

Chapter 3

Preliminary Data Analysis

In this chapter we present the percentages and distribution of transfer students within Prince of Songkla University (PSU), Pattani between 1999 and 2007. There are four sections in this chapter: variables of interest, distribution of determinants, percentage of transfer students and association between determinants and outcome.

3.1 Variables of Interest

The roles, variables, data types and categories are shown in Table 3.1. The roles of variables are classified as determinant and outcome. The outcome variable was binary data type (transfer or not transfer students). There are three determinants; a three-way combined variable called faculty-religion-gender, year of admission and duration of study. The faculty-religion-gender and year of admission variables are nominal, with 14 and 9 categories, respectively, while the duration of study variable is binary.

Role	Variable	Categories
Determinant	Faculty-	11:Edu.Muslim.Male, 12:Edu.non-Muslim.Male
	Religion-	13:Edu.Muslim.Female, 14:Edu.non-Muslim.Female
	Gender	21:Hum.Muslim.Male, 22:Hum.non-Muslim.Male
		23:Hum.Muslim.Female, 24:Hum.non-Muslim.Female
	31:Sci.Muslim.Male, 32:Sci.non-Muslim.Male	
	33:Sci.Muslim.Female, 34:Sci.non-Muslim.Female	
	41:Isl.Muslim.Male, 43:IslMuslimFemale	
	Year of admission	1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007
	Duration of study	2-3 years, 4 or more years
Outcome	Transfer	Transfer, Not transfer

Table 3.1: Roles, variables, data types and categories

3.2 Distribution of Determinants

There were 13,232 four-year bachelor degree students at PSU Pattani, year of admission between 1999 and 2007. The overall percentage of students transferring majors was 3.6%. Table 3.2 shows the frequency distributions of the categorical determinants. The percentages of transfer students are shown separated by faculty-religion-gender, year of admission and duration of study. Of the faculty-religion-gender variable, the highest percentage of transfer students was among Muslim male students from the faculty of Humanities and Social Sciences (7.8%), followed by the non-Muslim male students from the faculty of Humanities and Social Sciences (6.6%) and Muslim male students from the College of Islamic Studies (5.3%). The highest percentage of transfer students was the students admitted in 2004 (7.1%) and this percentage decreased over the next 3 years. Of the students who had been studying for 2-3 years, only 0.5% transferred to other majors, while 13.2% of students who had been studying for 4 or more years transferred some time during their studies.

<i>Determinant</i>	<i>Category</i>	<i>Number of students</i>			
		<i>Transfer</i>	<i>Not transfer</i>	<i>Total</i>	<i>% Transfer</i>
		480	12,752	13,232	3.6
Faculty- Religion- Gender	11:Edu.Muslim.Male	4	189	193	2.1
	12:Edu.non-Muslim.Male	8	357	365	2.2
	13:Edu.Muslim.Female	17	828	845	2.0
	14:Edu.non-Muslim.Female	46	1,349	1,395	3.3
	21:Hum.Muslim.Male	59	694	753	7.8
	22:Hum.non-Muslim.Male	47	663	710	6.6
	23:Hum.Muslim.Female	64	1,813	1,877	3.4
	24:Hum.non-Muslim.Female	112	2,191	2,303	4.9
	31:Sci.Muslim.Male	9	340	349	2.6
	32:Sci.non-Muslim.Male	11	696	707	1.6
	33:Sci.Muslim.Female	11	569	580	1.9
	34:Sci.non-Muslim.Female	17	1,195	1,212	1.4
	41:Isl.Muslim.Male	31	556	587	5.3
	43:Isl.Muslim.Female	44	1,312	1,356	3.2
Year of Admission	1999	35	1,020	1,055	3.3
	2000	30	1,086	1,116	2.7
	2001	51	1,523	1,574	3.2
	2002	107	2,028	2,135	5.0
	2003	55	1,798	1,853	3.0
	2004	104	1,355	1,459	7.1
	2005	81	2,329	2,410	3.4
	2006	8	834	842	1.0
Duration of study	2007	9	779	788	1.1
	2-3 years	48	9,922	9,970	0.5
	4+ years	432	2,830	3,262	13.2

Table 3.2: Frequency distributions of the categorical determinants

Note: Edu = Faculty of Education, Hum = Faculty of Humanities and Social Sciences, Sci = Faculty of Science and Technology and Isl = College of Islamic Studies

3.3 Percentage of Transfer Students

The percentages of transfer students for each factor are shown in Figures 3.1-3.4.

