

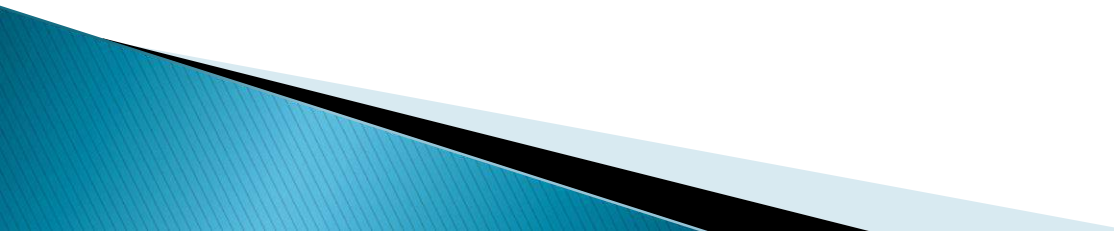
The 'Lost Boys' of Malaysian Public Universities

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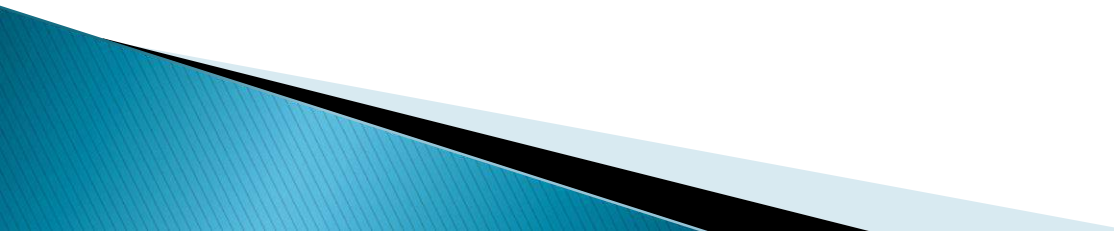
The 'Lost Boys'

- ▶ “....the gender gap is both significant and increasing, having widened over the past five years. Girls consistently outperform boys at every level; the gap in performance is already evident at UPSR level and increases over a student’s lifetime up to university level...”
 - Malaysian Education Blueprint 2013–2025

The Reverse Gender Gap

- ▶ Heward & Bunwaree: Gender gap is relatively small compared to ethnic gap (1999)
 - ▶ Branko Milanovic: Increasing education evenly distributed among genders (1984–97)
 - ▶ Since the mid 1990s, education researchers began to focus on unique problems faced by males– ‘The Boy Turn’
 - ▶ Men are outnumbered by women in tertiary education in 93 out of 146 countries worldwide
 - ▶ Majority of students live in countries where men outnumber women
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The Gender Parity Index (GPI) is an intuitive way of measuring gender disparity

- ▶ The Gender Parity Index (GPI) found by dividing the number of females over the number of males in a certain student population and rounding up to two decimals
 - ▶ A GPI of <1 represents a disparity in favor of males, while a GPI > 1 represents a disparity in favor of females
 - ▶ According to UNESCO, GPI measurement of 0.97–1.03 indicates gender parity
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The Gender Gap in UM, once in favour of male undergrads, is now skewed in favour of female undergrads

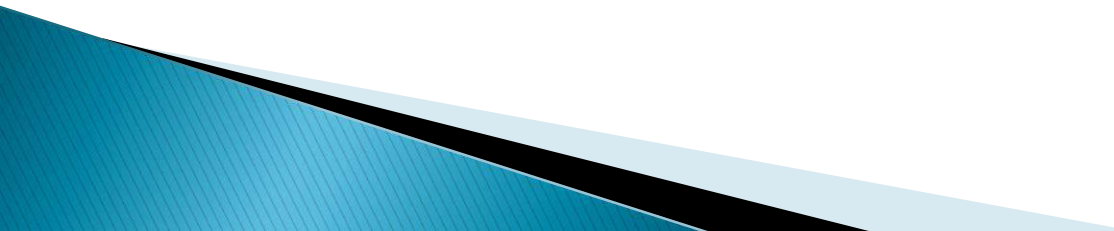
- ▶ In 1959, only 77 female undergraduates (10.7% of total undergraduates, 0.12 GPI)
- ▶ In 2013, there are 8265 female undergraduates (62% of total undergraduates, 1.63 GPI)

