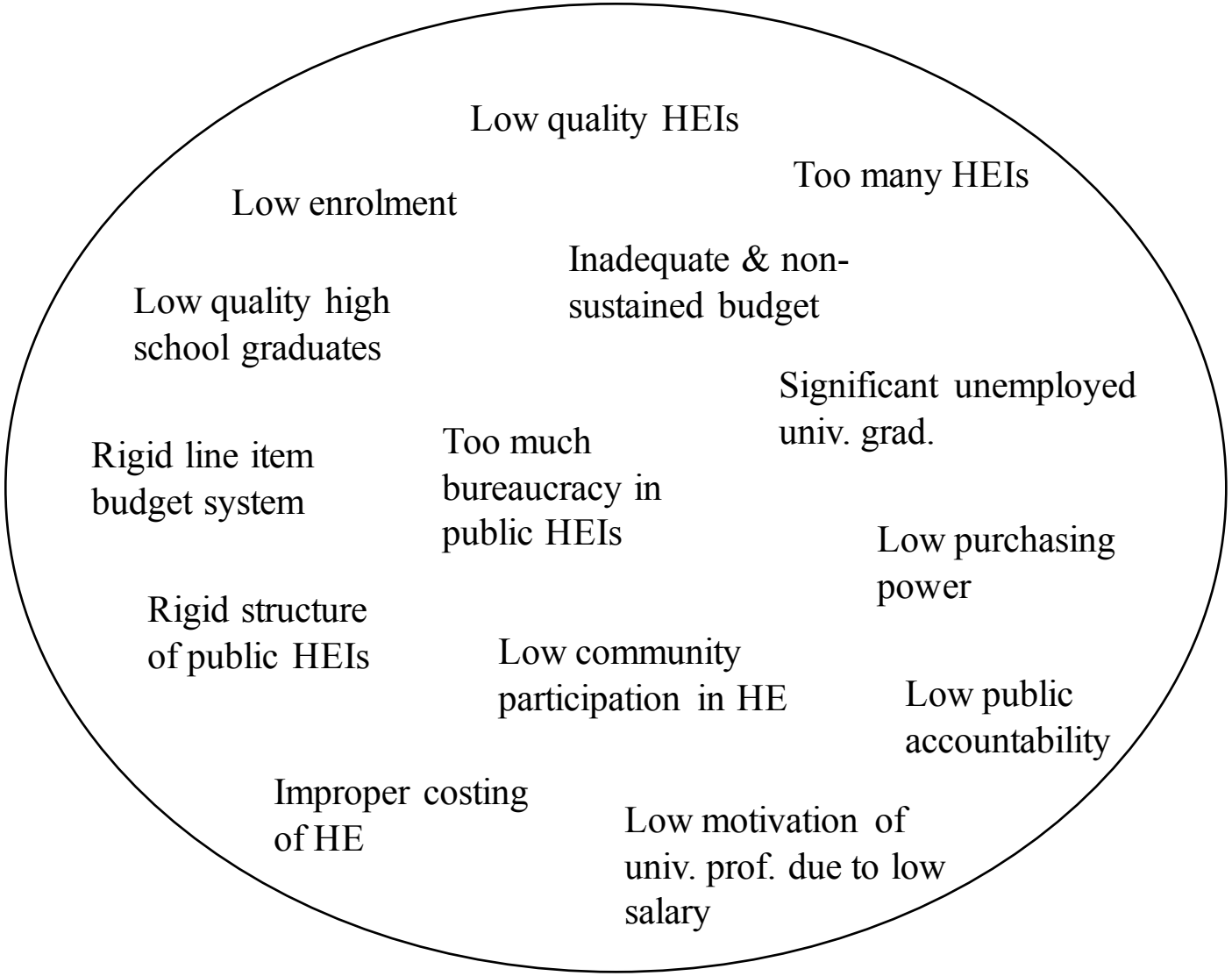
Pencapaian Mutu Perguruan Tinggi Berbasis Pengetahuan

Satryo Soemantri Brodjonegoro

Vicious circle in higher education in Indonesia



Definisi Mutu Pendidikan

- *Pemerintah:* pemenuhan/kepatuhan terhadap ketentuan/peraturan yang berlaku;
- *Hakiki*: pemenuhan terhadap janji yang sesuai dengan kepatutan;
- Apakah mutu pendidikan tinggi sama untuk semua jenjang dan jalur ?
- Definisi mutu pendidikan untuk institusi masing masing ?
- Definisi mutu pendidikan untuk kondisi negara yang majemuk seperti Indonesia?
- Institusi pendidikan tinggi pada dasarnya unik, tidak ada yang sama satu dengan yang lain.

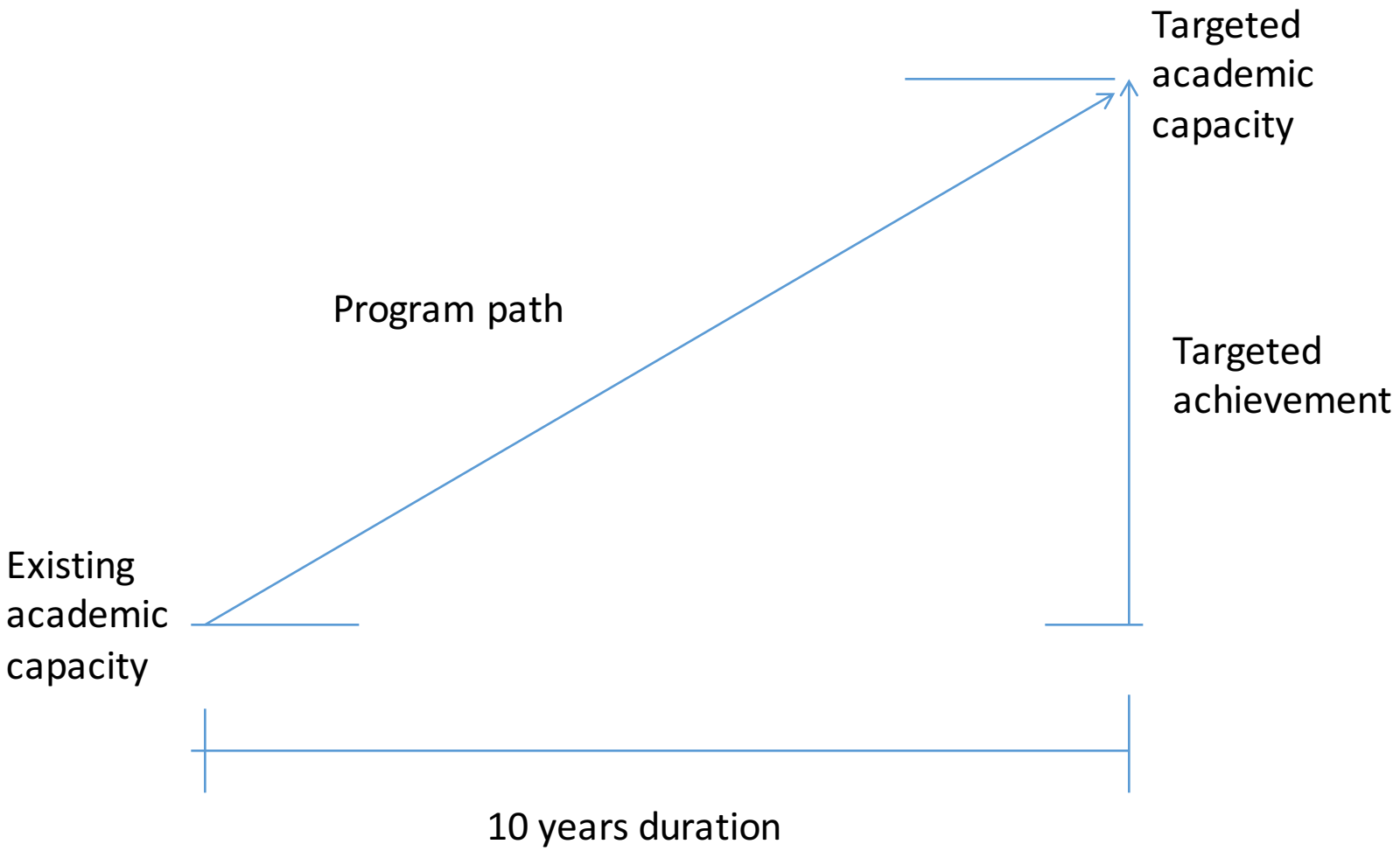
Tolok Ukur Capaian

- Standar/ukuran/bakuan nominal yang terukur ?
- Apakah harus diatur/dibakukan/terukur ?
- Alternatif yang lebih sesuai dengan hakekat pendidikan tinggi adalah *'rujukan relatif'* ;
- Hindarkan pembandingan antar lembaga, hindarkan pemeringkatan dalam bentuk apapun;
- Tolok ukur capaian mutu (secara hakiki) adalah seberapa besar *nilai tambah (peningkatan kapasitas)* yang dapat dicapai selama kurun waktu tertentu.

Proses Mencapai Mutu

- Evaluasi diri untuk identifikasi kapasitas akademik yang ada;
- Menetapkan target kapasitas akademik yang akan dicapai dalam kurun waktu 10 tahun berdasarkan misi institusi;
- Misi institusi adalah falsafah pendirian institusi;
- Target capaian seyogyanya tidak meniru/mengikuti/merujuk ke institusi lain, akan tetapi merujuk ke dalam (internal);
- Kepatutan bukan ditentukan oleh besar kecilnya institusi akan tetapi oleh kejelasan misi yang diemban;

Strategi Mencapai Mutu



Keberlanjutan Pencapaian Mutu

- Secara hakiki definisi mutu tidak bersifat statis;
- Bahkan target mutu akan selalu bergerak sebagai '*moving target*';
- Proses pencapaian mutu akan terus berlangsung karena tantangan tidak pernah berhenti;
- Pengembangan ilmu pengetahuan tidak pernah berhenti (*open ended problem*) sedangkan misi perguruan tinggi adalah pengembang pengetahuan (*knowledge developer*).

Akuntabilitas Mutu Pendidikan

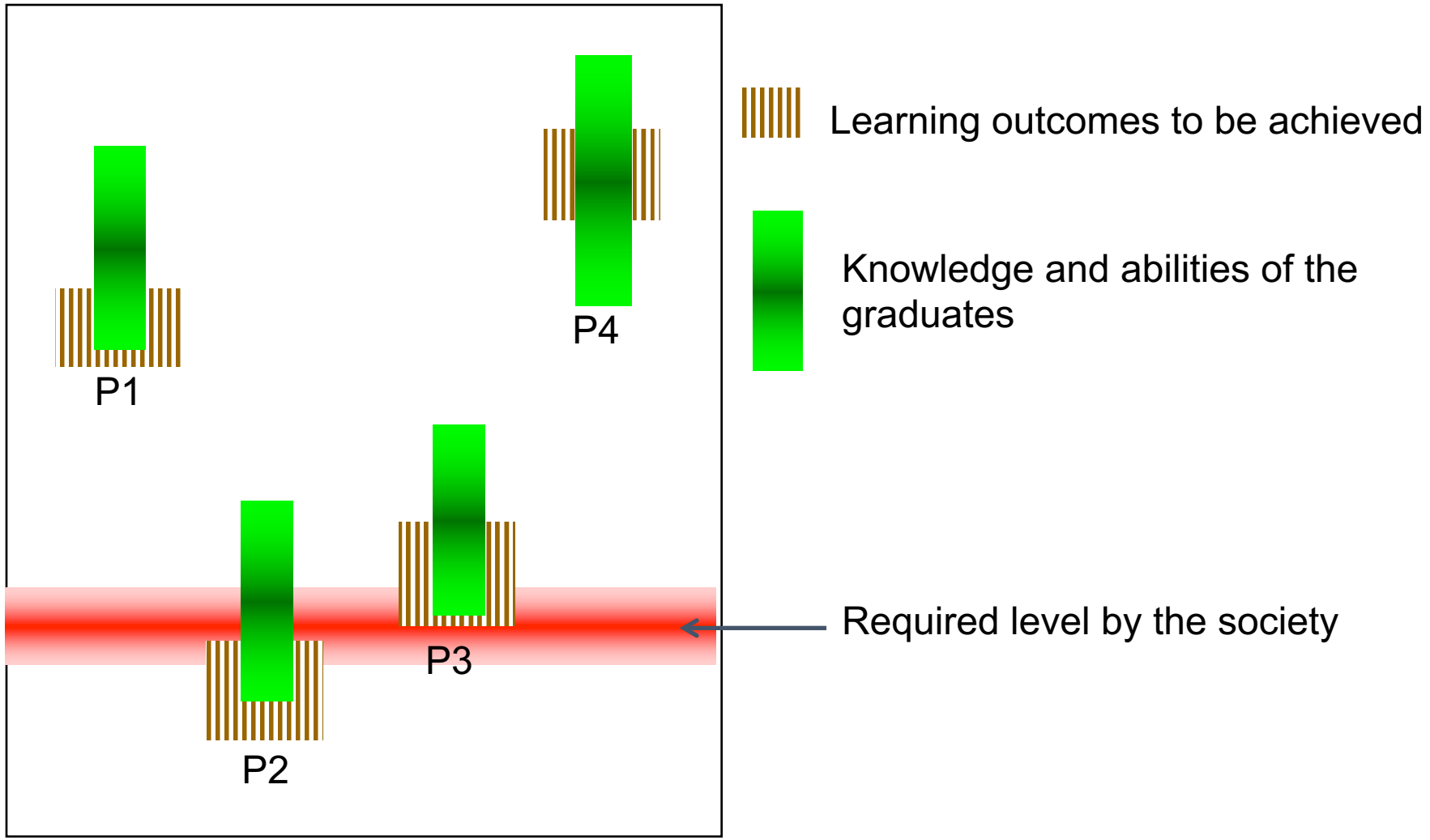
- Pihak yang berkepentingan dengan mutu pendidikan ?
- Akuntabilitas bukan sekedar proses transaksional antar pihak terkait;
- Perguruan tinggi tidak sekedar memenuhi keinginan masyarakat akan tetapi juga melakukan edukasi masyarakat supaya mencapai masyarakat madani sejahtera mandiri;
- Hasil survey menunjukkan bahwa kompetensi lulusan perguruan tinggi di Indonesia lebih tinggi dibandingkan dengan tuntutan kompetensi dunia kerja Indonesia, khususnya dunia industri, karena industri di Indonesia masih sangat terbelakang.

Identification of possible contribution from higher education stakeholders

Stakeholders	Expected output	Expected outcome	Possible contribution to national development and to nation's competitiveness
Students/graduates	Quality education	Hard-skill, soft-skill, life-skill	Prominent scholars, top professionals, excellent leaders
HEIs	Quality graduates, quality research	International reputation, world class ranking	Driving force for innovation that leads to nation's competitiveness
Government	Enrolment increases, graduate increases, research & publication increases	People prosperity as mandated by the constitution	People trust the government and therefore the government will be fully supported
Industries/productive sectors	Talented employees from HEIs for production and R&D	Expansion and more profit, more competitive	Top and competitive industries that will generate revenue for the Indonesia

Akreditasi bukan tujuan melainkan proses mencapai mutu

- Harus ada perubahan paradigma akreditasi dari *input-based* menjadi *outcome-based*;
- Akreditasi merupakan perangkat untuk evaluasi diri dan proses peningkatan mutu berkelanjutan;
- Akreditasi yang saat ini berlangsung dapat menimbulkan ketidak adilan dan akan memperbesar *disparitas* antar perguruan tinggi;
- Akreditasi tidak dapat diwajibkan kepada perguruan tinggi, sebaliknya justru perguruan tinggi yang membutuhkan akreditasi agar mutunya meningkat.


P1
P4
P2
P3
Learning outcomes to be achieved
Knowledge and abilities of the graduates
Required level by the society

Dampak Pendidikan Bermutu

- Mempunyai nilai tambah;
- Berbasis potensi lokal;
- Mampu memberdayakan masyarakat;
- Meningkatkan pertumbuhan ekonomi secara riil;
- Mampu meminimalkan disparitas antar wilayah;
- Mampu meminimalkan kesenjangan ekonomi di masyarakat.

Prasyarat kemajuan ipteks

- Indonesia harus punya industri dasar yang kuat sehingga tidak tergantung kepada negara lain;
- Pendidikan sains terutama matematik (terkait dengan daya nalar) harus dilakukan sejak pendidikan dasar, tentu dengan memperhatikan metoda yang sesuai dengan tingkat perkembangan anak;
- Industri harus diberi insentif untuk melakukan R&D supaya ada nilai tambahnya (biaya R&D harus diawali oleh pemerintah atau mereka diberi keringanan/pembebasan pajak);
- Lembaga riset dan kampus harus diberi insentif untuk mengembangkan ipteks (dengan dana dan otonomi pengelolaan);
- Pemerintah menangani kegiatan ipteks yang cost-center sedangkan pihak swasta menangani kegiatan ipteks yang profit-center, tidak perlu ada kompetisi pemerintah dengan swasta, tapi justru harus saling mengisi.

Pengakuan mutu pendidikan secara universal

- Kemampuan/kompetensi hasil didik untuk bersaing global;
- Kemampuan/kompetensi hasil didik untuk kolaborasi global;
- Eksistensi jati diri bangsa ditentukan oleh adanya pengakuan oleh komunitas global.

Globalisasi

- Global village;
- Tidak ada kendala & kendali informasi;
- Tidak ada kendala & kendali mobilitas;
- *Jati diri* : dibedakan berdasarkan kinerja, bukan karena suku / agama/ kebangsaan / budaya;
- Kinerja mewujudkan tingkat kesejahteraan.

Kompetisi global

- Eksistensi sebuah negara / masyarakat / kelompok ditentukan oleh besar kecilnya penguasaan ‘pasar’ global / dunia;
- Ukuran besar kecilnya negara / bangsa tidak dapat menentukan eksis tidaknya sebuah negara / bangsa;
- Secara transaksional maka negara maju (sebagai penyedia) akan menguasai negara yang belum maju (sebagai pengguna).

Tolok ukur kemajuan

- Diukur dengan peringkatnya terhadap negara lain;
- Pemeringkatan berdasarkan indikator yang terukur secara global;
- Tolok ukur global tidak mencerminkan potensi kearifan lokal, kecuali jika kearifan lokal mampu mengubah pola pikir negara / bangsa;
- Pola pikir (mindset) sangat menentukan kemajuan suatu bangsa / negara.

Kolaborasi

- Kolaborasi sangat dibutuhkan dalam era global, supaya tidak terisolasi;
- Kolaborasi tidak dapat dipaksakan akan tetapi karena saling membutuhkan dan menguntungkan;
- Supaya tidak terjadi ‘penjajahan’ maka pihak yang berkolaborasi harus mempunyai kapasitas yang sama;
- Kapasitas ditentukan oleh kemampuan / kompetensi SDM.

