

# COUNTRY STUDY



INDONESIA

## ASK Asia

Erasmus Mundus Alumni Employability Study in  
the Field of Agriculture and Related Life Sciences

**A**griculture  
**S**kills  
**K**nowledge  
**Asia**



With the support of the  
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**Team of authors:**

- Petra Chaloupková: project coordinator (Czech University of Life Sciences Prague, Czech Republic)
- Didier Pillot: project partner representative (Agreenium, France)
- Frederik Dewulf: project partner representative (Gent University, Belgium)
- Margarita Calderón-Peter: project partner representative (University of Natural Resources and Life Sciences, Austria)
- Martina Opočenská: project partner representative (AGRINATURA Association, Czech Republic)

**Cambodia**

- Petra Brtníková: PhD candidate, project officer (Czech University of Life Sciences Prague, Czech Republic)
- Socheat Keo: consultant (Royal University of Agriculture, Cambodia)
- Mom Seng : project partner representative (Royal University of Agriculture, Cambodia)

**China**

- Assem Abu Hatab: consultant (SLU, Sweden)
- Radek Vašíček: Master student (Czech University of Life Sciences Prague, Czech Republic)
- Jan Hummelová: project assistant (Czech University of Life Sciences Prague, Czech Republic)
- Xianlei Ma: project partner representative (Nanjing Agricultural University, China)

**Indonesia**

- Zuzana Polívková: PhD candidate (Czech University of Life Sciences Prague, Czech Republic)
- Masyhuri : consultant (Gadjah Mada University, Indonesia)
- Ingrid Melnikovová: project assistant (Czech University of Life Sciences Prague, Czech Republic)
- Aiyen Tjoa: project partner representative (Tadulako University, Indonesia)

**Mongolia**

- Bayarmaa Bold: consultant, project partner representative (Mongolian University of Life Sciences, Mongolia)
- Radek Vašíček: Master student (Czech University of Life Sciences Prague, Czech Republic)

**Thailand**

- Zuzana Polívková: PhD candidate (Czech University of Life Sciences Prague, Czech Republic)
- Prompilai Buasuwan: consultant (Kassetsart University, Thailand)
- Chutima Tantikitti: project partner representative (Prince of Songkla University, Thailand)
- Olga Leuner: project assistant (Czech University of Life Sciences Prague, Czech Republic)
- Chaidarun Tippawan: project partner representative (Erasmus Mundus Students and Alumni Association, Thailand)

**Vietnam**

- Petra Brtníková: PhD candidate, project officer (Czech University of Life Sciences Prague, Czech Republic)
- Ho Huong Lien: consultant (Czech University of Life Sciences Prague, Czech Republic)
- Hanh Hoang Huu: project partner representative (Hue University, Vietnam)

Project partner representatives are/were coordinators and/or partners of the Erasmus Mundus projects mentioned in the Methodology chapter.

English corrections: Michál Úa Séaghdha

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# Table of contents

<b>Abbreviations and Acronyms</b> .....	3
<b>Executive Summary</b> .....	4
<b>Introduction</b> .....	6
<b>Brief overview of Indonesian higher education and labour market</b> .....	7
<b>Development of economy</b> .....	7
<b>Higher Education</b> .....	9
<b>Methodology</b> .....	13
<b>Erasmus Mundus Alumni Experience</b> .....	15
<b>Sampled alumni characteristics</b> .....	15
<b>Knowledge and professional skills of graduates</b> .....	17
<b>Employment</b> .....	19
<b>Alumni perception of their position on the labour market</b> .....	21
<b>Employers' perception on employability of EM alumni</b> .....	24
<b>Agricultural sector evolution and characterization of the job market</b> .....	24
Employers' Characteristics .....	24
<b>Recruitment process</b> .....	25
<b>Employee's Background</b> .....	26
<b>Outcomes from the national workshop</b> .....	31

**Team work and internships**..... 31

**Comments and recommendations to minimize difficulties and maximize positive outputs of the EM programme**..... 32

**Implications and outlook** ..... 34

**References**..... 36

# Abbreviations and Acronyms

<b>CIA</b>	Central Intelligence Agency
<b>CV</b>	Curriculum Vitae
<b>DAAD</b>	Deutscher Akademischer Austausch Dienst (German Academic Exchange Service)
<b>EU</b>	European Union
<b>NGO</b>	Non Governmental Organization
<b>SEA</b>	South East Asia
<b>WB</b>	World Bank

# Executive Summary

During recent years the Indonesian job market benefited from Erasmus Mundus (EM) graduates returning from various European countries. This study aims to analyse how they perform in the local job market and whether they meet the expectations of employers. To conduct this study, firstly we used a quantitative online questionnaire among Indonesian EM alumni, secondly qualitative personal interviews with selected employers of EM alumni and finally a common discussion of resulting issues.

In recent decades Indonesia had put through many economic and educational reforms. Strategic plans have focussed on achieving food security, the reduction of poverty and providing employment and the sustainable utilisation of natural resources. The principle educational pillars aim to increase access to education, improve the quality of education and give better governance to the sector. Even though many reforms and development projects took place there are still some challenges like insufficient infrastructure and corruption. Kurniawati (2014) says that according to the Asian Development Bank, Indonesia should build the economy on more knowledge-based fields and particularly improve the quality and relevance of tertiary education. In recent decades the enrolment ratios in tertiary education have grown and the government has started to focus more on education. The educational system in Indonesia is under the Ministry of Education and Culture and the Ministry of Religious Affairs. The World Bank (2014) backed Indonesia's focus on supporting the Ministry of National Education's Strategic Plan, which also covers the development of tertiary education. The strategic plan for 2005-2009 was based on 3 main pillars: increased access to education, improved quality of education (e.g. according to teacher quality guidelines) and better governance of the sector. Indonesia, according to the CIA, is a growing country, because of a real growth rate reaching 5.3% in 2013. According to the WB (2013), the agricultural sector creates 14.4% of GDP. The agricultural labour force is 35.1% of total employment (WB, 2012), excluding the informal sector. Unemployment rates are decreasing, but according to the World Bank (2013) youth unemployment (between 15 and 24 years old) rates are above the average level of the country.

Nowadays, many Indonesian companies tend to be multidisciplinary and cooperate internationally. Employers interviewed mentioned an evolution in agricultural land management and technology development, the expansion of biotechnology and energy resources. Therefore they look for more multidisciplinary employees with international experience. Export oriented companies are demanding staff with global experience, with good communication skills as well as English language skills. Employers in the private sector look for graduates with basic agronomic knowledge, who are able to work in teams as well as work independently; practical experience or technical know-how is not seen as critical, because these companies usually train their employees in their own training centres; hence the fact that graduates



appreciate the increased opportunity to participate in internships or practical training in Europe to increase their employability. Employers value much more the experience of exchange as such, because these graduates are responsible and are able to use foreign languages on a daily basis. The above-mentioned skills and competences are, based on the results of this study, met by EM graduates. Being an EM graduate gives the opportunity to achieve better career advancement and better social status.

Some employers suggested improvements in the business perspective or business thinking. The advantages for local graduates lie, according to employers, in their domestic networks and their ability to use local or tribal languages. Overall, employers who cooperate with EM graduates have found creative, loyal employees with initiative, who are able to use foreign languages, bring new ideas and interact internationally through their networks. Networks created during EM programmes in Europe are especially useful in the university sector. University employers appreciate if their employees get inspiration from European teaching techniques, like participatory teaching or putting more focus on team work. During the common discussion with the graduates it was suggested to organize preparatory courses, before the exchange in the chosen country starts. The graduates would appreciate learning the basics of the local languages, to be later able to participate in internships which may require such; then some basics of cultural and social customs to prevent misunderstandings. Creating a buddy system can help with the integration into the host society and alumni associations can also be used by the employers when seeking employees with special skills.

