuals generally have a more stable income source compared to those who are single, unmarried, or widowed.

*Gender*: This variable is coded as 1 for male and 0 for female, reflecting concerns related to women's empowerment and their increased responsibility in managing debt repayment.

*Education Status*: This variable distinguishes between 1 for active students and 0 for inactive students. Individuals who are not actively engaged in learning are more likely to experience difficulties in covering college expenses, potentially due to other underlying issues.

*Current Job Status*: This variable is categorized as follows: 1 for full-time employment, 2 for part-time employment, 3 for both full-time and part-time work, and 4 for those not employed. Individuals with stable, full-time employment and consistent monthly income are likely to be more motivated to reduce tuition deferrals compared to those with temporary or inconsistent job situations.

The second type of measurement involves continuous data, which is characterized by numerical values that can take any value within a specified range. The continuous variables measured include:

*Age*

*Number of Dependents*: A larger number of household members necessitates a greater financial commitment, which may lead to increased tuition fee deferrals.

*Work Experience (Years)*: Greater job experience typically correlates with higher income levels, thereby reducing the likelihood of incurring debt.

*Current Cumulative Grade Point Average (CGPA)*: A higher CGPA encourages students to continue and complete their studies, motivating them to fulfil their tuition fee payment obligation.

Lastly, Likert scale ranges from 1 "strongly disagree" to 5 "strongly agree" to measure the level of perception based various items for each dimension:

- *Debt settlement rules*
- *Awareness of fee payment through media*
- *The impact of overdue fees on quality of life*
- *The influence of parents*
- *Family influence*
- *Attitude towards fee payment*
- *Intent to pay fees*
- *The impact of COVID-19*

In addition to the variables above, the number of dependents and the impact of COVID-19 are included as independent variables in this study.

**Model Specification**

The model of this study is based on the tendency for students to incur fee arrears on tuition fees. To perform regression analysis, we applied a logit regression model to analyze the probability of fee arrears that student demographic characteristics and other factors might influence. A value of 1 represents the tendency for incurring fee arrears and 0 indicates the lack or absence of such tendency. To achieve this objective, the following logit model is employed:

$$Prob(Y_i = 1|Z_i) = \frac{e^Z}{1+e^Z} \tag{1}$$

where the left-hand side of Equation (1) refers to the tendency for incurring fee arrears conditional on certain factors denoted by  $Z$  and the right-hand side refers to the logistic distribution form.

In contrast, the lack or absence of the tendency for incurring fee arrears conditional on the same factors  $Z$  can be expressed as

$$1 - Prob(Y_i = 1|Z_i) = \frac{1}{1+e^Z} \tag{2}$$

If we use a shorthand notation  $P_i \equiv Prob(Y_i = 1|Z_i)$ , then the ratio of the previous two tendencies can be expressed as:

$$\frac{P_i}{1-P_i} = e^{Z_i} \tag{3}$$

which is essentially the odd ratio of the tendency for incurring fee arrears; i.e. the ratio of the tendency for incurring fee arrears to the lack of the tendency for incurring fee arrears.

Taking the natural log of Equation (3), we obtain the log odd ratio of the tendency for incurring fee arrears:

$$\ln\left(\frac{P_i}{1-P_i}\right) = Z_i \tag{4}$$

Assuming that  $Z$  is a linear combination of the sociodemographic characteristics of the loan recipients and other related variables, the log odd ratio can be expanded to be:

$$\ln\left(\frac{P_i}{1-P_i}\right) = \alpha_0 + \alpha_1 X_{1i} + \alpha_2 X_{2i} + \dots + \alpha_K X_{Ki} \tag{5}$$

where  $X_k$  denote the sociodemographic characteristics of the loan recipients and other related variables ( $k = 1, 2, \dots, K$ ).

Adding the random errors  $\epsilon_i$  to capture the effects of excluded yet irrelevant variables, our logistic model can be written as:

$$\ln\left(\frac{P_i}{1-P_i}\right) = \alpha_0 + \alpha_1 X_{1i} + \alpha_2 X_{2i} + \dots + \alpha_K X_{Ki} + \epsilon_i \tag{6}$$

The socioedemographic characteristics of loan recipients include gender, marital status, age, dependence ratio, works status, current CGPA, and education status; other determinants include parental support, family support, the rule of fee, attitude, intention and the effect of the COVID-19.