Hasil Survey tahun 2015

Demand for Skills

Macro and Micro Analysis

Analysis of Macro vs Micro Skills Demand

To develop view of skills demand we conducted analysis at Macro and Micro levels

1. Macro level, based on analysis of SAKERNAS data-9 economic sectors

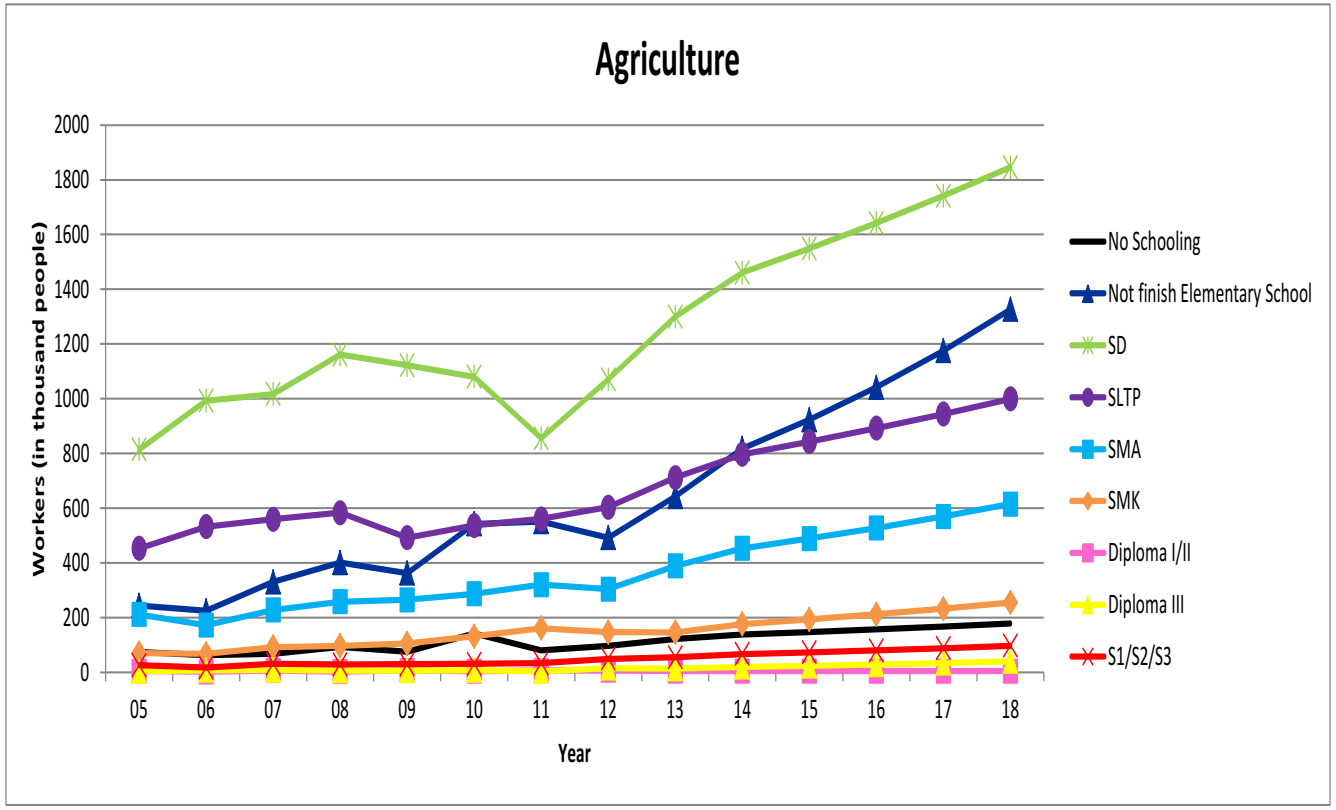
   - high level, not detailed, development of demand in the future by broad economic sector and based on past trends

2. Micro level- based on results of employer survey

   -asked employers about their hiring patterns and intentions, skills needs, the impact of skill shortages, linkages with education institutions

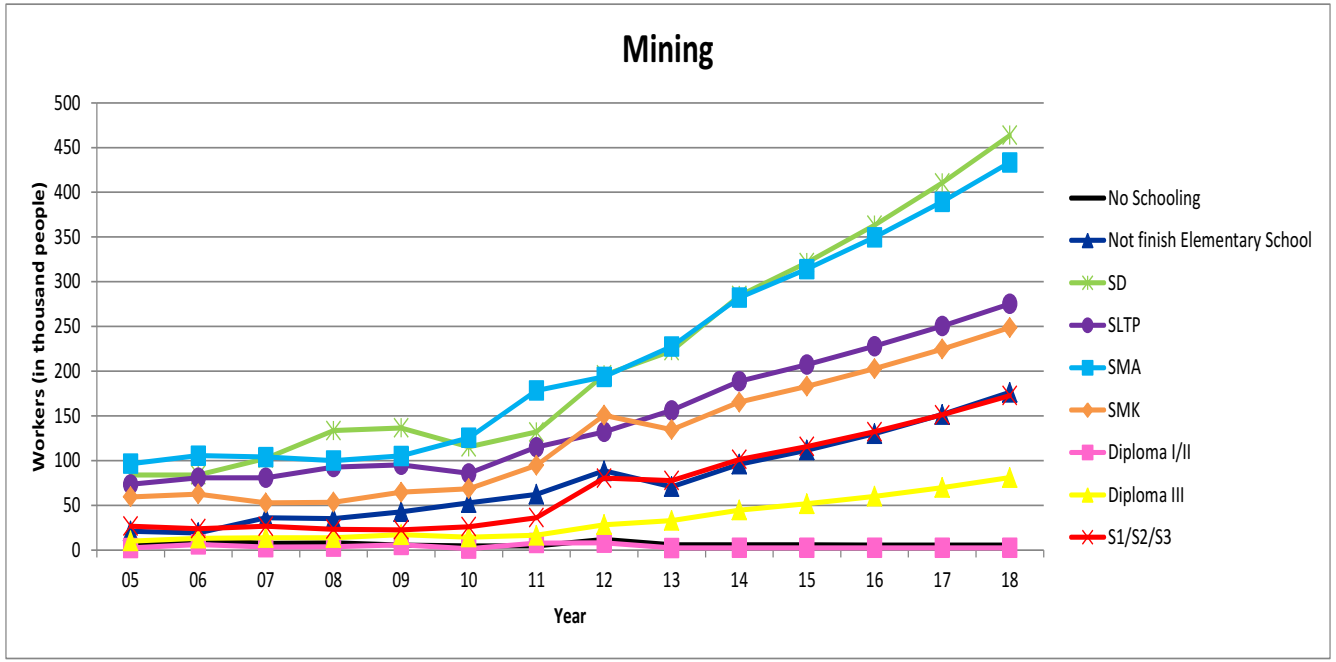
Projections Based on SAKERNAS Data

1. **Agriculture-** expected to rely on low-skilled labour (junior high school/SLTP or lower) as result of slow technological progress.



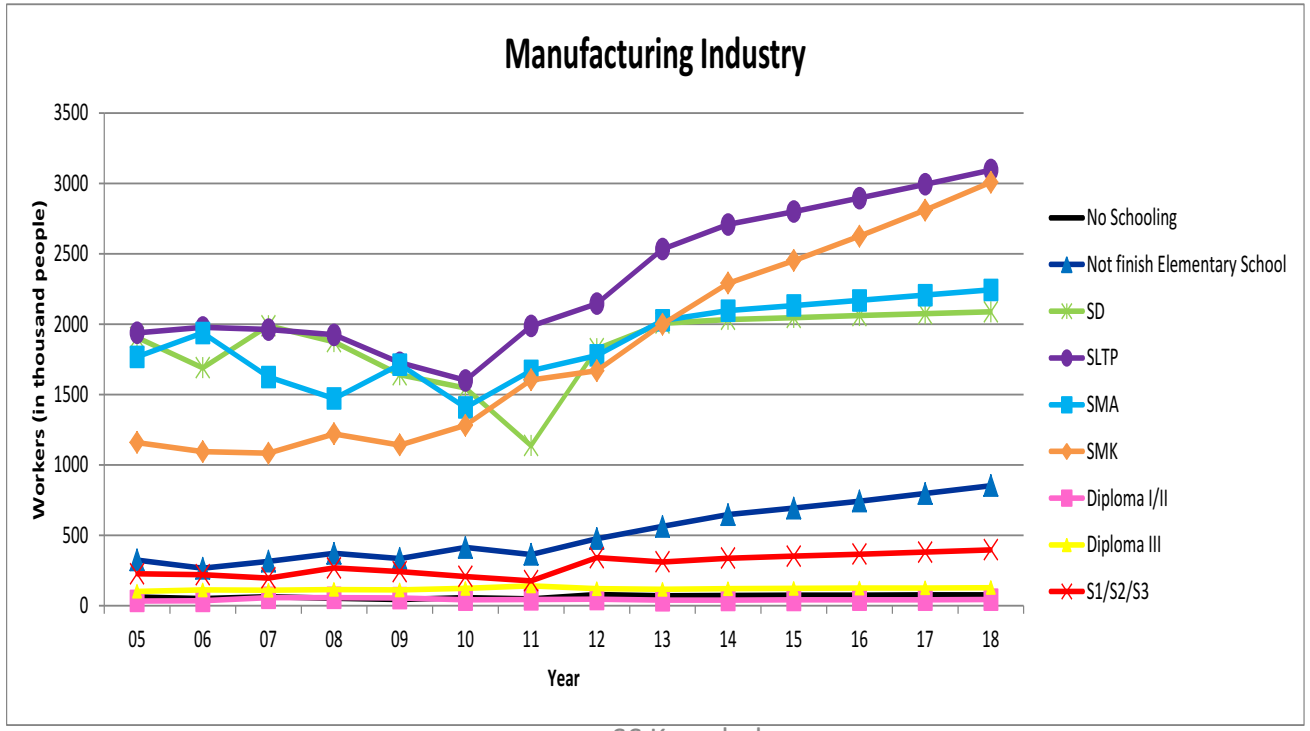
Projections Based on SAKERNAS Data

2. **Mining**- relatively capital intensive sector, labour projections for 2014-2018 suggest higher level skills will be required at senior high school level and university levels.



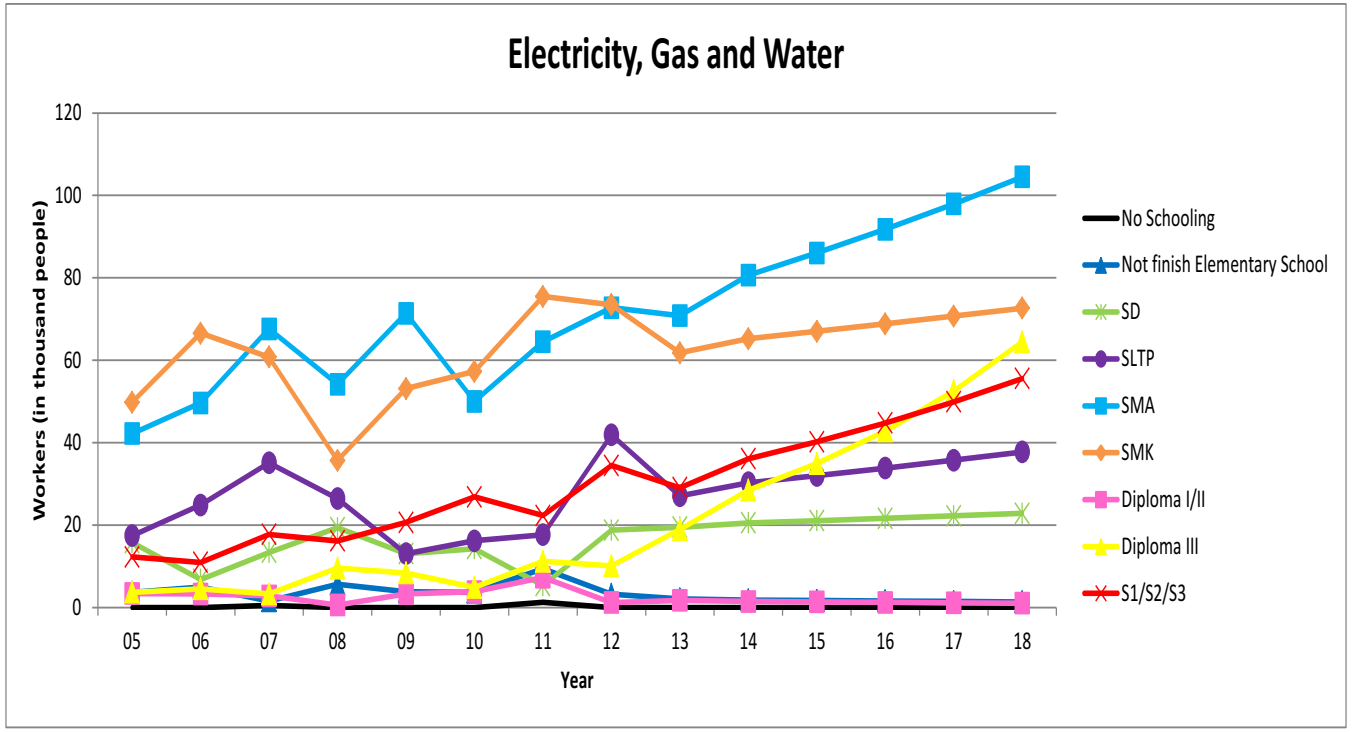
Projections Based on SAKERNAS Data

3. **Manufacturing-** will benefit from a variety of technological developments, labour projections for 2014-2018 dominated by medium skills- high school – levels (those graduating from SLTP, SMA and SMK).



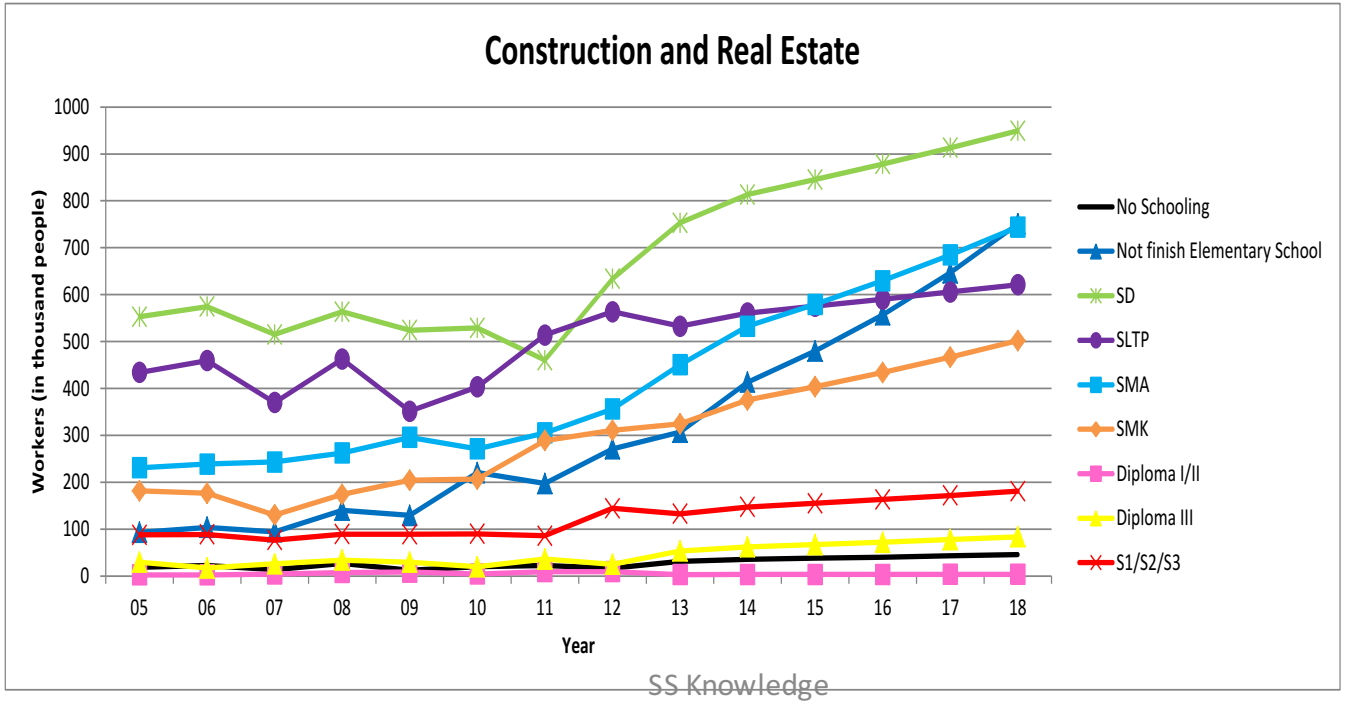
Projections Based on SAKERNAS Data

4. Electricity, gas and water- expect relatively high technological development, labour projections for 2014-2018 show future skills needs at the level of senior high schools(SMA and SMK), diploma III and university.



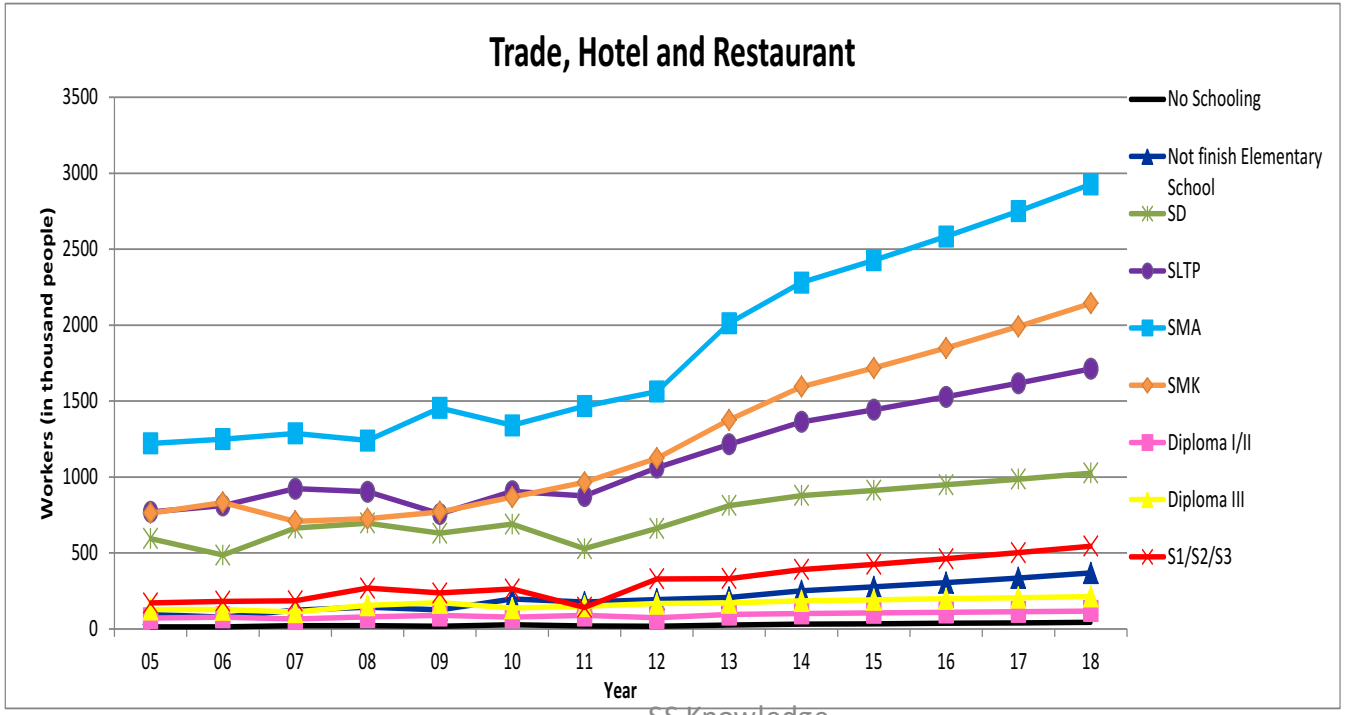
Projections Based on SAKERNAS Data

5. Construction and real estate- relatively labour intensive, low technological development skills needed, labour projection for 2014-2018 shows junior high schools level or lower, increasing trend to hire SMA and SMK graduates, possible transition to higher skill levels.



