

REFORMING HIGHER EDUCATION:

 **Scholarship**
- or -
Vocationalism? 

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Reforming Higher Education in Malaysia: Scholarship or Vocationalism?

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Part 1: Overview

- The Education Blueprint: Higher Education 2015-25, (HEB) launched on 7th April 2015 sets out a new vision for the development of Higher Education in Malaysia
- There are ambitious plans to raise student numbers from around 1.4 million in 2012 to 2.4 million by 2025
- The private sector accounts for nearly half of higher education students and more than half of academic appointments in Malaysia
- The private sector is also expected to grow at 5.6% p.a. under the HEB and to overtake the public sector in terms of numbers and resources by 2025

Part 1: Overview

- The Education Blueprint: Higher Education 2015-25, (HEB) has a number of key policy reforms which aim to change the focus of higher education in Malaysia which include *inter alia*:
 - Shift 1 – Holistic, Entrepreneurial and Balanced Graduates
 - Shift 3 – Nation of Lifelong Learners
 - Shift 4 – Quality TVET Graduates
 - Shift 5 – Financial Stability
 - Shift 9 – Globalised Online Learning
 - Creating – “The new higher education system”
 - A shift from “Conventional Academia” to “New Academia”
 - An emphasis on graduate employability and labour-market readiness
- Does this represent a significant shift towards **VOCATIONALISM** in higher education and away from **SCHOLARSHIP**?

Part 1: Overview

SCHOLARSHIP:

- The character, qualities, activity or attainments of a scholar through learning;
- The methods, discipline and attainments of a scholar or scholars;
- Knowledge resulting from study and research in a particular field

VOCATIONALISM:

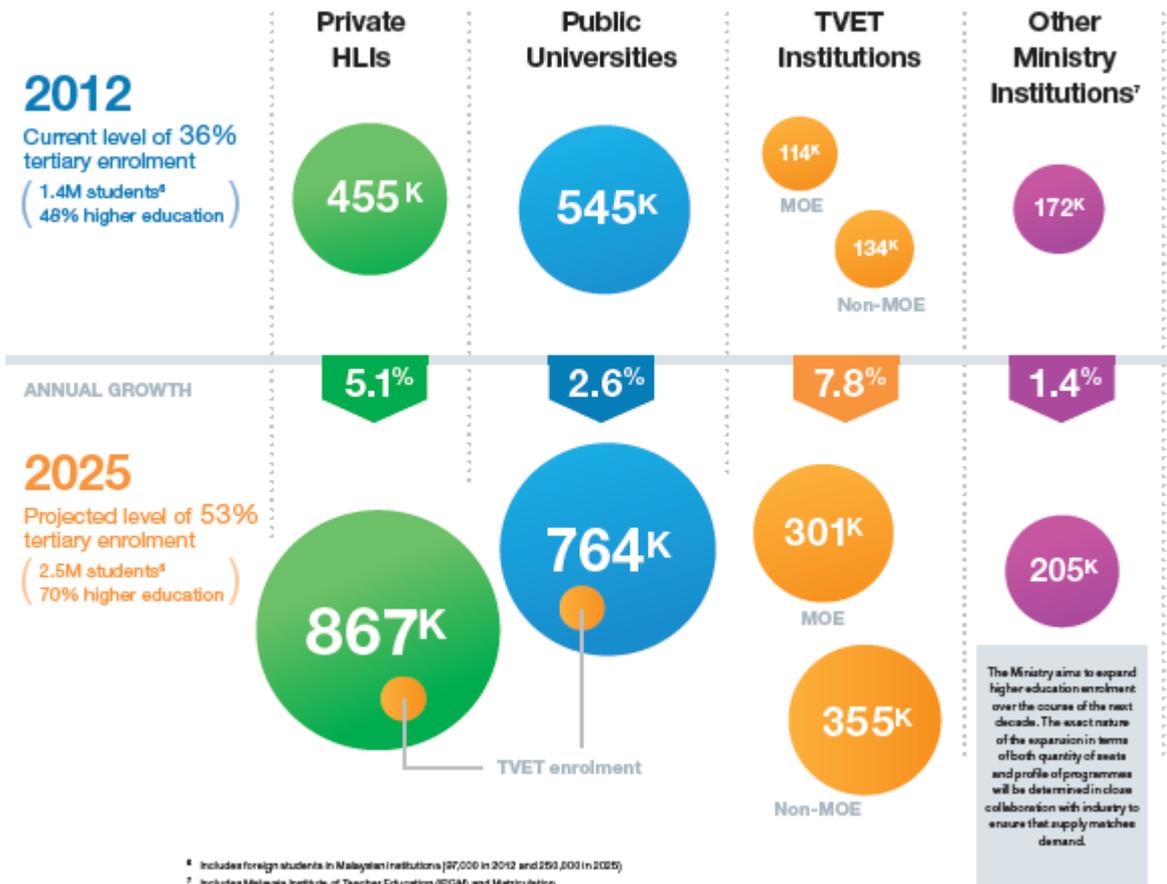
- The stressing of vocational training in education
- An educational philosophy or pedagogy, claiming that the content of the curriculum should be governed by its occupational or industrial utility and marketability as human capital
- The practice or policy of requiring vocational training of all college or high-school students