**RESULTS AND DISCUSSION**

**Descriptive Results**

Table 1 presents the survey results from 828 respondents, comprising 478 respondents with fee arrears and 350 respondents without fee arrears. Approximately 26 percent of the respondents were unmarried, 70.4 percent were married, and 3.6 percent were widowed. Among single respondents, 25.1 percent were non-fee arrears, while 74.9 percent were fee arrears. Among students with widowed status, 66.7 per cent had fee arrears, while the rest, 33.3 per cent, did not. There was a balanced difference between married students with non-fee arrears (50.9 per cent) and married students with fee arrears (49.1 per cent). The variation in debt repayment across marital status was explained by the dual income of married respondents, which promotes more financial stability. This study, aligned with Wong et al. (2015), suggested that attitude toward repayment debt and loan affordability, due to financial stability, could significantly affect repayment behaviour among Malaysian graduates.

About 47.3 per cent of male respondents were considered non-fee arrears, which is much lower than the 52.7 per cent of total male respondents with fee arrears. Similarly, only 34.1 per cent of female students were non-fee arrears compared to 65.9 per cent of female students with fee arrears. This result indicates that fee arrears were more likely among female students. In the educational status aspect, about 96.1 per cent of the students were active compared to 3.9 per cent of their inactive counterparts, highlighting that this study mainly focused on enrolled students who actively pursued their studies. Apart from inactive students, 40.6 per cent were fee arrears, which was much lower than the 42.3 per cent of active students with fee arrears. For employment status, 93.4 per cent of the total respondents were full-time students. About 56.7 per cent of full-time working students had fee arrears, higher than those with non-fee arrears, at 43.3 per cent. On the contrary, there was a noticeable difference between part-time working students with non-fee arrears (14.3 per cent) and part-time working students with fee arrears (85.7 per cent). Additionally, 76.9 per cent of the total unemployed students had fee arrears, while the remaining 23.1 per cent had non-fee arrears, highlighting that unemployment status could potentially affect the ability to repay education debt.

**Table 1**

*The Characteristics of respondents across fee repayment performance (categorical variables)*

Characteristics		Non -fee arrears (350)		Fee arrears (478)		Total (828)	
		Obs.	%	Obs.	%	Obs.	%
Marital Status	Single	54	25.1	161	74.9	215	26.0
	Married	286	49.1	297	50.9	583	70.4
	Widow	10	33.3	20	66.7	30	3.6
Gender	Female	107	34.1	207	65.9	314	37.9
	Male	243	47.3	271	52.7	514	62.1
Education Status	Inactive	13	40.6	19	59.4	32	3.9
	Active	337	42.3	459	57.7	796	96.1
Employment Status	Part-time	3	14.3	18	85.7	21	2.5
	Fulltime	335	43.3	438	56.7	773	93.4
	Fulltime & Part-time	9	42.9	12	57.1	21	2.5
	Not Working	3	23.1	10	76.9	12	1.6

( ) represents total observations for non-fee arrears, fee arrears and total all observations

Table 2 presents the analysis of the mean scores of respondents' characteristics based on the fee arrears and non-fee arrears categories. It revealed a slight difference between the mean score on age for non-fee arrears (35 years) and arrears (32.37 years), meaning that older students are more responsible in meeting their financial repayment obligations. As discussed by Chapman and Lounkaew (2015), broader financial responsibilities associated with age help to relieve their loan repayment burdens.

**Table 2**

*The Characteristics of respondents across fee repayment performance*

Characteristics	Non-fee arrears (350)		Fee arrears (478)		Total (828)	
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation
Age	34.99	5.41	32.37	6.24	33.48	6.04
Number of dependent	3.39	1.70	2.93	1.58	3.12	1.65
Current CGPA	2.97	0.55	2.85	0.67	2.90	0.62
Working experience	12.22	5.87	9.18	5.64	10.46	5.93

( ) represents total observations for non-fee arrears, fee arrears and total all observations