# Introduction

Indonesia is one of the countries that benefits from the Erasmus Mundus Programme that provides scholarships for and mobility for Indonesian students to study at selected European universities. Such cooperation aims to build up the human resources for the future development of Indonesia. Up to date nearly nine hundred Indonesian students, scholars and fellows have been selected to take part in EM mobility and to experience educational excellence at European universities, 378 of them under the Action 1 programme and 520 under the Action 2 programme (European Commission, 2014). The second phase of the Erasmus Mundus was launched between early 2009 and 2013 thus giving rise to questions related to its success in the years following.

This country report is a part of a comprehensive study that was conducted under the ASK Asia project. The project ASK Asia (“Agriculture, Skills, Knowledge in Asia: Competences and employability of Erasmus Mundus Graduates in Agriculture on the Asian Professional Market”) is an Erasmus Mundus Action 3 project funded by the European Commission (EACEA) in the period from 2013 till 2015. The main objective is to assess how the Erasmus Mundus graduates in Agriculture and related Life Sciences perform in the professional job market in Asia and to identify specific competences and skills that provide these graduates with a comparative advantage in meeting the expectations of their employers following the education/training period.

# Brief overview of Indonesian higher education and labour market

## Development of economy

The Republic of Indonesia is one of the biggest countries in the region of South East Asia. Its population is over 252 million (WB, 2014), which makes it the third most populous democratic country in the world. As the majority of the inhabitants are Muslim (87.2% according to the CIA, 2010), it is also the largest Muslim-majority country in the world. Indonesia belongs under lower middle income countries. The GDP per capita is 5,200 USD (CIA, 2013 est.). The largest part of GDP is created by industry (46.6%) and services (39.1%); compared to 1965, when GDP was mainly created by agriculture (by 51% acc. to the WB, 2015). The share of the agricultural sector has slowly decreased compared to industry, while services have remained at approximately the same level during the period 1965-2010. The agricultural sector now counts for only 14.4% of GDP (WB, 2013), but it employs 35.1% of the total labour force (WB, 2012). The current economic status of the country is regarded as growing; especially since 2010 (GDP real growth rate in 2013 according to the CIA was 5.3%).

**Table 1** Overview of Indonesian economy and demography

	2000	2003	2006	2009	2010	2011	2012	2013	2014
<b>GDP per capita (constant 2015 US\$)</b>	789.8	1,075.2	1,601.0	2,272.0	2,946.7	3,469.8	3,551.4	3,475.3	-
<b>Agriculture value added (% of GDP)</b>	15.6	15.2	13.0	15.3	15.3	14.7	14.5	14.4	-
<b>Value of agricultural production (1000 intl.\$)</b>	38,124, 287	44,543, 092	51,858, 027	58,107, 259	58,742, 066	61,212, 567	64,438, 976		
<b>Population (1000)</b>	208,93 8.7	218,14 5.6	227,70 9.8	237,48 6.9	240,67 6.5	243,80 1.6	246,86 4.2	249,86 5.6	
<b>Agricultural labour (1000)</b>	47,430	48,044	48,304	49,618	49,773	49,888	49,963	50,004	50,013

Source: WB, FAOSTAT, 2015

In past few decades the Indonesian economy was influenced by the then political regime. The period from the 1960s till the 1990s was ruled by President Suharto, whose interventions are called the New Order. That time was related to recovery activities and reforms, financial stabilization and cooperation with multilateral donors. In the late 90s Indonesia faced the Asian Financial Crisis, which was a catalyst for a process of political democratization and liberalization (Indonesia Investments, 2015). The Asian Financial Crisis in Indonesia was also accompanied by a social and political crisis. Tensions in the country made many investors turn their back on the country (Indonesia Investments, 2015).

After the fall of Suharto, Indonesia started to slowly recover economically and by the mid 2000s the macroeconomic indicators improved and got back on track. Then the global financial crisis started in 2008-2009; luckily Indonesia was not much touched by it, because, after the Asian crisis, the Indonesian

government had created protective measures, so that a similar crisis would not influence much the country's economy. Even during the global crisis Indonesia showed robust growth with 4.6% of GDP. According to Indonesia Investments (2015) this growth was created mainly due to domestic consumption. Especially during the period of 2003-2012, there was a huge growth in the commodities on offer, which benefited the economy.

The current relatively good political and economic situation predicts continuing growth. According to the government, its aim is to be in the top six largest global economies by the year 2030 (Indonesia Investments, 2015). According to Kurniawati (2014), the weak points in the Indonesian economy are mainly the high cost of starting a business, difficulties in getting credit, inefficient bureaucracy, and especially, massive corruption. Accumulation of capital in small privileged groups is a serious problem too. Barriers are also associated with the informal sector, which is creating around 60% of employment (Indonesia Investments, 2013).

The challenges of the Indonesian economy, and the agricultural sector especially, are related to falling competitiveness, low levels of productivity, low human development and a mismatch between fields of study and the demands of specific job positions. The improvements in infrastructure and more accurate spending in research and development should, according to the WB (2014), help the system work properly and contribute to tertiary education. Kurniawati (2014) says that according to Asian Development Bank, Indonesia should build an economy on more knowledge-based fields and especially improve the quality and relevance of tertiary education.

## Higher Education

As was mentioned above, the country went through many reforms during recent decades. These reforms were also related to the educational system and its decentralization. The result of these reforms can be seen in the growing numbers of enrolment rates, especially in secondary and tertiary education. According to several country studies (Frederik et Worden, 2011; the World Bank and Education in Indonesia, 2014) and WB data, literacy rates have been increasing since the 1980s. This is due to newly constructed primary schools during President Suharto's governance. Because primary education became more available to a broader range of pupils, later developments in the secondary and tertiary education system followed.

The tertiary educational system in Indonesia does not have a very long history. It began with the establishment by the Dutch colonialists of tertiary schools training indigenous people in medicine and engineering (Wicaksono et Friawan, 2011). The development of higher education continued during the period from the 1970s to the 1990s, when Indonesia was experiencing strong economic growth. Nowadays, there are four types of higher educational institutions: universities, institutes, academies, and polytechnics.

In the tertiary educational system there are four types of degrees offered (the equivalents of Associate Degree, Bachelor's, Master's and Doctoral degrees). Even though the government subsidizes the majority of university budgets, universities have relatively high autonomy as regards their curriculum compared to primary or secondary educational institutions (Frederik et Worden, 2011). Private universities are usually run by foundations. According to the World Bank East Asia and Pacific Regional Report from 2012, the majority of the tertiary educational institutions were private (2,818) and only 83 were public institutions.

All educational institutions fall under the responsibility of the Ministry of Education and Culture (Kementerian Pendidikan dan Kebudayaan or Kemdikbud) and the Ministry of Religious Affairs (Kementerian Agama or Kemenag). As Indonesia is a Muslim country, all Islamic schools come under the second mentioned ministry. Those schools also may receive some donations or grants from religious organizations. According to the WB (2014), the Ministry of National Education controls 84% of the schools, while the Ministry of Religious Affairs control the rest.

Currently, the Indonesian government's development agenda has started to focus mostly on education. According to the WB (2014) educational spending has increased significantly in the years since the economic crisis; specifically it doubled between 2000 and 2006. In 2007, spending on education accounted for more than any other sector. The World Bank also noted Indonesia's focus on supporting the Ministry of National Education's Strategic Plan, which also covers the development of tertiary education. The strategic plan for 2005-2009 was built on 3 main pillars:

- increased access to education
- improved educational quality (e.g. teacher quality guidelines)
- better governance of the sector

The influence of several reforms can be seen in the rates of enrolment in the secondary and tertiary education systems, which have grown more significantly than primary enrolment. The secondary enrolment ratio was 61.7% in 2005 and by 2012 it had increased to 82.5%. The tertiary enrolment ratio has grown from 17.7% (in 2005) to 31.5% (in 2012). In 2013, according to UN Data, 6,233,984 students were enrolled in tertiary education, out of which 50.8% were females. Tertiary enrolment in agricultural fields was around 4.6% in 2011, representing 286,230 students. The total number of students who were studying abroad was 34,999 regardless of their field of studies or place of stay (UN Data, 2012).