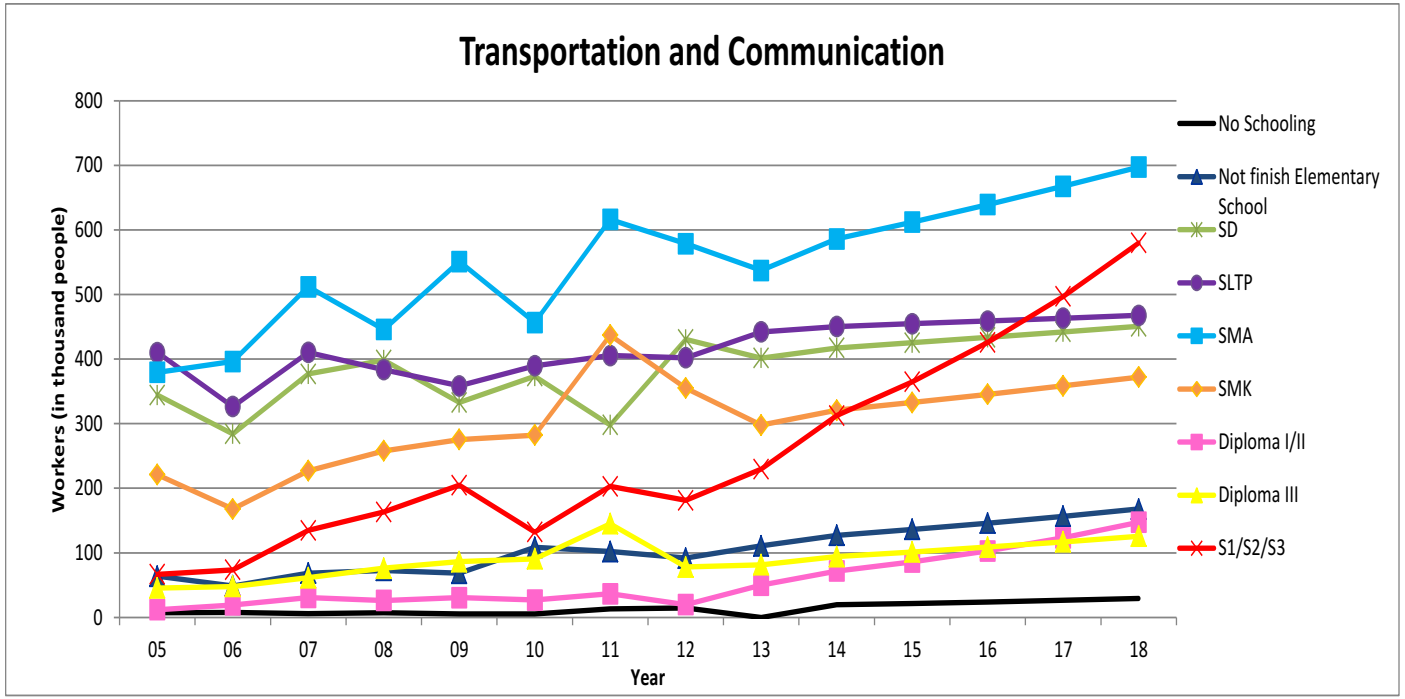
Projections Based on SAKERNAS Data

6. Service sector, hotel and restaurant- transitioning to medium-high technological development, labour projection 2014-2018 trend shows requirement for higher labour skills such as are possessed by SMA, SMK and SLTP graduates.



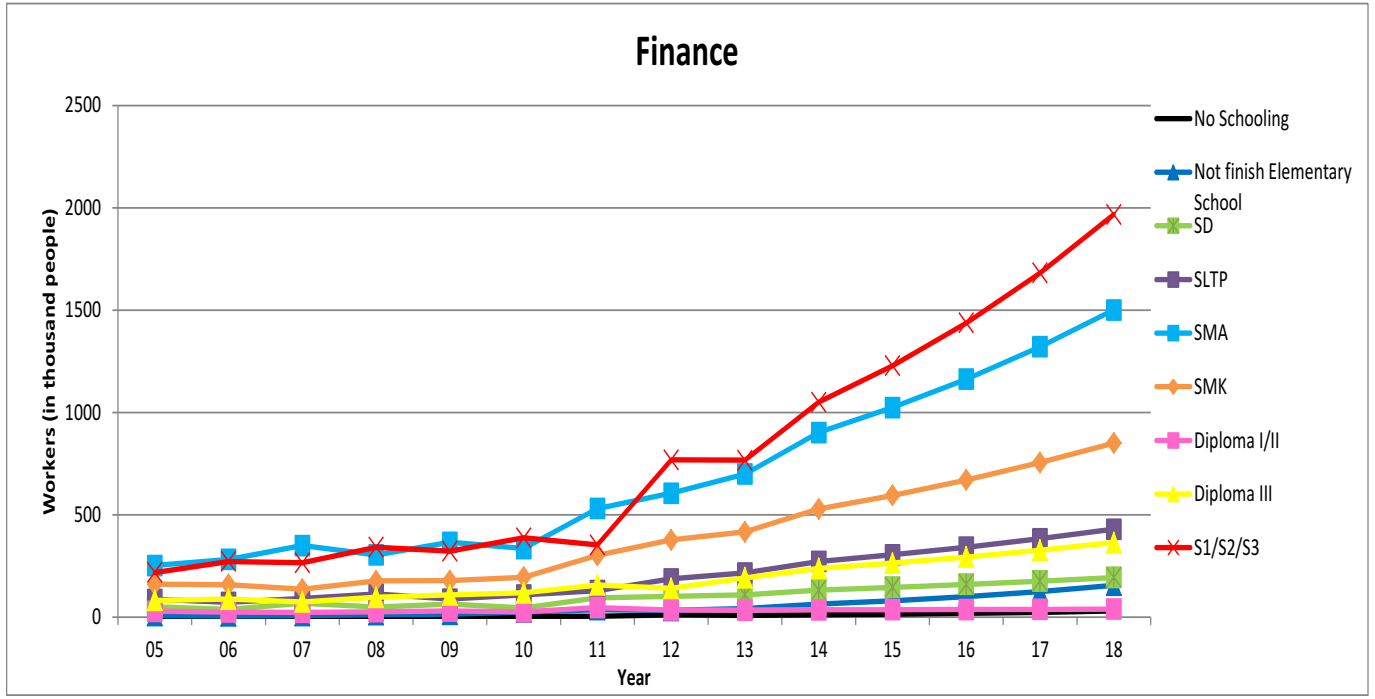
Projections Based on SAKERNAS Data

7. Transportation and communications- experienced fast technological development in the past decade, labour projection for 2014-2018 presents growing demand for SMA, higher education and diploma III graduates.



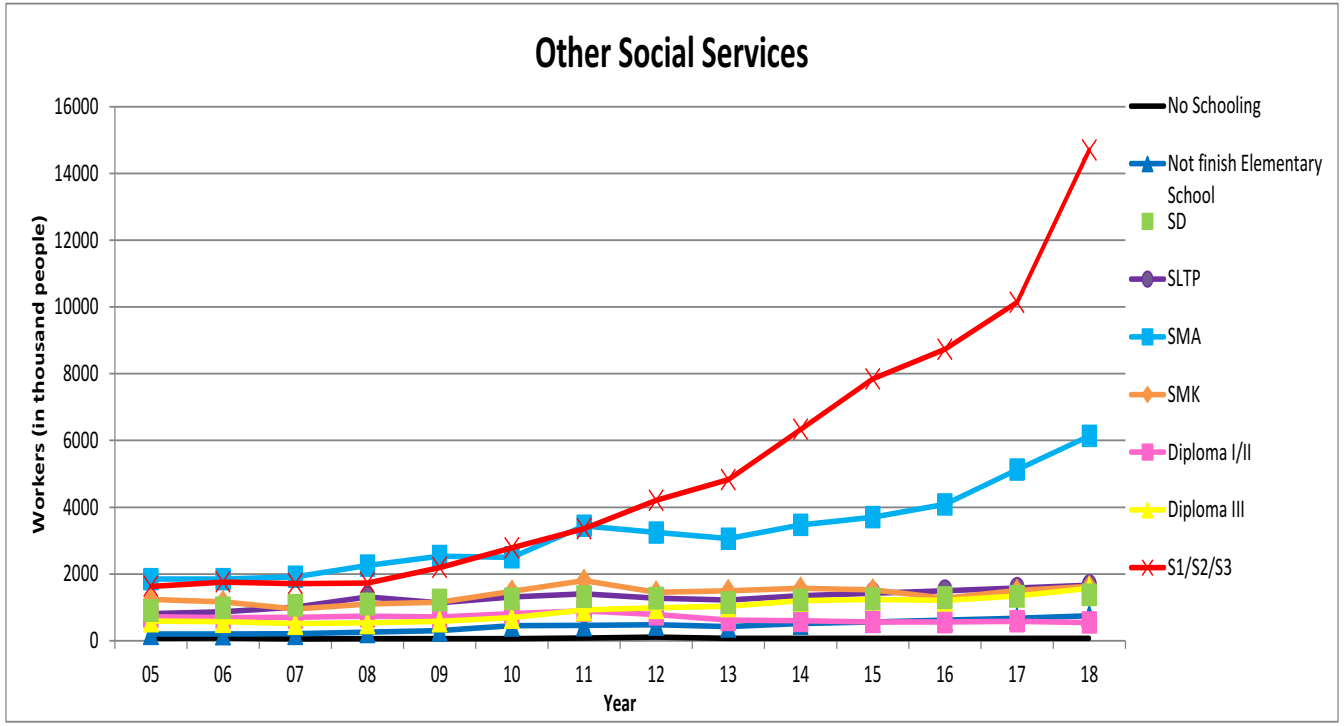
Projections Based on SAKERNAS Data

8. Finance- has experienced higher technological development compared to other sectors, high skilled labour dominates labour projection for 2014-2018, university, SMA and SMK graduates are three highest skill levels expected to be in demand.



Projections Based on SAKERNAS Data

9. Social services-labour projections for 2014-2018 show skills possessed by university and SMA graduates will be most in demand.



Conclusions from Macro-analysis

Analysis of projections of trends in skill levels 2014–18, conducted at the macro level using SAKERNAS data, indicates:

1. There will be acceleration in skills levels required in most sectors, with the strongest growth in high-level skills demand arising in finance, transport and communications; and service sectors

2. Only sectors not showing significant increase in high-level skills are agriculture, manufacturing and construction

3. Demand will vary in different regions, information about this should be part of the development of labour market information systems that we recommend should be developed at both region and national levels

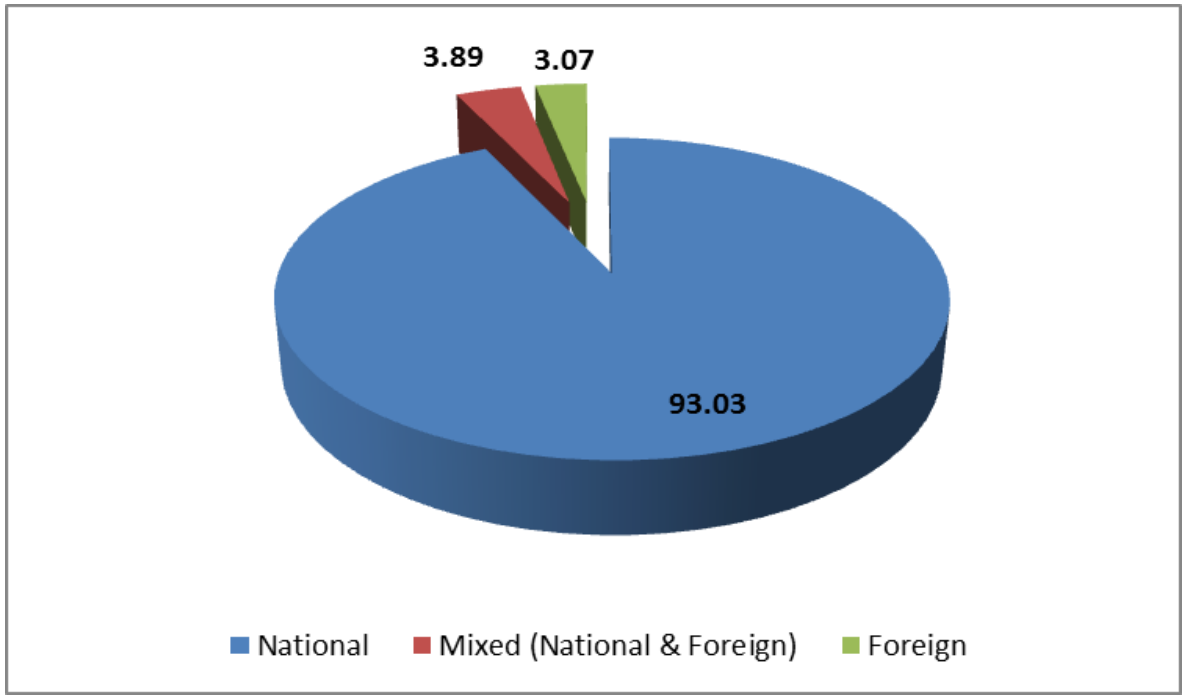
Results from the Employer Survey

Company Distribution and Characteristics

- Employer survey conducted in four main regions of the country: Java/Bali, Sumatera, Kalimantan and Sulawesi
- Survey sample consisted of 460 companies with highest number of employers 269 or 58 per cent being privately-owned limited companies
- Sample selected for the Java/ Bali region was the largest with 340 companies, followed by Sumatera with 70 respondents, Sulawesi 28 and Kalimantan 22.

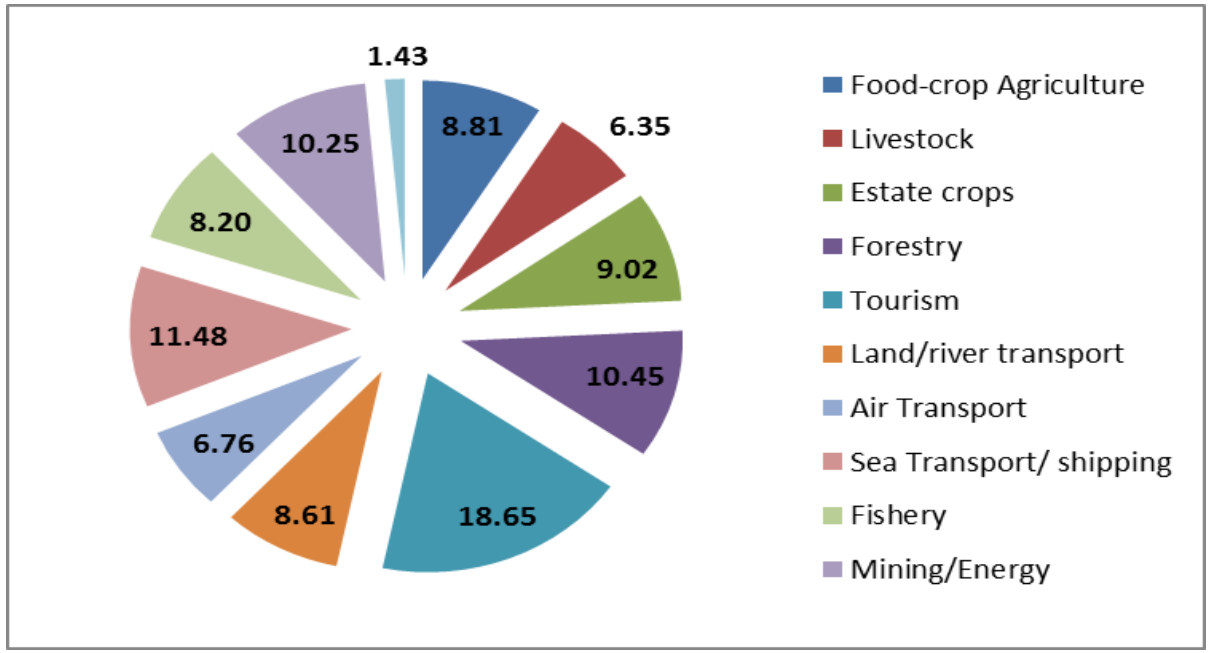
Company Ownership

- Companies in the survey sample primarily nationally owned with 426 out of the total 460, or 93 per cent
- Second category was mixed ownership (national and foreign), 19 companies or 4 per cent and last foreign companies, 15 or 3 per cent.



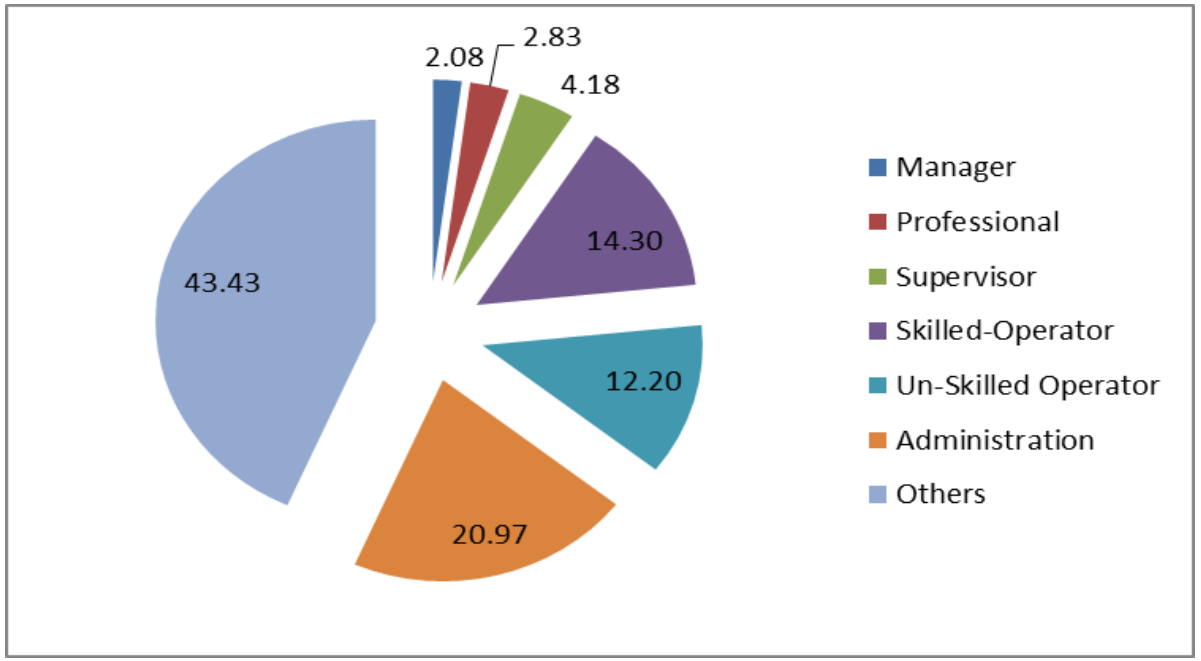
Company Economic Activity

- Highest number of employers interviewed during survey were in the tourism sector, 85 or 18 per cent
- Next were sea transport and shipping 56 companies (12 per cent), forestry 51 (11 per cent); and mining and energy 50 (11 per cent)



Company employment

- Total number of employees in the companies sampled was 118,765
- Number of males employees was 73 per cent, managers and professional occupations less than 3 per cent, supervisors 3 per cent, technical operators 21 per cent and administration employees 23 per cent



Findings from Employer Survey

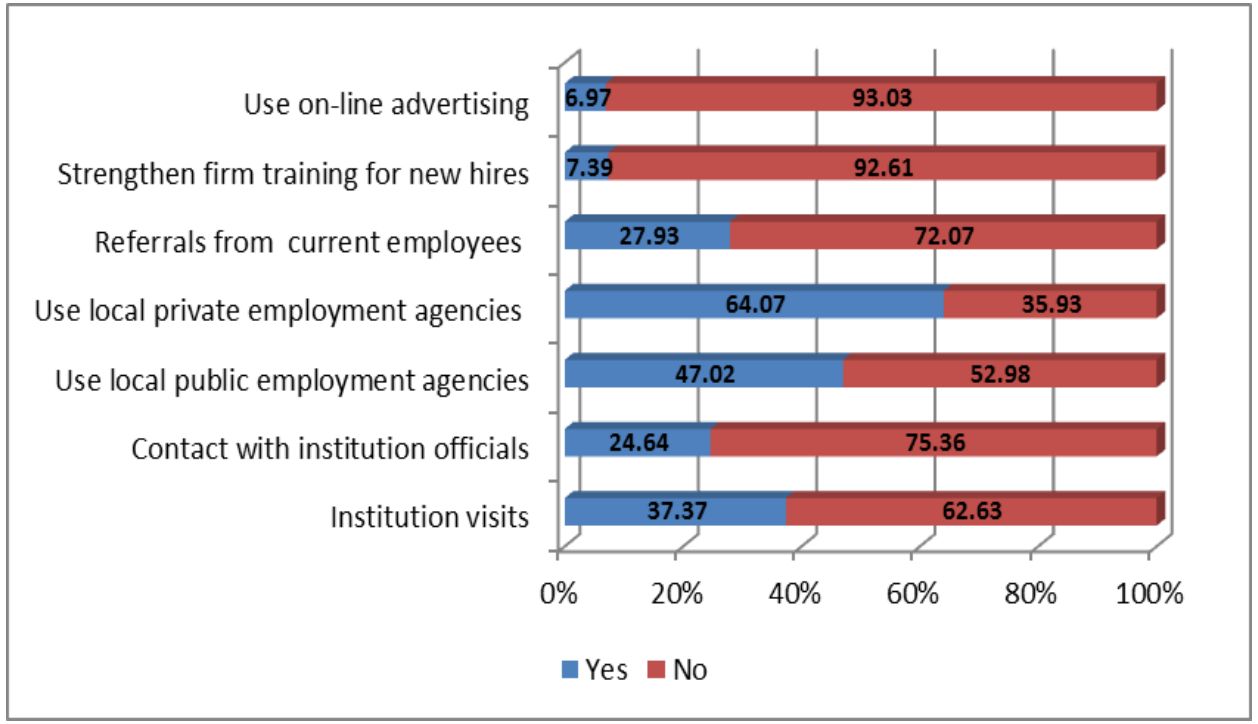
Employer Hiring

1. Almost 70 per cent of employers expect to hire more workers in the next 3-5 year period
2. The highest percentage of employers expect to hire five workers or less (37%)

