

# PhD GOT: Current Scenario



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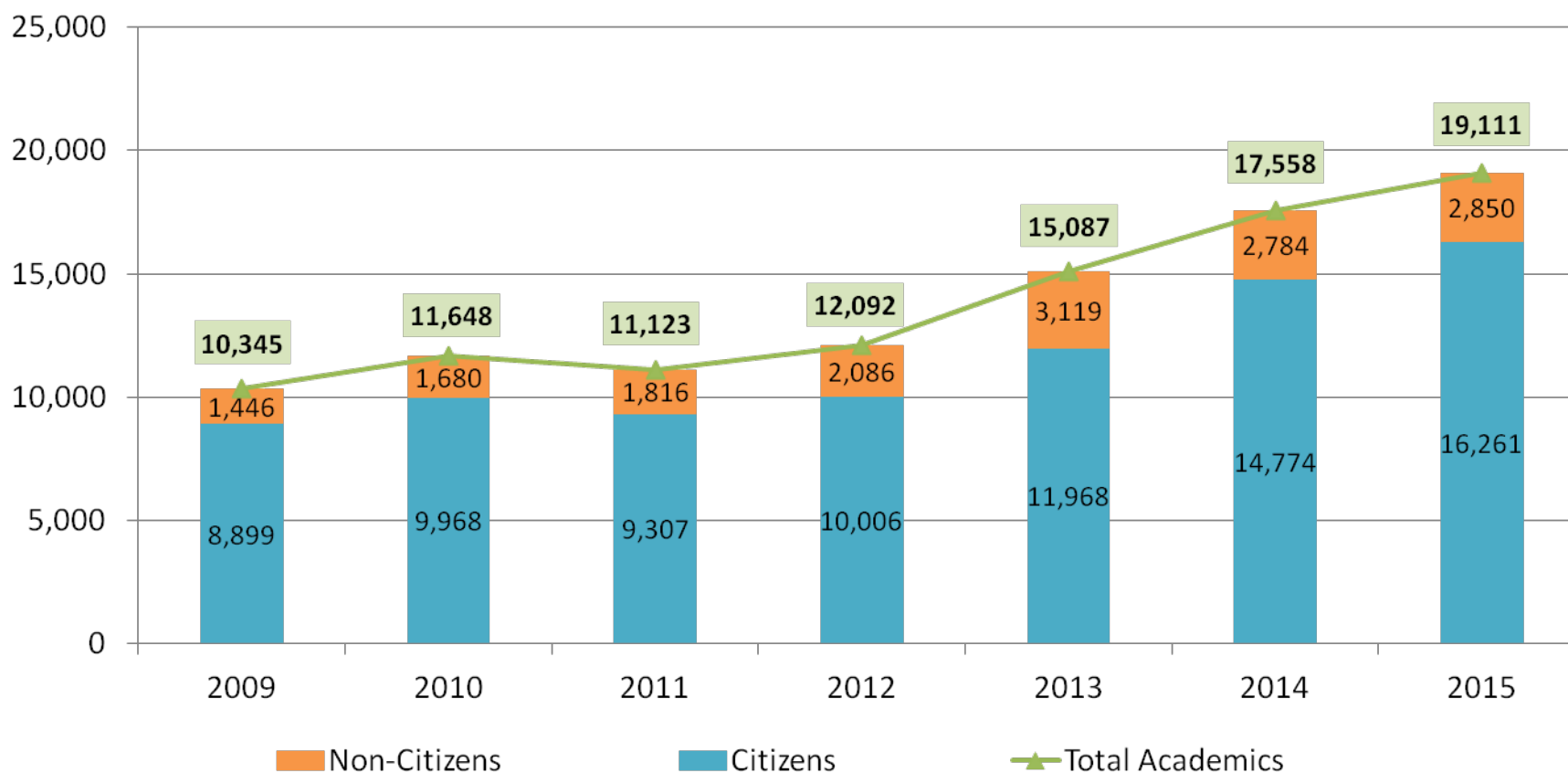
**26 Sept, UMT**

# The Contents

- GOT – National Agenda
- PhD's Completion Time in Other Countries
- PhD's Completion Time in Malaysia
- Strategies for GOT at institutional level
- Impact!

# Number of Academics with Doctorate in HEI (2009-2015)

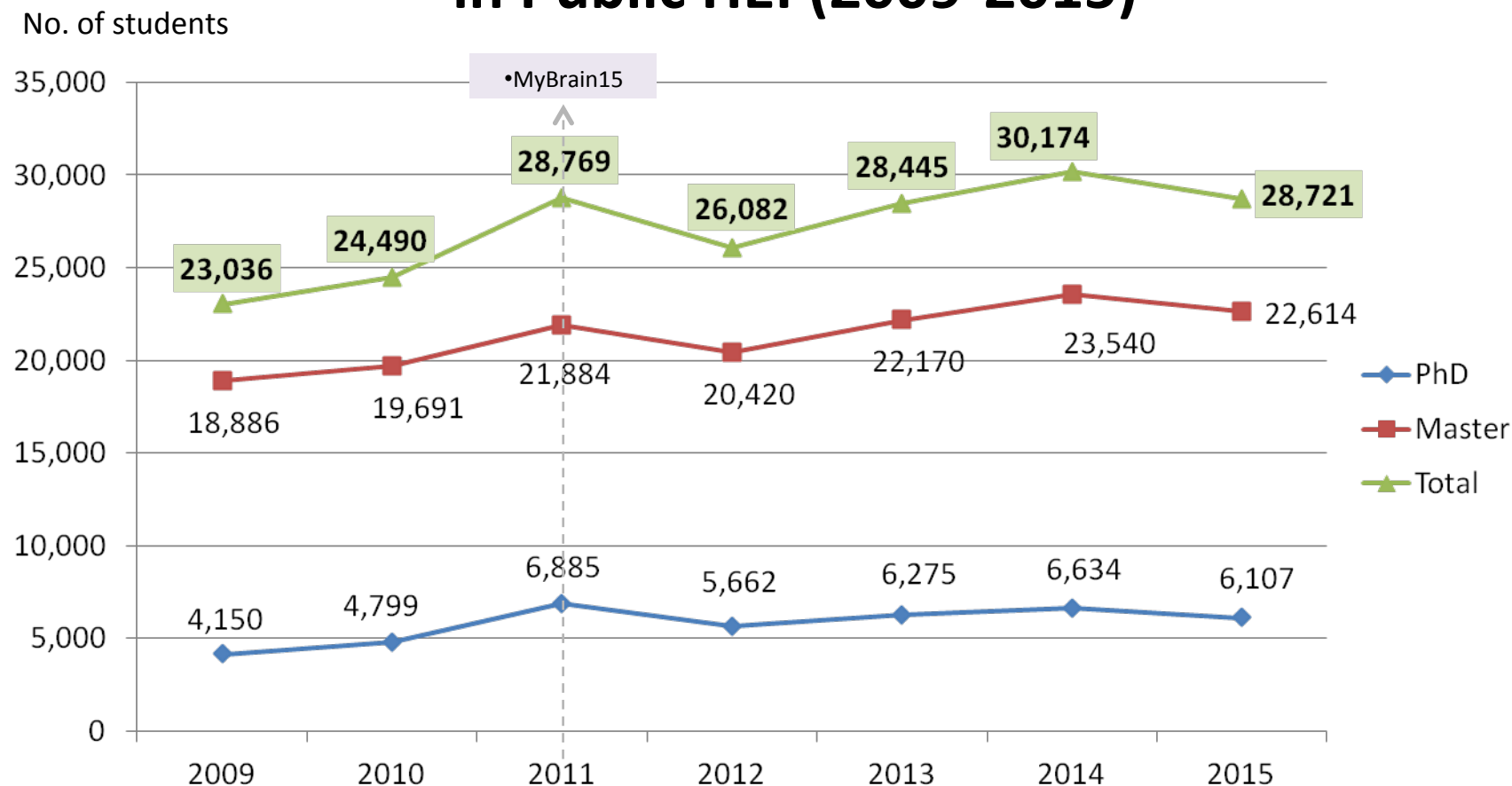
No. of students



(Source: Ministry of Education Malaysia)

\* Total number of academics in 2015 (19,111) compared to 2009 (10,345) is equivalent to 45.9% increment.