As the history of tertiary education is not long, there are big challenges, especially at the PhD level. The government set a goal of 5,000 PhD graduates per year by 2008. According to Matthews (2013), students lack certain skills. The insufficiency is mainly related to English language, which holds the students back from gaining a PhD in a foreign country. Matthews (2013) quotes the experience of a Mr. Soelaiman: 'Of the country's estimated 220,000 lecturers, fewer than half have doctorates. Thirty years ago, I taught

undergraduates myself – despite possessing only a BA at the time.’ According to this statement, there are still many improvements needed.

Agricultural or related life sciences fields are offered by senior high schools and of course by universities and colleges. In Indonesia there are in total 283 tertiary education institutions which offer agricultural or related life sciences courses (Dikti, 2015).

Agricultural Sector and Labour Market AssessmentAs mentioned above, the economy has gone through many reforms, so the three main economic sectors have totally changed. Regarding the largest share of Indonesian GDP in the last 50 years, the country has changed from being a mainly agriculture dependent developing country into a newly industrialized country.

Even though agriculture is not contributing the biggest share to GDP, as it did before, it represents 35.1% of the total labour force (WB, 2012). In 2012 around 49 million Indonesians were employed in agriculture and it provides income to part of many households. The Indonesian government has started to focus more on self-sufficiency programmes, especially regarding rice production, which, according to Indonesia Investments (2015), is mainly produced by smallholders and family farmers. On the other hand large scale plantations produce commodities for export, e.g. palm oil or rubber. According to a case study on investment in agriculture in Indonesia, the government is currently trying to undertake strategic plans to achieve food security, the reduction of poverty, providing employment and the sustainable utilization of natural resources, so the agricultural sector of the country can be more effective and consequently grow (Elias et Noone, 2011).

According to Indonesia Investments (2013) the share of agriculture grew only during the Asian Financial Crisis. It happened due to unemployment in industry and the services sectors and a shift of employees into agriculture. The people who lost jobs in urban areas moved into rural areas, where most of their jobs formed part of the informal sector (Indonesia Investments, 2015). The informal sector still plays a large role in the country’s economy, according to Indonesia Investments (2015); estimations speak of about 55 to 65% of total employment as informal. Jobs in the informal sector are also usually connected with vulnerable groups.

On the one hand Indonesia seems to perform well regarding economical indicators, but on the other hand, there is 11.7% of the population living under the poverty line (CIA, 2012 est.). Unemployment rates, according to the WB, are decreasing, but they are still higher than the South East Asian (SEA) average; in 2005 the unemployment rate was at 11.2%, while in 2013 it decreased to 6.3%. Although the overall rates are decreasing, according to WB (2013), the unemployment rate for youth between 15 and 24 years old is much higher than average of total unemployment. The youth rates in 2013 reached 22%. Even though

almost half of Indonesia's total number of workers possess a primary school degree only, the share of higher education degree holders is rising. But still the freshly graduated students from secondary and tertiary levels of education suffer from difficulties in job searching. Annually there are around 2 million people newly entering the labour market (Indonesia Investments, 2015).

Other often mentioned challenges of the job market are connected with insufficient infrastructure, high levels of bureaucracy and corruption. The country is still trying to consolidate its democratic system after over 300 years of Dutch administration and 40 years of authoritarian regime.



# Methodology

The data were collected by ASK Asia project experts from The Czech University of Life Sciences and local consultants according to a common methodology (see ASK Asia Erasmus Mundus Alumni Employability Study). In the following paragraphs, we describe the specifics of the data collection in Indonesia. All activities connected with data collection took place between March and October 2014.

A common online questionnaire was used, which was the same for all selected countries. The sampling strategy for alumni was non-random; the respondents were graduates of the Erasmus Mundus programme who had finished agricultural or related life sciences courses between 2004 and 2013. The graduates were contacted using the partner universities' databases (both European and Asian); they were also addressed using a snowball technique through social media (Facebook groups of EM Alumni or through the Facebook group of Ask Asia project).<sup>1</sup>

The total number of Indonesian respondents was 43. The final number used for the data set was 28, due to the fact that two respondents filled it in twice and others declared they were studying non-agricultural courses (namely Language and Education, International Relations, European Studies, Psychology and Educational Science, Social Science, International Relations, Language, Political Science and International Relations or Ethnolinguistic and Ancient Philology).

In 2011, 4.6% of all Indonesian students were enrolled in agricultural or related life sciences fields. As there were 898 students participating in the EM programme (European Commission, 2014), 28 respondents (studying agricultural or related fields) constitute around 3.1% of all Indonesian EM students.

To assess the opinion of employers on EM graduates' performance in their jobs, we have asked respondents who were currently working to fill in their employers' contact details. The total number of currently employed respondents was 17, but the contact details were usually not exact, so it was necessary to search for them. Subsequently 12 employers were reached and agreed to cooperate. The employers were asked to do personal or phone interviews; a majority of these employers were located in Jakarta or other main cities. The interviews were carried out according to the common guidelines and took around 40 minutes, depending on the person's willingness to provide more details. The interviews were done from September to October 2014.

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<sup>1</sup> ASK Asia Facebook group: <https://www.facebook.com/groups/ASKAsia/>

After the collection and analysis of the relevant data, a national workshop was organized, which was meant to be a discussion platform for selected employers and employees. These were chosen according to the relevance and detail of their answers, so the discussion of the topics would be fruitful and arrive at new ideas.

The national workshop was co-organized together with Tadulako University (UNTAD) in Palu, on Sulawesi. The meeting took place on 30<sup>th</sup> October 2014 and was held at the same time as the Agriculture Career Days which were organized by the university. Around 150 Bachelor students, the university staff of UNTAD, representatives of local Indonesian companies interested in recruitment, 8 grantees of EM programmes chosen by ASK Asia project and some of the ASK Asia team members participated. The employers of the Alumni were also invited, but due to their business commitments or the long distance from their place of stay all but one did not participate personally in the workshop. Firstly the results of the survey on EM graduates and employers were presented, then there was a platform for common discussion.

After finishing all the national workshops of the project, the regional workshop on Employability of Erasmus Mundus Graduates took place in Prince of Songkla, Thailand on 2<sup>nd</sup> – 4<sup>th</sup> February 2015. During this workshop, the main findings of all six participating countries were presented. Discussion of those results led to the development of overall conclusions and recommendations.

# Erasmus Mundus Alumni Experience

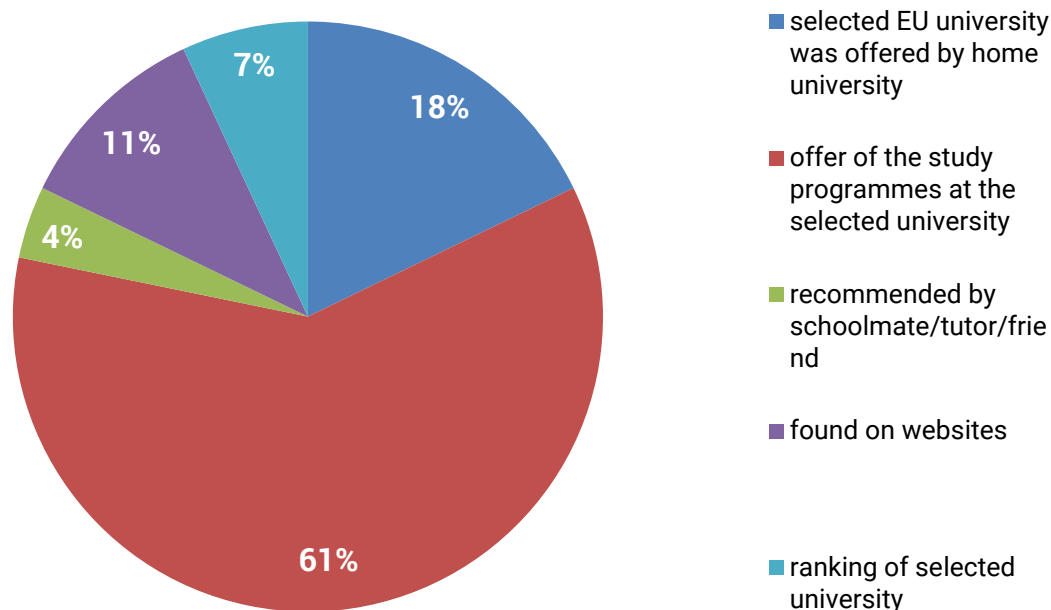
In this chapter results from the alumni online survey are presented, including general demographic information about the respondents, their study background, professional experience and skill development gained throughout the programme and, last but not least, the current employment situation of EM alumni in the field of agriculture and related life sciences.