Number of new employees	Region				Total	%
	Sumatera	Java/Bali	Kalimantan	Sulawesi		
1- 5	13	87	3	12	115	37
6 - 10	12	73	8	4	97	31
11 - 20	8	34	3	2	47	15
21 - 50	7	14	1	1	23	7
51 - 100	2	14	1	1	18	6
> 100	2	10	1	0	13	4
Totals	44	232	17	20	313	100

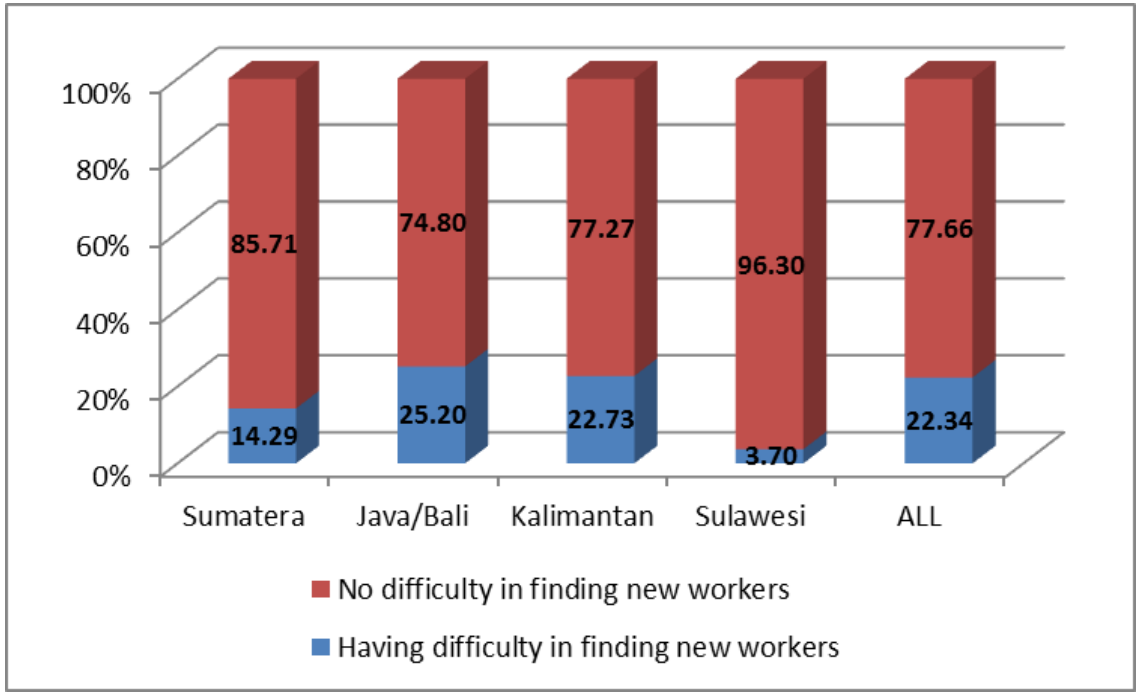
Employer Recruiting Methods

- Employers use a variety of methods to recruit new workers, less than 50% use government agencies, only 7% use on-line advertising



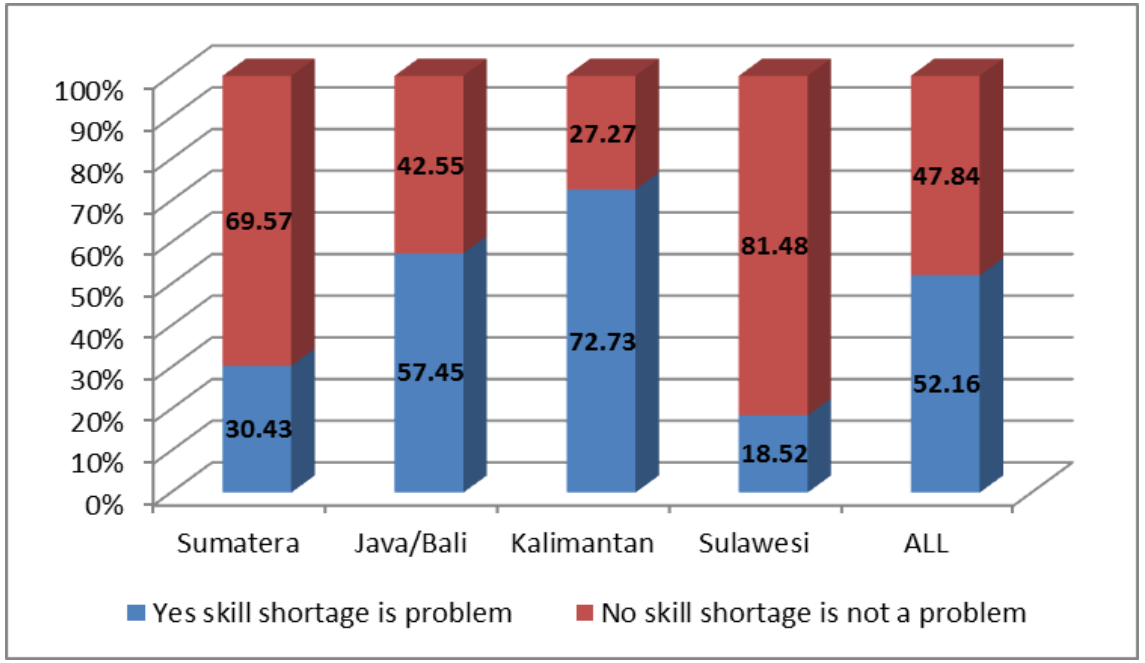
Mismatch in Skills

- Mismatch between worker availability and required skills
- Most companies (80%) have no difficulty finding candidates for jobs, problem is finding candidates with necessary skills



Workers Lack Required Skills

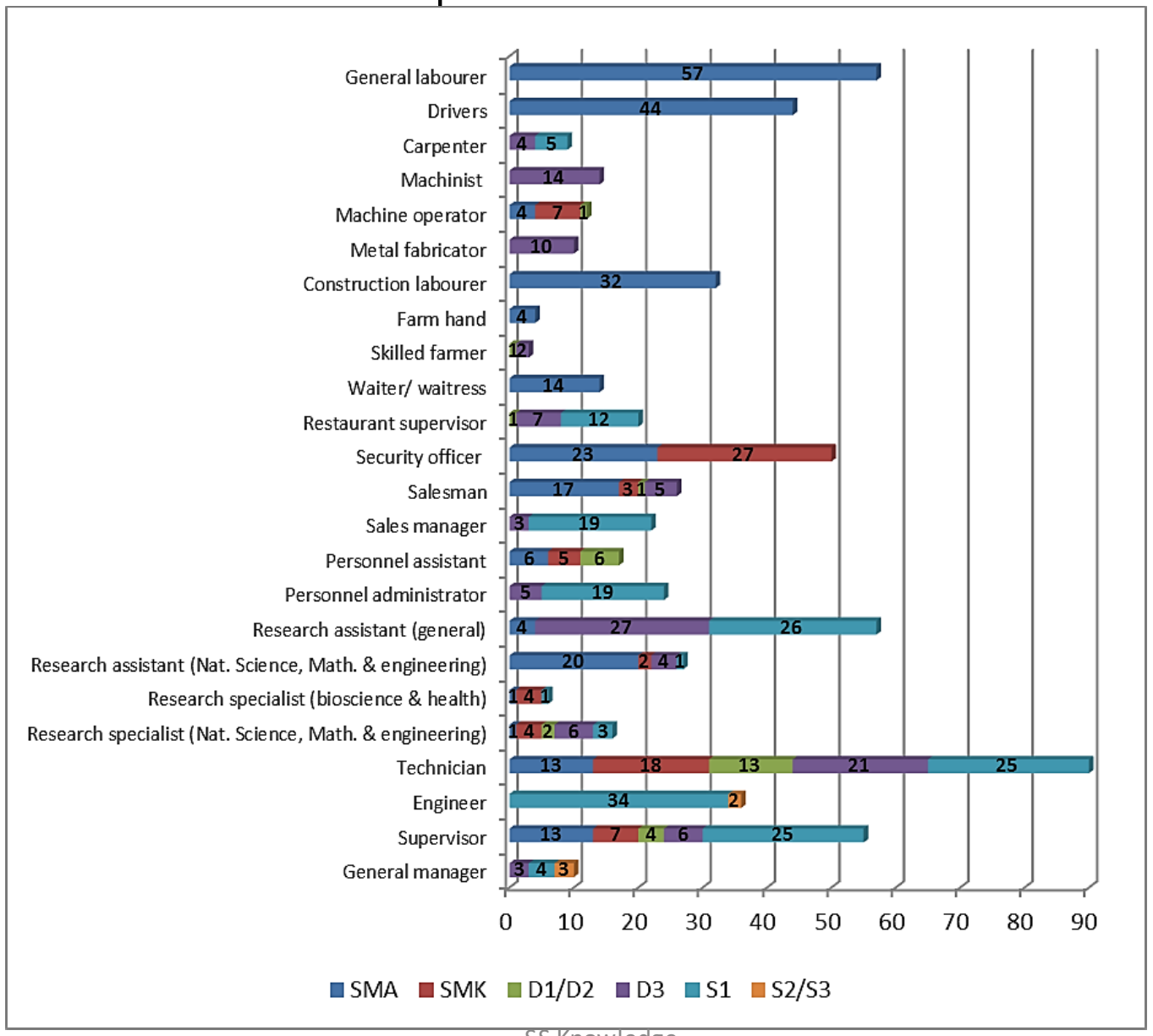
- Less than 50 per cent of employers felt the workers available would have the required skills



High Demand for High-skill Occupations

- Employers see occupations requiring higher technical skills and management expertise to be in highest demand over next 3-5 years
- Expected demand for technicians, engineers, research specialists, supervisory and senior management personnel; and to a lesser degree there will be a requirement for personnel managers, machinists and metal fabricators
- In the lower skilled categories employers see a growing demand for security personnel, labourers and drivers.

Occupational areas in demand



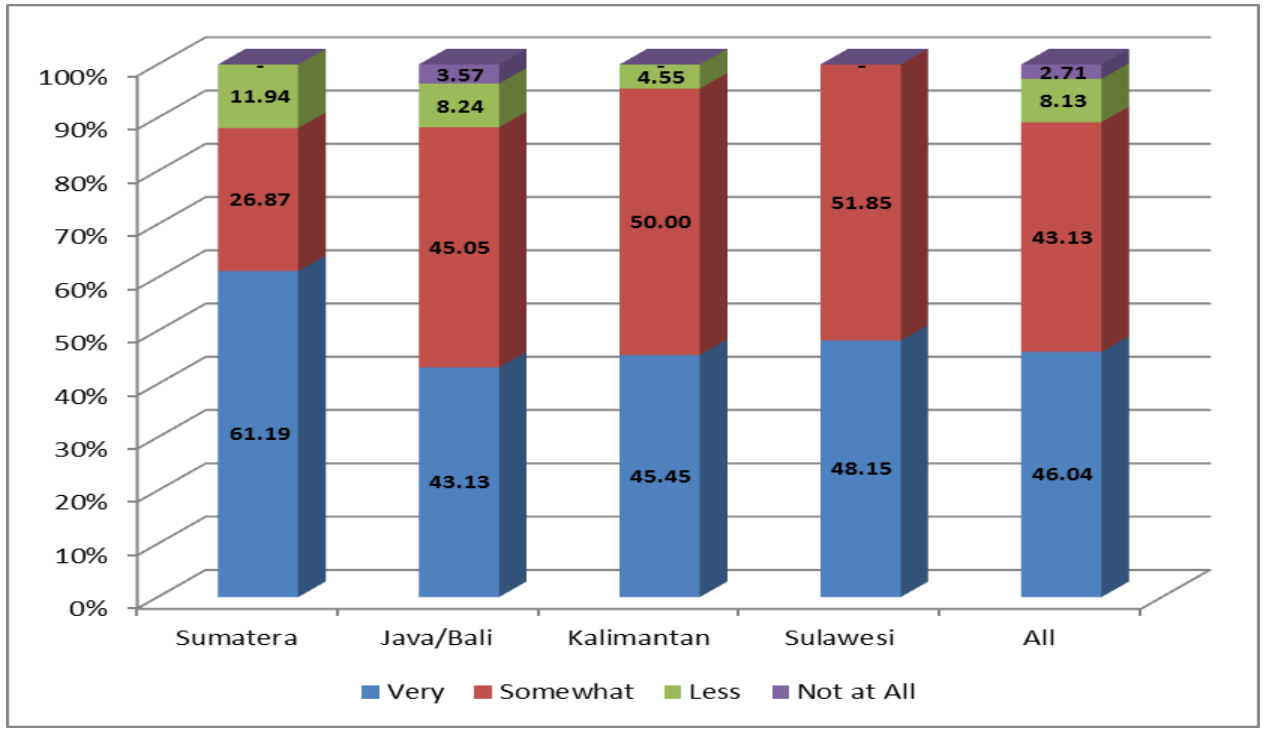
Projected Shortage for High-skilled Workers

- Employers from our survey sample across four regions see shortage in next 3-5 years for high skilled technical personnel, supervisors, managers

Occupation	Projected employer vacancy totals (3-5 years)				Total
	Sumatra	Java/Bali	Kalimantan	Sulawesi	
Managers	6	62	2	6	76
Supervisors	14	142	3	10	169
Engineers	17	220	2	2	241
Technicians	15	449	6	8	478
Research specialists	12	122	4	3	141
Research assistants	90	620	8	2	720

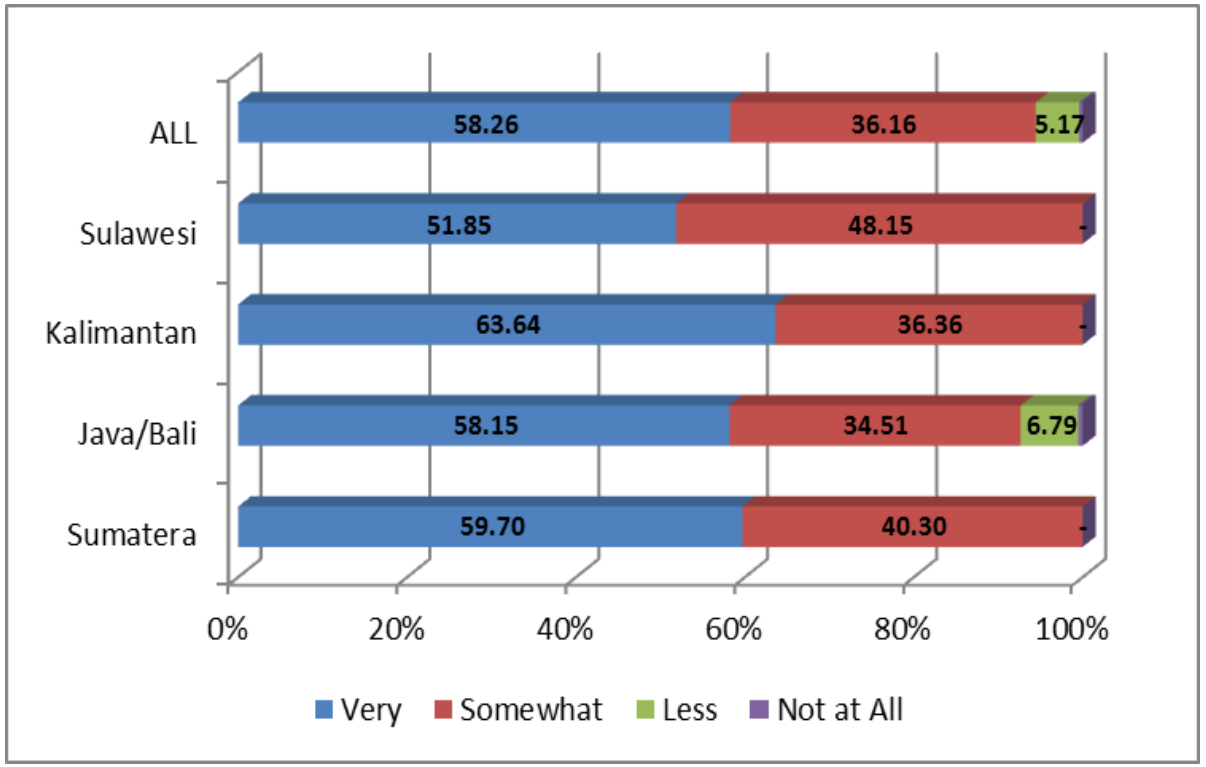
Importance of Soft Skills

- Employers see workers with strong skills as critical to company success
- More than 90% of employers surveyed felt worker soft skills were important or very important to their company



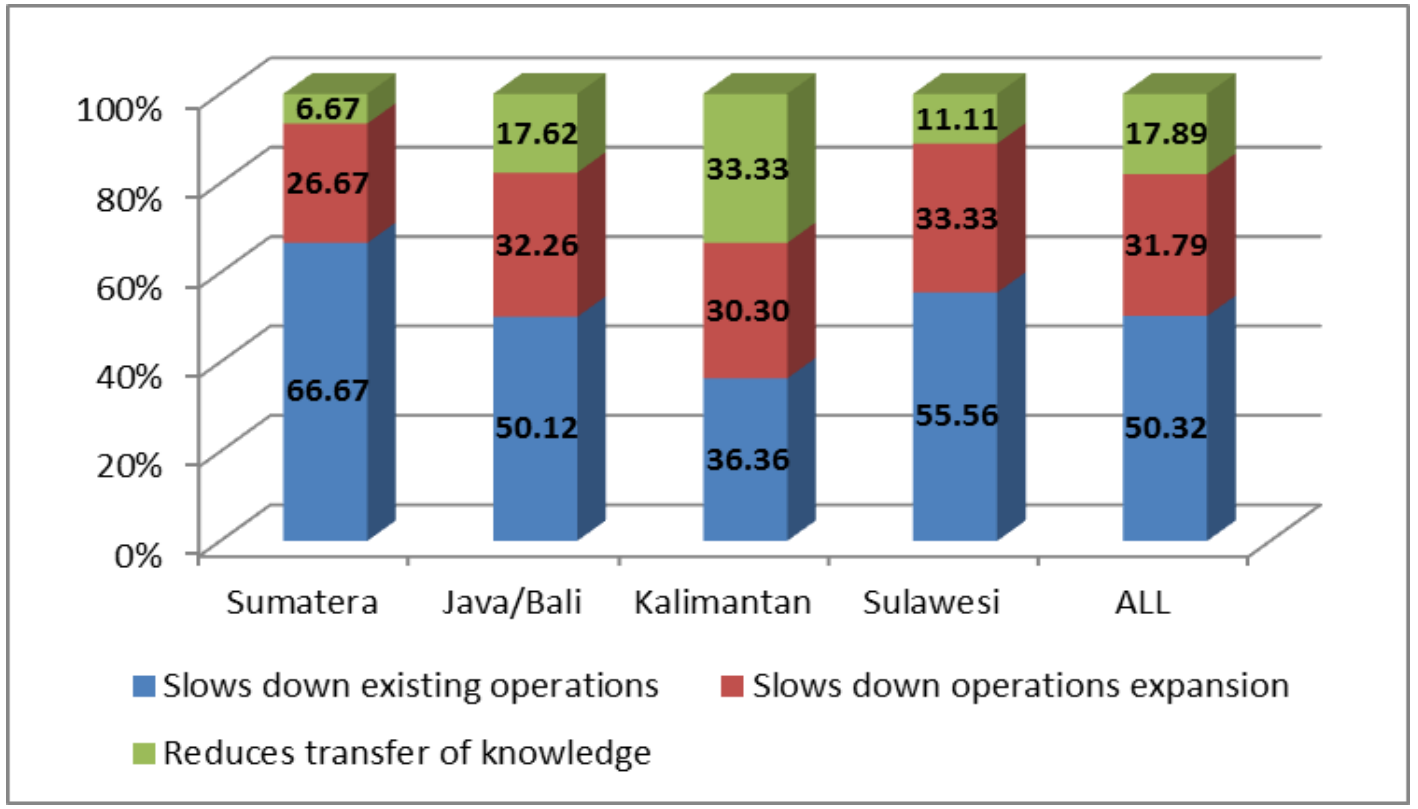
Importance of Technical Skills

- More than 90% of employers surveyed also felt worker technical skills were important or very important to their company