# Number of Student Intake for Post Graduate Study in Public HEI (2009-2015)



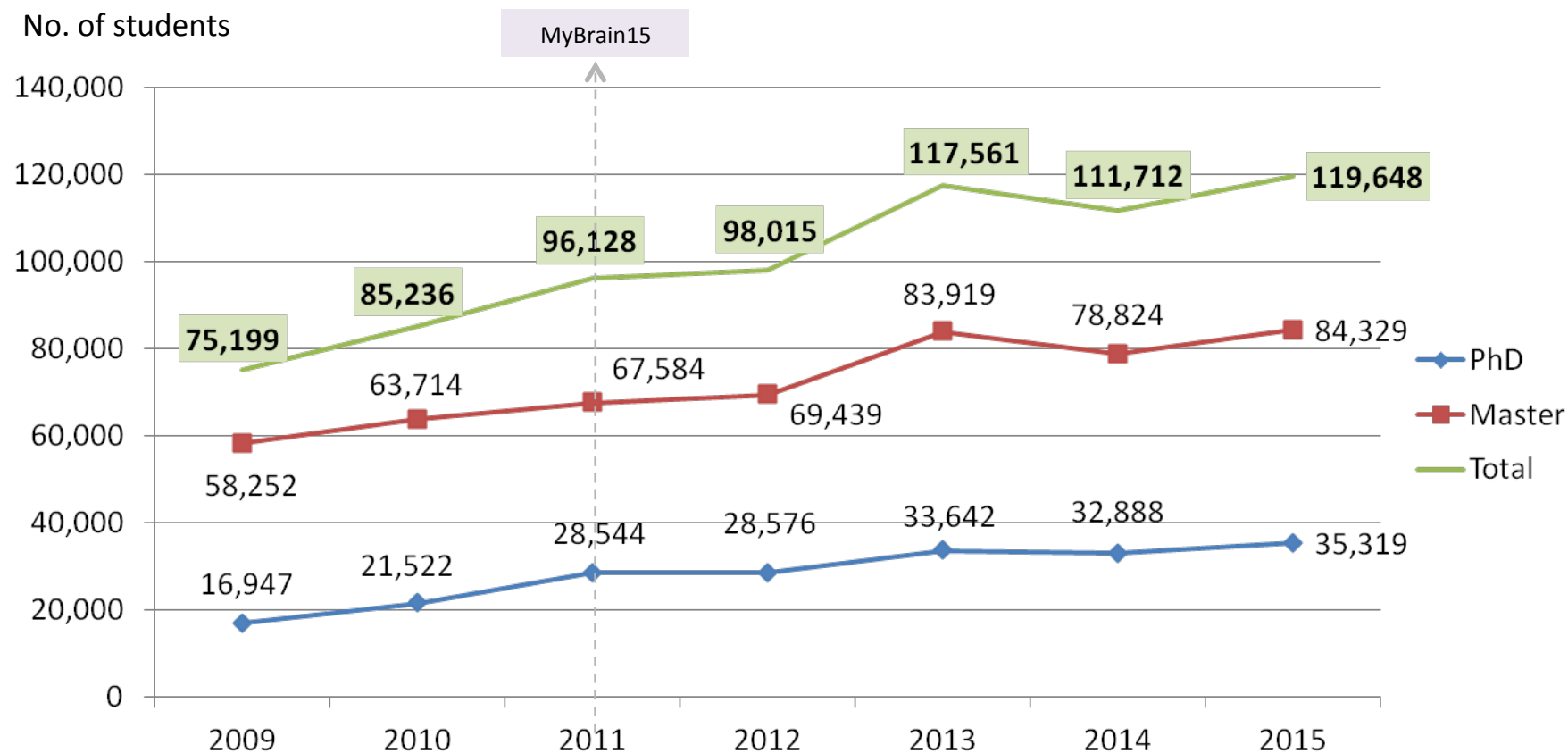
(Source: Ministry of Education Malaysia)

\* MyBrain15 scholarship embarked in 2011

•The number of intake of public HEI in 2015 has increased to 19.8% compared to 2009.

•\* A small pattern of decrease in 2015 from 2014 (4.8%).

# Number of Student Enrolment for Post Graduate Study in HEI (2009-2015)



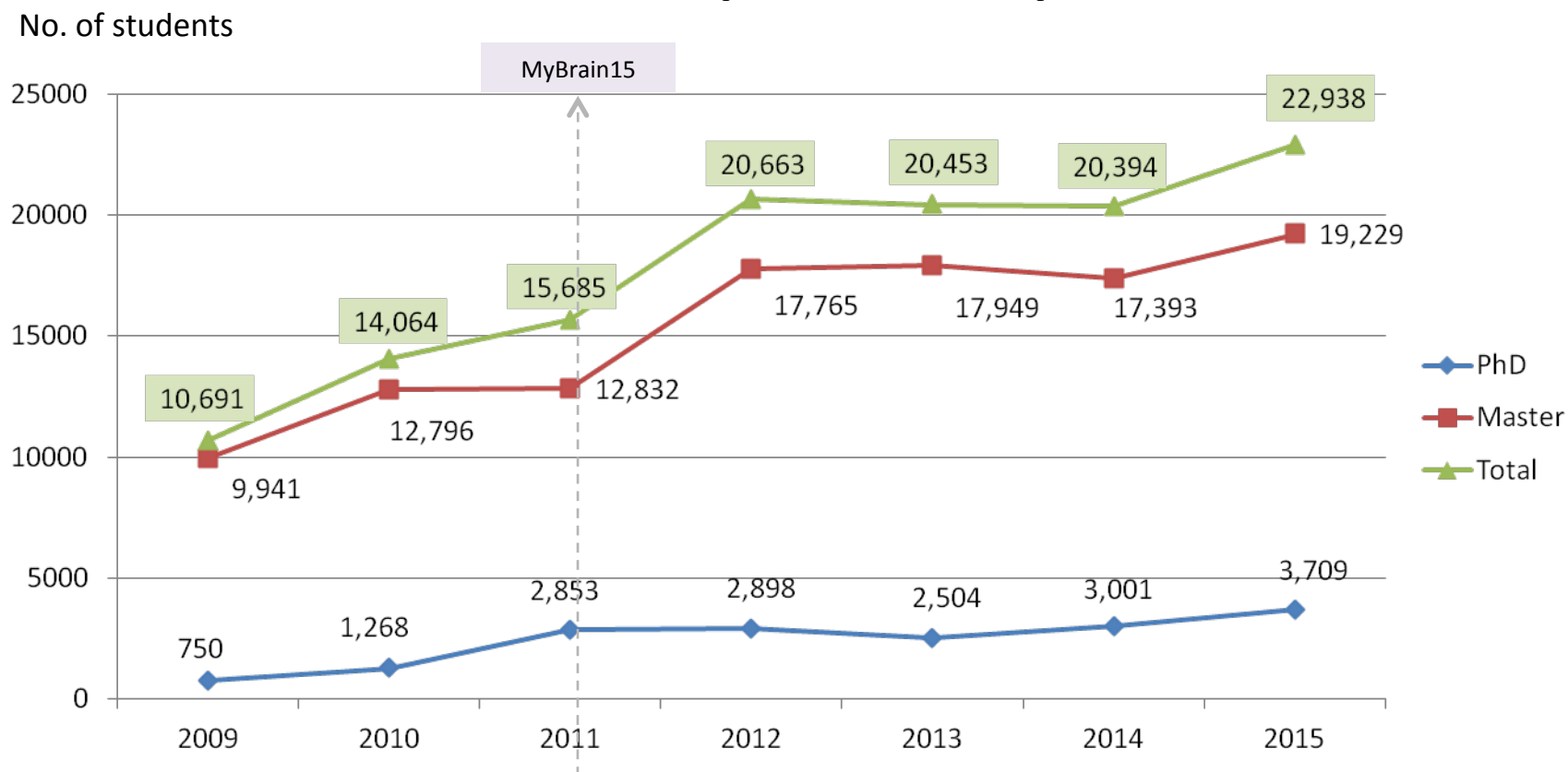
(Source: Ministry of Education Malaysia)

\* MyBrain15 scholarship embarked in 2011

\* The number of enrolment in 2015 has increased to 37.1% compared to 2009.

\* A small pattern of increase in 2015 from 2014 (6.6%).

# Number of Graduates for Post Graduate Study in HEI (2009-2015)



(Source: Ministry of Education Malaysia)

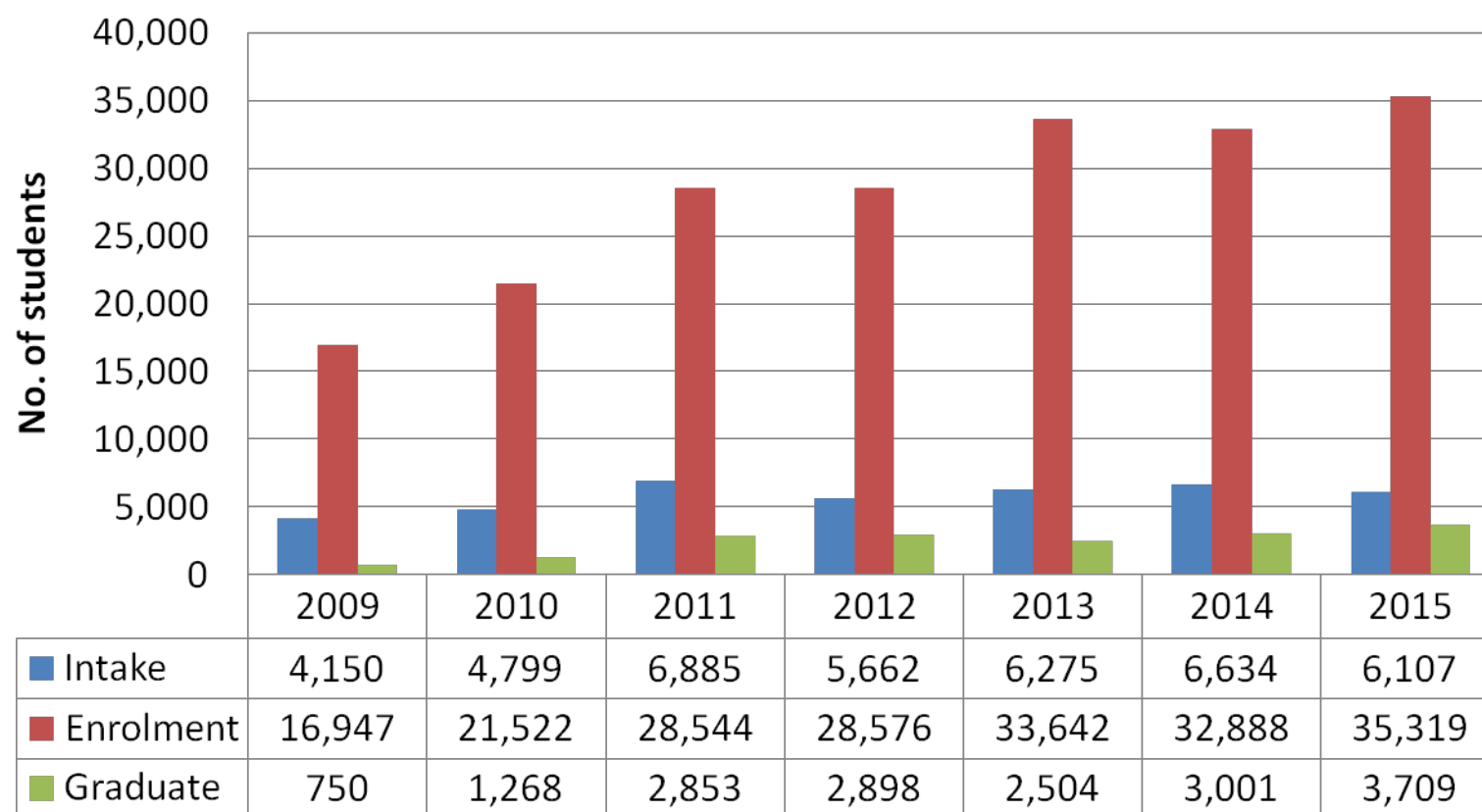
\* MyBrain15 scholarship embarked in 2011.