Part 1: Overview

- Within this context this research project aims to examine higher education in Malaysia across three broad dimensions:
 1. What is the meaning of vocationalism in the Malaysian context and what are the consequences for scholarship?
 2. Does the investment return on higher education justify a vocational approach?
 3. What type of policy responses are needed to address the vocational aspects of higher education whilst maintaining higher levels of scholarship?
- What we are ultimately concerned about is the fundamental question:

WHAT ARE UNIVERSITIES FOR?

Higher Education Reform: Highlights



Source: Kementerian Pendidikan Malaysia (2014): Malaysian Education Blueprint: Higher Education, April 2014

Higher Education Reform: Highlights

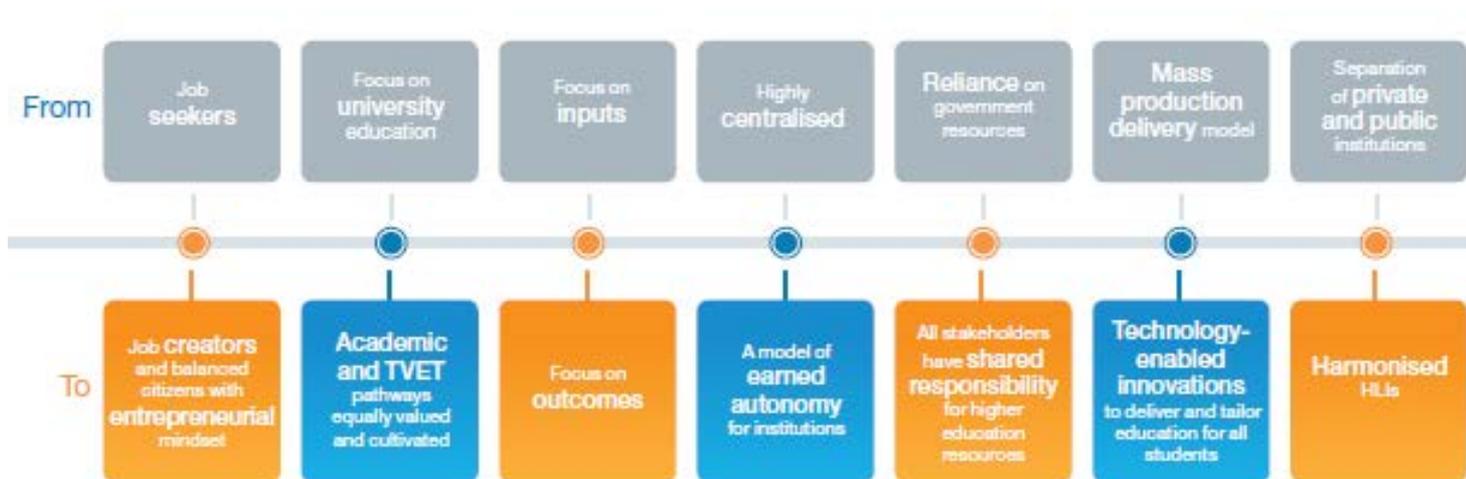


- The main shifts driving a vocationalist approach include:
 - Shift 1 – Holistic, Entrepreneurial and Balanced Graduates
 - Shift 3 – Nation of Lifelong Learners
 - Shift 4 – Quality TVET Graduates
 - Shift 5 – Financial Stability
 - Shift 9 – Globalised Online Learning

Source: Kementerian Pendidikan Malaysia (2014): Malaysian Education Blueprint: Higher Education, April 2014