GPI at the University of Malaya over time 1959–2013

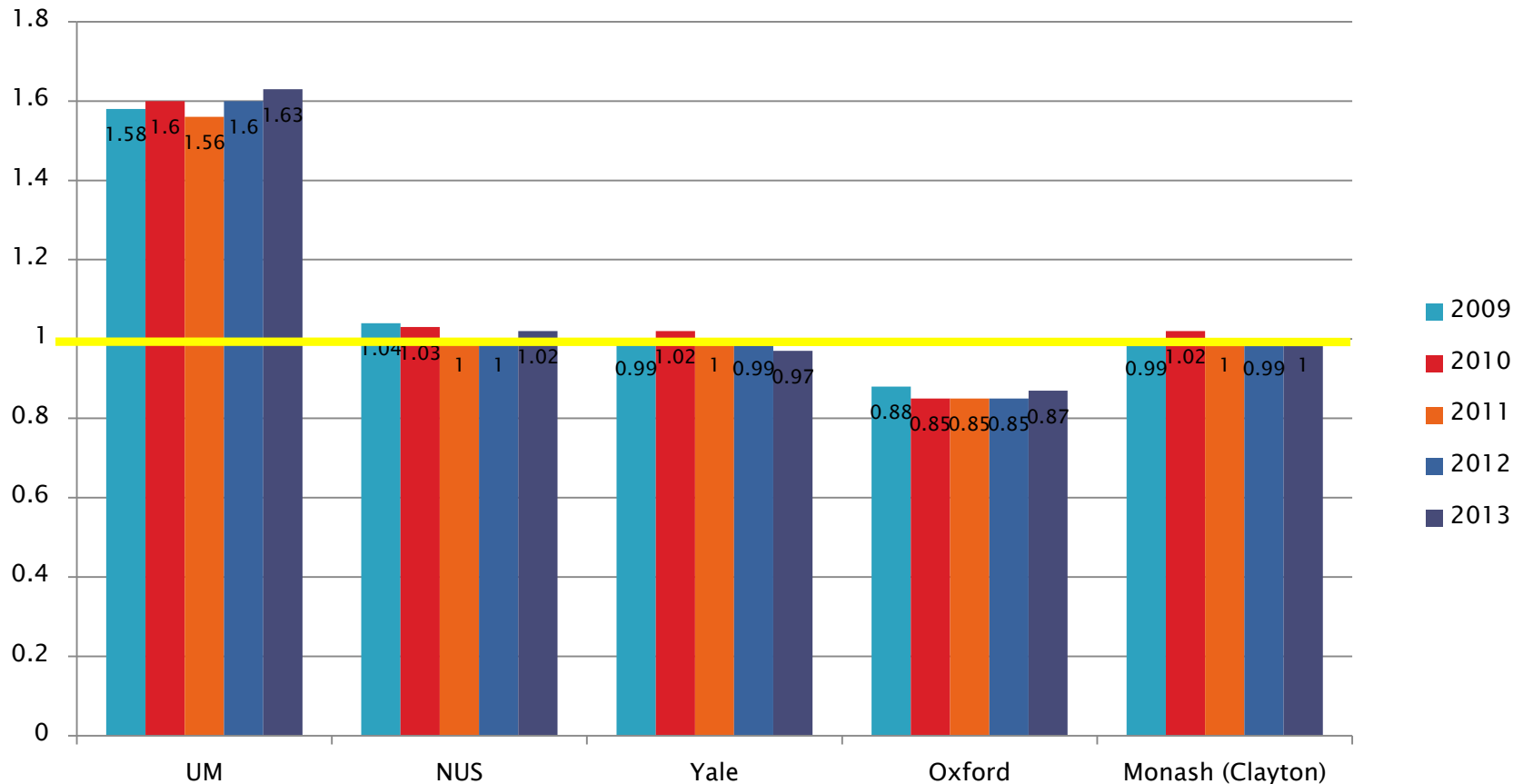
	1959	1967	2013
Total Students Enrolled	720	4060	13333
Male students	643	3057	5068
Female students	77	1003	8265
GPI	0.12	0.33	1.63

Source: Educational Statistics of Malaysia

UM's GPI is significantly higher than its counterparts in other countries

- ▶ How does UM's Gender Gap compare with equivalent overseas institutions?
 - ▶ Comparison done with NUS (Singapore), Yale (U.S) , Oxford (UK), and Monash (Australia)
 - ▶ UM's Gender Gap is significantly higher than the other universities by 0.5–0.6 GPI in 2009–2013
 - ▶ Only Oxford's GPI is consistently in favour of men over women
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UM's GPI is significantly higher than its counterparts in other countries (Graph)