## Sampled alumni characteristics

The total number of respondents was 28. Except for one respondent, who was sent by their home university in Malaysia even though of Indonesian nationality, all of the graduates were sent to Europe by their home universities located in Indonesia. The gender of the respondents was split almost equally, with 54% being males. Half of the respondents came from urban areas, 32% are from suburban and the rest from rural. The majority of the respondents (54%) were aged between 20 and 25 years. The largest percentage participated in Bachelor's (43%) or Master's levels of education (39%). 21% of the respondents were aged 26-30, five were over 36 years old and the rest were from 31 to 35. The older respondents participated in PhD level (3 respondents) or in a Post Doctoral (2 respondents).

Most of the alumni (32%) went to Europe through Eurasia 2. 21% chose Mover, three respondents Lotus I; one each chose Eurasia 1, Experts I, Experts II, Experts III and Lotus III. 18% of the respondents mentioned other programmes, namely: EUNICE (2 respondents), Euroaquae, Mobility for Life; or they did not specify their exchange programme. The most frequent (32%) length of study in Europe was 10 months. 18% of the respondents stayed in Europe for 24 months and another 18% up to 5 months; three stayed for 6 months and one for 36 months. Another 18% of the respondents stayed in Europe for other amounts of months: 9 months, 12 months (2 respondents), 22 months and 34 months.

The main reason for choosing the EM programme was graduates' willingness to take advantage of studying and living in Europe (32%). 29% were motivated by the opportunity of getting a scholarship; five were interested in the academic level of the exchanging university. The reputation of the EM programme was important for three respondents, two were motivated by the availability of their study programme and one wanted to take advantage of a multiple degree. The study programmes offered were the main reason for choosing a particular university (61%). Other reasons for choosing a particular university (see the Figure 1) were namely: the European university was suggested by the home university (18%), three others found their exchange university on websites, two were interested in the ranking of the selected university and one followed the recommendation of a schoolmate/tutor/friend.

**Figure 1** Reasons for choosing particular university

**Source** Online survey on Alumni experience with the EM programme

Among the other fields of study mentioned were: Animal and Food Science in the Tropics and Subtropics, Plant Nutrition, Agriculture and Life Sciences, Animal and Food Sciences, Management Economics and Consumer Studies, Business Studies, Economics, Toxicology, Energy Management and Engineering, and Earthquake Engineering. The rest of the respondents were studying Engineering (three respondents), another three Sustainable Development in Agriculture, while Animal Sciences, Crop Sciences, Food Sciences, Rural Development and Water Management were each chosen by two respondents respectively, Biotechnology was studied by one person, another one did Forestry.

Out of the 41 European countries available, 13 were chosen as a country of stay. The most often chosen country among the respondents (chosen by 21%) was the Czech Republic. The second most often chosen were Belgium, Germany and France (each chosen by 14% respondents respectively). Italy was chosen by three respondents, Spain by another three, Portugal by two and the rest chosen by one were Austria, the Netherlands, Poland, Slovakia, Switzerland and the United Kingdom. Two respondents stayed during their exchange programme in more than one country; specifically a case of a respondent staying in Switzerland, the Czech Republic and Austria for a total of 34 months. The second stayed in France, Germany and the UK, for a total of 24 months. The top motivation for choosing a specific country was (36%) the respondents' interest in a particular university (e.g. in Belgium, the Netherlands or Poland). The second most often reason given (chosen by 32%) was that they wanted to get to know the history and culture of the country selected. 14% chose the country because it was suggested by their home university, two followed the

recommendation of a friend/schoolmate/tutor (the UK, Germany, France and the Czech Republic), another two followed the recommendation of their employers (orientated mainly towards Germany). One respondent was motivated by lower costs of living (in the case of staying in Slovenia).

Studying and living in another country requires a process of adaptation, as cultural differences can cause misunderstandings. Integration in the host country (European society) which is in many cases very different from Asian, was also a subject of study. The majority of the respondents (57%) perceived their integration as good (with some small problems). 39% of the respondents integrated perfectly (they had no problems). The remaining one respondent mentioned financial problems (Belgium for 10 months), which precluded integration.

## **Knowledge and professional skills of graduates**

As education and the practical utilisation of skills and knowledge are perceived as a prerequisite for successful performance on the job market, the graduates were asked to compare their knowledge, skills and competences before and after the EM programme. The general self-evaluation of their improvement in skills and competences was 4.48 out of a maximum of 5 points. The most developed skills (rated 4.68 out of 5 points) were the following: independence, responsibility and interaction with other people and cultures; then (with a rating of 4.64) self-confidence and language skills, and (with a rating of 4.61) the capacity to learn. The skills which were rated lowest were the following: computer skills (4.11) and the capacity to work in a team (4.14). These rankings of improvement in all examined skills and competences are shown in the Figure 2. In this figure the perception of graduates about their employer's expectations in skills and competences, as well as the real employers' expectations, can also be seen.

**Figure 2** Comparison of skills and competences development and demand

**Source:** Online survey on Alumni experience with the EM programme and Personal interviews with employers

Language skills were among the most improved skills. Regarding the English language, the average rate of improvement reached 94%. French was improved by 57% of the respondents, Spanish by 36%, Czech by 29%, German by 29% and Italian by 21% of the respondents. This language improvement correlates with the place of study of the graduates. The opportunities to improve specific skills and competences, as well as gaining knowledge, were slightly connected to the quality of teaching style. On average, the appreciation of European teaching and learning style by the respondents was rated 4.2 points out of 5 maximum points (the best). Most appreciated (4.57 points) were the scientific level of the teachers and relations with academic staff (4.43).

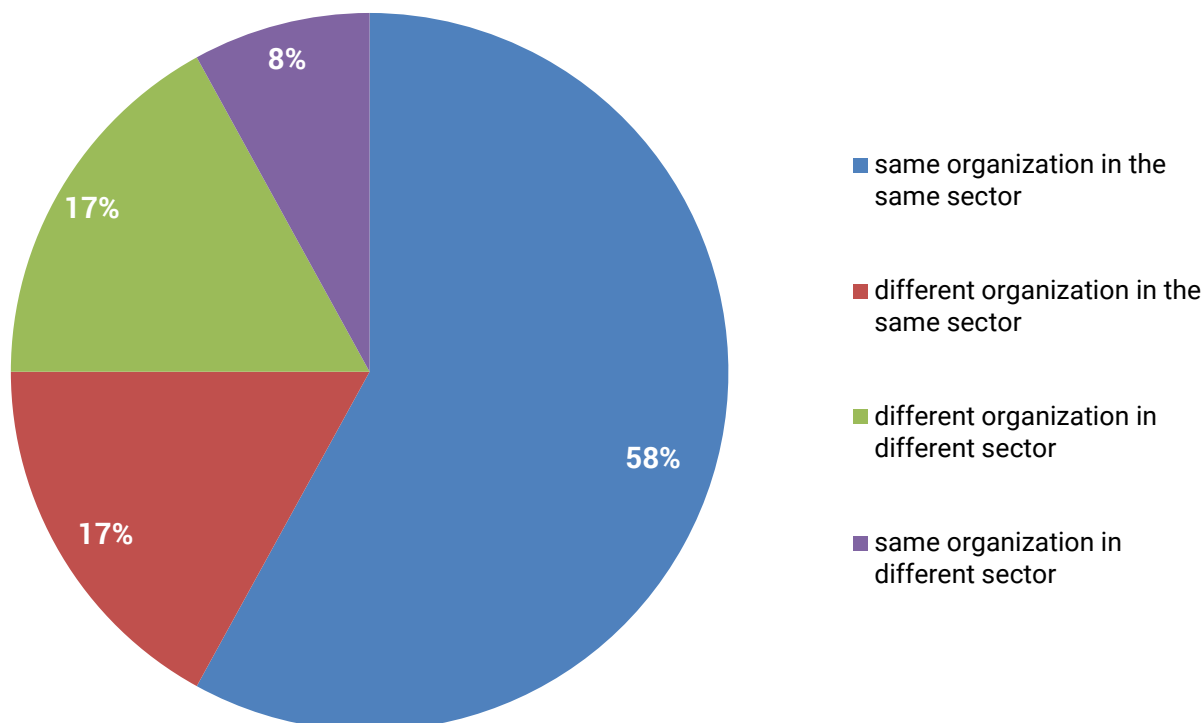
According to the respondents, the weakest points in European education were the quantity and quality of practical training (4.14) and the opportunity for internships (rated by 3.46). The majority of the respondents (79%) did not participate in any internship within their studies. Of those, who had internships, some had mandatory ones (14%); two respondents had voluntary internships. The mandatory internships were in France, Germany, Belgium and the Netherlands.