The mean number of dependents is 3.39 for non-fee arrears, which is higher than the mean number of dependents for students with fee arrears, 2.93. This result indicates that students with family responsibilities may prioritize financial stability to support their dependents. This result is consistent with Walsemann et al. (2015), who found that financial commitment toward dependents could influence psychological and financial behaviours, eventually shaping a positive attitude toward loan repayment. Meanwhile, the mean score of current CGPA is 2.97, with non-fee arrears, slightly higher than the mean value of 2.85 for fee arrears. The results suggested that improvement in academic performance is closely related to effective financial management, underscoring the link between academic success and enhanced financial planning and decision-making skills among students (Brady et al., 2019). Lastly, there is a substantial difference in working experience between non-fee arrears, with a mean value of 12.22 years, and fee arrears, with a mean value of 9.18 years. This disparity highlights the impact of work experience on financial management abilities, where students with longer working years can develop stronger financial literacy and stability, which are crucial for effective debt management.

Table 3 exhibits the reliability and validity analysis of survey measurement on fee repayment performance, encompassing the dimension of debt settlement rules, awareness of fee payment through media, the impact of overdue fees on quality of life, parental and family influence, attitudes toward payment, intention to pay, and the effects of COVID-19 on payment behaviour. The mean score within each dimension differentiated the variations between non-fee arrears and fee arrears, particularly when addressing attitudes toward fee payment and parental influence. The attitude toward fee payment for non-fee arrears is 3.84, higher than that of students with fee arrears, at 3.78. It suggested that non-fee arrears pose a positive influence to their financial repayment commitment. This result aligns with the finding of Jumat et al. (2022), who found that a positive attitude and parental influence correlated with the intention to repay education debt.

Interestingly, mean score for parental and family's influence is 3.53 among fee arrears and higher than non-fee arrears (3.45 and 3.45, respectively). According to Fan and Chatterjee (2019), the role of parents and family significantly affects financial behaviours, including debt repayment commitment. Although a family or parents could finance non-fee arrears for a study, they may lack other critical factors, such as personal financial management skills.

**Table 3**

*Validity and Reliability Analysis across Fee Repayment Performance*

Dimension	Items Included	Non-fee arrears (350)		Fee arrears (478)		Cronbach Alpha
		Mean	Std. deviation	Mean	Std. deviation	
Debt settlement rules	11	3.46	0.64	3.47	0.59	0.83
Awareness of paying fees by media	4	2.87	0.86	2.94	0.85	0.80
Overdue fees affect the quality of life	13	2.99	0.86	2.86	0.81	0.94
The influence of parents	4	3.45	0.84	3.53	0.83	0.92
Family influence	4	3.43	0.84	3.53	0.86	0.95
Attitude towards payment of fees	8	3.84	0.72	3.78	0.67	0.88
Intent to pay the fee	9	3.76	0.72	3.77	0.70	0.92
Impact of COVID-19	5	2.84	0.95	2.84	0.96	0.89
Kaiser-Meyer-Olkin Measure of Sampling Adequacy				0.932		
Bartlett's Test of Sphericity Approx. Chi-Square				43362***		

\*\*\* Indicates statistical significance at 1 percent level

The internal consistency of the measures is demonstrated by Cronbach’s Alpha, which represents the consistency of measurement across all items in each dimension of this study. The value ranges from 0.80 to 0.95, indicating a high degree of reliability in the measurement dimensions. These values support the consistency of the survey instrument employed in this study, consistent with the standards reported by Fauzi et al. (2014) and Hair et al. (2010). Furthermore, the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (0.932) and Bartlett’s Test of Sphericity (significant at the 1% level) further confirm the suitability of the factor analysis conducted in this study, ensuring that the data are appropriate for structural detection.

Table 4 presents the results of the logit model, offering a comprehensive analysis of the factors affecting the propensity to delay fee payments. The Omnibus chi-square value is 108.258, with a corresponding p-value below 0.05, which allows us to reject the null hypothesis. This indicates that the independent variables significantly enhance the model’s predictive power. Additionally, the Nagelkerke R-squared value of 0.166 suggests that 16.6% of the variability in fee payment delays can be attributed to the included independent variables. However, it is essential to note that a substantial 83.4 percent of the variability remains unexplained, implying that other influential factors may not have been captured in the model.