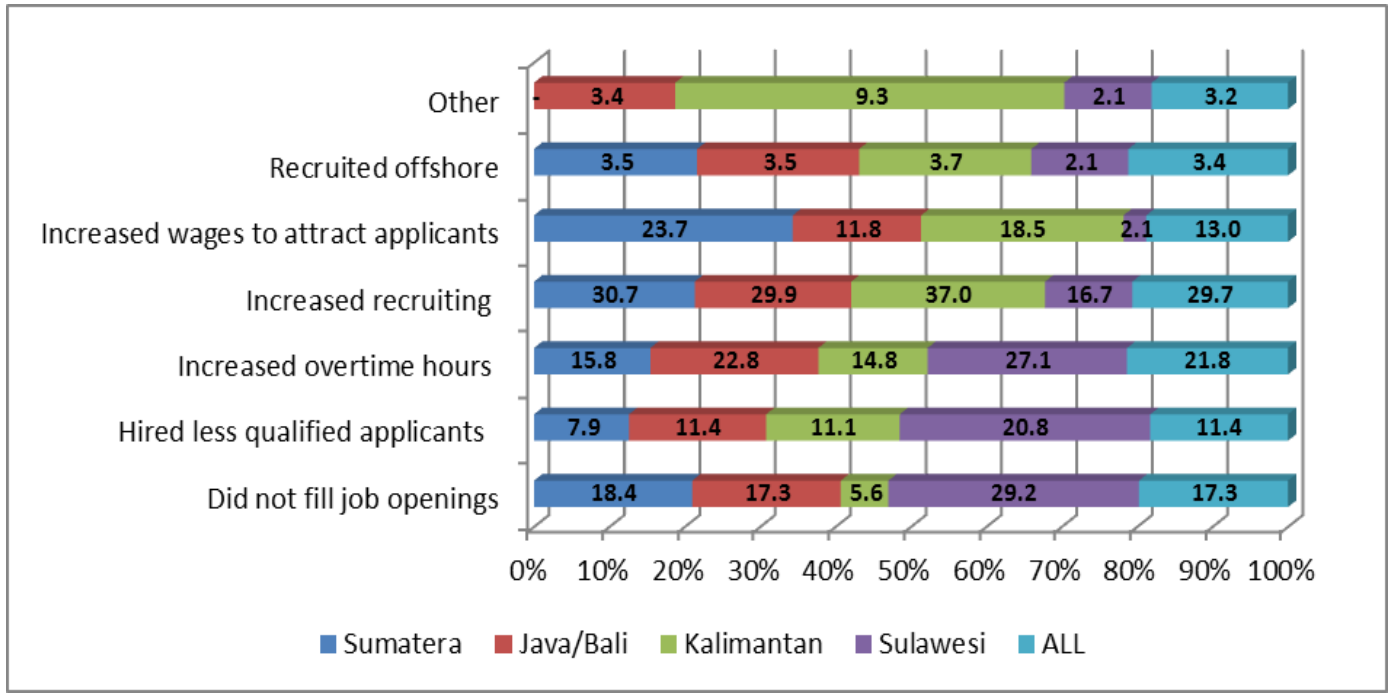
Impact of Skill Shortages

- About 50% of the employers surveyed were concerned that skill shortages slow down their existing operations, over 30 per cent felt this would slow the expansion of future operations



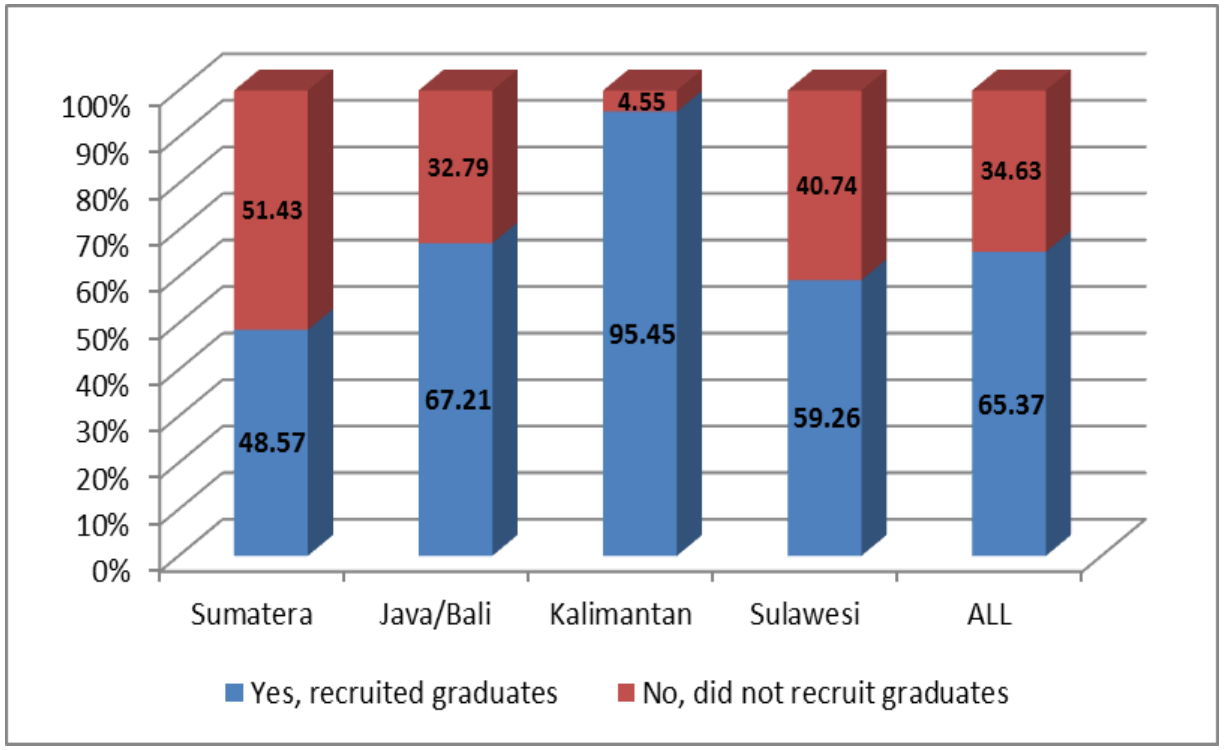
Employer Response to Finding Workers

- More than 20 per cent of employers did not fill vacancies because of skill shortages
- Across all regions 30 per cent of employers stated they increased their recruiting efforts to find new workers, 21 per cent increased overtime hours for existing skilled staff



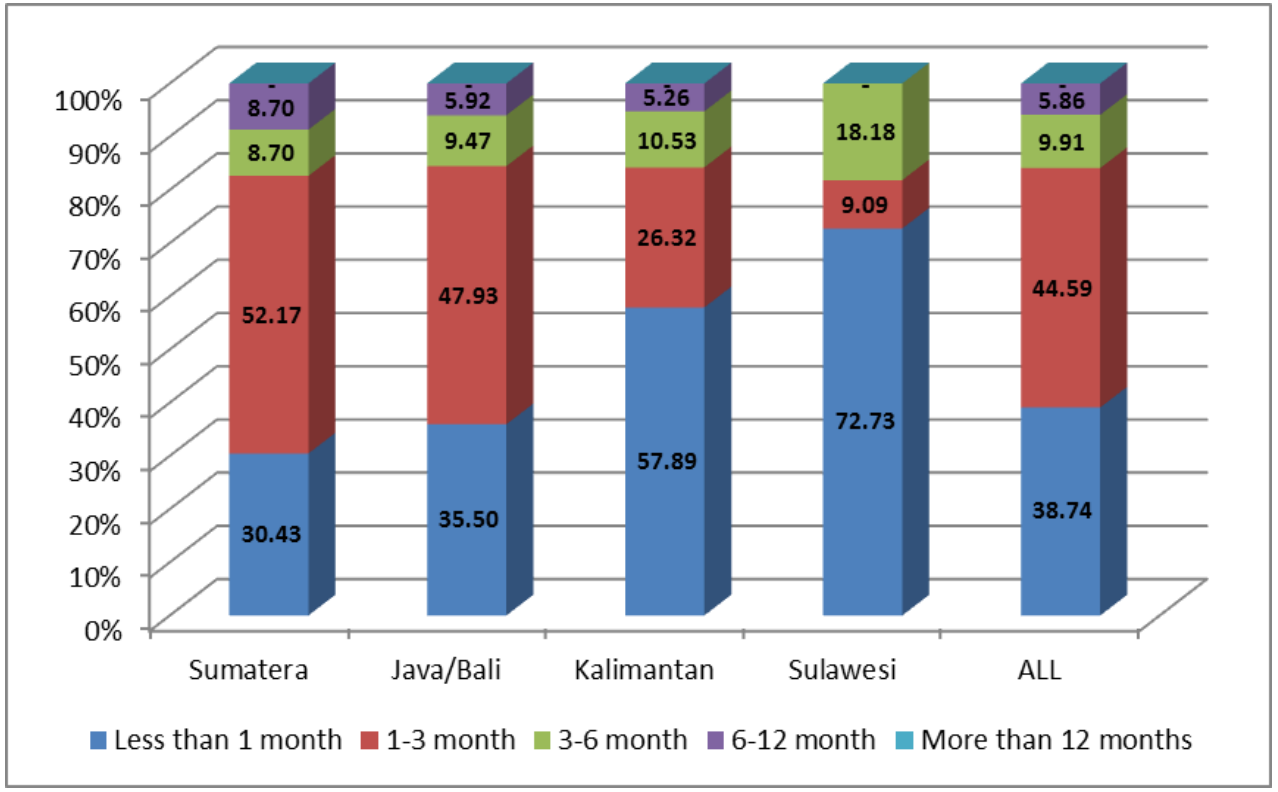
Employer Hiring of Higher Education Graduates

- More than 65 per cent of employers have hired higher education graduates in the past three years



Employer Training Provided to Graduates

- Most companies provide additional training to newly hired graduates, on average up to 3 months



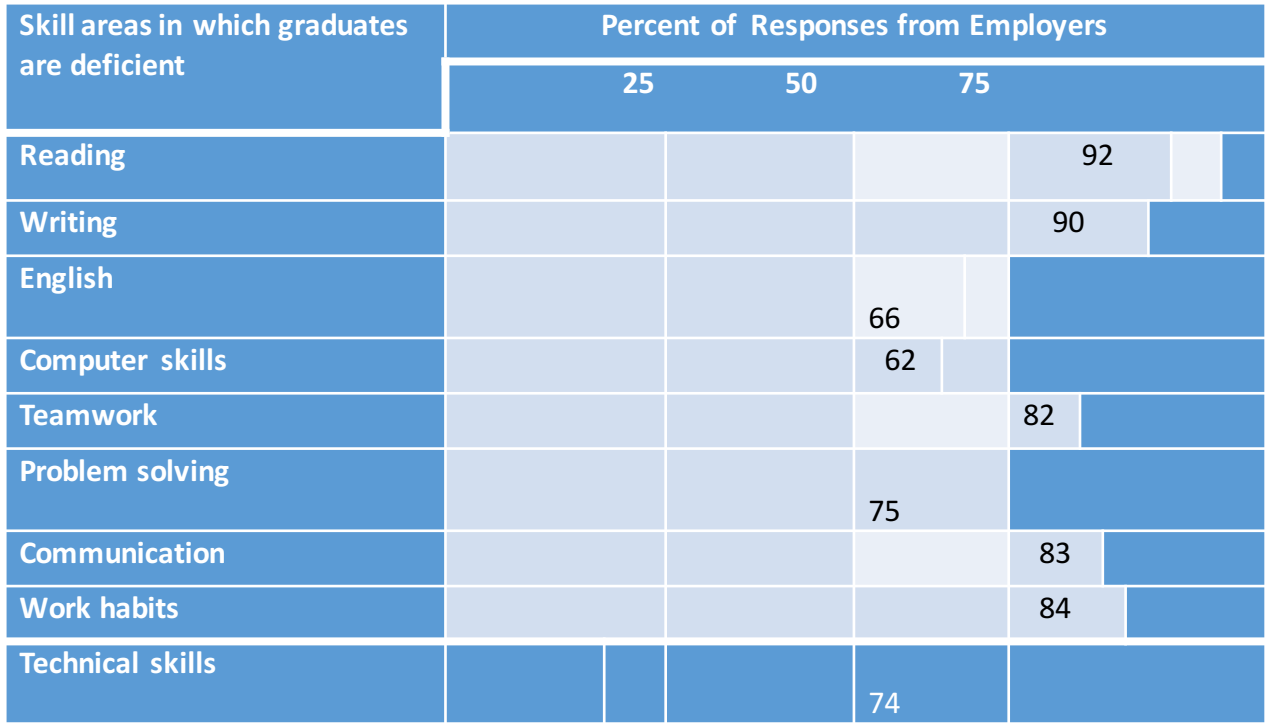
Internships Provided by Employers

- Only 40% of employers interviewed provide internships to students

Total companies reporting	Region								Total	
	Sumatra		Java/Bali		Kalimantan		Sulawesi			
	N	%	N	%	N	%	N	%	N	%
Yes, provide internships	28	40.0	145	39.4	17	77.3	11	40.7	201	41.3
No, don't provide internships	42	60.0	223	60.6	5	22.7	16	59.3	286	58.7

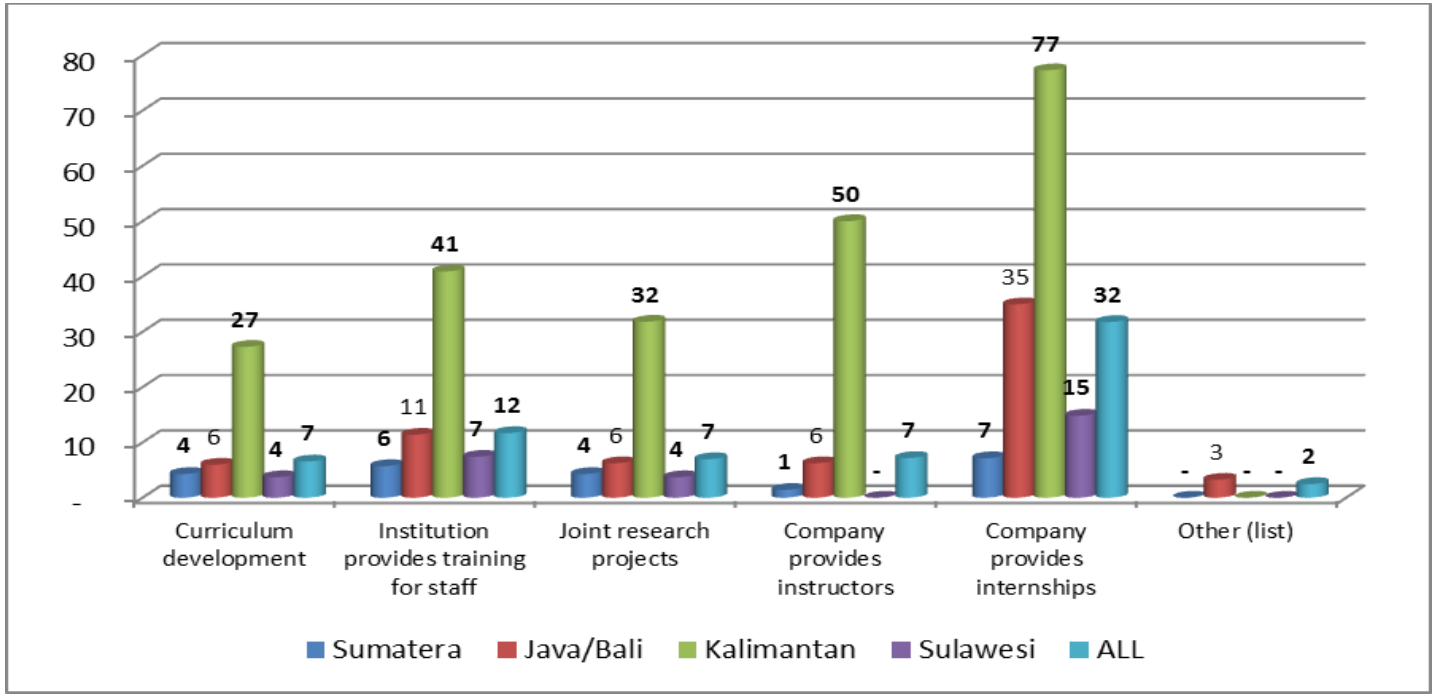
Employer Assessment of Basic Graduate Skills

- Results from the survey were largely negative, with employers assessing graduate reading and writing skills as very poor. This was followed by work habits, communication, and team work which were assessed by employers as poor.



Employer Links with Higher Education Institutions

- Employer links are very weak, study sample revealed only 7 per cent of employers have input into curriculum development, 12 per cent use institutions for staff training, 7 per cent enter into joint research projects and 7 per cent have staff arrangements for instructors



Conclusions and Recommendations From Employer Survey

Conclusions

- The Government's National Medium-Term Development Plans 2015-2025 can be expected to increase demand for skilled industry managers, engineers and technicians as production becomes more intensive and sophisticated
- Results from the employer survey sample show that while almost 70 per cent expect to hire new workers in the next 3-5 year period they are not at all confident that the education system as it currently exists will have the ability to produce graduates with required skills
- Issue is not one of numbers as there are many graduates, but of quality and unless the linkages between employers and the institutions are strengthened this situation will not change

Conclusions

- Employer survey results consistently show that employers are not satisfied with the skill levels of their new tertiary hires, whether these are graduates from universities or vocational schools.
- Main complaints from employers are the lack of technical training, inadequate English, and deficient soft skills, such as the ability to work in teams, critical thinking, and innovative capability.
- While employers raised concerns about worker skills and the poor quality of graduates, they are doing little to address the core problem which is to strengthen linkages with the institutions themselves
- Survey results show a small number of employers have input into curriculum at the institutions, participate in joint research projects or provide instructors, less than 1/2 provide opportunities for student internships
- Need to strengthen linkages between employers and training institutions

Recommendations

To Government

- That Government should take the lead in developing measures to strengthen the linkages between employers and the higher education institutions
- That better information sources should be developed to provide information about skills gaps and further develop the labour market information system in Indonesia
- That measures should be taken to address the identified need from the survey sample for higher skilled occupations as economy grows

Recommendations

To the Education Ministries

- In response to employer negative opinion about basic graduate skills the Ministry of Education should review its programming, and should conduct employer satisfaction surveys
- All higher education institutions should have in place active job placement/ career centres and involve employers in their services
- Training advisory committees should be established at each education institution to involve employers in the development of curricula and program planning to meet local labour market needs.