\* The number of graduates has increased to 53.4% in 2015 compared to 2009.

\* A positive growth for 4 years was experienced a small pattern of decrease in 2013.

\* Total number of graduates since MyBrain sponsorship (2011-2015): 100,133 students (Phd: 14,965 students).

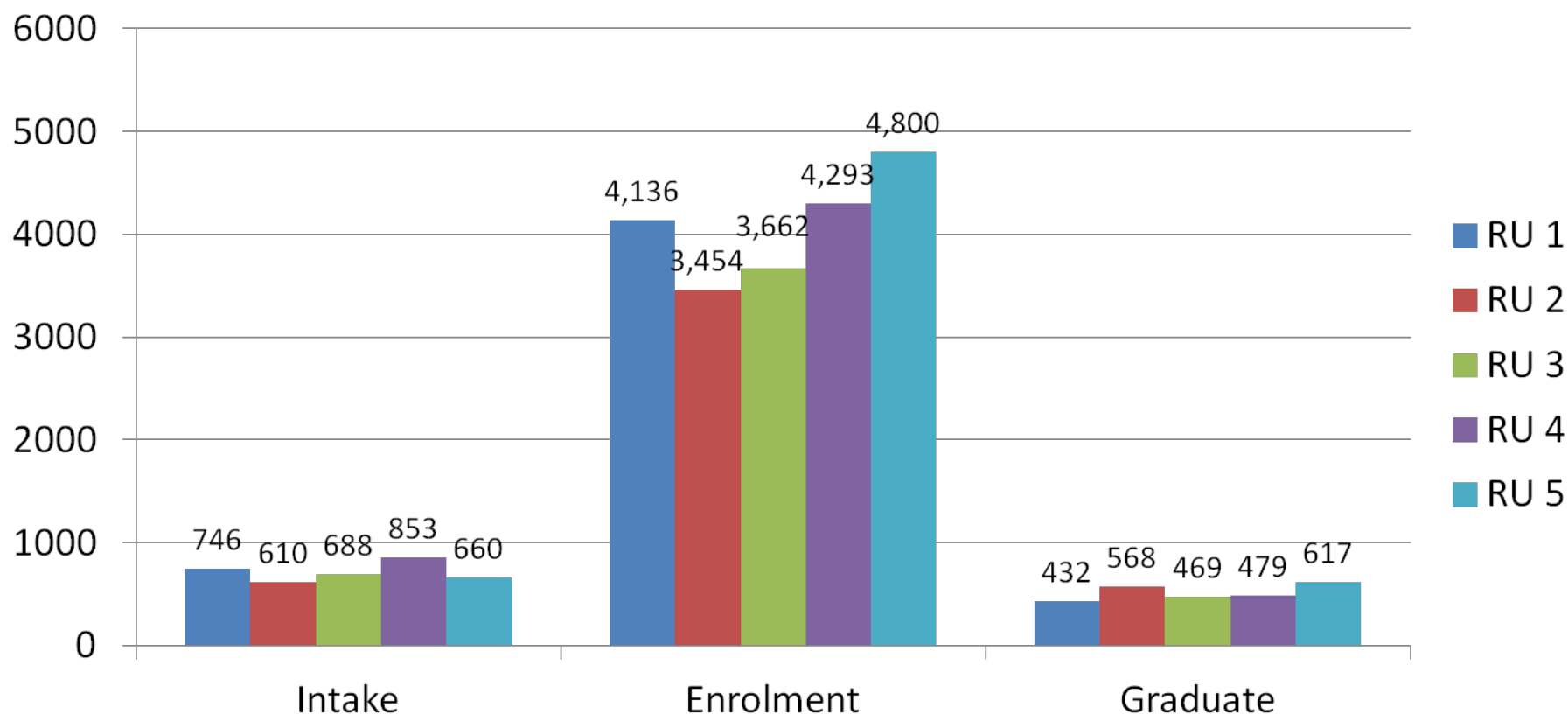
## Number of PhD Students for Intake, Enrolment and Graduates in Higher Education Institutes (HEI), 2009-2015



(Source: Ministry of Education Malaysia) \* MyBrain15 scholarship embarked in 2011

# 5 RUs Intake, Enrolment, Output

PhD Intake, Enrolment and Output of Research Universities (2015)



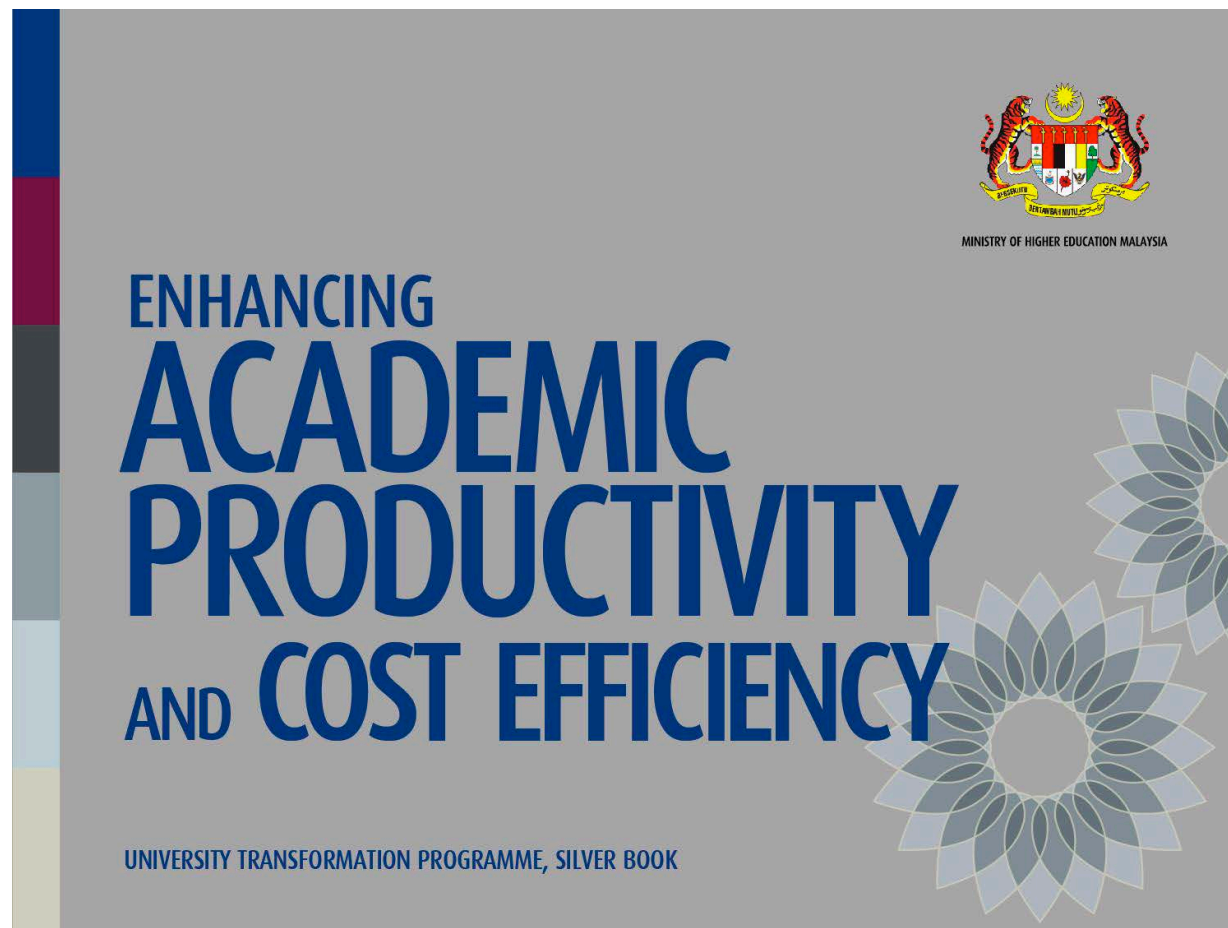
(Source: Ministry of Education Malaysia) \* MyBrain15 scholarship embarked in 2011



# GOT - National Agenda



# UniTP – Silver Book




# UniTP – Silver Book

- Malaysia is currently ranked 25th out of 50 higher education systems, based on the 2017 Universitas 21 rankings, and has been steadily climbing upwards.
- Optimising Academic Productivity and Cost Efficiency:
  - **Improving academic productivity** by increasing **iGoT** and optimising costs per FTSE
- Costs are rising faster than available funding

# U21 Ranking 2017

- Malaysia is ranked 25<sup>th</sup> overall:
  - 11 for Resources,
  - 13 for Environment,
  - 34 for Connectivity and
  - 39 for Output.
- Malaysia is ranked eighth for government expenditure on higher education as a share of GDP and expenditure per student ranks eleventh.