Higher Education Reform: Highlights

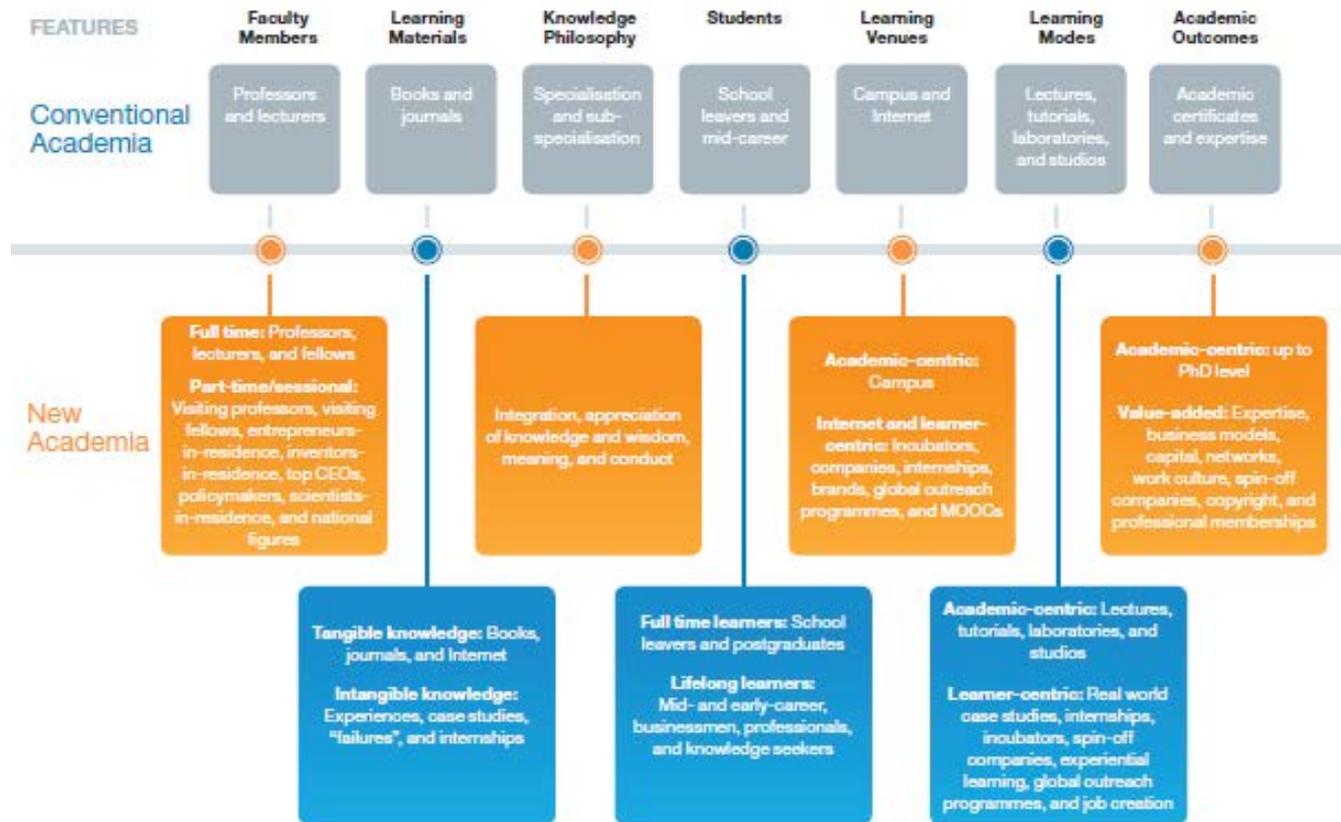
The New Higher Education System



The MEB (HE) will generate major shifts in the way we operate

Source: Kementerian Pendidikan Malaysia (2014): Malaysian Education Blueprint: Higher Education, April 2014

Higher Education Reform: Highlights



The
“Conventional”
and the “New
Academia”

Source: Kementerian Pendidikan Malaysia (2014): Malaysian Education Blueprint: Higher Education, April 2014

Higher Education: Stylized Facts - Employment

Employment	ITPA	ITPS	POLY	KK	TVET	Total
Employed	48,763	34,351	13,886	3,764	522	101,286
Unemployed	27,249	18,332	7,034	471	196	53,282
Further Studies	24,219	11,982	4,837	1,062	343	42,443
Skill Training	1,477	869	538	25	2	2,911
Waiting for Placement	9,416	2,808	645	28	11	12,908
Total	111,124	68,342	26,940	5,350	1,074	212,830
Employed	44%	50%	52%	70%	49%	48%
Unemployed	25%	27%	26%	9%	18%	25%
Further Studies	22%	18%	18%	20%	32%	20%
Skill Training	1%	1%	2%	0%	0%	1%
Waiting for Placement	8%	4%	2%	1%	1%	6%