## Employment

The majority of respondents (75%) declared that before they participated in the EM programme, they had no experience with any study programme, work or research abroad. The rest had the following experience: 3-6 months in Thailand (2 respondents), up to 3 months in Vietnam, less than 1 year in France, 3-6 months in Germany, less than 3 months in Portugal and one respondent had both experience in Germany (two times) and the Netherlands (in total length of up to 3 months).

During their stay in Europe, 61% of the respondents got some professional experience. 18% had a student job (in Spain, the Netherlands, Italy, France and the Czech Republic), 36% had an internship which was not part of their studies (in the United Kingdom, Switzerland, Spain, Poland, Italy, Germany, France, the Czech Republic, Belgium and Austria) and the remaining two did voluntary work. Both voluntary jobs were in Portugal.

The majority of the respondents (57%) declared they had no work experience before they left to Europe. Those who had some kind of work experience (see Figure 3 below) worked mainly for the same organization in the same sector (7 respondents), two worked in different organizations in different sectors, another two in different organizations in the same sector and one worked in the same organization but in different sector.

**Figure 3** Work experience before EM programme (included only those who have some experience)

**Source** Online survey on Alumni experience with the EM programme

Out of total number of 28 respondents, 61% declared they were currently working. Those who were not working were mostly searching for a job (25%), while 3 were on holiday and 1 was on maternity leave/sick leave. The majority of the respondents who were not working were searching for a job for less than 3 months; one person was searching for less than a year, another one over one year. The majority of working graduates (65%) declared they had their first employment after their return from EM.

Nearly all of the graduates stayed within their field of study. They were usually working in the same or a field related to their studies in Europe. The majority of working respondents (88%) were also convinced that there is a demand for jobs with their specialization. Two respondents did not know about the situation on the job market and its demands.

The majority of respondents were currently working in the public sector (59% out of 17 working respondents), 35% were working in the private sector and 1 respondent in an NGO. Those who were working



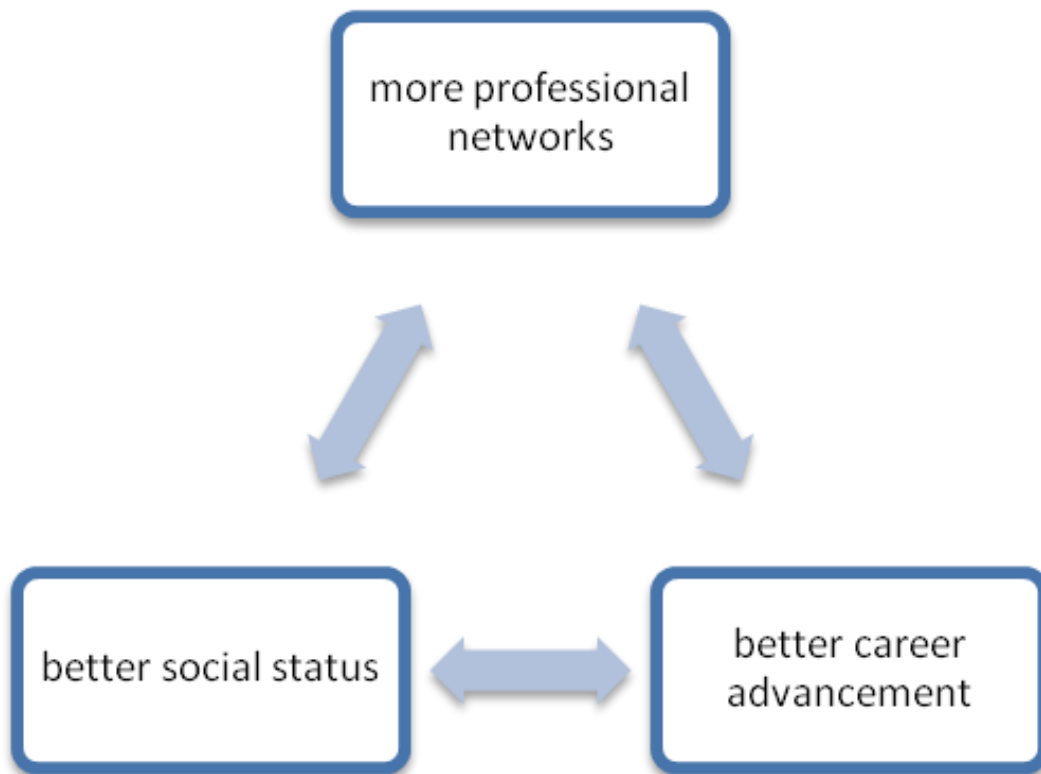
in the public sector were working at universities or in national agencies. One respondent declared themselves to be working in Germany, another in Malaysia. The current positions of working respondents were as follows: qualified employee (29%), academically qualified employee with middle management functions (29%), two worked as a research assistant, two others as academically qualified employees without management functions, one respondent worked as a public servant at a higher level, another one as a public servant at a middle/lower level and the last one declared themselves as being self-employed.

Each of the above mentioned positions requires different skills and competences, but overall most required (according to the alumni): responsibility, independence and the capacity to learn (all rated 4.94 out of a maximum of 5 points). Skills with the lowest requirement rating were computer skills and time management (both rated 4.47) and the ability to interact with other people and cultures (4.41). When we compare these required skills in jobs with skill improvement after participation in the EM programme, to be seen in Figure 2, responsibility is the most improved and at the same time the most required according to the alumni themselves.

## **Alumni perception of their position on the labour market**

Overall, the alumni were rather satisfied with their current position in the labour market. Out of 17 working graduates only two revealed some dissatisfaction; one of those mentioned low appreciation of education by the employers and difficulties in finding suitable job opportunities, while the second complained that well developed countries usually make much higher demands on their workers, and EM graduates are only specialized in one or two topics, which, according to him, is not sufficient for the employers.

Being an EM graduate is perceived as an advantage; hence we tried to compare their opportunities with non-EM graduates on the labour market. Out of 17 working respondents, 82% think that they have the possibility of better career advancement, and 77% think that they have better social status thanks to EM. All of the respondents agreed on the fact that they now have more professional networks. In Figure 4 the 'virtuous circle' which is a result of participating in the EM programme can be seen.

**Figure 4** The greatest advantages of EM alumni

**Source** Online survey on Alumni experience with the EM programme

EM graduates also agreed on the fact that they had an advantage searching for a job; only one respondent was not sure about this statement. This advantage was not much seen in relation to a shorter period of searching, because, as was said before, 47% of working respondents had their job already arranged before they came back from Europe. Those, who searched for a job just after their return to their home country usually needed less than a month to find a job (24%); 2 respondents were searching less than 3 months, one needed less than 6 months, only one less than a year and the last one reported searching for over a year.