In 2017 Australia ranks 10<sup>th</sup> overall, which combines ranks of 15 for Resources, 3 for Environment, 12 for Connectivity and 3 for Output.

# UniTP – Silver Book

- The UniTP Silver Book's focus will be on cost per graduate, in order to address the unique challenge of keeping costs under control while meeting the demand for higher education.
- iGoT
- IMPROVING ACADEMIC PRODUCTIVITY IS THE KEY TO EDUCATING MORE STUDENTS WITH THE SAME RESOURCES

# Current Definition

- iGOT vs GOT by MyRA2
- iGOT:
  - ‘iGoT’ is defined as the **percentage of full-time students from a particular intake batch** who graduate on or before the year that they are prescribed to graduate.
- GOT by MyRA2:
  - Number of PhD graduated within 7 semesters/42 months
  - % of PhD’s students graduated within 7 semesters/42 months from numbers of PhD’s graduated in a year of assessment.

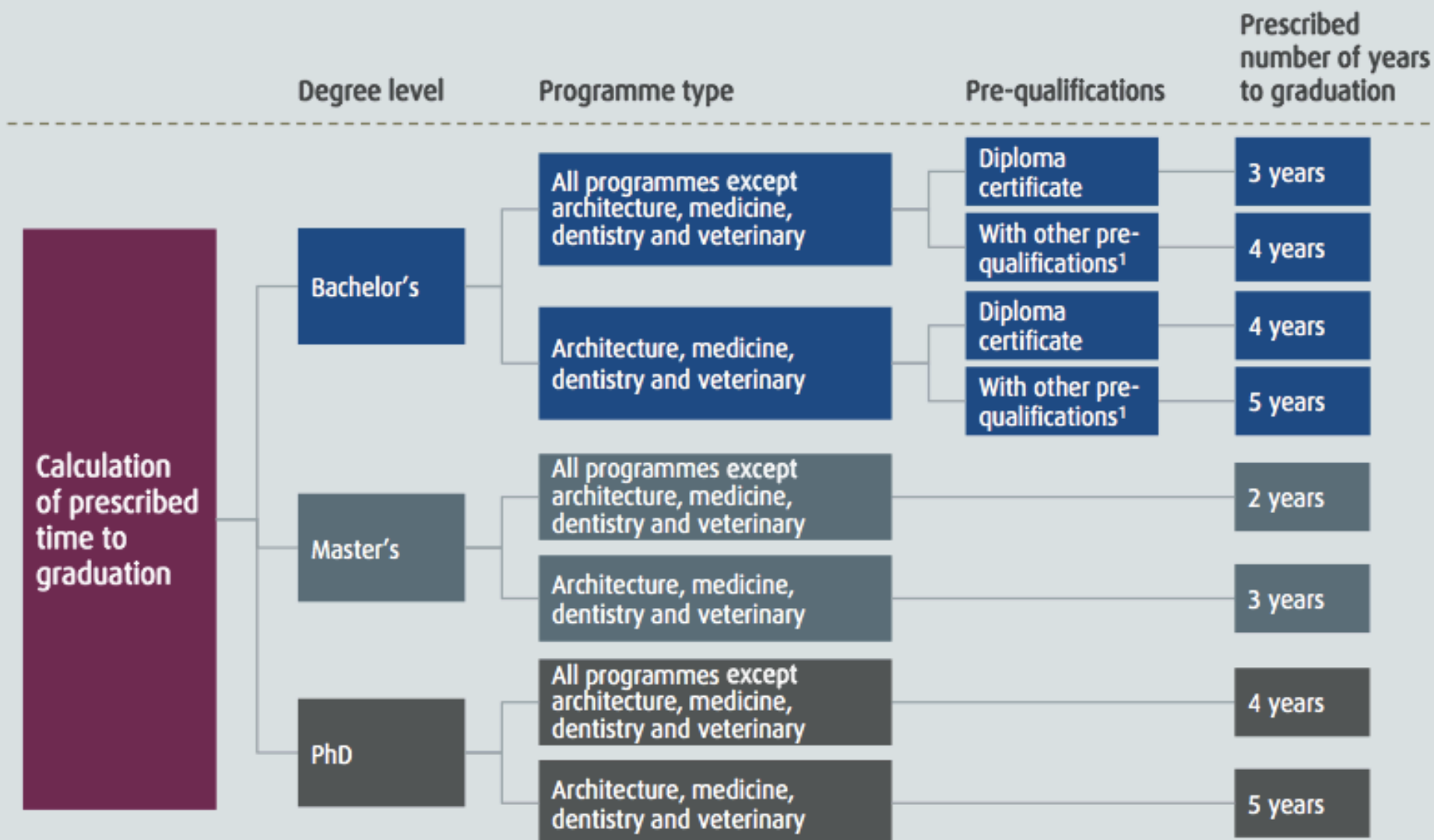


# Current Definition

- The need to measure iGoT tied to a cohort instead of a total annual graduation rate is critical.
- Even though students who take longer to graduate still receives a degree, that degree took more time than intended, and therefore costs more for the university.
- There are, of course, instances in which some students will reasonably need more time to complete a programme of study – but in other instances, delays could have been avoided to improve productivity.

# Exhibit 1

Prescribed *iGoT* depends on three factors: degree level, type of programme and the student's incoming pre-qualifications



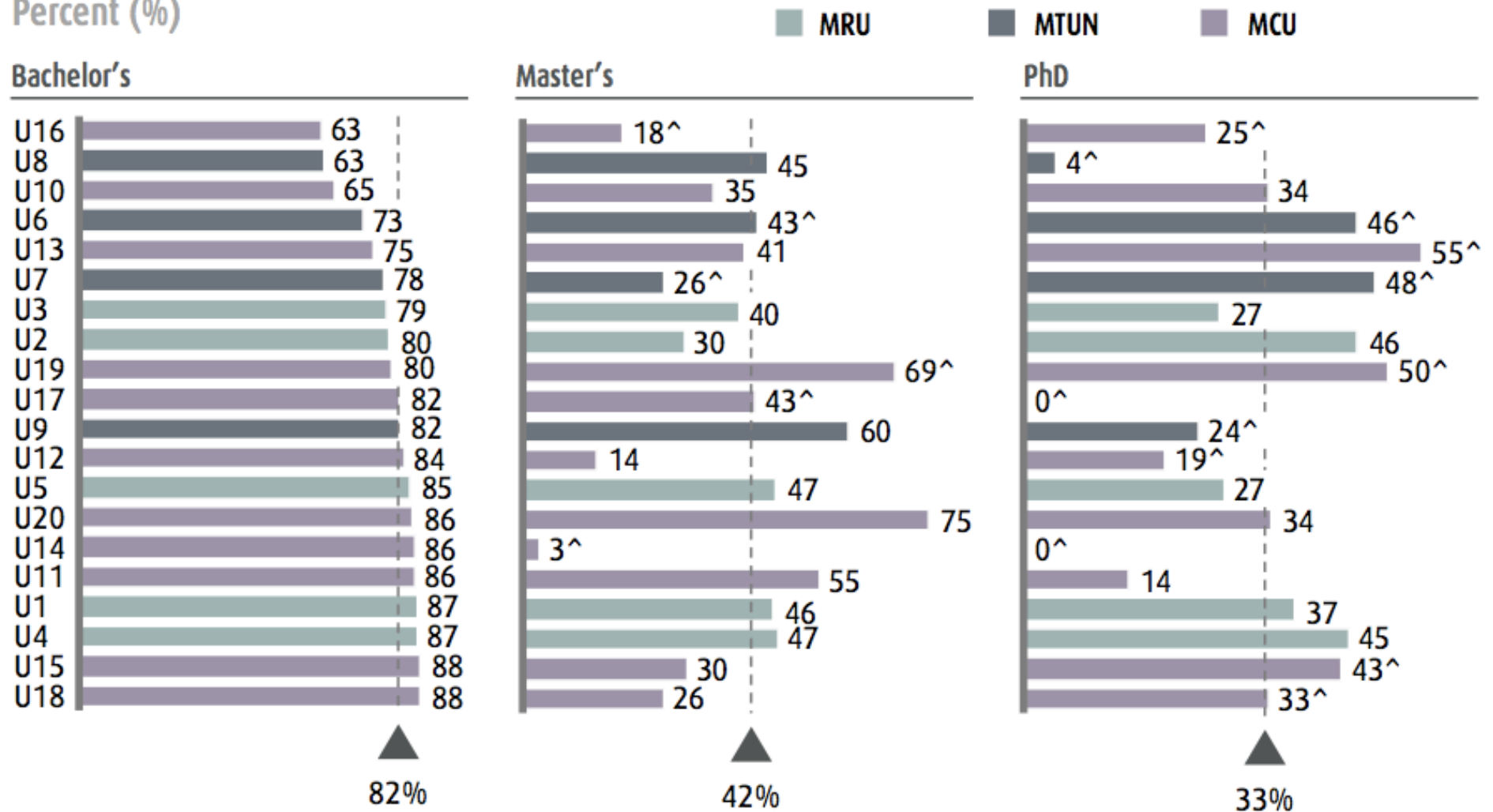
<sup>1</sup> Undergraduate students who come in to the programme with other qualifications, which include STPM, polytechnic or other equivalent pre-qualifications.