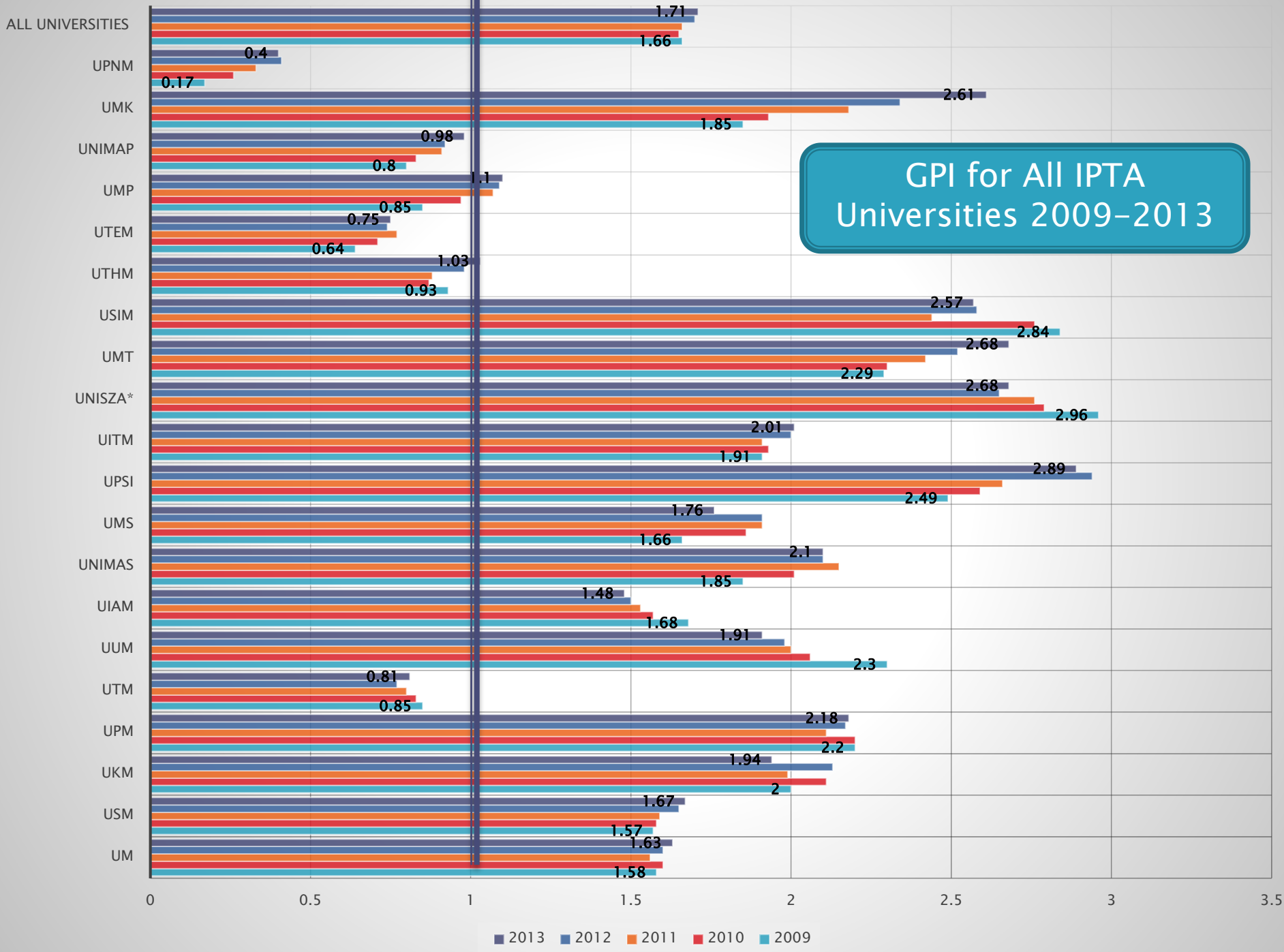


Source: Malaysian Higher Education Statistics, NUS Registrar's Office, Oxford Gazette Student Numbers Supplements, Yale Office of Institutional Research Common Data Set, Monash University Planning and Statistics