Vocational Schools (SMK) Select Findings, Working Conclusions and Recommendations

CONTEXT

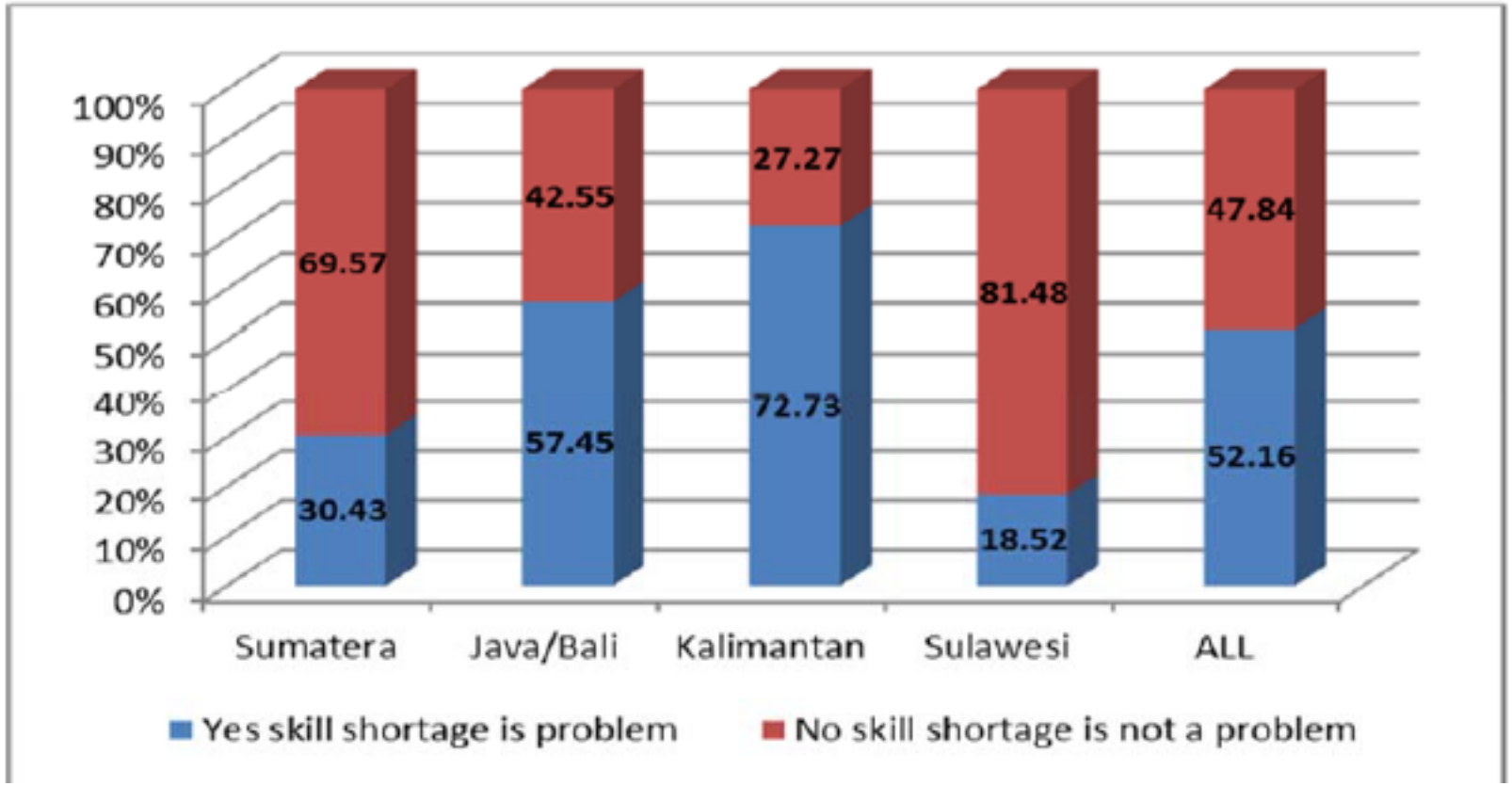
SMK education is intended to prepare youth to be trainable on entering a formal job in the career for which they have prepared

To be hired, graduates have the general thinking skills and initial technical skills that employers seek

Indonesia's Employers are Relatively Satisfied with SMK That They Hire

Company Opinion	Sumatra		Java/Bali		Kalimantan		Sulawesi		Totals			
	No	Yes	No	Yes	No	Yes	No	Yes	No	%	Yes	%
1. SMK schools have produced graduates that are ready to develop their capacity to work in this company	24	46	94	267	4	18	2	27	124	25	358	75
2. SMK schools have supplied their graduates with skills that match the needs of this company	25	45	91	270	5	17	4	24	125	26	356	74
3. SMK schools have given an adequate balance of technical concepts, theoretical knowledge and	22	48	92	292	5	17	24	25	143	27	382	73

But employers still Face skill shortages



Half of SMK graduates do not find formal jobs

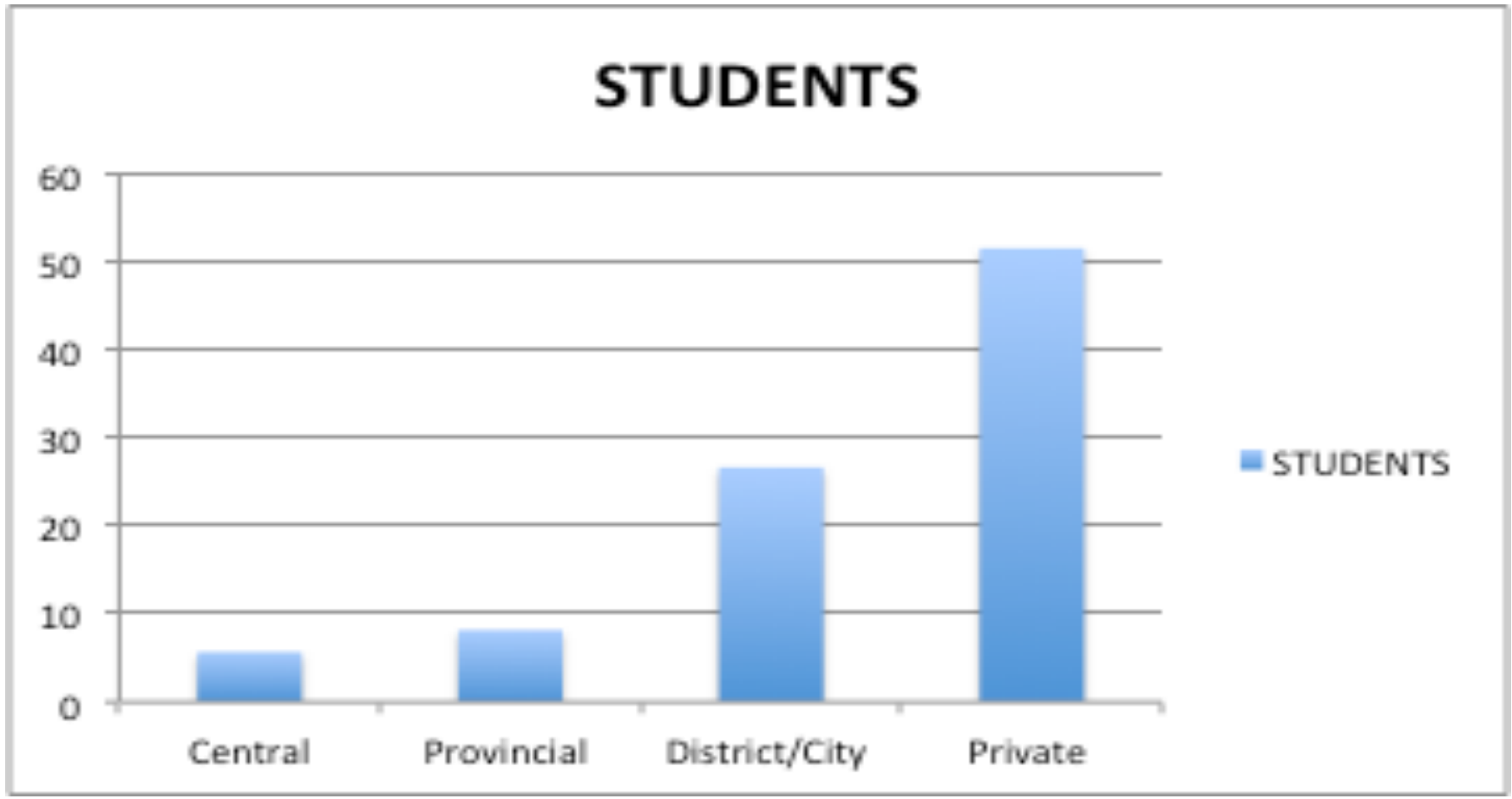
For these youth, there is mis-match between the skills they learn and what employers want.

The quality of SMK Needs to be improved

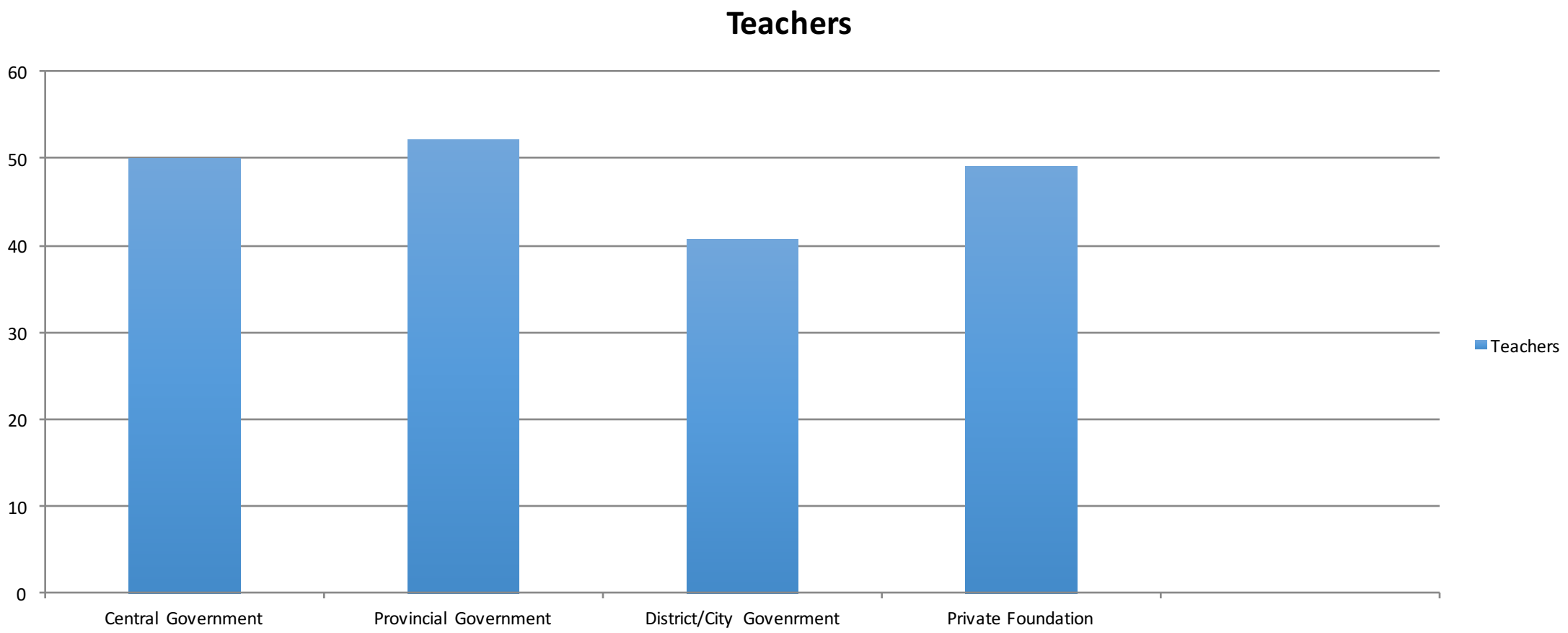
International experience suggests three ways to do this:

- *Make better uses of labor market information*
- *Collaborate effectively with employers*
- *Align their courses of study with the needs of employers*

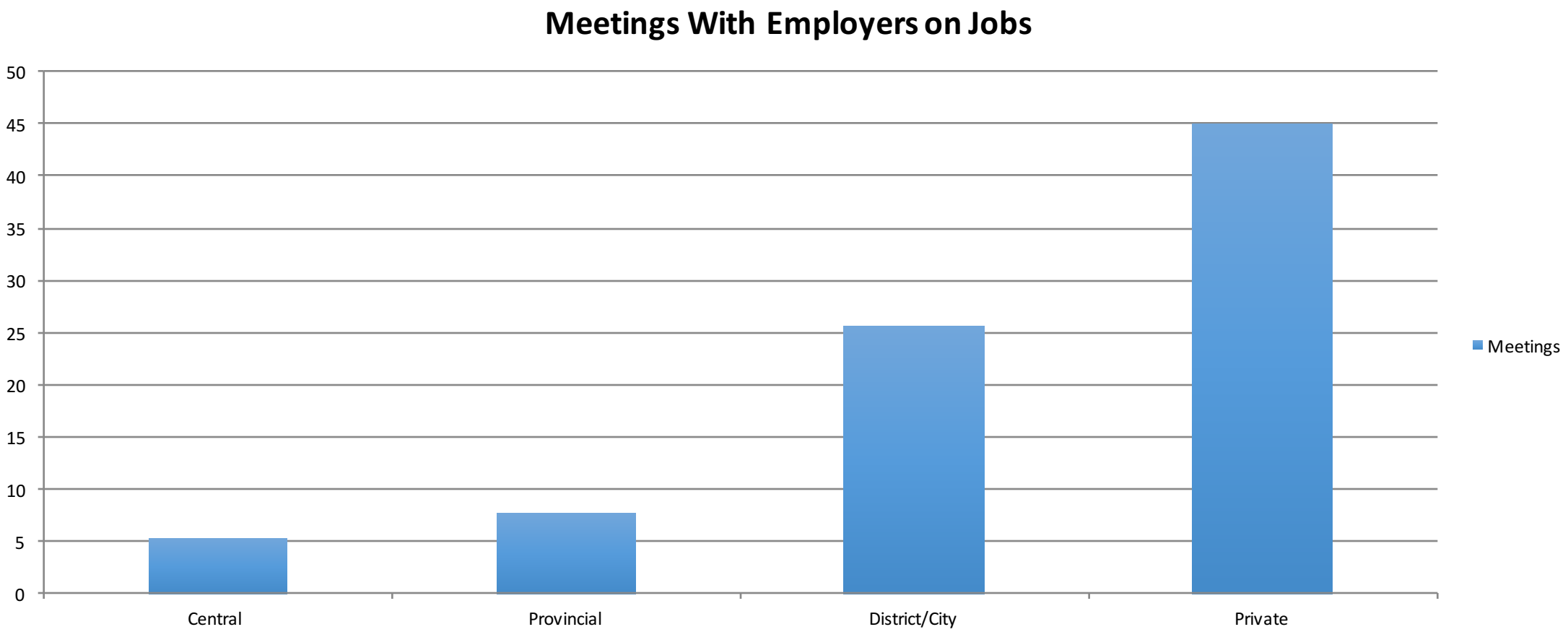
Private SMK are More Likely to Provide Labor Market Information to Students Than Public SMK



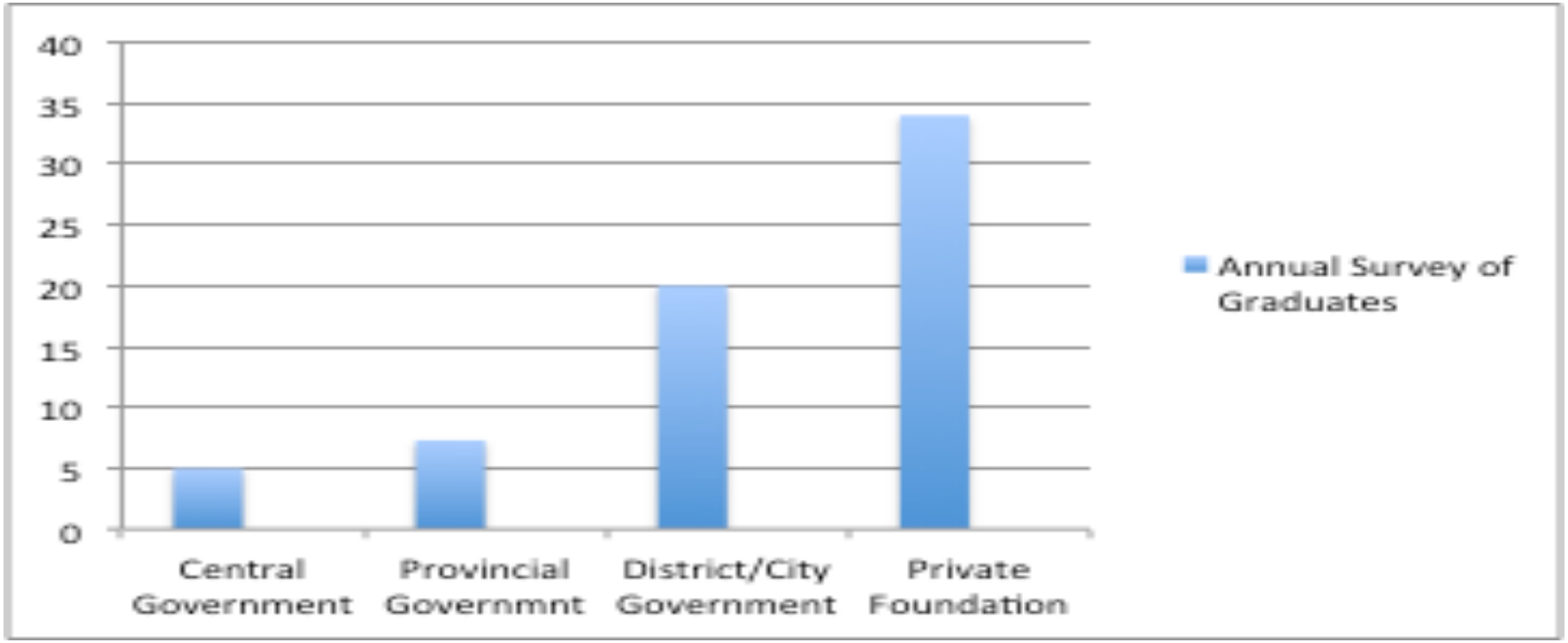
Half of Public and Private SMK Provide LMI to Teachers



Private and District/City SMK Most Likely to Meet with Employers on Jobs



Weak Follow Up on Graduates in Public SMK Compared to Private SMK



Some SMK Courses Work Better Than Others
Java and Bali

Java and Bali

3 Most Effective Fields	3 Least Effective Fields
Hotel and Accommodation Services	Tailoring and Design
Accounting	Office Administration/Secretary
Culinary Arts	Tourism or Accounting

Some SMK Courses Work Better Than Others Other Regions

Other Regions Combined

3 Most Effective Fields	3 Least Effective Fields
Hotel and Accommodation Services	Tailoring and Design
Accounting	Office Administration/Secretary
Culinary Arts	Tourism or Accounting

Working Conclusions

The SMK need to have flexibility and incentives to adapt to changing skill demand no and the future

Overall Public SMK have made a head start in using labor market information and collaborating with employers, nationally and across the Region

But the SMK have constraints on changing to become more effective

- SMK are small schools usually with a civil service principal and 5-8 non PNS administrative staff
- SMK report that budgets are constrained
- Most SMK have been offering the same courses of studies for 8 years
- In practice SMK have little flexibility to change courses of study and few resources to implement changes (such as teacher training and new learning materials)

What SMK Need

- More autonomy to respond to skills needs in their districts and regions by changing or developing new courses of study
- More accountability locally and nationally to provide incentives to change
- Additional resource from the Central Government to District budgets earmarked for changes
- Much strengthened local accountability to ensure that changes meet the needs of parents, students and employer

Recommendations for the Improving SMK Outcomes
District

Government should strengthen the accountability of SMK to District and City Governments and citizens for the employment outcomes of their students

-- Consider requiring that an annual graduate survey be a condition of the SMK's budget

-- Districts should make the results of SMK gradate surveys available to the public