Chart 5

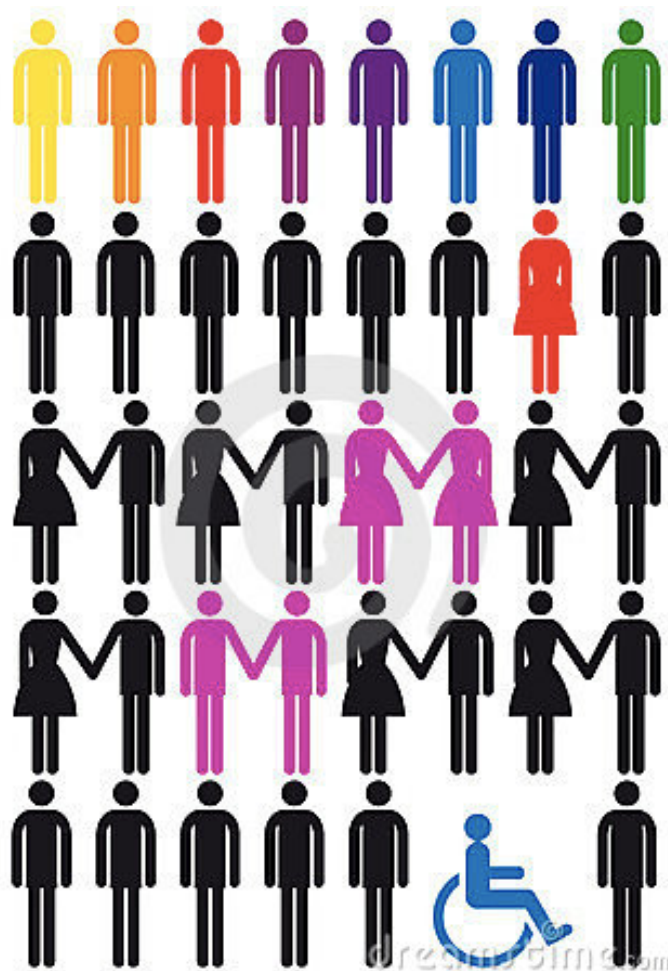
**iGoT for Malaysia's public universities, by degree level**

Percent (%)



^ Universities with intake batches of less than 100 for their master's/PhD programmes

# Postgraduate Students



**39** PhD's  
Students

**10%** Get  
Married

**20%** Get  
Employed

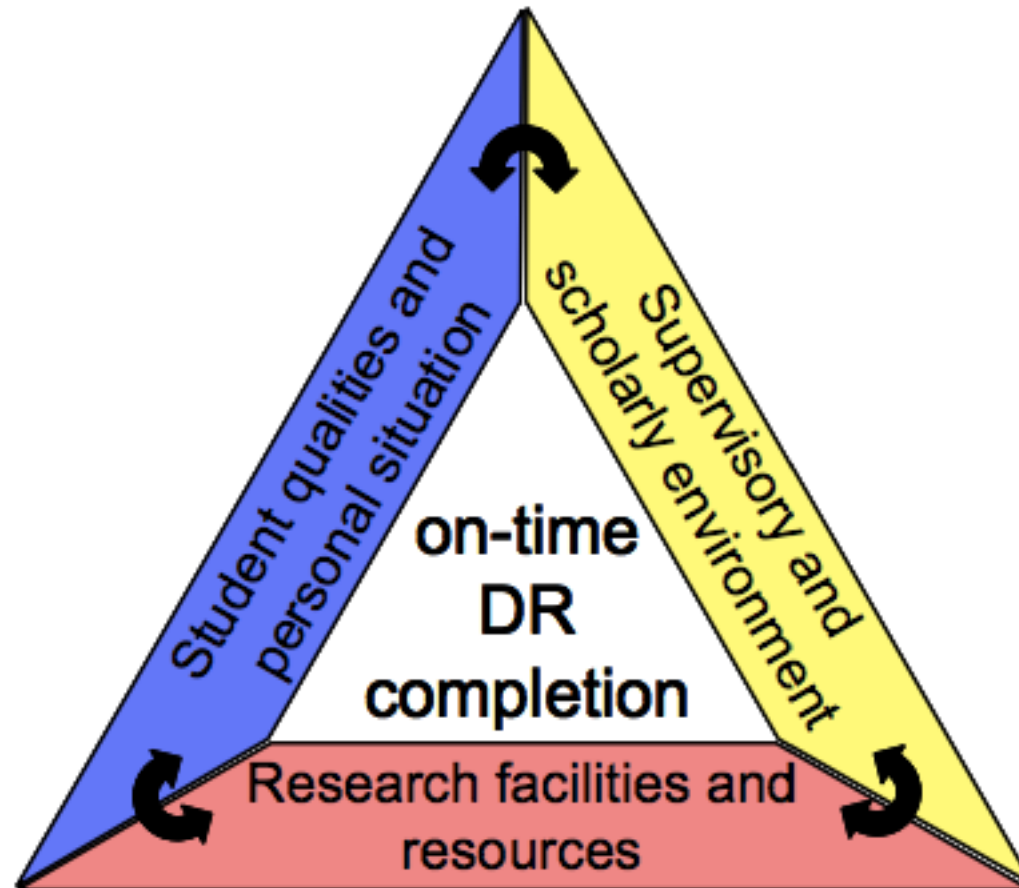
**5%** Health  
Problem

**5%** Parents/  
Spouse Sick

**60%** Active/  
Full Swing in  
Study

Greater Cohort Diversity

# Factors Contribute to Timely Completion (Jiranek, 2010)



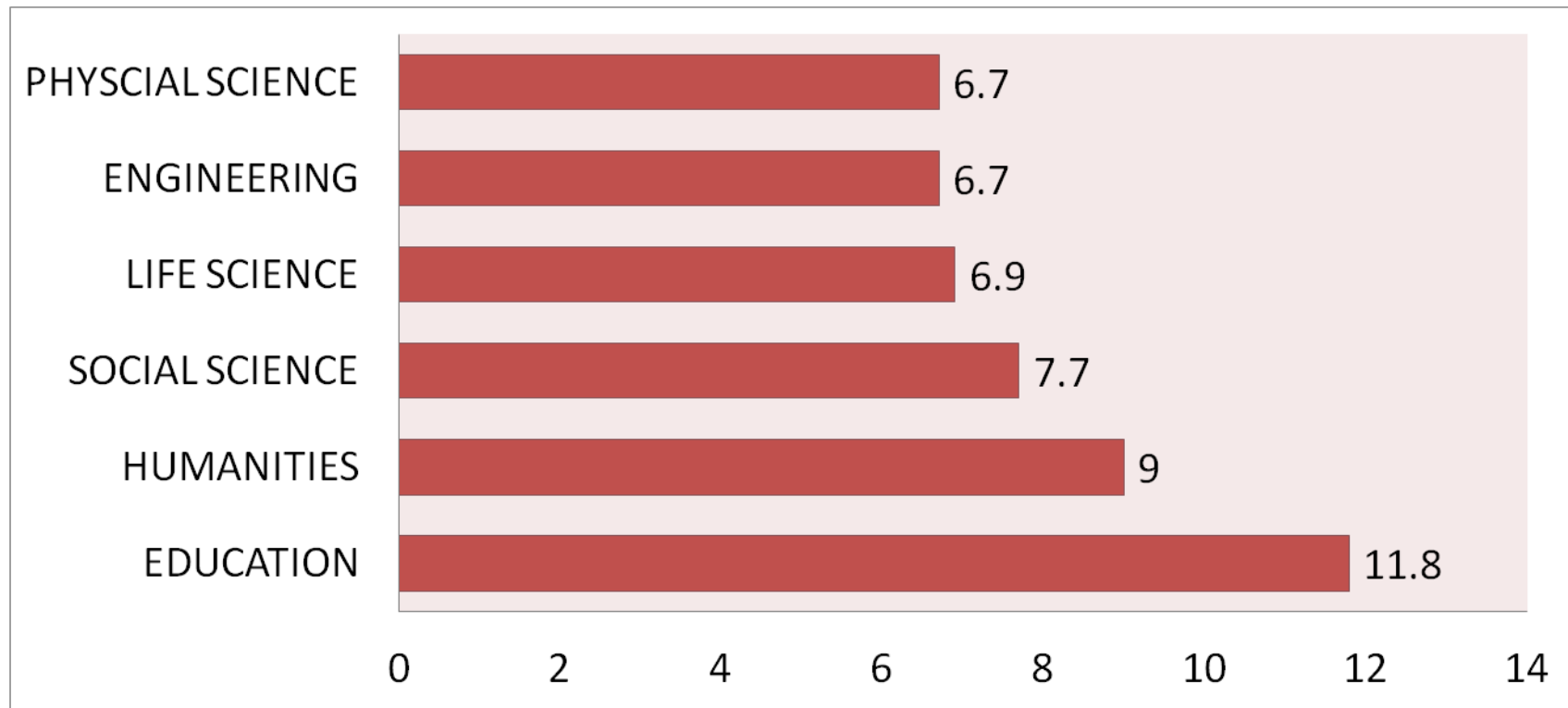
# Issues

- The length of time it takes to earn a doctoral degree varies according to:
  - Field of Study
  - Institutions/Curriculums
  - Countries
  - Sponsorship
  - Supervisors
  - Students