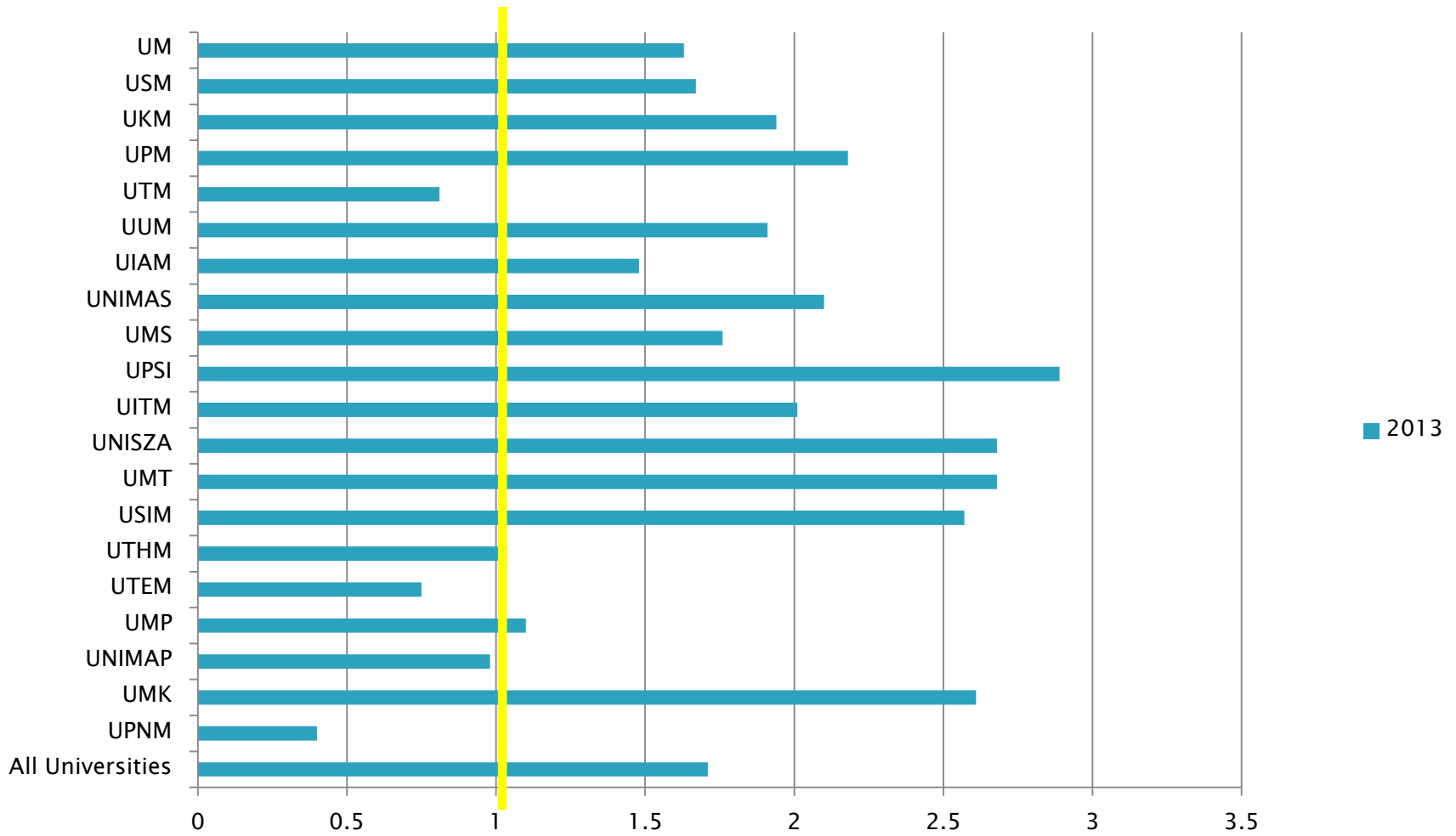
UM is not the only IPTA with extreme gender disparity

- ▶ How does UM's GPI compare to other public universities in Malaysia?
- ▶ GPI of 1.63 is closer to parity than the average GPI of all IPTAs– 1.71
- ▶ 12 IPTAs have GPIs higher than UM, 7 IPTAs have GPIs lower than UM
- ▶ 8 IPTAs have GPI higher than 2.0, indicating boys are outnumbered by more than 2:1
- ▶ The difference between male and female enrolments in the year 2013 amounted to 86,798 students, 26% of total student enrolments