41% used the opportunity to return to their previous jobs after their repatriation. The rest used various methods of finding a job. Three respondents applied at selected companies, one was directly approached by a company, and the remaining 35% of respondents used their networks. More specifically three used networks created at their home universities, two used their personal networks and one used networks created during the EM stay.

Networking is very important in the Indonesian context and it serves as a useful tool in job searching. The majority of the respondents (94%) declared they had collected important contacts during their stay in Europe. 65% had made professionally useful contacts with academic staff, two with their EM classmates, another two with companies and one with an NGO.

Among the factors which influenced the graduates' employability the most mentioned was having an academic background from Europe (e.g. having an academic score above the average, or activities in some organization beside school). The graduates also named language skills, both oral and written, mainly in English, but some also mentioned French or Mandarin as a positive factor of their employability, even though the latter was not improved through EM. Other useful skills and competences influencing graduates' employability were the capacity to work in a team, research skills, self-confidence, multicultural understanding, creativity, having initiative, being responsible, loyalty, the ability to adapt to new situations, the capacity to apply knowledge in practice and being open-minded. Having some kind of work experience from the past, even though it was not essential, may help people have a better chance of getting a job. Some respondents also mentioned the importance of networks with scientists abroad. The following are some interesting quotes from the respondents regarding influences on their employability:

*'The quality of the academic programme, international (European) exposure, and the high quality in research experience.'*

*'EM sharpened my qualification.'*

*'It is certainly computer skills for building a computerization system. And as we give a service to the people, we need also the ability to pass it on to people, to the team and boss.'*

*'As internal consultant, it is demanded to broaden our knowledge in many aspects and analyse the best decision for the company's improvement.'*

*'It is strongly associated with the educational background, skills, and experience. Of course these factors will result in a great salary and benefits.'*

# Employers' perception on employability of EM alumni

There were 17 employers identified from the alumni questionnaire. Three could not be reached and therefore were not contacted; another two were located in foreign countries and were also not reached. Finally there were 12 employers interviewed. The interviews were done either in person or by phone. Guidelines for the interview were sent by email before the interview took place.

## Agricultural sector evolution and characterization of the job market

Most of the employers (92%) declared there to be an evolution in this sector in Indonesia. Some mentioned evolution in the field of agricultural land expansion and technology, biotechnology or energy resources which are related to agricultural activities. In view of this evolution it was suggested that academic programmes be adjusted so that they can cover those new trends.

The Indonesian government in the employers' opinion (83%) supports the agricultural sector e.g. by funding, specialized internship opportunities and by policy implementation. It is also influenced by international donors according to 75%. Those influences are mainly seen in direct or indirect funding of concrete programmes or projects.

Based on the development of fields like agricultural land management, animal husbandry (integrated into plantations), forestry (especially management and conservation), there is a need for new job positions according to 92% of the respondents. Recent technological developments in these fields were particularly remarked on; so the new job positions may combine several disciplines in one.

## Employers' Characteristics

Out of the 12 interviewed employers, 50% are from the public sector, which comprises of universities and governmental organizations. 42% of the employers declared they were private sector, usually multinational companies, mainly export oriented. The remaining employer was an NGO.

The private sector employers were offering jobs mainly in the Management of Natural Resources and Rural Development, but also in other fields. The private sector ones offered jobs in Biotechnology, Food Sciences or others; and the NGO's specialization was Forestry.

The employers mentioned that most Indonesian companies have a tendency to go global; universities in particular want to become internationally recognized research institutions; multinational organizations therefore require staff with global experience, useful networks and good communication skills.

## Recruitment process

The announcement of a vacancy is mainly (31%) carried out via the internet, either through the institution's own web-page or through other websites. 19% of the employers advertise in the newspapers, 16% contact alumni associations, three use personal agencies and one employer uses head-hunters. 22% of employers mentioned other methods, e.g. social media or they spread the information through institutions' internal information channels.

The period during which the announcement is up varies. 33% of the employers leave the advertisement open up to 3 months, another 33% leave it up to 1 month; one employer even registered an extremely short period of a few days only. This was due to the very specific requirements of the employee and such a highly specialized applicant is usually found through professional networks. If this applicant fits the requirements he can be directly employed; the employer also highlighted the fact that this method of finding an applicant is very efficient and fast. One employer said they had already prearranged the employment before the graduate came back to the home country. Another employer reported leaving the announcement open for up to 6 months. Two employers advertised all year round.

The number of responses received per single vacancy depended mainly on the size of the company; the bigger and more famous, the more graduates apply. 42% of the employers declared they receive more than 101 applications per vacancy; another 42% receive from 1 to 5 responses. One employer said they receive up to 50 responses, another one between 51 and 100. All of the employers agreed they also receive applications from graduates from abroad.

The applicants were asked to provide several documents, which were later analysed and, based on the results, they were invited for the entrance interview. Among the documents which are required were a CV (required by 32%), a covering letter (29%), a letter of recommendation (23%) and others (17%), e.g. language proficiency certificates.

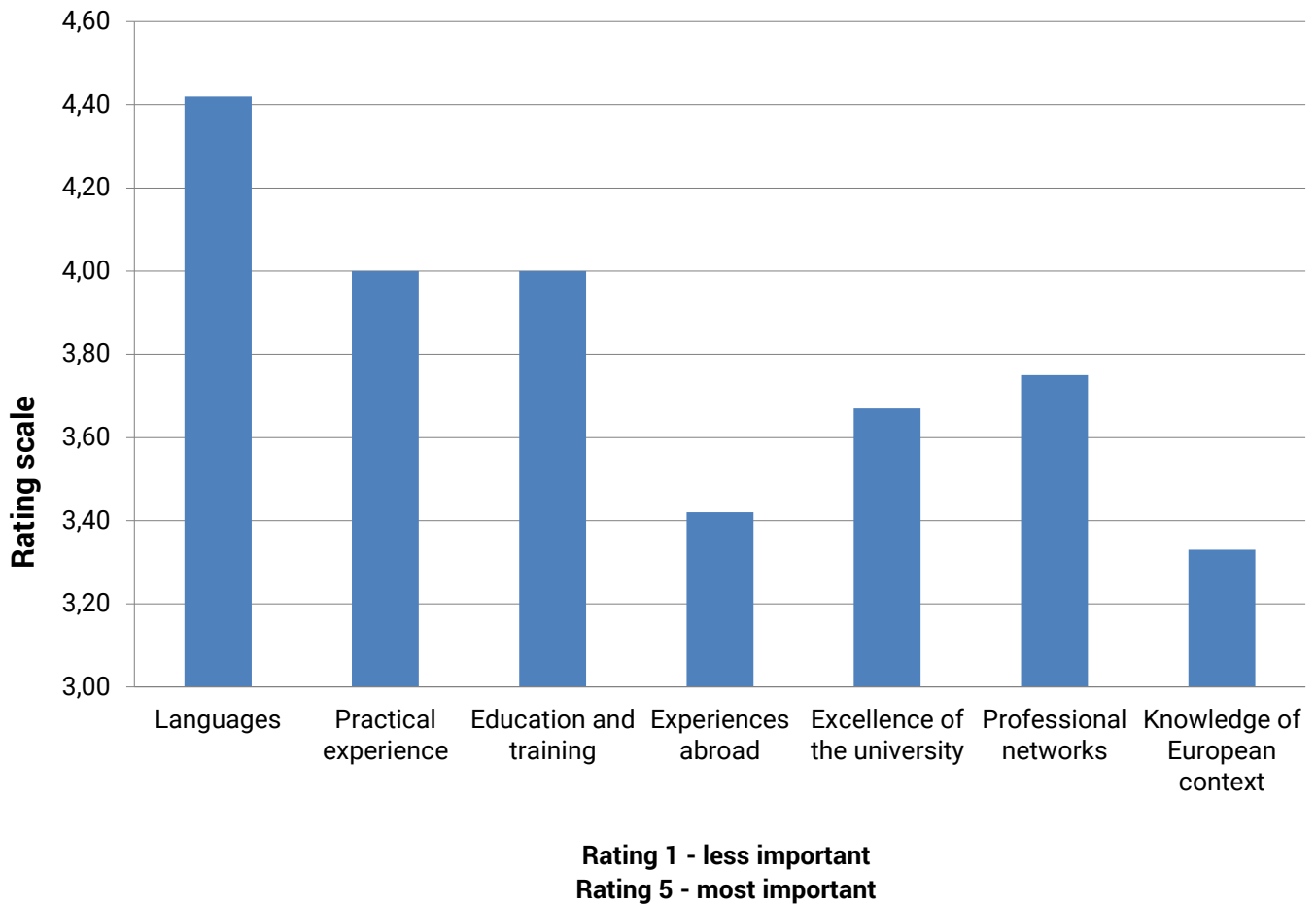
At public universities, the application procedure goes through the Ministry of Education and Culture. The university demands candidates via the Ministry, which selects suitable candidates based on an evaluation of several of the applicants' personal documents. The number of applicants and terms of qualification were set by the Ministry and announced on the web pages of the Ministry. Documents required by the Ministry were: a letter of application (hand-written and addressed to the Minister of Education and Culture c.q. Rector), a copy of any diploma, authorized by the Dean/Vice Dean of the faculty, a photo, a curriculum vitae (hand-written), police records (any criminal record), medical records, and a letter declaring the applicant free of drug abuse.