- High levels of graduate unemployment and under-employment are influencing the vocationalist agenda
- Around 45% of recent graduates earned RM1,500 or less according to the HEB
- **Policy Plan:**
Kementerian Pendidikan Tinggi Malaysia (2012): National Graduate Employability Blueprint, 2012-17

Data Source: Kementerian Pendidikan Malaysia: Perangkaan Pendidikan Negara: Sektor Pengajian Tinggi 2013 (Ministry of Education: National Education Statistics: Higher Education Sector 2013). POLY: Polytechnic; KK: Kolej Kommuniti (Community College); TVET: Technical & Vocational Education & Training. Many heads of IPTS dispute the Ministry statistics and point to their own data which shows much higher employment rates. Kementerian Pendidikan Malaysia (2014): Malaysian Education Blueprint: Higher Education, April 2014; Kementerian Pendidikan Tinggi Malaysia (2012): National Graduate Employability Blueprint, 2012-17

Higher Education: Stylized Facts - Employment

- **JPM / EPU (2015):** 455,000 unemployed in Malaysia of which 161,000 (35%) are graduates or 8.8% of youths, aged between 20 and 24 years
- **Unemployment Ratio:** Overall unemployment 3.2% (Statistics Malaysia) and youth unemployment is 6.7% (World Bank)
- Does this justify a shift towards vocationalism?
 - **Grant Thornton (2014):** 62% Malaysian firms have difficulty finding skilled workers and 48% identify lack of talent as a constraint for future growth
 - **Talent Corp/World Bank (2014):** Identified employers' unwillingness to offer the level of compensation needed to meet the expectations of recent graduates and attract the required talent.
 - **Jobstreet (2015):** "Unrealistic Salary Expectations" (68%); Poor English (65%); Choosy About Job / Company (60%); Poor Communication Skills (60%); Poor Character / Attitude (58%)
 - **Jobstreet (2015):** Companies look for Leadership Skills (39%); High Academic Scores (25%); Extra Curricula Activity (20%); Volunteering (16%)

Reference Note: World Bank Youth Unemployment (15-24): Average 18.2%; Max: 57.9%; Min: 0.9%
Source: Kementerian Pendidikan Tinggi Malaysia (2012): National Graduate Employability Blueprint, 2012-17; Jobstreet (2015) "Employers: Fresh Graduates Have Unrealistic Expectations," December 2015; New Straits Times (2014) "High ratio of jobless youths to overall unemployment in M'sia: World Bank"

Higher Education: Stylized Facts - Employment

- This is not just an issue for Malaysia:
 - Graduate unemployment in China may be around 30%, Middle East 20-30%, in Greece 19.4% and Spain 14.9% (OECD)
 - Lowest graduate unemployment rates: Norway (1.8%). Germany (2.4%) and Czech Republic (2.5%)
 - But this may also be misleading: In the UK graduate unemployment was 11.9% six months after graduation but falls to 3.9%, 3 years after graduation compared to 9.0% for non-graduates (DBIS, 2015)
- Demand for Degrees:
 - In the US in 2010, 20% of jobs required a bachelor's degree, 43% required a high-school education, and 26% did not even require that. Meanwhile, 40% of young people study for degrees. (Cockburn, 2012)
 - A decline in demand for knowledge-intensive workers requiring a degree since 2000 (Beaudry, Green and Sand, 2013)

Alexander Cockburn (2012) "The Myth of the "Knowledge Economy" Counterpunch, March 23, 2012 ; Paul Beaudry, David A. Green and Ben Sand (2013) "The great reversal in the demand for skill and cognitive tasks," London School of Economics, November 2013; OECD Employment Outlook 2015, Paris: Organisation for Economic Cooperation and Development; DBIS (2015) Graduate Labour Market Statistics 2015, London UK: Department for Business Innovation and Skills

Higher Education: Stylized Facts - Employment

- Automation of Knowledge-Intensive Jobs (Frey and Osborne, 2013):
 - Over 47% of existing jobs are under threat of being automated.
 - Most likely to be automated: knowledge-intensive auditor, insurance underwriter and credit analyst
 - Least likely to be automation: hands-on jobs such as masseuse and fire fighter
- University Value-Added (Arum and Roksa, 2011):
 - After two years at university, 45% of the students showed no significant improvement in their cognitive skills
 - After four years, 36% of students had not improved in their ability to think and analyse problems
 - In some courses – such as business administration – students’ cognitive abilities actually declined in the first few years
 - A recent YouGov survey showed 37% of UK employees think their jobs make no meaningful contribution to the world at all.