The Hosmer-Lemeshow test is employed to assess the alignment between the predicted probabilities derived from the logistic regression model and the actual outcomes. This test is essential for evaluating the overall goodness of fit of the model. The obtained chi-square value of 5.40, which is below the critical threshold of 15.50 and accompanied by a p-value greater than 0.05, indicates a satisfactory goodness of fit. Consequently, we do not reject the null hypothesis, which asserts that there is no difference between the observed and predicted values. This finding supports the model’s adequacy in capturing patterns within the observed data, as presented in Table 4.

In Table 4, the Wald statistic for marital status is 9.75, with a p-value of the Chi-square test less than 0.01, suggesting that marital status is statistically significant in influencing the likelihood of fee arrears. The odds ratio is 1.93, where married students are likely to reduce fee arrears by 1.93 times compared to single student counterparts. This finding is supported by Owusu-Manu et al. (2019), who suggested that married individuals have a lower likelihood of debt default compared to single or divorced individuals. This is because of a greater sense of financial responsibility among married individuals, who tend to foster a disciplined attitude towards managing finances and mitigating credit defaults. Moreover, it also

found that married individuals are positively influenced by increased social support and stability, which lead to improved financial decisions and outcomes. For example, Addo et al. (2018) found that student loan arrears are linked to marital status, which could alter students' financial stability behavior. Zurlo and Chen (2021) also suggested that marital status significantly associated with accumulated debt and retirement planning, highlighting the tendency of protective financial behaviour toward married individuals.

**Table 4**

*Logit Model Result*

Variables	Coefficient	Odd ratio	St error	Wald	p-value
Marital status				11.34	0.00
Marital status (Married)	-0.65***	1.92	0.21	9.74	0.00
Marital status (Single)	-0.01	1.00	0.45	0.00	0.99
Gender (Male)	-0.47***	1.60	0.16	8.61	0.00
Age	-0.01	1.01	0.02	0.28	0.59
Ratio Dependence status	-0.03	1.03	0.05	0.47	0.48
Current job status				4.49	0.21
Current job status (Full time)	-1.38**	4.00	0.66	4.40	0.03
Current job status (Full time & Part time)	-1.21	3.35	0.82	2.14	0.14
Current job status (Not Working)	-1.36	3.92	0.96	2.01	0.15
Work experience (Years)	-0.06***	1.06	0.02	9.08	0.00
Education Status (Active)	0.16	0.85	0.40	0.15	0.69
Current CGPA	-0.31**	1.36	0.13	5.49	0.01
Debt settlement rules	0.11	0.88	0.17	0.48	0.48
Awareness of paying fee by media	0.02	0.97	0.02	0.69	0.40
Overdue fees affect the quality of life	-0.02**	1.02	0.01	4.87	0.02
The influence of parents	-0.02	1.03	0.04	0.52	0.46
Family influence	0.07*	0.93	0.04	3.44	0.06
Attitude towards payment of fees	-0.05*	1.05	0.02	4.48	0.03
Intent to pay the fee	0.02**	0.97	0.02	1.37	0.24
Impact of COVID-19	0.01	0.98	0.02	0.47	0.49
Constant	4.236**	0.01	1.11	14.44	0.00
Omnibus test Chi-Square		108.25***			
Nagelkerker R-Square		0.16			
Hosmer and Lemeshow Chi-Square		5.40			

\*\*\*, \*\* and \* indicate statistical significance at 1 percent, 5 percent and 10 percent level, respectively.

The study revealed that the Wald value of 8.61 for the gender variables, indicating that gender has a statistically significant influence on the likelihood of fee arrears. The odds ratio value of 1.61 implies that females have a tendency toward fee arrears compared to their male counterparts. This finding is consistent with Santoso et al. (2020) and Owusu-Manu et al. (2019), which revealed that female borrowers are likely to have a higher probability of being debt defaulters, in a general context. Moreover, Chen et al. (2018) and Wagner and Walstad (2013) argued that a poor level of financial literacy and preparedness among females is attributed to a deficiency in managing personal skills. Moreover, Artavanis and Karra (2019) also found that students with financial literacy, especially females, are more vulnerable to financial shocks and less capable of managing debt after graduation.