GPI for All IPTA Universities 2009-2013

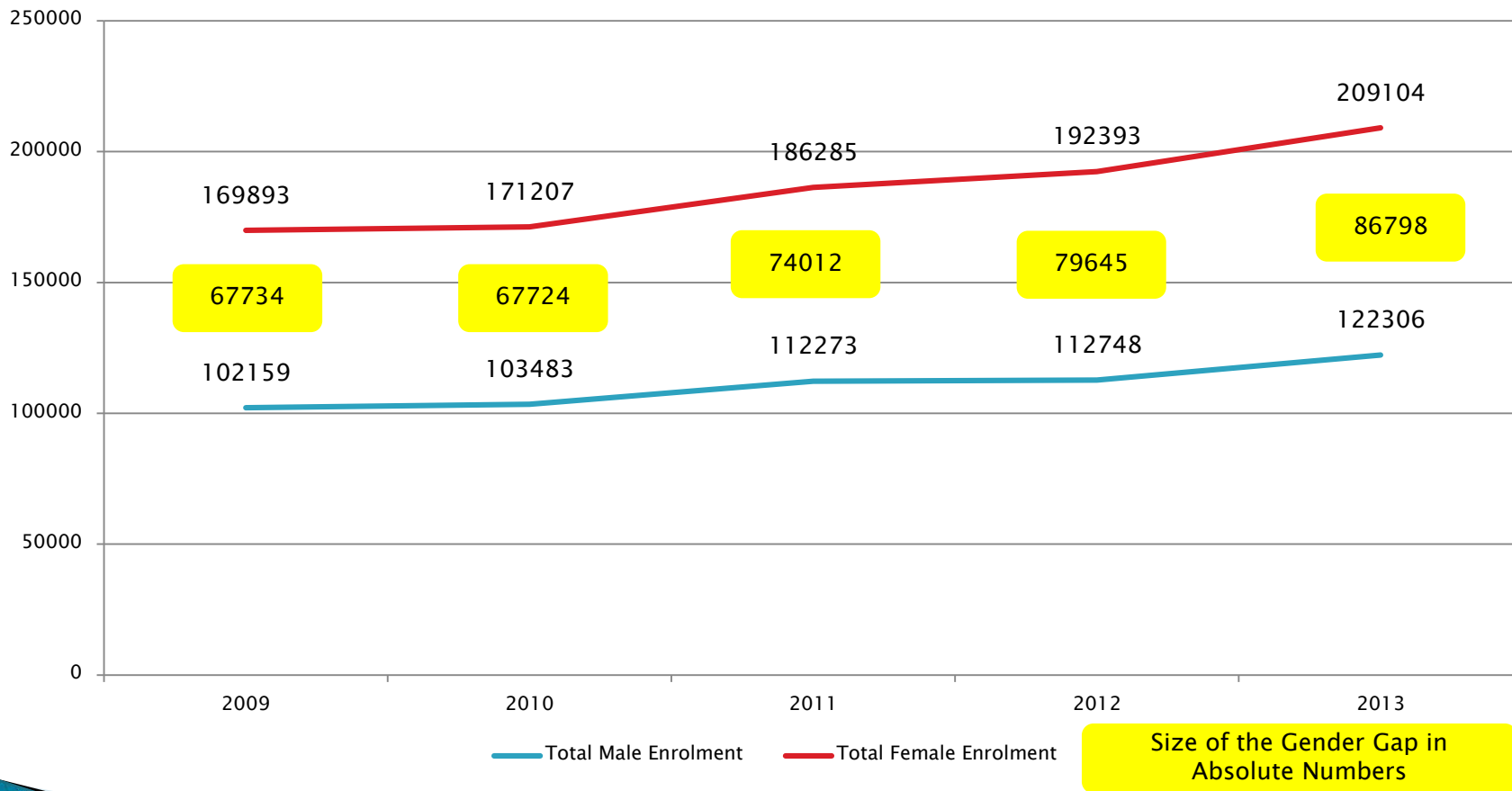


GPI for all IPTAs in 2013



Size of Gender Gap in Public Universities

Male and Female Undergraduate Enrolment Trends at IPTAs 2009-13

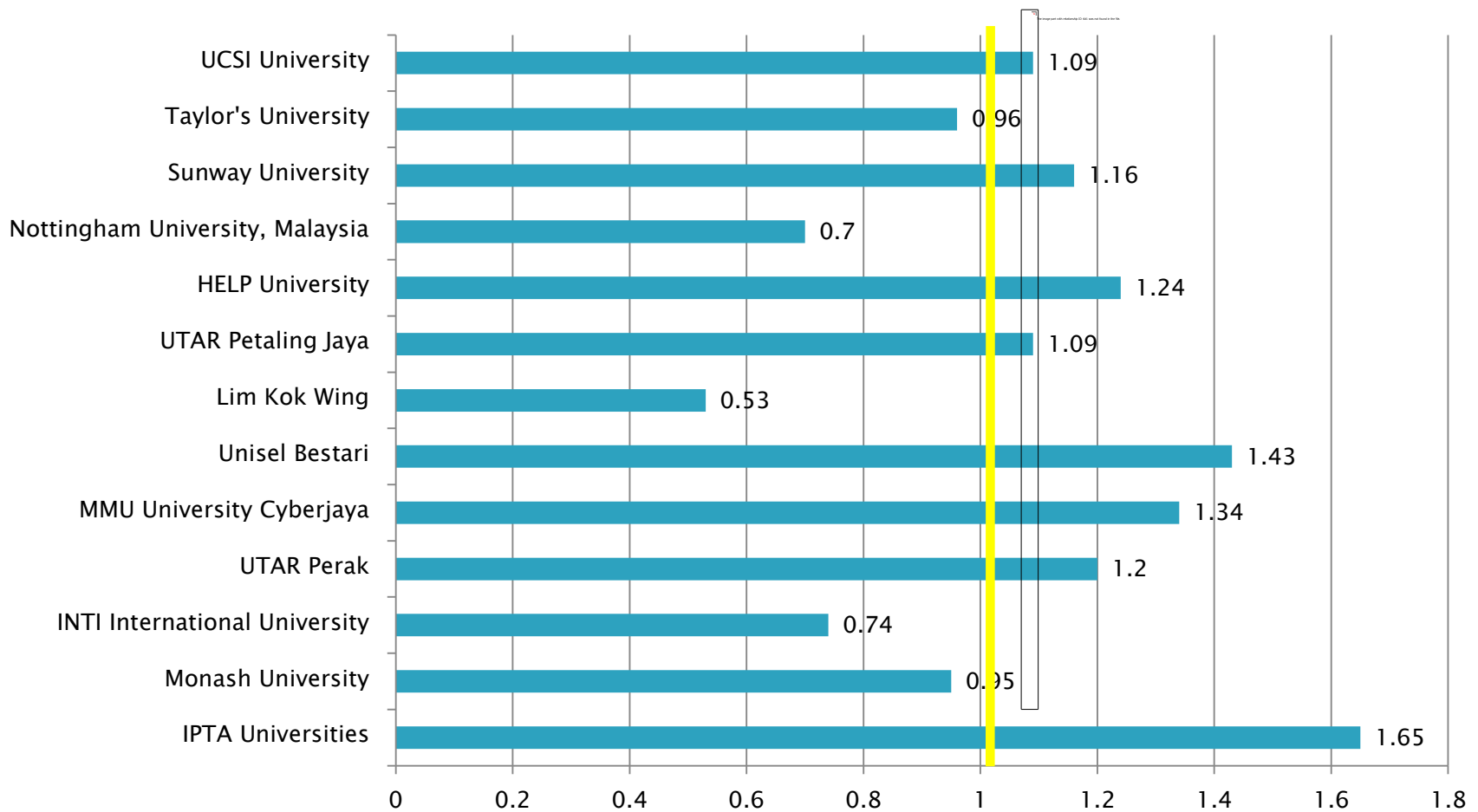


Source: Malaysian Higher Education Statistics

IPTS shows GPI that is close to gender parity

- ▶ Average GPI for IPTS Institutions is much closer to gender parity: 0.98