After considering an applicants' documents, those selected are invited to be interviewed in front of a jury in 92% of cases. The jury is usually made up of people authorized by the organization, representatives of recruitment departments or human resources departments. During the selection process selection grids were used by 92%. The employers generally give credit for education abroad; 60% appreciate it highly, 10% gives it medium value and for 30% it has a low level of importance. This low level of importance of education abroad was explained by a higher valuation of specific skills over formal education. 59% of the employers also stated they actively try to reach graduates from abroad, because they highly value their well-developed skills and level of English (therefore English speaking countries are preferred, namely Australia and the USA). Some employers also mentioned interest in graduates from Germany or the Netherlands.

92% of the employers would recommend their colleagues to employ EM graduate. Their main reason for this is that they are usually graduates from highly valued world universities and they have more experiences than local graduates. One employer said he would not recommend employing specifically EM graduates, because having experience from the EU is not considered that valuable for his field.

## **Employee's Background**

The most important points on the applicants' background are, according to employers, their English language skills, which are seen as a good tool for communication in internationally active institutions. Excellence in language is followed by their practical experience, education and professional training. In the following Figure 5, a detailed division of preferences of the employers can be seen (5 was the maximum importance). Applicants who may be giving lectures in Indonesian universities should have a chance to get experience abroad, especially completing a PhD or research cooperation. Private companies expressed the view that practical training and updating of knowledge is necessary for them. Experience from abroad and knowledge of the European context is seen as not that important, but still may be useful. Some of the employers however mentioned that as the EU is a multinational area it was a great opportunity for the graduates to travel around, explore different cultures and societies, to enrich their experience and therefore improve various abilities.

**Figure 5** The most important points on the candidates' background

**Source** Personal interviews with employers

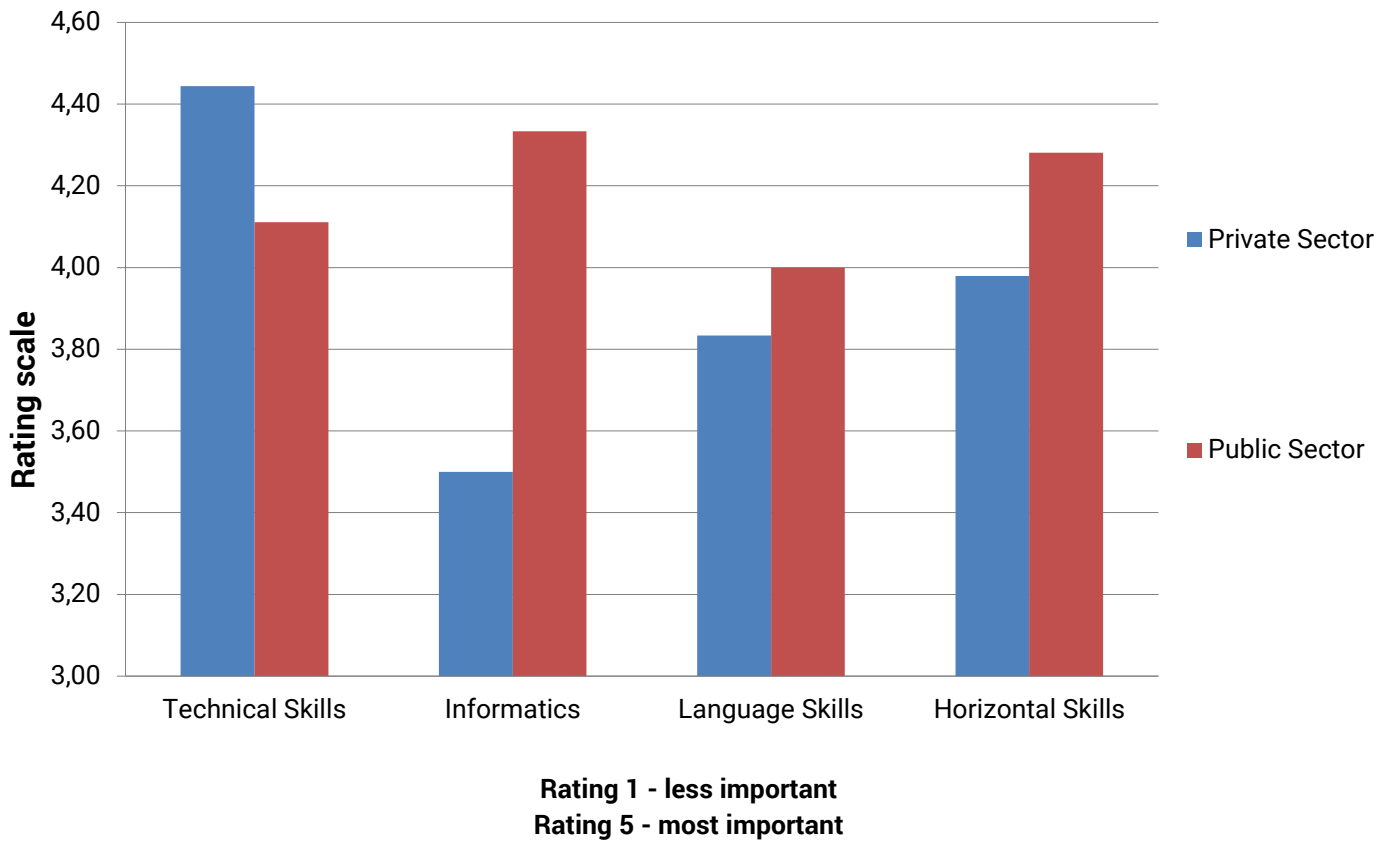
Even though graduates from abroad are actively sought after by some employers, local graduates also have advantages. 83% of the employers thought that local graduates are well oriented in the local culture, have a knowledge of the local work environment and practices, and, last but not least, they are able to speak regional or tribal languages in comparison to EM graduates.

The employers were also asked to evaluate which skills and competences are the most important for their job positions. As the most important with a rating of 4.58 (out of 5 maximum points) was responsibility, then came the capacity for generating new ideas or creativity (rated 4.5 points) and then oral and written communication (4.42 points). Less important were the following: planning and organization (rated 3.75), the capacity to adapt to new situations, and decision making (both rated 3.83). A detailed comparison of the skills and competences which were developed by the graduates thanks to EM programme, graduates' own opinion on the skills and competences demanded in their jobs and employers' real demands is shown in Figure 2.