References: Richard Arum and Josipa Roksa (2011) Academically Adrift: Limited Learning on College Campuses, Chicago IL: Chicago University Press;; Carl Benedikt Frey and Michael A. Osborne (2013) “the future of employment: How susceptible are jobs to computerisation?” University of Oxford, Oxford Martin School, September 17, 2013

Higher Education Reform: Highlights

EXHIBIT 1-3

	Wave 1 (2015)	Wave 2 (2016-2020)	Wave 3 (2021-2025)
Strategy A Developing holistic and integrated curriculum A	<ul style="list-style-type: none"> Introduce High Impact Educational Practices (HIEPs) and lessons on experiential learning and entrepreneurial immersion to public and private HLIs Initiate development of integrated assessment methodology led by pilot HLIs 	<ul style="list-style-type: none"> Introduce undergraduate 3+1 or 2+2 programmes with off-campus or industry-based learning Launch and implement integrated assessment system by HLIs Support HLIs in intensifying industry and community engagement efforts Facilitate HLIs in enhancing MPU framework by including generic cross-curricula and liberal arts courses; and Encourage enhancements in entrepreneurship programmes, especially practical components 	<ul style="list-style-type: none"> Refine and improve integrated assessment framework across all public and private HLIs Review and revise policies and guidelines to encourage and facilitate incorporation of 21st century skills into HLI curriculum Support HLIs in developing integrated curricula
Strategy B Enhancing the learning support system B	<ul style="list-style-type: none"> Initiate development of Job-Creator framework in consultation with HLIs and entrepreneurs Review existing policies and guidelines to encourage and facilitate excellence in service and entrepreneurial learning Review and develop guidelines for supporting student activities (e.g. green lane policy for student-owned businesses) 	<ul style="list-style-type: none"> Launch Job-Creator framework across public and private HLIs to support students in creating and growing businesses Develop Unity Index or indicators and rollout across HLIs Introduce rewards and incentives for excellence in service and entrepreneurial learning 	<ul style="list-style-type: none"> Refine and improve Job-Creator Framework for HLIs Review effectiveness of Unity Index and improve for ongoing tracking Enhance recognition and best practice sharing of instructional excellence by individuals and institutions

Holistic, Balanced & Entrepreneurial Graduates: The Implementation Roadmap

Source: Kementerian Pendidikan Malaysia (2014): Malaysian Education Blueprint: Higher Education, April 2014

Consequences for Scholarship?

- For academics:
 - A change to the “New Academia”
 - More teaching and less research?
 - Retrenchment for “non-changers”?
- For students:
 - Subject concentration and a reduction in course options?
 - Greater homogeneity in the labour market and more need for, “signalling.”
 - Less emphasis on critical and analytical intellectualism and more on skills, competencies and “Industry-relevant” mindsets
- For the system overall:
 - A negative effect on international standings and rankings?
 - More commercialisation and competition – public vs private competition
 - Exiting of key staff and a greater, “brain drain”?

Programme Concentration

	IPTA	IPTS	POLY	KK	TOTAL	IPTS Courses
EDU	9%	8%	0%	0%	8%	3%
A&H	9%	7%	3%	6%	7%	3%
SS,B&L	35%	34%	24%	4%	33%	28%
S,M&C	14%	13%	8%	15%	13%	21%
E&C	22%	14%	59%	54%	22%	24%
A&V	2%	1%	0%	2%	2%	0.20%
Health	6%	11%	0%	0%	8%	8%
Services	3%	5%	6%	18%	5%	4%
General	0%	8%	0%	0%	3%	9%
TOTAL	100%	100%	100%	100%	100%	100%

Data Sources: Enrollment Statistics from: Kementerian Pendidikan Malaysia: Perangkaan Pendidikan Negara: Sektor Pengajian Tinggi 2013 (Ministry of Education: National Education Statistics: Higher Education Sector 2013).

IPTS courses: From Malaysian Quality Agency (MQA) refer to MQA approved courses per institution.

Courses: EDU: Education; A&H: Arts, Humanities; SS,B&L: Social Science, Business & Law; S,M&C: Science, Maths and Computing; E&C: Engineering & Construction; A&V: Agriculture & Veterinary Health: Medicine: Services: Mostly Hospitality

- IPTS enrolment matches that of IPTA closely
- There is a high concentration in Social Science, Business & law (SS,B&L) mostly Business
- IPTS have a high course offering in Science, Maths and Computing (S.M&C) but lower enrollment
- In Engineering & Construction (E&C), enrolment is lower than course offering and below IPTA, Polytechnics and Community Colleges

Part 2: Investment vs Returns

- If we are moving toward a more vocational system where the content of the curriculum will be governed by its occupational or industrial utility, and marketability as human capital – **then is this investment worthwhile?**
- To evaluate this we look at a number of indicators:
 1. Is there a wage premium between graduates and non-graduates?
 2. How long does it take to pay-off the investment in human capital development?
 3. How does the investment period and return compare between graduates and non-graduates?
 4. What is the rate of return on the human capital development?
 5. How does the rate of return compare against alternatives?