- ▶ 12 IPTS Institutions examined for the year 2012: None had extreme disparities in favour of men or women, all had GPI lower than the IPTA average
 - 2 universities had GPIs > 1.25 (Unisel Bestari 1.43 and MMU Cyberjaya 1.34)
 - 3 universities had GPIs < 0.75 (Nottingham Semenyih 0.7, Lim Kok Wing 0.5 and INTI International University 0.74)

Comparison of GPI with IPTS Institutions



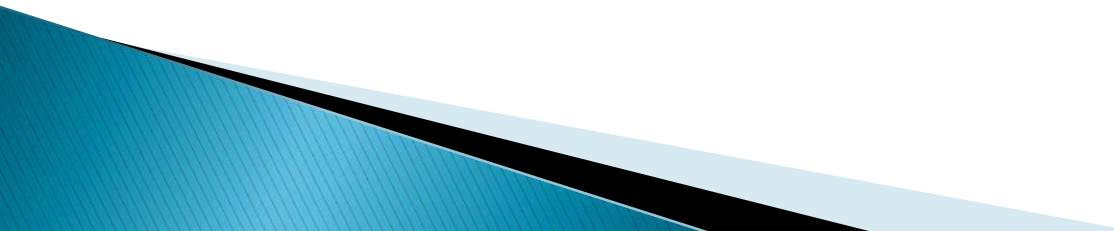
Source: Buku Informasi IPTS 2012

Only Engineering, Manufacturing & Construction has GPI in favour of male students at IPTAs