# PhD Completion Time

- Field of Study
- Modes of Study – FT vs PT, Mainstream vs Remote
- Student's Age??
- Level of Resources
- Quality of Students
- Quality of Supervisors
- Graduate Education Ecosystem

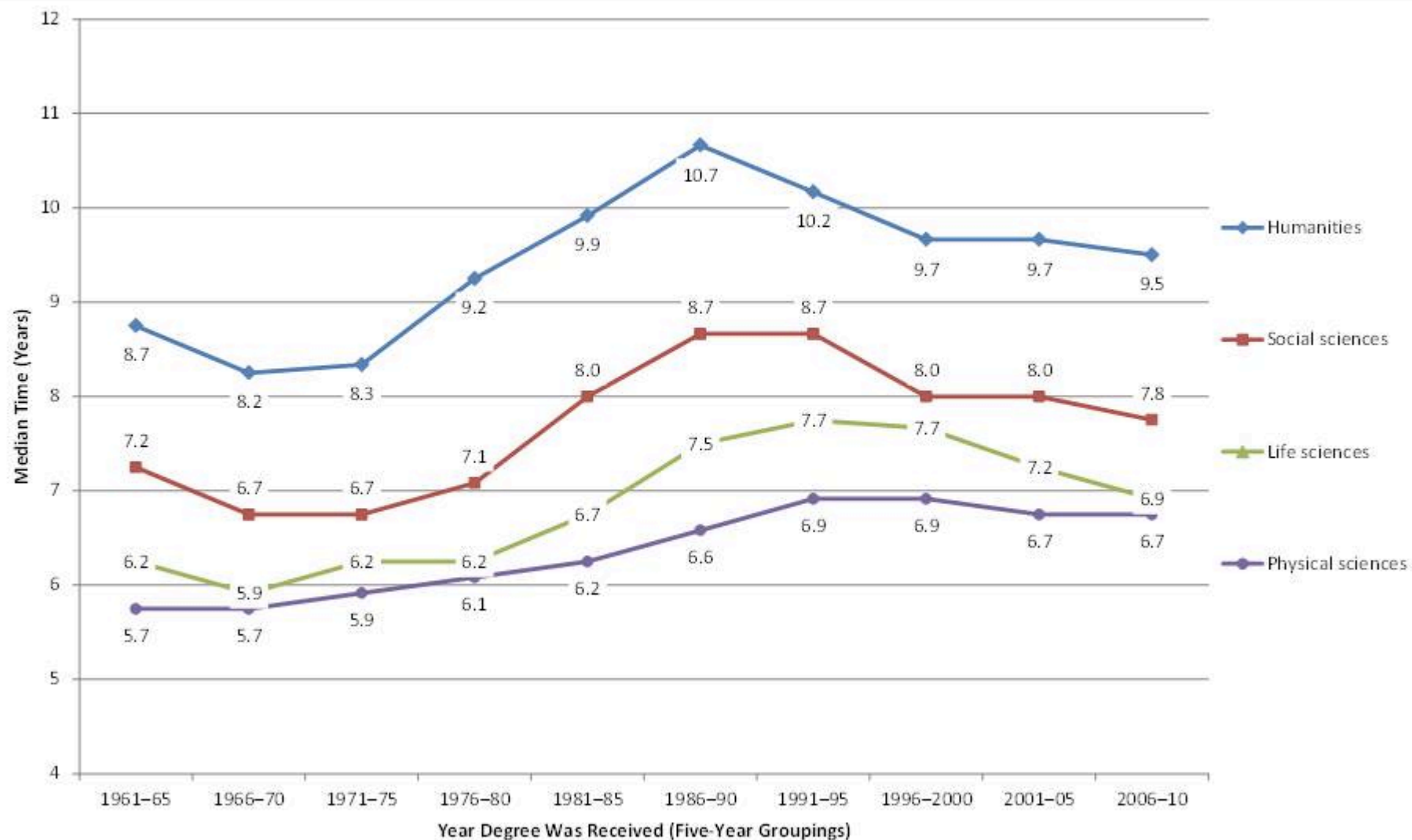
# PhD's Completion Time by Discipline - US



Source: Doctorate Recipients for US Universities, 2012

Median Time to Degree (in Years) from Entry into Graduate School, by Discipline, 2012

# Median Time to Degree (in Years) from Entry into Graduate School, by Discipline and Year the Degree Was Received, 1961–65 to 2006–10



Source: Survey of Earned Doctorates, MLA custom data request



## Percentage of 2006–10 Doctorate Recipients Taking Six Years or Less and More Than Ten Years to Complete Their Degree Programs, by Discipline



Source: Survey of Earned Doctorates, MLA custom data request

Note: The number of degree recipients forming the basis for the percentages is given in parentheses. The 3,540 degree recipients in American and English literature do not represent the total for English for the years 2006–10. Because of variations in the way the SED has collected information for English over the years, not all graduates the MLA customarily includes in the total for English were included in the special data run NORC prepared for us. Time to degree does not differ significantly between the total number of degree recipients in English and the subset of graduates included here.



# Average Completion Time

AVERAGE TIME  
(AUSTRALIA)

4

AVERAGE TIME  
(EUROPE)

5

AVERAGE TIME  
(UK)

7

AVERAGE TIME  
(US)

7.5

AVERAGE TIME  
(JAPAN)

5

AVERAGE TIME  
(MALAYSIA)

4.3

Average: **51.8 months**

Median: **53.2 months**

Minimum duration (UTM): **28.0 months**

Maximum duration (UTM): **123.5 months**

(Source: Ministry of Education Malaysia & UTM PG Statistic  
2015)

2015  
Doctoral Enrolment in Malaysia

35 319

2009 - 2015  
Doctoral Graduates in Malaysia

16 983

2010 - 2011  
Doctoral Graduates in UK

72.9% - 7 years

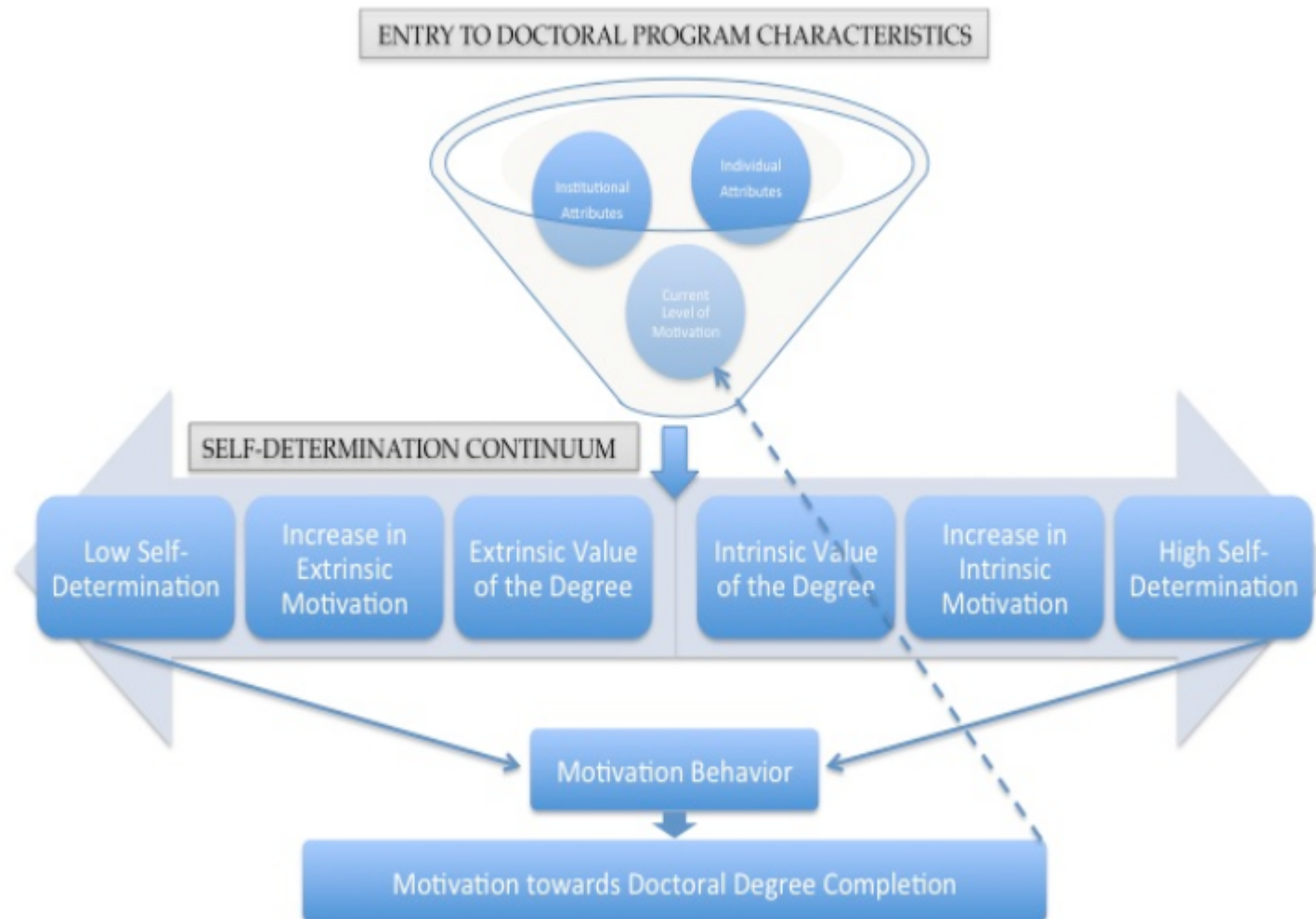
2000 - 2010  
Doctoral Enrolment in Australia  
27 966 - 47 066