Is there a wage premium?

Wage Premium vs School Leavers	AVERAGE SALARIES			PREMIA OVER NON-GRADS		
	1 YEAR	5 YEARS	10 YEARS	1 YEAR	5 YEARS	10 YEARS
School Leavers	20,400	49,920	90,000			
Education	29,004	49,452	71,544	42%	-1%	-21%
Arts & Humanities	27,600	60,188	168,000	35%	21%	87%
Social Science, Business & Law						
Social Science	24,000	68,400	180,116	18%	37%	100%
Management	24,000	68,400	128,400	18%	37%	43%
Accounting	30,000	66,000	164,400	47%	32%	83%
Banking & Finance	29,400	66,000	172,200	44%	32%	91%
Law	28,800	67,800	150,000	41%	36%	67%
Science, Maths & Computing	33,600	85,200	174,000	65%	71%	93%
Engineering & Construction	30,000	78,600	150,000	47%	57%	67%
Agricultural & Veterinary						
Health	45,120	60,936	84,576	121%	22%	-6%
Services	18,000	58,800	224,400	-12%	18%	149%
General	18,000	58,800	224,400	-12%	18%	149%

Source: 1. Kelly Services Malaysia (2015) 2014/15 Salary Guide, Kuala Lumpur, Kelly Services, October 2015; 2. Hays (2016) The 2016 Hays Asia Salary Guide "Asia at a Crossroads: Can Talent Supply Meet Increasing Demand?" Singapore, Hays Specialist Recruitment Pte Ltd (Singapore); 3. Robert Walters (2016) Global Salary Survey 2016 – Malaysia; 4. Adecco (2015) Malaysia Salary Guide 2015, Kuala Lumpur, Adecco Malaysia; 5. Bar Council (2012) The National Working Conditions Survey Report and Working Conditions Forum: The Bigger Better Deal for Everyone? Circular No 215/2012 (20 Oct 2012); 6. Bar Council (2014) Salary Survey Report for Malaysian Lawyers 2014, Praxis April-June 2014 Supplement, 7. CIMA (2015) CIMA SALARY SURVEY 2015, Kuala Lumpur CIMA Malaysia

Is there a wage premium?

- Graduates can generally earn a premium above non-graduates in similar types of work
 - Health (121%); ICT (65%); Accounting (47%) and Engineering (47%) lead in starting salary premia
 - Service Industry (-12%) and General Degrees (-12%) have the lowest starting premia
- This changes over time however as work experience and industry opportunities begin to play a bigger role
 - After 10 years Service Industry and General Degrees (149%) have the highest premia followed by Social Sciences (100%) and ICT (98%)
 - Those choosing Education (-21%) and Health (-6%) fall below non-graduates in basic pay terms
- After 5-7 years post-graduate and professional qualifications are more commonly required to achieve higher salaries

How long does it take to pay-off?

NPV Break Even (Years)	Post Univ	Post School	
		Min	Max
Local Private	5	9	10
Public	4	8	9
Foreign Branch Campus	6	10	11

NPV Break Even (Years)	Health	Education	Engineering
	PU / PS	PU / PS	PU / PS
Local Private	8 / 13	6 / 11	-
Public	4 / 9	-	-
Foreign Branch Campus	>10 / >15	6 / 11	7 / 11

Source: Author calculations see annex for methodology.

PU = Post university; PS = Post School

$$NPV = \sum_{t=1}^T \frac{CF_t}{(1+r)^t} - CF_0$$

NPV = Net Present Value

CF_t = Cash Flow (Salary) at time t

CF_0 = Initial Cash Flow (Outflow) = Fees + Lost Income

r = Discount Rate

- Students make an investment in terms of fees and lost income during the study period
- In order to look at the pay-off period we calculate the Net Present Value (NPV) of the investment based on expected returns (salaries) after graduation
- For an investment to be worthwhile in purely market-based terms the NPV should be positive over a preferred investment horizon
- The table shows the number of years it takes for a positive NPV to be generated
- The calculation of the NPV for expected returns on various degree programmes shows that graduates face a long-haul before they see any return on their investment