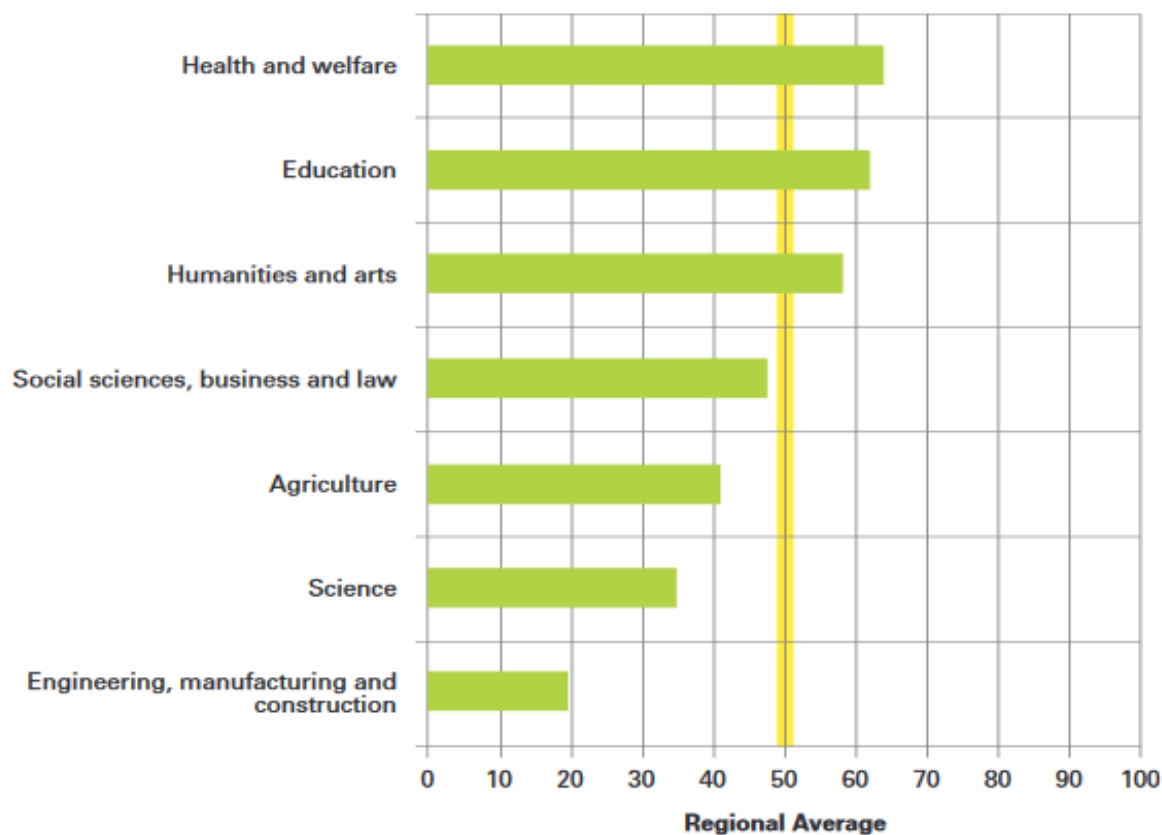
- ▶ Male and female students tend to enrol at different faculties and courses



Gender Gap by Subject shows more female enrolment even in science, math and computing

- ▶ Women outnumber men in Malaysia in seven out of eight major fields of study
 - ▶ This includes science, mathematics and computers, in which men hold a traditional advantage
 - ▶ Women in Malaysia have higher representation in each field of study compared to other countries within the East Asia and Pacific Region
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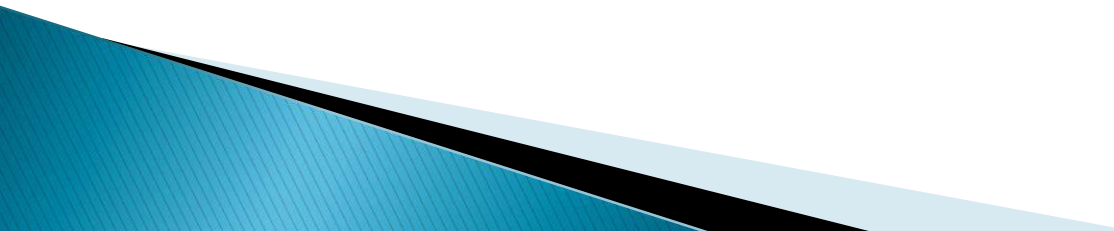
Gender Gap by Subject Segregation in East Asia and Pacific is very different from Malaysia



IPTA Percentages of Enrolment (2010)
Health and Welfare : 70%
Education: 69%
Humanities and Arts: 63%
Social Sciences, Business and Law: 67%
Agriculture: 59%
Science (Mathematics and Computer Science): 62%
Engineering, Manufacturing & Construction: 42%

Source: Gender Equality in Education Snapshot, UNICEF (2009)