2000 - 2010  
Doctoral Graduates in Australia  
3 793 - 6 053

# STRATEGIES



# Doctoral Student Motivation

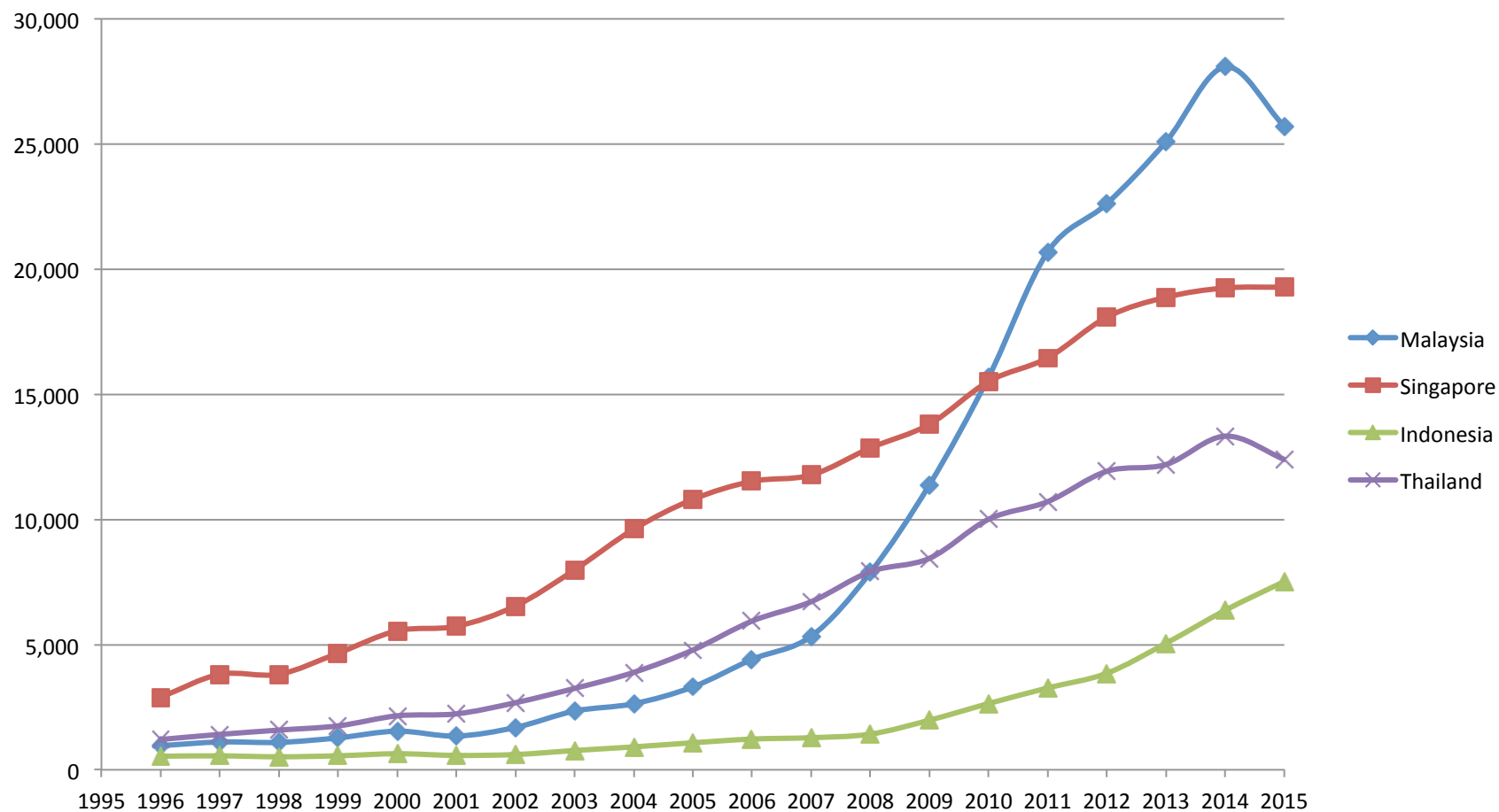




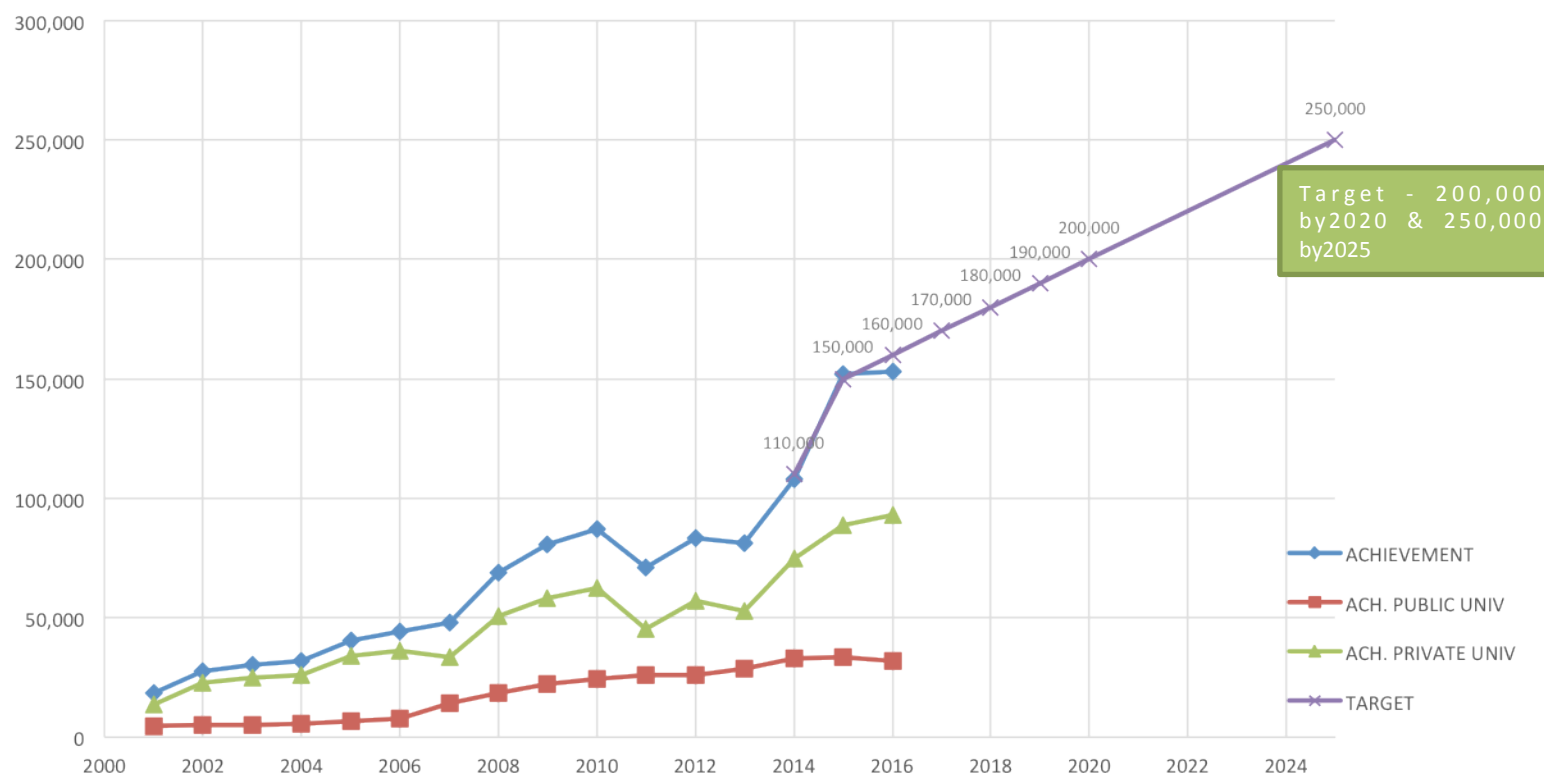
# IMPACT!