Investment Period: Comparison

Net Present Value vs School Leavers	LOCAL PRIVATE			PUBLIC			FOREIGN BRANCH CAMPUS		
	1 Year	5 Years	10 Years	1 Year	5 Years	10 Years	1 Year	5 Years	10 Years
School Leavers									
Education	-229%	-108%	-58%	-161%	-88%	-42%	-227%	-107%	-58%
Arts & Humanities	-190%	-85%	-8%	-162%	-90%	-2%	-244%	-113%	-21%
Social Science, Business & Law									
Social Science	-205%	-90%	1%	-165%	-92%	10%	-250%	-113%	-10%
Management	-205%	-90%	-19%	-165%	-92%	-10%	-250%	-113%	-30%
Accounting	-213%	-88%	2%	-173%	-89%	12%	-259%	-111%	-9%
Banking & Finance	-200%	-81%	6%	-161%	-79%	16%	-246%	-104%	-4%
Law	-230%	-88%	-14%	-174%	-78%	-1%	-277%	-111%	-25%
Science, Maths & Computing	-203%	-62%	19%	-157%	-62%	30%	-252%	-87%	8%
Engineering & Construction	-241%	-95%	-4%	-183%	-90%	10%	-326%	-138%	-24%
Agricultural & Veterinary									
Health	-417%	-185%	-85%	-171%	-76%	-27%	-552%	-253%	-117%
Services	-241%	-119%	-5%	-169%	-103%	12%	-254%	-126%	-8%
General	-215%	-106%	1%	-169%	-103%	12%	-254%	-126%	-8%

- Although most degree programmes break even between 4-6 years after graduation (or 8-11 years after the end of schooling) in fact it is around 10 years after graduation before they catch-up with the investment return earned by non-graduates
- Health and Engineering take longer than this

What is the rate of return?

Investment & Returns vs Alternative Investments	LOCAL PRIVATE			PUBLIC			FOREIGN BRANCH CAMPUS		
	Costs	Return	vs EPF	Costs	Return	vs EPF	Costs	Return	vs EPF
School Leavers			6%			6%			6%
Education	183,500	0%	-5%	101,600	7%	1%	183,350	0%	-5%
Arts & Humanities	136,100	8%	2%	101,600	10%	4%	202,850	4%	-2%
Social Science, Business & Law									
Social Science	150,600	8%	2%	101,600	11%	5%	206,600	5%	-1%
Management	150,600	6%	0%	101,600	9%	4%	206,600	3%	-3%
Accounting	165,600	7%	1%	116,600	10%	4%	221,600	4%	-2%
Banking & Finance	150,600	8%	2%	101,600	11%	5%	206,600	5%	-1%
Law	185,550	5%	-1%	115,800	9%	3%	243,470	2%	-4%
Science, Maths & Computing	157,100	8%	3%	101,600	12%	6%	218,300	6%	0%
Engineering & Construction	198,350	5%	0%	127,000	9%	3%	301,700	1%	-5%
Agricultural & Veterinary									
Health	424,000	-12%	-18%	127,000	7%	1%	N/A	N/A	N/A
Services	190,100	6%	0%	100,800	11%	5%	206,600	5%	-1%
General	157,100	7%	1%	101,600	11%	5%	206,600	5%	-1%

- The 10 year rate of return (to catch-up with non-graduates) is generally positive for all subjects except for Health studies at Private Universities
- But if we compare the rate of return against a standard investment such as the Employees Provident Fund over the same period we can see that in many cases investing in an EPF account would give a better return than investing in higher education

Source: Author calculations see annex for methodology

Some Stylised Conclusions

- Using a purely market-based approach, investment in higher education offers a mixed picture
- Whilst in most cases there is a premium on graduate salaries over those of school-leavers in similar jobs, in some cases school-leavers still have a premium over graduates
- In the short-term, better salaries appear to be associated with vocation-oriented courses such as Accountancy but in the long-term more general subjects such as Social Sciences appear to provide a higher premium
- Short-term considerations may be driving market demand and enrolment in subject specific courses as well as vocational course offerings – although cause and effect needs further investigation

Some Stylised Conclusions

- In investment terms it can take a long time for the costs of higher education to pay-off – graduates can be in their mid-30s before they see a better return overall compared to non-graduates
- Students from Public Universities have a significant advantage over those from the private sector – due mainly to lower costs
- Graduates from Foreign Branch Campuses may not recover their higher investment costs for more than a decade after graduating
- In many cases – applying a vocationalist assessment – it would be better to start work straight from school and invest the savings in an EPF account rather than study for a university degree