The STEM Gap Worldwide shows significant bias towards male enrolment

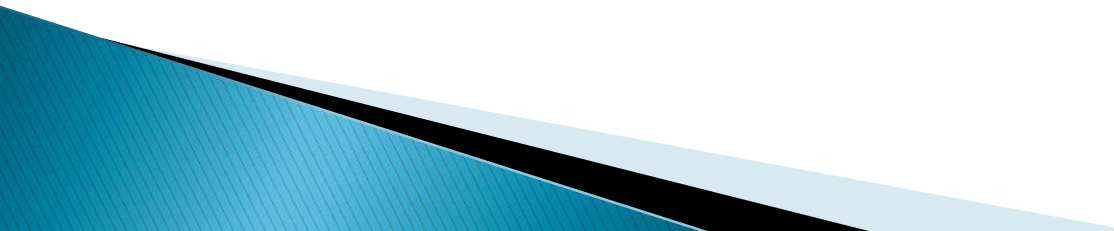
- ▶ Degrees in Science, Technology, Engineering and Mathematics (STEM) have often been an exception of the trend towards increased female enrolment
 - ▶ STEM Bachelor degrees in the U.S going towards women has decreased in the past decade
 - ▶ There are more male than female students in 91% of countries examined by UNESCO
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The STEM gap in Malaysia is much narrower & sometimes opposite to global trends (I)

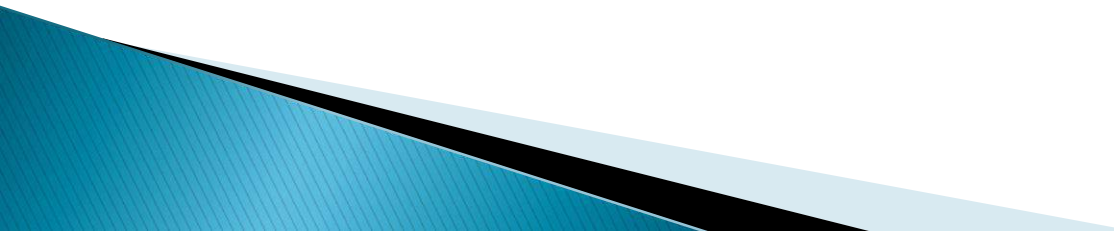
Degree		Men	Women	All	GPI	% of which are women
Engineering	Bachelors	42309	34615	76924	0.82	45
	Masters	6543	6377	12920	0.97	49
	Doctorate	4380	2607	6987	0.6	37
Mathematics	Bachelors	1512	4450	5962	2.94	75
	Masters	264	709	973	2.69	73
	Doctorate	313	369	682	1.18	54
Science	Bachelors	3286	8275	11561	2.52	72
	Masters	3909	7121	11030	1.82	65
	Doctorate	2102	2506	4608	1.19	54
Technology	Bachelors	2581	4098	6679	1.59	61
	Masters	534	540	1074	1.01	50
	Doctorate	333	180	513	0.54	35

Source: Malaysian Higher Education Statistics

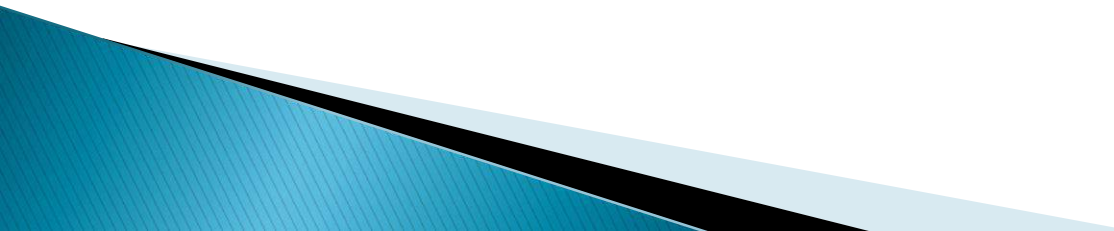
The STEM gap in Malaysia is much narrower & sometimes opposite to global trends (II)

- ▶ Women outnumber men in almost all STEM Subjects from undergraduate to PhD Studies with the exception of Engineering
 - ▶ The Gender Gap in engineering is much closer to parity compared to international norms
 - ▶ Only 17% of engineering undergraduates in the U.S are female
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Causes of the Gender Gap

- ▶ Human Capital Theory: Women have higher returns for education
 - ▶ Better performance among females in secondary education
 - ▶ Socialization theory: boys are socialised from a young age to accept unhealthy gender stereotypes
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GPI score in favour of women does not mean that gender discrimination against women has disappeared

- ▶ Malaysia is far from the top ranks of indexes which measure gender equality.
 - ▶ Malaysia ranks 111 out of 145 in the World Economic Forum's Global Gender Gap Index. On the UNDP's Gender Inequality Index (GII)
 - ▶ Malaysia does somewhat better coming in at 62 out of 188 countries.
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Conclusion

- ▶ The Gender gap in favour of women in Malaysian higher education has become increasingly prevalent
 - ▶ Malaysia has done well in reducing gender disparities in STEM subjects
 - ▶ More research needs to be done to uncover causes and implications of gender gap
 - ▶ Remains to be seen if shift to TVET can address these gaps at the post-secondary level
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