- Districts and SMK could also give consideration to appointing a full officer to manage collaboration with employers,

Districts Recommendations 2

Establish District Skill Committees representing employers, district officials and SMK directors to:

---to consult annually with employers on the relevance of courses of study to employment and skill needs

--- to recommend changes in courses of study as appropriate to local skills needs

National Recommendations

- Establish independent apex national and regional Skills Monitoring and Evaluation bodies with governance by government, employers and citizens to monitor the employment outcomes of secondary education – public and private SMA and SMK and MA MK.
- Consider creating a Skills Enhancement Fund In the MOEC with a strong public/private Advisory Board to provide financial incentives districts and to SMK that are contingent on independently-verified improvement in the employment outcomes of public and private SMK

Higher Education Capacity and Capability

Capacity of the higher education system to produce the required skills

- Looked separately at
  - (1) ‘physical’ capacity
    - student demand (whether there is likely to be sufficient demand for places)
    - Universities ability and willingness to accommodate those students
  - (2) Quality
    - Whether graduates are emerging with the right skills

Capacity of Universities - Physical supply & demand

- Student demand is strong
  - Numbers have increased substantially in recent years
  - Indonesia's Gross enrolment ratio is still lower than others, so is likely to grow
- The main constraints universities see on their ability to grow are
  - Plant and equipment
    - But if students fill the additional places they will provide sufficient income to pay for this
    - Government loan guarantees would help
  - Appropriately qualified faculty
    - The Government's intention to increase the number of Masters graduates 7-fold should ensure sufficient potential new faculty are available
    - But these must be spread around the country
- But there appears a serious imbalance between the availability of S1 and Diploma places. The number of Diploma places needs to be increased and students motivated to fill them

Capacity of Universities - quality

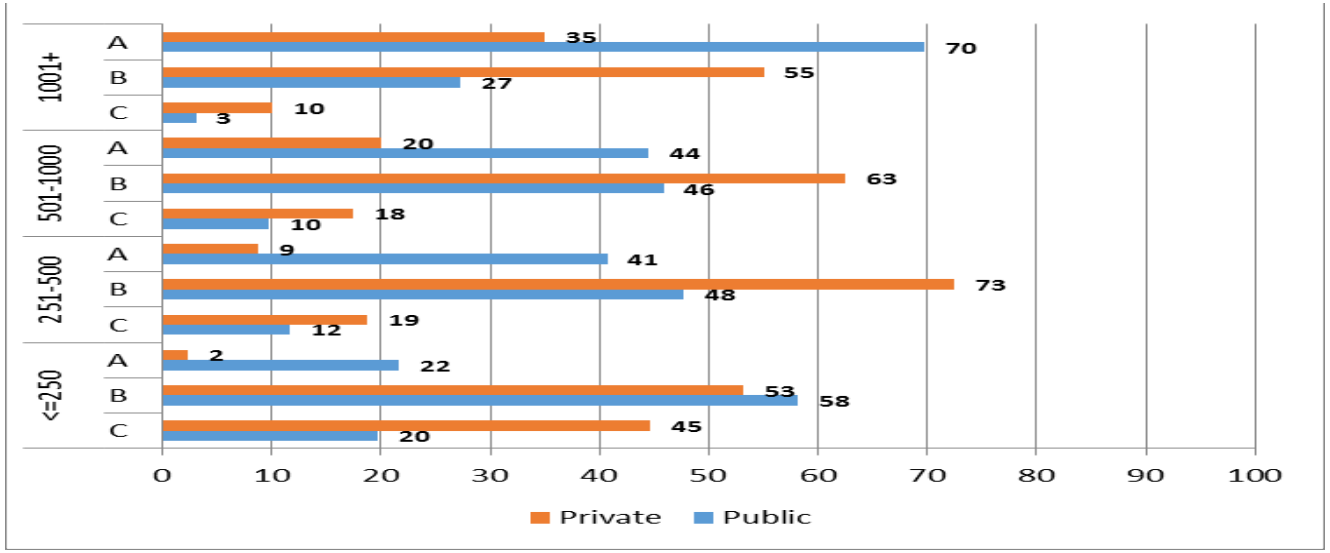
- Research exists that shows that economic success relies more on quality of the output of education institutions than quantity of output
- Quality is internationally recognised as being difficult to identify using outcome indicators but there are some
  - Accreditation levels
  - Employment outcomes
- There are rather more input and process indicators, for example
  - Faculty qualifications
  - Involvement of employers in curriculum design and content
  - Provision of real world experience to students (internships and work experience)

Outcome indicators - Accreditation

- Accreditation scores are very uneven
  - Private/public (public universities on average have much higher scores than private)
  - Size (there is a linear relationship between size of institution & accreditation score)
  - Region (Papua, Nusa Tengarra and Kalimantan regions which in our sample have no Category A accreditations)

Accreditation grades by size of institution, ownership (private/public) and region

% of institutions with accreditation at each grade – by size and legal status



% of institutions with accreditation at each grade – by region and legal status

REGION	PUBLIC			PRIVATE			TOTAL		
	A	B	C	A	B	C	A	B	C
Sumatera	16	73	11	2	56	42	16	73	11
Java	48	43	9	9	60	32	48	43	9
Kalimantan	-	47	53	-	14	86	-	47	53
Sulawesi	22	56	22	-	40	60	22	56	22
Bali	17	67	17	-	100	-	17	67	17
Nusa Tenggara	-	67	33	-	100	-	-	67	33
Papua	-	-	100	-	25	75	-	-	100

Student outcomes

- It is important to monitor student outcomes
  - A large majority of universities claim to do so

Percentage of institutions undertaking tracer studies

REGION	Mining	Agriculture	Industry	Engineering	Maritim	Transportation, Hotel & Tourism	Economic & Business	Science & Education	TOTAL
Sumatera	100.00	90.24	90.32	83.33	100.00		85.71		89.80
Java	80.00	78.00	86.57	78.42	86.21	84.85	79.52	81.48	81.01
Kalimantan	75.00	100.00	50.00	80.00	100.00				78.26
Sulawesi		100.00	100.00	100.00	85.71	60.00	100.00		87.88
Bali				100.00		100.00			100.00
Nusa Tenggara		100.00		75.00	66.67	100.00	100.00		84.62
Papua	50.00			100.00	-				66.67
GRAND TOTAL	**77.78**	**84.69**	**87.38**	**79.55**	**84.91**	**85.19**	**81.00**	**81.48**	**82.59**

Student outcomes

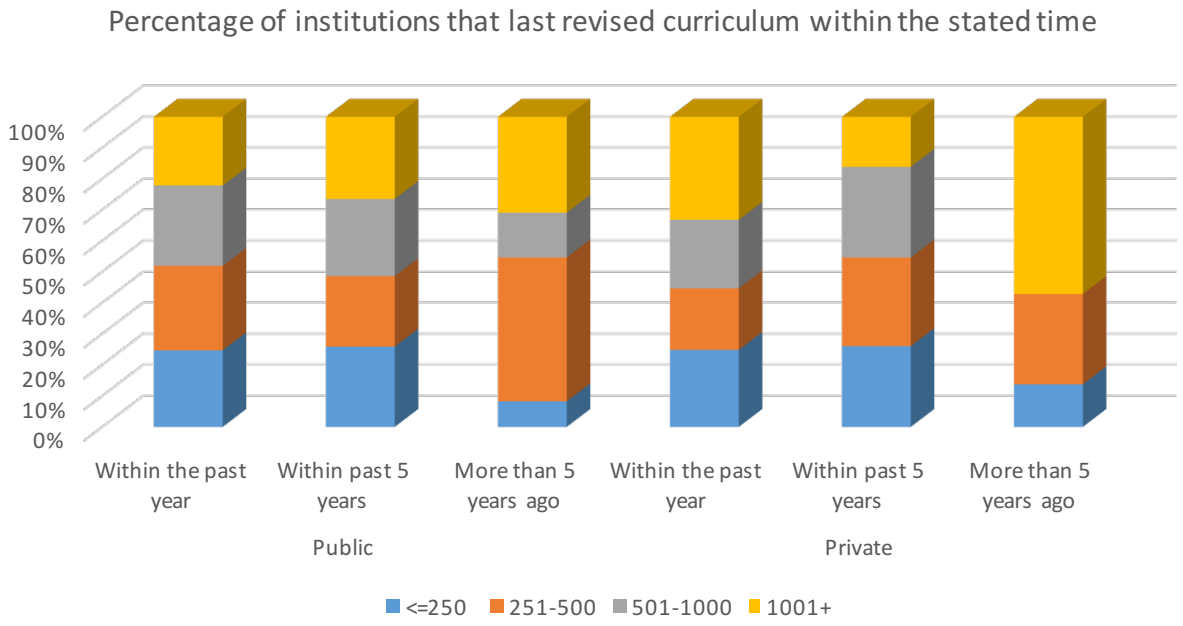
- And the employment outcomes on the face of it are not bad – less than 10% unemployed on average, but with some important variations

Unemployment rates revealed in tracer studies

REGION	Mining	Agriculture	Industry	Engineering	Maritim	Transportation, Hotel & Tourism	Economic & Business	Science & Education	TOTAL
Sumatera	5.00	6.89	8.37	5.00	17.00	-	16.42	-	9.05
Java	9.32	7.78	10.51	5.69	7.69	4.75	10.04	4.46	7.35
Kalimantan	3.67	29.15	20.00	7.00	23.00	-	-	-	9.96
Sulawesi	-	6.25	6.67	13.50	12.92	-	10.00	-	10.03
Bali	-	-	-	-	-	7.67	-	-	6.57
Nusa Tenggara	-	20.00	-	12.50	15.00	8.33	12.50	-	12.50
Papua	40.00	-	-	5.00	-	-	-	-	16.67
GRAND TOTAL	**9.04**	**7.99**	**9.80**	**6.05**	**10.78**	**4.97**	**11.07**	**4.46**	**7.95**

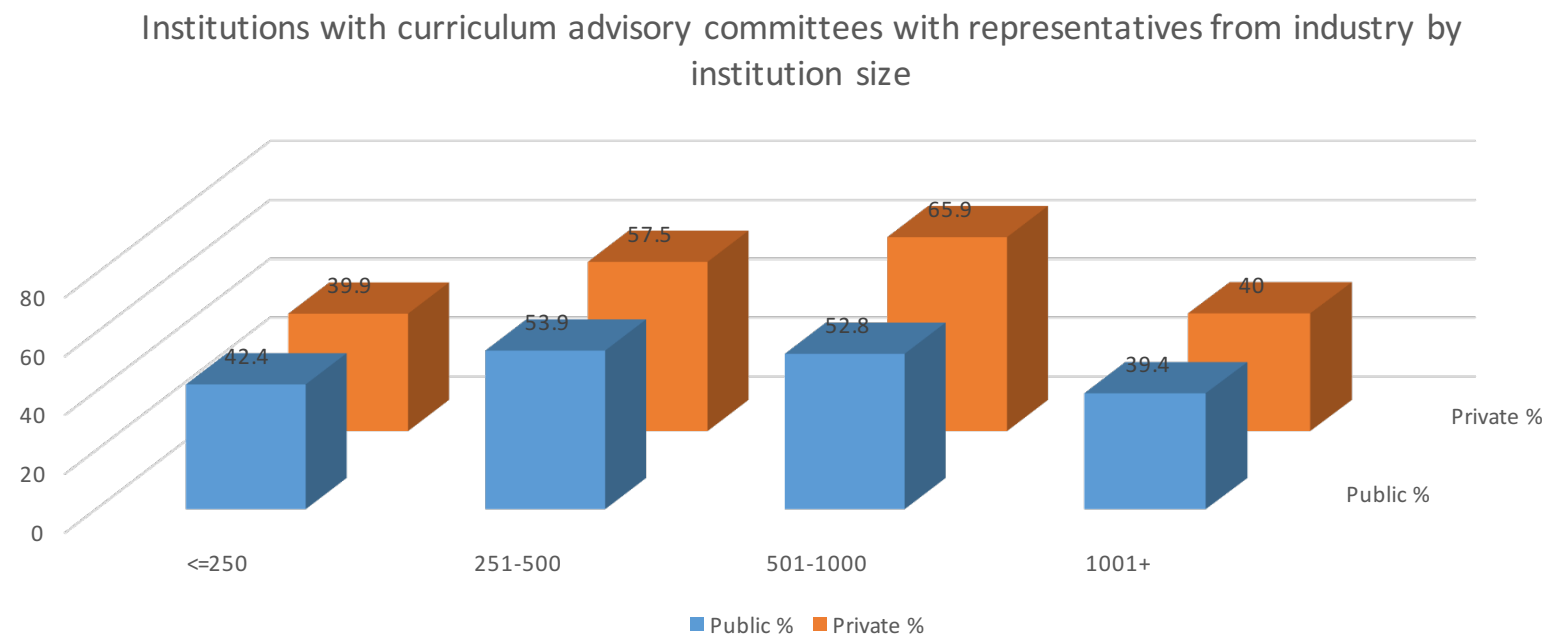
Curriculum review

- Almost all claim to have reviewed curricula within the past 5 years, and over one third have done so within a year



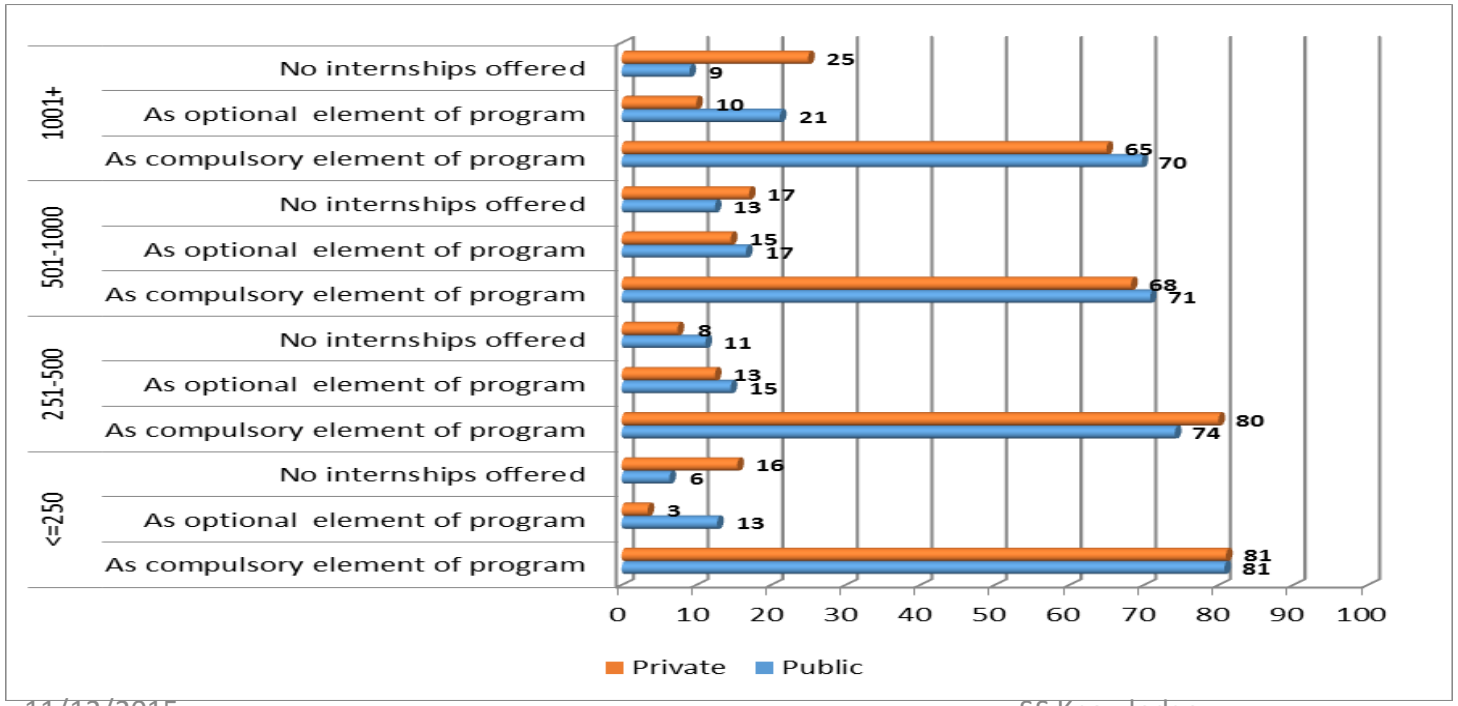
Involvement of industry in curriculum advisory committees

- The majority of universities claim to involve industry in drawing up the curriculum



Real world experience for students

- Almost all universities claim to arrange work experience for students and the majority have internship as a compulsory part of their programmes



Faculty qualifications

- Masters is the most common qualification – which is ok for teaching
- Private universities have a much higher percentage of faculty with only S1 qualification
- Chart to follow

Faculty qualification levels by region and discipline

REGION	Mining	Agriculture	Industry	Engineering	Maritim	Transportation, Hotel & Tourism	Economic & Business	Science & Education	TOTAL
Sumatera									
Below S1	-	-	-	-	-		-		-
S1	-	4.20	5.76	5.97	-		2.08		**4.24**
Master	52.63	74.15	72.08	82.24	54.61		81.48		**73.82**
PhD	47.37	21.65	22.16	11.79	45.39		16.43		**21.94**
Java									
Below S1	-	0.26	0.55	1.22	-	1.90	0.70	-	**0.87**
S1	5.45	7.04	4.70	7.14	5.29	14.73	3.30	4.73	**6.86**
Master	60.42	60.66	62.59	73.93	58.11	73.70	78.38	66.99	**70.11**
PhD	34.13	32.05	32.16	17.19	36.61	9.67	17.62	24.58	**21.79**
Kalimantan									
Below S1	-	-	-	-	-				-
S1	15.28	-	-	4.30	-				**7.18**
Master	75.79	64.55	76.01	90.91	75.00				**81.37**
PhD	8.93	35.45	23.99	4.79	25.00				**11.45**
Sulawesi									
Below S1		-	-	-	-	-	-		-
S1		6.00	12.73	3.79	1.02	36.29	-		**8.51**
Master		56.30	71.40	86.17	53.35	60.63	50.00		**62.32**
PhD		37.70	15.87	10.03	45.63	3.08	50.00		**29.17**
Bali									
Below S1				-		0.10			**0.09**
S1				-		11.05			**9.67**
Master				88.00		78.40			**79.60**
PhD				12.00		10.45			**10.64**
Nusa Tenggara									
Below S1		-		-	-	-	-		-
S1		2.41		4.17	3.33	1.52	-		**2.59**
Master		69.88		85.15	91.67	95.45	92.42		**88.98**
PhD		27.71		10.68	5.00	3.03	7.58		**8.44**
Papua									
Below S1	-			-	-				-
S1	-			-	-				-
Master	85.16			95.14	83.33				**89.85**
PhD	14.84			4.86	16.67				**10.15**
ALL									
Below S1	-	0.13	0.36	1.05	-	1.56	0.58	-	**0.65**
S1	7.18	5.62	5.16	6.70	3.35	15.26	3.03	4.73	**6.49**
Master	65.00	66.30	65.96	75.82	59.22	74.10	78.81	66.99	**71.23**
PhD	27.82	27.95	28.52	15.97	37.43	9.08	17.58	24.58	**21.36**

Yet there is a disconnect between the skills and knowledge employers say they need and what universities supply

- Employers are overwhelmingly dissatisfied with the skills possessed by their graduate recruits
  - Especially generic and personal skills
  - This is where universities need to make a particular effort to improve
- And they also report that they do not trust the qualifications students come with give a true account of their skills and knowledge
  - Common standards need to be created and maintained throughout the system