Figure 3.1 shows percentage of transfer students classified by year of admission and faculty-religion-gender. The x-axis is year of admission and the y-axis is percentage.

The highest percentage of transfer occurred among Muslim male students from the faculty of Humanities and Social Sciences (7.8%) while the lowest percentage

occurred among non-Muslim female students from the faculty of Science and

Technology (1.2%). Consistently high transfer percentage of 10.7%, 13.0%, 14.0%

and 12.9% occurred for Muslim male students admitted to the faculty of Humanities and Social Sciences, in the years 2001 until 2004, respectively. The highest transfer

percentages for Muslim male students from the College of Islamic Studies was for those admitted in 2001 and 2004, at 11.1% and 10.4% respectively.

Figure 3.2 shows the percentage of transfer students classified by year of admission and duration of study. The x-axis is year of admission and the y-axis is percentage of

transfer students. The percentage of transfer for students who had studied for 2-3

years was consistently low over the 9 years. The highest percentage of transfer

students occurred for students who had been studying for 4 or more years, particularly

for those who were admitted in 2004 (39.1%).

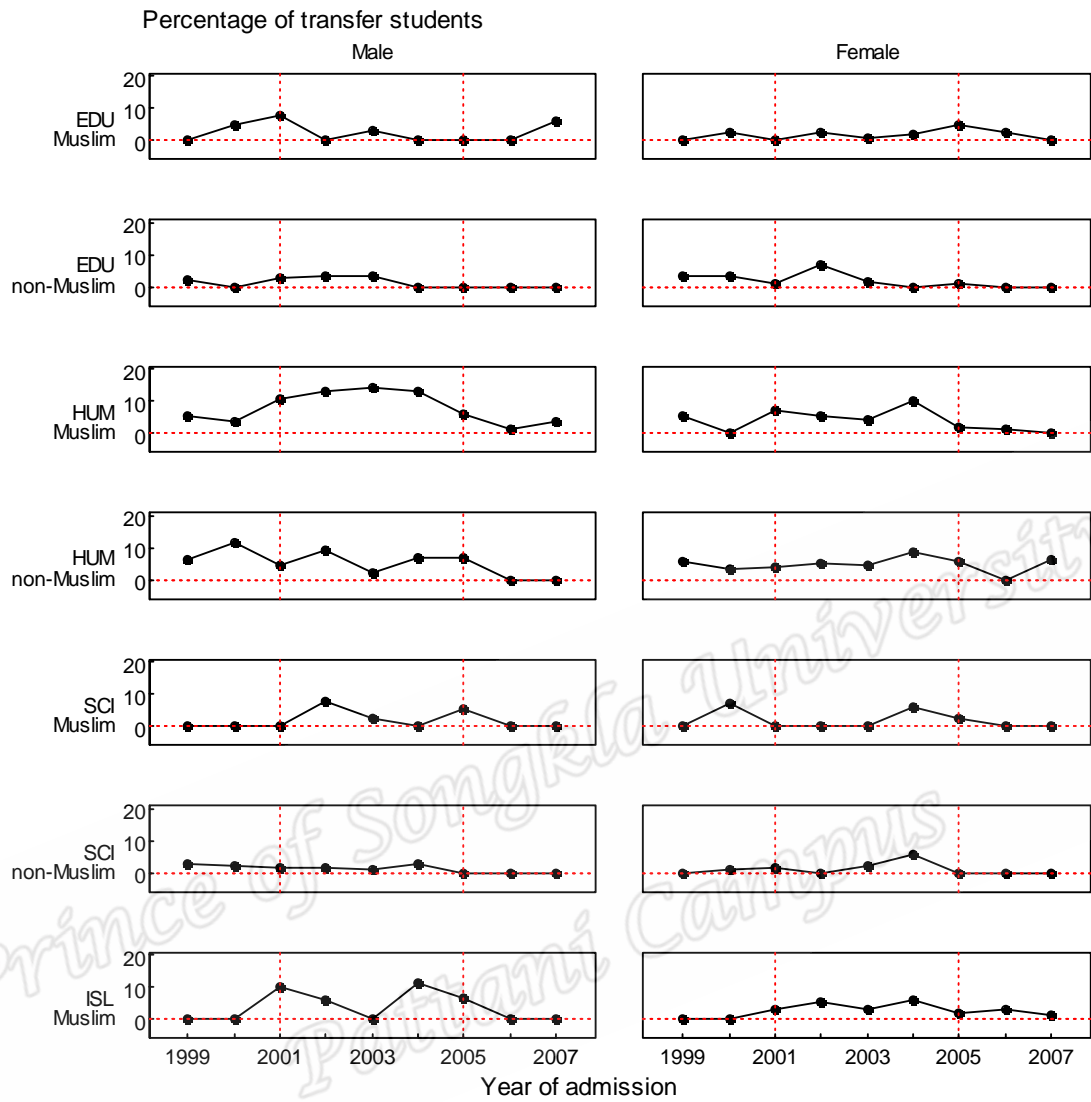


Figure 3.1: Percentage of transfer students classified by year of admission and faculty-religion-gender

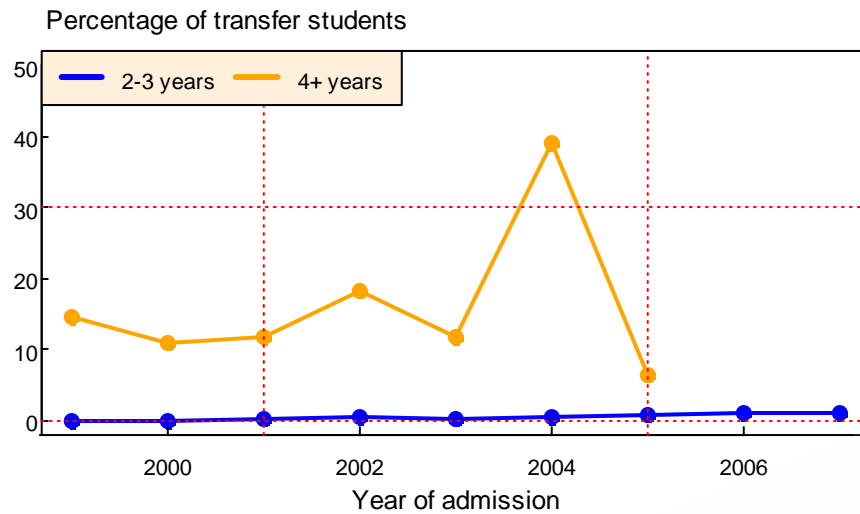


Figure 3.2: Percentage of transfer students classified by year of admission and duration of study

The percentage of transferring students by faculty-religion-gender and duration of study is shown in Figure 3.3. The x-axis is faculty-religion-gender and the y-axis is percentage. The faculty-religion-gender codes are as explained in Table 3.1. For most of the students has been studying for 2-3 years, the percentage of transfer was again consistently low over the 9 years. The highest transfer percentage occurred among students who had been studying for 4 or more years and among non-Muslim female students from the faculty of Humanities and Social Sciences (25.1%), followed by both Muslim and non-Muslim male students from the faculty of Humanities and Social Sciences (24.6%, 23.2% respectively).