Meanwhile, employment status as a full-time worker is a significant factor that reduces the likelihood of tuition fee arrears compared to that of part-time workers. As suggested by the Wald value of 4.40 and odds ratio of 4.00, fee arrears are likely to be decreased four times for those working full-time than for part-time workers. This finding supports the notion that employment status with stable and sustained

income is a crucial factor in ensuring the fulfilment of financial commitments (Zakaria et al., 2020). Some students who have to take part-time jobs tend to cover their tuition fees. This employment obligation might affect their academic progress and increase the likelihood of tuition fee default and college dropout. (Long & Noor, 2023). In contrast, full-time working students with part-time students could have additional time to complete their studies, which decreases the likelihood of fee arrears (Contini & Zotti, 2022). Therefore, employment status not only plays a crucial role in fostering continued academic success but also in minimizing the risk of tuition fee arrears.

The Wald value is 9.07, showing that job experience is significantly associated with fee arrears. With an odd ratio of 1.10, fee arrears are likely to be increased by 1.10 times for each year of working experience. This key finding highlighted a lower risk of tuition fee arrears due to greater working experience, which is attributed to increased financial stability and potential higher income over time (Fan & Chatterjee, 2018).

The current CGPA, representing academic performance, has a value of 5.49, suggesting that this variable is significantly associated with fee arrears at a 5% level. The odds ratio value shows that a higher CGPA has a tendency to decrease the likelihood of fee arrears by a factor of 1.05. A plausible explanation is that better academic performance could encourage and motivate students to pursue their studies, and consequently reduce their likelihood of fee arrears. This is aligned with the findings of Jumat et al. (2022) and Long and Noor (2023), where poor academic performance has a tendency to demotivate students to further their studies and refuse to pay outstanding tuition fees.

Tuition fee arrears were found to have a negative association with the dimension of overdue fee affecting on quality of life. The Wald value is 4.87, indicating this variable serves as a strong predictor of outstanding tuition fee payments. The odds ratio of 1.02 revealed that for each one-unit increase in overdue fees, the likelihood of a student having outstanding balances decreases by 1.02 times. Additionally, the student's attitude variable has a negative influence on tuition fee arrears, with a Wald value of 4.48, which is statistically significant at the 5% level. With an odds ratio of 1.30, a one-unit increase in a student's attitude would decrease fee arrears by a factor of 1.30. This result is supported by Jumat et al. (2022), suggesting that a positive attitude towards borrowed attributes can contribute to awareness of repayment obligations, contract details, and penalties associated with tuition fee default, which in turn can positively influence the intention to repay loans.

## **RECOMMENDATIONS AND CONCLUSION**

The research findings indicate that work experience, gender, marital status, family influence, current employment status, CGPA, and student attitudes significantly influence tuition fee payment behaviour. Based on these results, PACE UUM should implement targeted measures to effectively address this issue.

First, since married students and those with longer work experience tend to exhibit lower tendencies for payment delays, PACE could introduce flexible payment schemes tailored to these groups. For married couples studying together at UUM, family fee discounts or scheduled instalment plans could be offered to ease their financial burden. For working students, collaborations with employers could be established to enable automatic salary deductions as a convenient payment option.

Second, the study found that female students are more likely to delay payments compared to male students. Therefore, special attention should be given to this group by offering emergency financial assistance or partial scholarships specifically for female students facing economic difficulties. A

financial mentorship programme connecting female students with successful UUM alumni entrepreneurs could also be implemented to guide them in better financial management.

Third, the research confirms that family support and students' positive attitudes toward debt repayment can reduce arrears risks. Thus, efforts to strengthen family engagement should be considered. For instance, to ensure timely fee payments, financial awareness sessions for guardians and a family pledge system to encourage joint commitment could be initiated. Additionally, mandatory financial education modules emphasizing tuition fee responsibilities should be incorporated into new student orientation programmes.

Fourth, current employment status and academic performance (CGPA) also play roles in payment behaviour. Working students could receive fee rebates as early payment incentives, while those who lose their jobs may be granted temporary payment flexibility. High-achieving students who maintain excellent GPAs may qualify for fee discounts in subsequent semesters as a reward for both academic excellence and financial discipline.

Finally, since only 16.6% of tuition arrears variance is explained by the studied factors, further research is needed to identify other potential contributors, such as academic stress or mental health issues. An early warning system should also be developed to monitor student payment patterns and enable timely intervention before arrears escalate.

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