Key recommendations arising from the analysis

- The Government should implement its stated policy of substantially increasing the number of Masters students, well distributed between regions.
- The Government should persist in its intention to redress the balance between S1 and D1 level provision
- BAN-PT should be provided significantly increased resources and its remit should widen from accreditation to one of quality assurance more generally, and should include in its criteria
    - Whether the University conducts tracer studies regularly
    - The employment and other outcomes for students
    - The mechanisms for reviewing and revising curricula
    - The extent of a university's engagement with employers in its curriculum development
- Tracer studies covering all universities should be conducted (preferably by the Government), as a condition of accreditation.
- The Government should take steps to publish a relatively small number of performance indicators (including re results of trace studies) covering all universities in the country, providing information about student outcomes
- All universities should ensure that all relevant programmes are informed by curriculum advisory committees with industry representatives
- Local networks of employers, government and education institutions should be created to provide locally focussed labour market information
- The Government should conduct the review proposed by the OECD, aimed at rationalizing provision on a provincial level, as one instrument in the improvement of quality, and this review should specifically consider how smaller institutions might be rationalised and their quality increased.
- Universities should be granted maximum Autonomy consistent with accountability requirements, to enable them to respond flexibly and rapidly to changing labour market demands

Research & innovation

- Indonesia punches well below its weight in both basic research & innovation

Basic research output

Rank	Country	No. of documents	Citable documents	Citations
1	United States	5,322,590	4,972,679	100,496,612
2	China	1,848,727	1,833,463	7,396,935
3	United Kingdom	1,533,434	1,392,982	24,535,306
4	Japan	1,464,273	1,429,881	16,452,234
10	India	533,006	507,792	3,211,864
11	Australia	520,045	485,249	7,083,995
14	Korea Rep.	430,438	422,745	3,344,131
15	Brazil	328,361	318,294	2,409,214
17	Taiwan	308,498	301,775	2,391,691
21	Turkey	231,178	219,280	1,380,599
31	Iran	120,350	117,469	499,322
32	Singapore	109,346	105,665	1,092,233
33	New Zealand	101,286	95,295	1,309,197
42	Thailand	59,332	57,509	442,250
43	Malaysia	55,211	53,979	218,280
62	Estonia	14,366	14,106	150,084
63	Bangladesh	13,657	13,304	80,533
64	Indonesia	13,047	12,776	105,759
65	Kenya	12,982	12,350	153,702
67	Kuwait	10,981	10,723	69,937
68	Vietnam	10,904	10,676	89,244
70	Philippines	9,717	9,440	103,428

No of patents

Economy	Patent filings by office			Patent filings by origin
	Total	Resident	Non-resident	Total
Japan	396,291	333,498	62,793	501,270
Singapore	9,951	696	9,255	3,538
Korea, Rep.	172,469	128,701	43,768	174,896
Malaysia	2,372	670	1,702	1,144
Thailand	1,388	877	511	1,049
China	245,161	153,060	92,101	160,523
Indonesia	4,606	282	4,324	308
Philippines	3,265	231	3,034	310
Vietnam	0	0	0	13

3 major problems

- Investment in research (public and private)
- Qualified researchers are in short supply – especially in some provinces
- Innovation infrastructure and support is poor

Investment & strategy

- Is being addressed
  - Particularly with the creation of the Indonesian Science Fund
- The ISF will have a critical role
- Our recommendations include that it should:
  - Develop a strategy for building research capacity as well as supporting excellence. This strategy should
    - Identify & support the most promising research topics
    - Identify & support the most promising researchers to support
    - Build capacity
      - 1 nationally recognised research university in each region
      - 1 university in each Province where significant research relevant to the province is conducted
      - Eventually 2-3 world class research universities in the country

Lessons from international experience

- Increased public investment in basic research
- Highly selective distribution of that investment – A recent World Bank study, suggests that Indonesia should limit its ambitions to develop research capacity to a few institutions. That is probably realistic in Indonesia's present circumstances.
- Mergers, in order to achieve universities with critical mass – on the assumption that critical mass is necessary for high-quality.
- Importing talent is a feature that appears in some of the strategies.

Research faculty: PhDs are in short supply

AVERAGE NUMBER OF RESEARCHER IN EACH INSTITUTION BY EDUCATION LEVEL

REGION	PUBLIC			PRIVATE			TOTAL		
	S1	S2	S3	S1	S2	S3	S1	S2	S3
Sumatera	2	87	51	0	22	3	1	35	13
Java	28	138	57	2	33	7	7	51	16
Kalimantan	5	102	4	-	22	0	3	72	3
Sulawesi	1	27	26	1	7	3	1	15	12
Bali	18	34	3	7	10	-	15	28	2
Nusa Tenggara	-	88	12	2	9	2	1	56	8
Papua	10	46	3	-	20	1	3	26	2
GRAND TOTAL	**17**	**105**	**39**	**2**	**29**	**6**	**6**	**47**	**14**

The average university in Papua has only 2 faculty with a PhD, in Bali 2 and in Kalimantan 3. And the average private university throughout the country has very few.

Increasing the number of PhDs and ensuring they are distributed throughput the country will be key to improving research performance

Research faculty

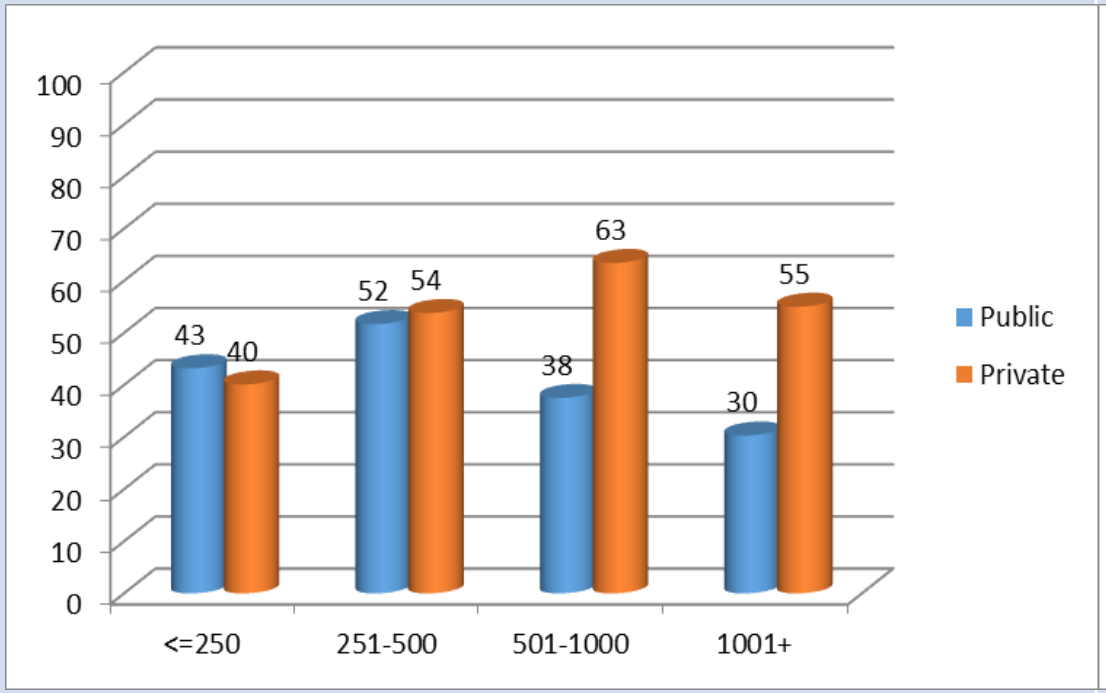
- Our recommendations in respect of faculty include:
- **A campaign, to persuade Indonesians undertaking research overseas to return to a relatively small number of Indonesian universities.**
- **A programme, financed by the Government and administered through the Indonesian Science Fund, to finance faculty to go abroad to undertake PhDs**

Innovation & entrepreneurship

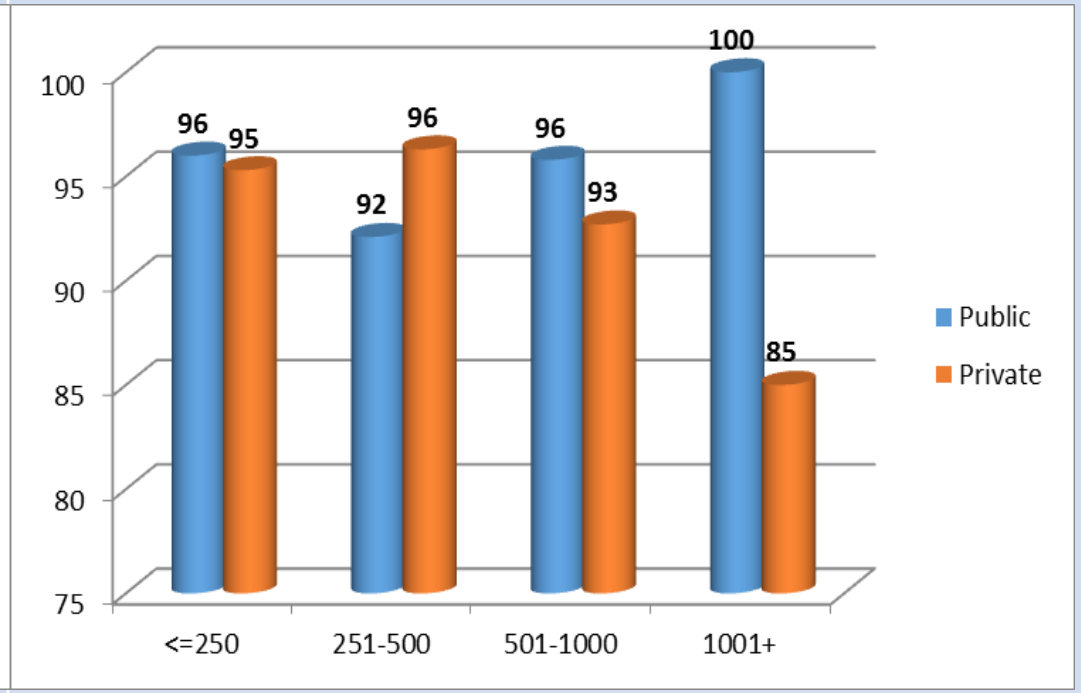
- Is as much a question of attitude as of resources
- Will flourish if encouraged – otherwise will not take hold
- Government and universities each need to play their part in encouraging

Most universities say they provide encouragement for new business start ups and for entrepreneurship

Universities saying they provide start-up support for spin-out enterprises



Universities saying they offer courses in entrepreneurship



But the results are not good

New business created per 1000 population

	New business density ▼
Hong Kong SAR, China	28.12
Singapore	8.04
Timor-Leste	2.76
Vanuatu	2.34
Malaysia	2.28
Tonga	1.91
Samoa	1.04
Thailand	0.86
Indonesia	0.29
Philippines	0.27
Kiribati	0.11
Lao PDR	0.1

Our recommendations in respect of innovation & entrepreneurship include

- **the Government should encourage – and perhaps support with special funding programmes - those universities in receipt of public funds to establish central services and facilities like technology transfer offices**, incubator facilities and science parks
- **All universities should be encouraged with support from the Government to develop entrepreneurship programs for students – which can be done collaboratively between institutions**
- Both Government & universities should ensure rules, legislation & regulations do nothing to discourage entrepreneurial activity among staff and students, but rather encourage it

Review of the Labour Market Information System in Indonesia

Actions Taken to Assess LMIS

The following actions were taken:

- A review of international best practice in the development of LMIS was completed
- A survey was conducted of government institutions in Indonesia involved with the development and dissemination of labour market information (LMIS)
- An assessment was conducted of present LMIS arrangements in Indonesia
- Recommendations were developed to strengthen the LMIS in Indonesia and promote a more demand driven education system.

Review of International Best Practice in LMIS

Review of current literature on the development of labour market information systems reveals three major points:

- Basic labour market information and analysis is a necessary precondition for the early identification of skill needs
- Early identification of skill needs becomes more complex as economies develop and better integrate into the global economy; and increasingly rely on various methods based on both quantitative and qualitative information
- It is important that institutional arrangements are in place to translate information into policy action, which should be aligned to broader economic policies, including trade, investment and technology policies

Features of an Optimal LMIS

Based on international best practice, an optimal LMIS should have the following features:

1. Good governance and cost-effectiveness
2. Timely, accurate and relevant data
3. Effective analysis and interpretation of data
4. Competent labour market analysts
5. Information that is easily accessible to users through a variety of sources
6. Knowledgeable intermediaries; and
7. Development of education and guides for effectively using LMI
8. A lifelong learning process, as individuals, businesses, and schools operate in a dynamic global economy

Survey of Indonesia Government Institutions

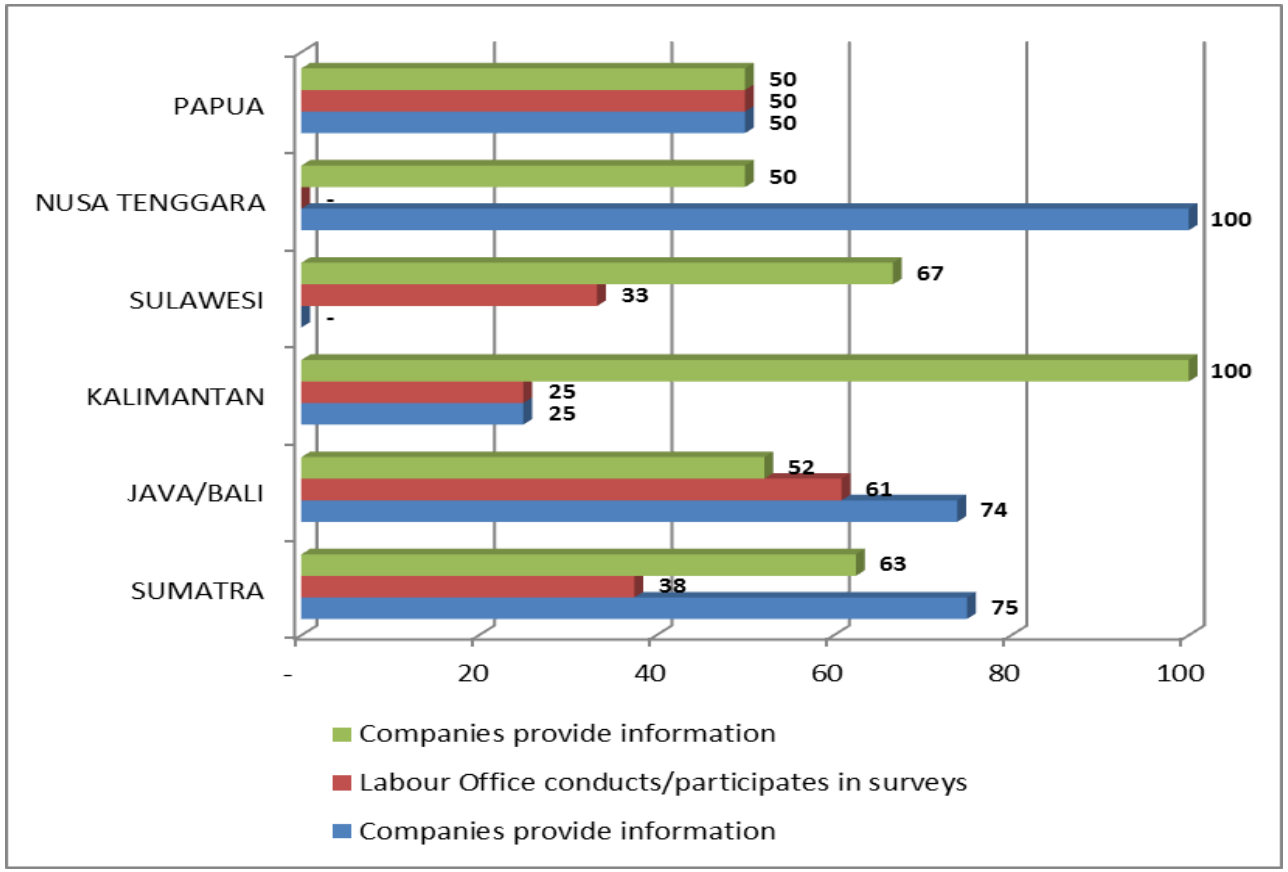
- As part of LMIS review we conducted surveys of a sample of local labour offices and regional government offices (BAPPEDA) to gain a better understanding of how LMI is developed and disseminated
- Forty-two local labour offices were surveyed in six regions to assess how they made use of LMI in serving their clients and the transmission of LMI between local offices and with head office
- 23 labour offices surveyed in Java, eight offices in Sumatra, four in Kalimantan, three in Sulawesi, and two each in Nusa Tenggara and Papua.

Survey of Labour Offices

- Majority of LMI collected by the labour offices relates to job seekers and employers using the services of the office, including vacancy information, number and type of job seekers
- Survey results show that only 27 of the 42 labour offices receive some labour market data from employers
- This still means that 25 or almost 50% of employers did not receive or exchange any information with local employers
- Twenty-five of the labour offices requested LMI from employers and received it, 19 offices requested it but did not receive anything

Survey of Labour Offices

How local labour offices obtain vacancy information from employers



Survey of Labour Offices

- Only 7 of the 42 offices provide LMI reports on a monthly basis, 7 offices reported every three months, 2 offices report every 6 months and 4 offices yearly
- 16 of the offices surveyed provided no reports on a regular basis at all.
- Only 28 of the 42 labour offices provide counselling and placement services to job seekers

Survey of Regional Government Offices

- 41 regional government offices or BAPPEDA were visited during the survey with over half of the offices in the Java/ Bali region
- Main responsibility of the BAPPEDA offices is the development of a regional development plan
- As far as LMI is concerned the offices develop a skills development plan which helps to fund the programs of the local agencies such as the labour offices
- Survey results show that in terms of the development and distribution of LMI the BAPPEDA offices have little direct involvement

Assessment of Current LMI Situation in Indonesia

- The Labour market Information System in Indonesia has been developed systematically since the beginning of New Order in 1970s through a centralised system
- Since 2001, when the Government adopted a new decentralised public management system, the responsibility for labour management was decentralized to regional level
- Labour market information system now developed at three levels, district, province and national
- Badan Pusat Statistik (BPS) is responsible for conducting regular surveys at the macro level. The data on labour is collected at household level through the National Labour Force Surveys
- The Population Census (Sensus Penduduk) and Population Survey among Census (Survey Populasi Antar Sensus, or SUPAS) provide the main information on employment every five years

Assessment of Current LMI Situation in Indonesia

- The Ministry of Labour receives reports regularly from Labour Offices at the district and province levels
- The reports from Labour Offices are sent to the Center of Data and Information and several related directorates such as Labour Replacement and Industrial Relations and Monitoring
- At the regional level, Dinas of Labour are responsible for collecting administrative data regularly from firms among others on the number of workers and on wages, they also report on industrial relations such as labour disputes or termination on employment and wages

Assessment of Current LMI Situation in Indonesia

Limitations

- System for reporting administrative data from local to central level is fragmented
- Several related Directorate Generals and Directorates at Ministry of Labour provide different reporting guidelines for different purposes
- Data and Information Center at the Ministry of Labour requests reports from district and province levels, however the response rate is relatively low
- Data collected administratively from firms at local levels only covers a small proportion of the total number of firms, is not representative
- The consistency of data from firms at the district level is relatively weak

Assessment of Current LMI Situation in Indonesia

Limitations

- Ministry of Labour has attempted to set up LMIS with limited success
- MOL has established a website to provide LMI but is unable to produce a complete data set from regions and is unable to present national data effectively
- The development of effective labour and human resource policies in Indonesia rely on BPS macro level data since labour data collected administratively at regional and local levels are unreliable in comparison
- There is thus great scope for improving the Labour market Information System at all levels in the country

Recommendations to Strengthen LMIS

Recommendations

To Government

- As a strategic priority the government should ensure the development of a Labour Market Information System and provide incentives and structures to implement this.
- A Labour Market Information Coordinating Committee should be established in each region of the country to coordinate and advise on all matters related to the labour market.
- As a first step one region should be selected and a committee established that would serve as a model for the other regions

Recommendations

To the Ministry of Labour

- The Ministry of Labour and its regional labour offices should conduct regular establishment surveys to obtain demand data and statistics
- Each local labour office should be mandated to provide placement and counselling services to its clients
- The Ministry of Labour, as part of the operational policy to implement an effective Labour Market Information System, should plan and implement a wide-ranging program of capacity building covering all levels of government and others with LMI responsibility