Different jobs in different sectors demand different skills and competences. The above mentioned skills and competences were divided into the following 4 groups of skills and analysed according to employers' own opinions in Figure 6 below:

1. technical skills: technical know-how, research skills, capacity for applying knowledge in practice
2. informatics: computer skills
3. language skills: language skills
4. horizontal skills: oral and written communication, planning and organization, capacity to work in a team, time management, ability in problem solving, independence, self-confidence, ability to make your way through, responsibility, interaction with other people and cultures, capacity for critical and self-critical thinking, capacity for analysis and synthesis, capacity for generating new ideas, capacity to adapt to new situations, capacity to learn and decision making



**Figure 6** Most important skills and competences according to employers

**Source** Personal interviews with employers

Based on these results employers in the private sector mainly require technical skills and employers in the public sector rather demand informatics skills. Public sector employers value informatics skills which are obtained from self-education, voluntary training etc., while technical skills are expected to be obtained at university.

When the employers were asked whether there are some skills which are missing in their candidates (including local), 67% said yes. They often named English language fluency. Other skills mentioned as missing were: practical experience, business perspectives in thinking and some employers also mentioned that the young generation is less focused and have problems with concentration for longer periods of time.

EM graduates not only have an advantage because of their better English language skills, but also their social status is better (according to 67% of the employers) and according to 58% they have broader professional networks, which are much appreciated by the employers. Some employers also think that EM

graduates show better career advancement (33% of the employers), they may have higher salaries (33%) and they may search for employment for a shorter period than non-EM graduates (33%). The salary level is not high due to a higher starting position, but thanks to making faster progress in their career. 58% of the employers also agreed that EM graduates ask for higher salaries. Some employers mentioned other advantages of EM graduates, like their excellent creativity, innovative attitude and disciplined behaviour. According to 83% of the employers EM graduates have promising careers. Career development, according to some employers, can happen thanks to the employees' better networks, skills and abilities in international communication.

# Outcomes from the national workshop

The results which came out from the graduates' and employers' survey (see chapters 4 and 5) bring up some uncertainties in a few topics. The national workshop which took place on 30<sup>th</sup> October 2014 in Tadulako University was a great opportunity to discuss these topics.

There were two representatives of private sector employers. One was an employer of an EM graduate, the second participated in the Agriculture Career Days organized by Tadulako University (and not in the research). The second mentioned was interested in recruitment; their goal was to test 10-30 graduates-to-be at a Bachelor level. Limited opportunities, especially for future executives, were offered also to MSc. graduates-to-be. PhD placements in this company are rare, and are mainly in research.

## Team work and internships

As was said by the alumni themselves and then confirmed also by the employers, practical training was one of the skills missing in the applicants. Therefore the discussion focused on practical training, internship opportunities and team work mainly. PhD graduates mentioned that they participated in research activities in teams, where they can share experiences, methods and discuss topics. Intensive relations with their tutors allowed them to often meet and discuss their work, which was positively valued. Those experiences encouraged them to change their approach, when they are teaching at local universities. They feel more responsible for the quality of their teaching and they are developing their own techniques. They require more independent work from their students, because the local style of teaching is more teacher-centered; they give the students a lot of freedom, although having guidelines. They encourage their students to express their opinions, which are then discussed. This approach is not very frequent in Indonesian higher education, so it brings new and developing ideas according to them. The universities actually support these interventions.

Although teamwork is not emphasized in Indonesian companies, it is becoming more important as a lot of companies are multinational or trying to go global and internationalize themselves. Private sector employers also mentioned during the discussion that team work is one of the essentials for them, as well as independent working.

Master programmes' graduates expressed the importance of team work in the European style of teaching; in some universities (namely Wageningen in the Netherlands) it is an essential part of studies. Graduates said that, at the beginning, for newly arrived students it is especially stressful, due to their lack of confidence. They tend to participate less in these activities and therefore are seen as 'sleeping members' or

'followers'. According to the graduates national students usually group into local-nation groups. This reduces the opportunity of EM students to create networks and make friends. If they were part of international groups, they could improve also in communication skills and maybe learn the local language. Some graduates mentioned that they went out a few times with local students and it helped them to improve this situation, because the local students started to cooperate with them and offered further help.

Learning the local language was expressed as one of the problems connected with finding opportunities for internships. Especially internships in the private sector often require at least a basic knowledge of the local language too. Another barrier in the case of internships was immigration legal restrictions (working by international students was forbidden in e.g. Austria) or getting residence permits. Indonesian graduates regret they did not have enough opportunity to get experience in European private companies. Some graduates also mentioned that some universities minimize the importance of professional experience to the detriment disciplinary knowledge.

The employers said that many private companies do not emphasize the importance of technical know-how, because they usually provide their own training in specialized training centres which are suited to the needs of the current positions of the employees. Essential is just a basic knowledge of agronomy in general. According to employers it is more important to experience being an international exchange student than studying at any specific institution or in a specific country. This experience gives the graduates more potential for their future; they return more confident, with enlarged skills and capacities. The self-confidence, ability to work in a team and also their autonomous way of work was mentioned by the private employers as the most expected qualities of EM graduates, as future employees.

## **Comments and recommendations to minimize difficulties and maximize positive outputs of the EM programme**

Some of the graduates mentioned that the level of English language required for application to the EM programme was too high, as some of the applicants proficient in other requirements fail in English. Therefore it was suggested that an earlier announcement of the selection process may help the universities provide intensive language courses for pre-selected candidates.

Later, when the EM grantees are in their new universities, they would also appreciate being accommodated in the same buildings as local students and not apart. This may help them create networks and make

teamwork more easy to conduct. An effective buddy system might benefit both local and exchange students.

Some of the graduates also regretted there was no very functional alumni association and they lacked any kind of follow up after their studies were finished. As a good example mentioned was the German organization called DAAD. The last complaint was about the complicated visa application process for Indonesians.

# Implications and outlook

Based on the results of this study, EM graduates have a comparative advantage in several skills and competences in comparison to local graduates. The employers overall expressed high satisfaction with EM graduates' abilities. Indonesian private companies as well as universities and research institutes want to be internationally recognized and therefore staff with multinational experience are highly valued. The agricultural sector in Indonesia is currently passing through reforms which are leading to increased multidisciplinary in the companies. Employers in international companies demand applicants who are able to work in a team and also independently. Even though graduates themselves would appreciate more opportunities to improve their team work, the employers were generally satisfied. Practical training or technical know-how was not so important according to them, because many companies provide their own employees with training. The ability to work in a team and to work independently is connected with a high degree of responsibility, according to the results of a majority of the EM graduates. The EM graduates are also more self-confident, which helps them in improving communication skills and the ability to use a foreign language in practice. Employers think that the language skills of EM graduates are on a much higher level compared to local graduates and therefore they are more likely to be working in international companies or at universities. University employers also support employees with EM experience in implementing European techniques of teaching. The employees should be creative, have initiative and be able to bring forward new ideas. Successful employees with an EM background can benefit from better career advancement and therefore better social status. This career advancement is due to more rapid progress and not to a higher starting position.

Many graduates had prearranged jobs before they came back to Indonesia, some came back to their previous jobs. Some employers therefore encourage their employees to participate in EM to improve their skills and to build professional networks. Networking is also one of the factors helping in the search for a job, but also helpful for starting new cooperation among universities and among companies.

The limitations of EM graduates as well as local graduates relate to having a business perspective. Some employers complained their employees are not able to think economically, to see the financial part of their activities. The advantages of local graduates are mainly in knowledge of local tribal languages or having useful domestic networks.

Even though the employers said that practical training is not so important for them when evaluating the applicant, the graduates themselves would appreciate a greater opportunity of getting internships in order to become more competitive. Regarding this, the provision of specialized courses before the EM

programme starts was suggested. These courses should include some basics of the local language as well as insight into foreign cultural and society customs, so as to prevent intercultural misunderstandings, which may happen at the beginning of the stay. This collective activity may also encourage shy individuals to make new friendships and learn how to open up to others, which would also later be useful in participation in team work at college.

Local students could also benefit from the establishment of a buddy system, and thereby improve in English and intercultural understanding. After the end of the EM exchange, it was suggested to build an active alumni association, which may help graduates come back into their own culture after a longer period of time spent in Europe. These associations can also be useful for the employers who could address them when searching for specific employees.

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