Part 3: Policy Options

- Business-as-Usual (Optimistic)
 - The new policy framework and the market mechanism will provide solutions
 - Changes in pedagogical approach will run smoothly
 - Management change will improve performance
- Business-as-Usual (Pessimistic)
 - Further distortion due to market-failure – imperfect information
 - Further distortion due to policy direction – centralized planning
 - A persistent “over-emphasis” on three subject groups
 - A concentration of course offerings and a restriction of choice
 - Excessive competition and costs cutting – closures and mergers
 - Poor outcomes may become “intergenerational”

Part 3: Policy Options

- Addressing cost issues:
 - Degree choice is often driven by the need to cover costs – cheaper degrees in subjects with high starting salaries become popular for purely instrumental reasons
 - But if there is a distortion due to poor information then choices can be sub-optimal and inefficient
 - The system as a whole is driven by low-cost, “buffet,” options rather than by choice and need.
- Financing options:
 - High fees in the private sector in particular are clearly a contributory factor but **financing** is often more material
 - Private financing is often justified if the value is accumulated privately
 - If not then public support is justified in, “merit good,” terms or if benefits are socialized (Health and Teaching for example)
 - Reform of the PTPTN system should be high on the agenda
 - A re-evaluation of the overall financing system – perhaps using vouchers or other choice-based financing rather than loans (as preferred in the HEB) should be considered

Part 3: Policy Options

- Greater 'in-study' work options:
 - Part of the issue of low returns or long return periods in our analysis arises from the, "opportunity cost," of lost income during study
 - Allowing students more, "in-study," work options would raise their income during the study period and ease the cost burden
- Greater 'in-work' study options:
 - The HEB talks broadly about more industrial placements and greater work-study options but full-time traditional degrees (2+2 and 3+1 industrial placements) are still a central plank of the system
 - The German dual system takes an alternative view where working is the primary aim and study compliments the process in a formal and structured way

Part 3: Policy Options

- Addressing choice issues:
 - Degree offerings are often driven by cost issues and the perceived market demand which is largely untested
 - They are also driven by policy plans (11MP, ETP, HEB) rather than by market demand
 - This can lead to gluts and shortages (such as the recent medical degree issue)
 - There is a need for a wider assessment of preferred choices and demand which is not driven so much by costs
- Greater specialization:
 - Allow some universities (both public and private – Tier 6 MyRA rated for example) to focus on scholarship
 - Provide public support for scholarly courses directly for public and private universities
 - Funding driven by performance in agreed scholarly criteria

We thank you for listening to us

Annex: Technical Method and Data

$$NPV = \sum_{t=1}^T \frac{CF_t}{(1+r)^t} - CF_0$$

NPV = Net Present Value

CF_t = Cash Flow (Salary) at time t

CF_0 = Initial Cash Flow (Outflow) = Fees + Lost Income

r = discount rate

Data Sources:

Salaries: Collected from various industry sources including: 1. Kelly Services Malaysia (2015) 2014/15 Salary Guide, Kuala Lumpur, Kelly Services, October 2015; 2. Hays (2016) The 2016 Hays Asia Salary Guide “Asia at a Crossroads: Can Talent Supply Meet Increasing Demand?” Singapore, Hays Specialist Recruitment Pte Ltd (Singapore); 3. Robert Walters (2016) Global Salary Survey 2016 – Malaysia; 4. Adecco (2015) Malaysia Salary Guide 2015, Kuala Lumpur, Adecco Malaysia; 5. Bar Council (2012) The National Working Conditions Survey Report and Working Conditions Forum: The Bigger Better Deal for Everyone? Circular No 215/2012 (20 Oct 2012); 6. Bar Council (2014) Salary Survey Report for Malaysian Lawyers 2014, Praxis April-June 2014 Supplement, 7.CIMA (2015) CIMA SALARY SURVEY 2015, Kuala Lumpur CIMA Malaysia

Degree Costs: Taken from an average of public domain information on degree programme costs derived from a sample of university websites and industry sources

Lost Income: Calculated as the average non-graduate salary (RM1,700 per month) over the period of study

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Disclaimer

This report is prepared for the Penang Institute by Dr Geoffrey Williams as part of an ongoing research programme. Valuable input was provided by experts from the Penang Institute. The contents of the draft paper do not necessarily reflect the views and opinions of the State Government of Penang. Circulation of this paper to a wider forum of stakeholders is intended to seek feedback and consensus on the various issues and strategies suggested in the paper. Consultations and research on various topics is still in process and stakeholders are invited to send any comments or suggestions to the authors to help improve the paper.

Whilst all reasonable effort has been made to base the ideas and modelling in this report on factual evidence and reasonable assumptions, the authors may have made errors and any legal liability is disclaimed. We apologize for any mistakes, omissions and gaps.

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