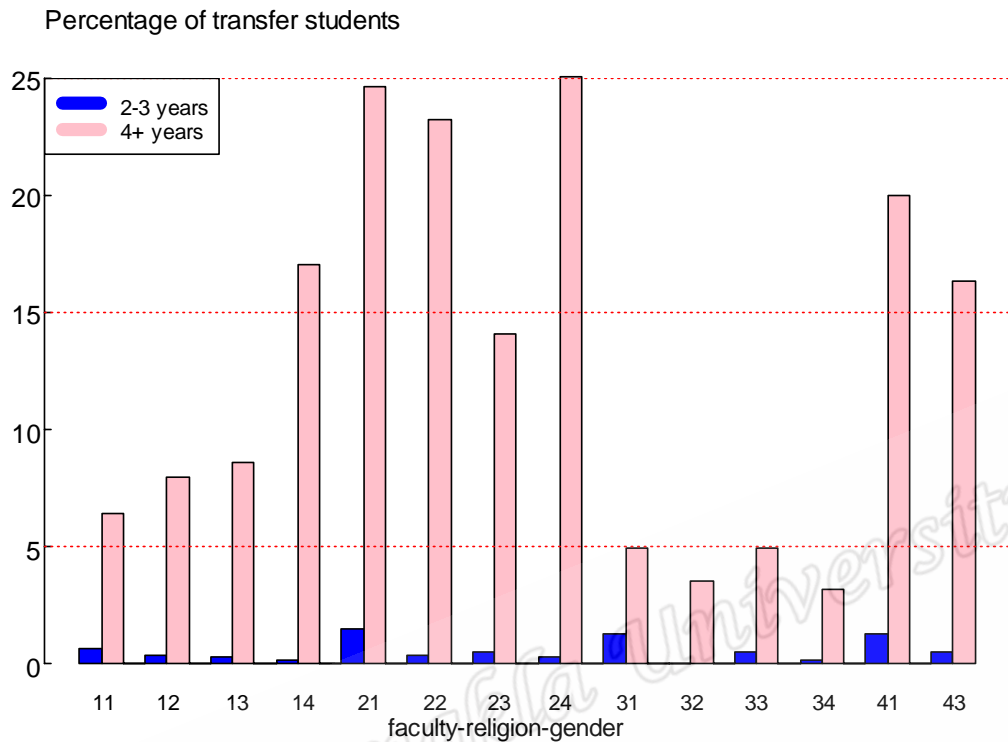


Figure 3.3: Percentage of transfer students classified by faculty-religion-gender and duration of study

Figure 3.4 shows the percentage of transfer students classified by year of admission, faculty-religion-gender and duration of study. The x-axis in each of the small panels is year of admission and the y-axis is percentage. Among the students who had been studying for 2-3 years, consistently low transfer percentage were evident among both Muslim male and female students from the faculty of Education, both the Muslim and non-Muslim female students from the faculty of Humanities and Social Sciences, and among Muslim female and non-Muslim male students from the faculty of Science and Technology. The highest transfer percentage were found for non-Muslim female students from the faculty of Humanities and Social Sciences (admitted 2007; 6.3%), Muslim male students from the faculty of Education (admitted 2007; 5.9%), the faculty of Science and Technology (admitted 2005; 6.1%) and the College of Islamic Studies (admitted 2001; 5.2%). Among the students who had been studying for 4 or

more years, the highest transfer percentage occurred in Muslim male students from the faculty of Education (100%) admitted in 2001, however there was only one student in this subgroup. Muslim male students from the College of Islamic Studies admitted in 2004 had a transfer percentage of 72.7% and Muslim female students from the College of Islamic Studies admitted in 2004 had a transfer percentage of 64.7%. Muslim male students from the faculty of Humanities and Social Sciences and Muslim female students from the College of Islamic Studies had similar transfer percentage patterns over the duration of study, with increases between 2000 and 2004 followed by a decrease in 2005.