# Publication 1996-2015



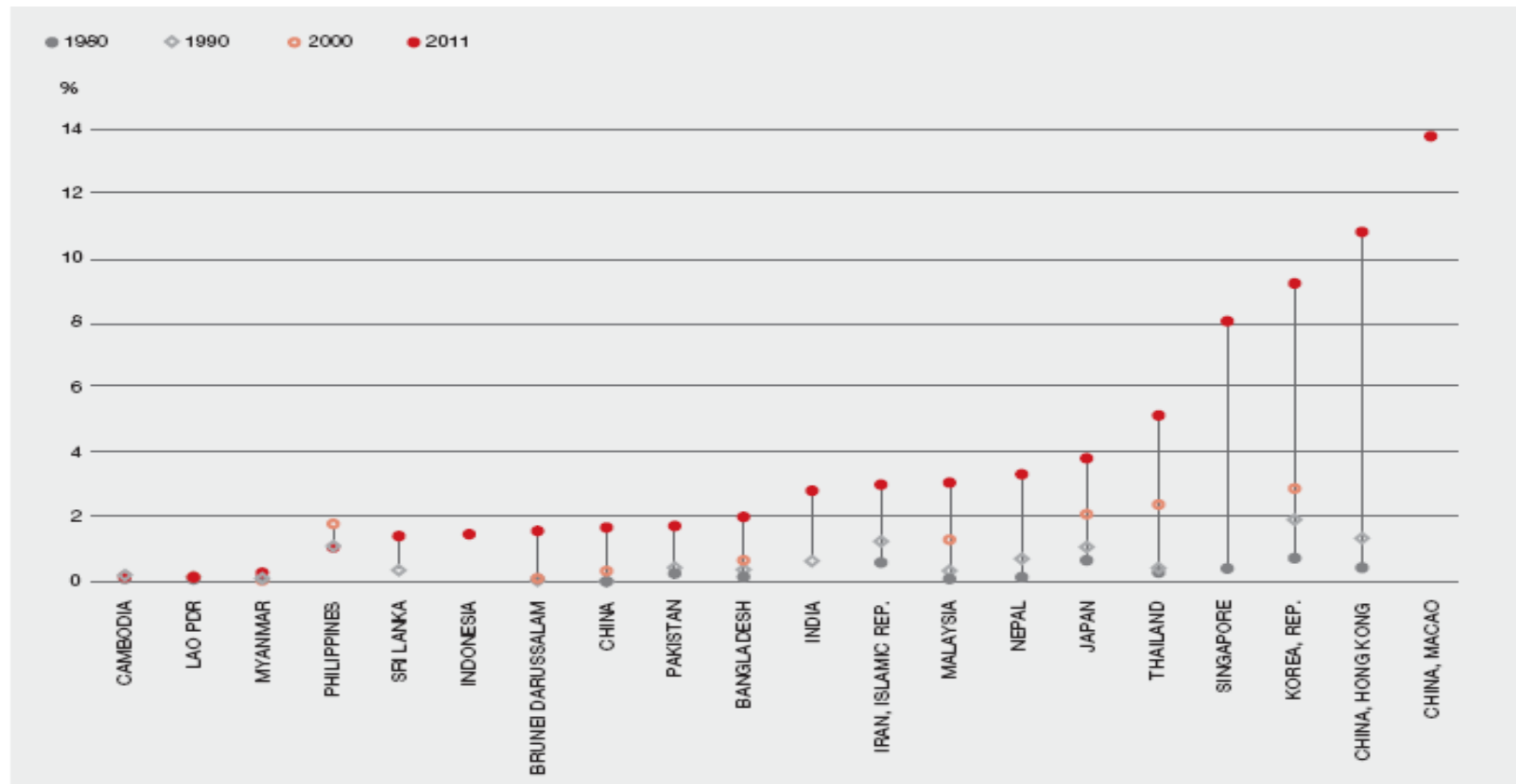
# ACHIEVEMENT AND TARGET OF INTERNATIONAL STUDENT ENROLMENT IN MALAYSIAN UNIVERSITIES



YEAR	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
PUBLIC	4,770	5,045	5,239	5,735	6,622	7,941	14,324	18,485	22,456	24,214	25,855	26,232	28,826	32,842	33,369	31,926
IPTS	13,472	22,827	25,158	25,939	33,903	36,449	33,604	50,679	58,294	62,709	45,246	57,306	52,598	74,996	88,665	93,158
TOTAL	18,242	27,872	30,397	31,674	40,525	44,390	47,928	69,164	80,750	86,923	71,101	83,538	81,424	107,838	122,034	125,084

# HIGHER EDUCATION ENROLMENT IN SOUTHEAST ASIA

GROSS ENROLMENT RATIOS FOR MASTER AND PHD PROGRAMMES BY COUNTRY, 1980-2011



\* Thailand leads the region among Southeast Asia middle-income countries for having a relatively higher GER for graduate education (5%), followed by Malaysia (3%).



## Top 30 Countries Collaborating With Malaysia, 2011-2015



Country	Region	Co-authored publications	Co-authored publications (growth %)	Citations per Publication	Field-Weighted Citation Impact	Institutions
United Kingdom	Europe	5,442	44.80	6.3	1.69	285
Australia	Asia Pacific	4,596	67.30	6.5	1.68	110
Iran	Middle East	4,398	54.90	4.6	1.44	72
United States	North America	3,889	79.20	8.1	2.10	505
India	Asia Pacific	3,780	38.40	5.8	1.50	194
Japan	Asia Pacific	3,480	46.10	5.5	1.45	240
Saudi Arabia	Middle East	2,984	126.60	3.9	1.31	19
Indonesia	Asia Pacific	2,362	42.10	4.9	1.18	19
China	Asia Pacific	2,069	93.30	9.3	2.45	313
Pakistan	Asia Pacific	1,991	194.30	5.6	1.80	30
Iraq	Middle East	1,488	313.50	3.5	1.20	7
Singapore	Asia Pacific	1,433	45.30	9.2	2.15	19
Bangladesh	Asia Pacific	1,359	111.40	4.5	1.36	13
Canada	North America	1,313	92.70	11.9	2.98	77
Germany	Europe	1,271	85.10	11.2	2.83	147
Thailand	Asia Pacific	1,253	35.10	8.6	2.17	22
South Korea	Asia Pacific	1,234	98.00	8.4	2.33	99
France	Europe	1,114	79.70	10.2	2.87	145
Taiwan	Asia Pacific	1,015	133.00	9.0	2.50	81
Nigeria	Africa	897	222.50	3.8	1.35	40
Italy	Europe	895	117.20	10.5	3.31	102
New Zealand	Asia Pacific	888	81.50	7.8	2.52	26
Egypt	Africa	794	307.80	6.5	2.28	35
Spain	Europe	782	263.90	11.1	3.45	80
Netherlands	Europe	765	115.90	12.8	3.38	36
Brazil	South America	687	83.00	13.2	3.89	74
Turkey	Middle East	664	370.70	9.2	3.48	97
Switzerland	Europe	584	134.30	9.8	3.16	23
Sweden	Europe	562	100.00	15.5	4.36	20
Hong Kong	Asia Pacific	524	39.50	11.6	3.16	13

### Collaborators with Malaysia

UK : No 1

Australia : No 2

Impact : Sweden, Hong Kong, Brazil, Netherlands, Spain, Italy, France, Germany, Canada

Region totals	Collaborating Countries	Co-authored publications
Worldwide	187	40,638
Asia Pacific	45	21,029
Middle East	18	10,912
Europe	42	9,938
North America	23	4,902
Africa	44	3,169
South America	15	857

Source : Scopus (May 2016)

## RESEARCH PERFORMANCE 2013-2015

COUNTRY	POPULATION (MILLION)	PUBLICATIONS	AUTHORS	COLLABORATING COUNTRIES	INTERNATIONAL COLLABORATION	INDUSTRY COLLABORATION
US	323	1,858,512	1,830,799	226	31.7%	3.0%
JAPAN	127	381,541	528,542	201	25.6%	3.7%
UK	65	551,837	430,883	223	47.9%	2.9%
THAI	65	37,942	48,844	178	39.2%	1.2%
S.KOREA	50	231,823	260,830	170	26.5%	3.3%
SPAIN	46	256,902	257,957	201	44.0%	1.7%
CANADA	37	292,708	239,184	202	47.5%	2.3%
S.ARBIA	32	50,837	31,829	173	70.6%	1.5%
<b>MSIA</b>	<b>31</b>	<b>77,615</b>	<b>77,599</b>	<b>180</b>	<b>35.8%</b>	<b>0.6%</b>
PORTUGAL	10	67,177	55,712	187	48.4%	1.2%
SWITZERLAND		125,777	95,663	201	63.7%	5.4%
SWEDEN		112,339	78,799	197	57.3%	4.3%
NORWAY		56,742	39,332	188	55.4%	3.4%

**INCREASE INTERNATIONAL COLLABORATION TO 41% (AVERAGE) & INDUSTRY COLLABORATION TO 4.3% (AVERAGE)**

Source: Scopus June 2016

# HOW TO IMPROVE??

- **RESOURCES (20%)**
- **ENVIRONMENT (20%)**

- **CONNECTIVITY (20%)**
- **OUTPUT (40%)**



**ROOMS FOR  
IMPROVEMENT**



# Issues and Challenges

- Quality of research
- Quality of training
- Research Skills
- Supervision skills
- Social skills
- Communication skills
- 21<sup>st</sup> Century skills
- Industrial relevance
- Output -

Quality

- Stakeholders requirements
- Malaysian Qualification Agency (MQA) -Accreditation
- Ranking and Rating



Vision  
2020

- 2023 – 60,000 PhD Holders
- 2008 – 8,000
- 2014 – ± 12,000

Quantity

- Intake
- Enrolment
- Retaining pool of students
- Widening access vs limited

- Financial sustainability
- Low ROI
- Prudent graduate management
- How fast and well HEIs respond to changes

# Challenges in PhD's Study

- High rates of student attrition (upwards to 40 - 50% in certain academic disciplines),
- Funding challenges,
- Lengthy time-to-degree completion rates,
- Limited academic job market in some academic disciplines,
- Inadequate training for teaching and research

# Further Discussions

- Mentoring for GOT
- Eco-system for GOT
- What is Takes to GOT?



*Acknowledgement:*

*Assoc. Prof. Dr. Aminah Md. Yusof  
All parties that shared these data and info*