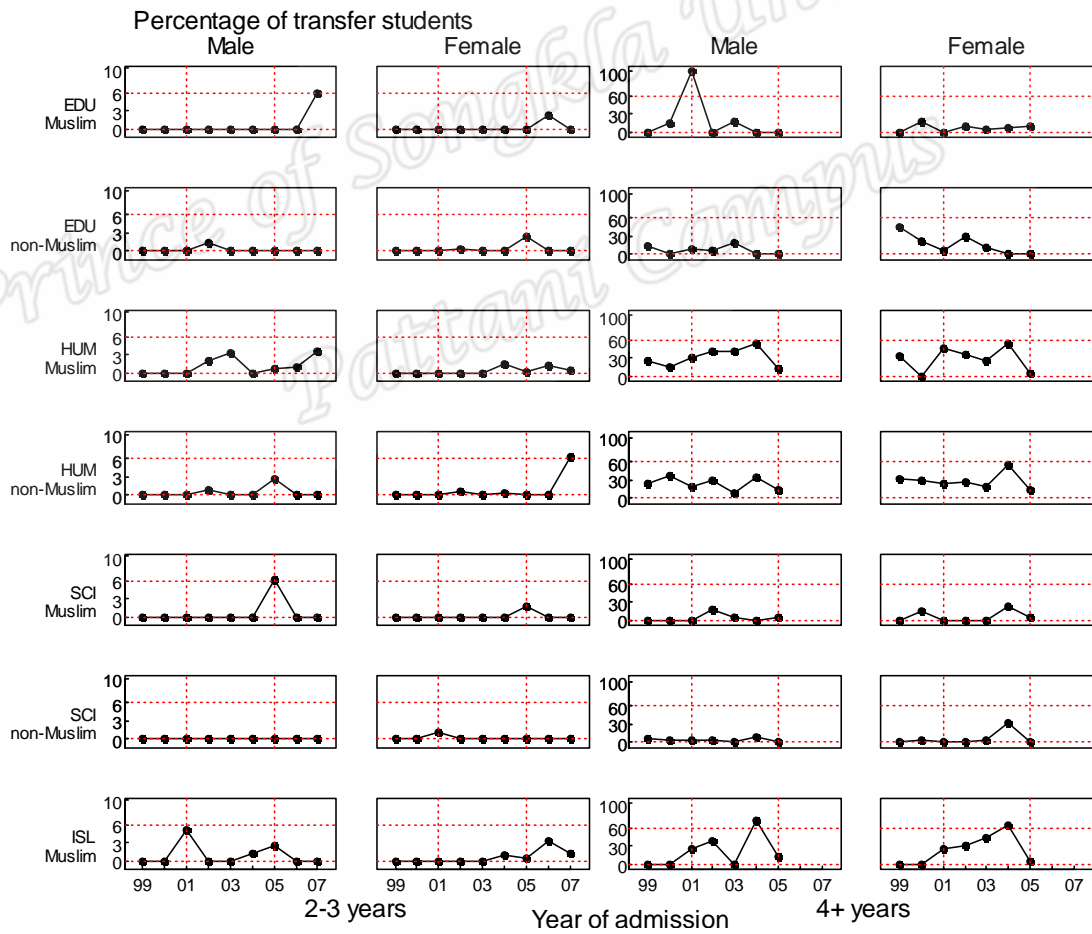


Figure 3.4: Percentage of transfer students classified by year of admission, faculty-religion-gender and duration of study

3.4 Association between Determinants and Outcome

Since the outcome and determinant variables are all categorical, Pearson's chi-squared test may be used to obtain a p-value that indicates the statistical significance of the association for each determinant. These are shown in Table 3.3. All three determinants were significantly associated with transfer, with p-value less than 0.0001.

<i>Determinants</i>	<i>Chi-square</i>	<i>df</i>	<i>P-value</i>
Faculty-religion-gender	113.9	13	< 0.0001
Year of admission	100.6	8	< 0.0001
Duration of study	1145.0	1	< 0.0001

Table 3.3: Association between determinants and outcome

In the next chapter, logistic regression was used to investigate the association between the outcome and all determinants. The data were obtained from 14 faculty-religion-gender, 9 year of admission and 2 duration of study variables. The totals of data were 252 groups. In years 2006 and 2007 no student had been studying for more than 3 years. Therefore the number of groups remaining for data analysis was 224.