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Demand for Competences and Skills of Erasmus Mundus Alumni: Study of Agricultural Labour Market in Cambodia and Vietnam

Dissertation thesis proposal for State Doctoral Examination

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Declaration of authorship

I, Petra Brtníková, hereby declare that this thesis entitled "Competences and Skills of Erasmus Mundus Alumni: Labour Market Demand in Agricultural Fields in Cambodia and Vietnam" submitted in partial fulfillment of the requirements for the degree of Ph.D., in the Faculty of Tropical AgriSciences of the Czech University of Life Sciences Prague, and the work presented in it is entirely my own work. Information derived from the published or unpublished work has been acknowledged in the text and a list of references is provided. Results of the research were already partially published in the ASK Asia Erasmus Mundus Alumni Employability Study in the Field of Agriculture and related Life Sciences (Chaloupkova, 2015), I hereby declare co-authorship of this publication.

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List of Abbreviations

ADB – Asian Development Bank

EACEA – Education, Audiovisual and Culture Executive Agency

EM – Erasmus Mundus

GSO – General Statistics Office

HEIs – Higher Education Institutions

HERA - Higher Education Reform Agenda

IFAD – International Fund for Agricultural Development

IIE – International Institute of Education

ILO – International Labour Organization

IMRD – International Master in Rural Development

MAFF – Ministry of Agriculture, Forestry and Fisheries

MOET – Ministry of Education and Training

QA – Quality Assurance

RGC – The Royal Government of Cambodia

1 Introduction

Agriculture is one of the major pillars of the economic development in South-East Asian countries. Depending on the country, it represents between 10 to 36% of the GDP spell out (World Bank, 2013). The region is the main exporter of multiple agricultural commodities on the world market such as rice, cassava, rubber, palm oil, coffee or tea (FAOSTAT, 2013). At the same time, Europe is a major client on the same markets and exchanges are due to get even stronger in the future. With labour shortage problems that region is facing, the major Southeast Asian labour-importing countries rely on guest work programmes that tend to regulate immigration (Kaur, 2010).

The multiple functions of agriculture and natural resources management connected to rural development in tropical and subtropical countries attract more and more attention and increasingly offer job opportunities for graduates in agricultural and environmental sciences, thus providing their qualification effectively responds to the needs of this market. This is probably one of the reasons why international study exchange programs such as Erasmus Mundus have always paid an important attention to agriculture as one of the major domains in which Europe should have a clear supply of capacity building for Asian students.

Association between scientific work and employability was already proved in Taiwan (Pan and Lee, 2011). Continuous exchange programmes generate mutual cultural awareness and more economic and business opportunities (Shamsuddin et al, 2013). It is certain that a lot of time, money and resources are used to develop strategies and provide education. How far is the effort appreciated by the employers and how the professional labour market is opened to highly skilled and competitive labour is a centre of discussion.

Cambodia and Vietnam are one of the countries that benefit from the Erasmus Mundus Programme that provides scholarships for and mobility of Cambodian and Vietnamese students to study at selected European universities. Such cooperation aims to build up human resources for the future development of these countries. Up to date, over four hundred Cambodian and over nine hundred Vietnamese students, scholars and fellows have been selected to take part in the EM mobility and to experience educational

excellence at European universities, 372 of them under the Action 1[1] programme and 1,008 under the Action 2[2] programme (European Commission, 2014).

The second phase of the Erasmus Mundus was launched from early 2009, running until 2013 and thus success-related questions arose in the following years. The consortium of ASK Asia project decided to evaluate the impact of the programme on its beneficiaries. Main objective of this study was to concenrate on deep analysis of the labour market in Cambodia and Vietnam in the field of agriculture and related life sciences and to assess how the Erasmus Mundus alumni perform on the professional job market in terms of specific competences and skills that provide these graduates with a comparative advantage in meeting the expectations of their employers following the education/training period.

[1] The **Action 1** encourages cooperation between higher education institutions and academic staff in Europe and Third Countries with a view to creating poles of excellence and providing highly trained human resources. Action 1 provides: Support for high-quality joint programmes; Scholarships/fellowships for third-country and European students/doctoral candidates to follow these programmes; Short-term scholarships for third-country and European academics to carry out research or teaching assignments as part of the Erasmus Mundus Masters Courses.

[2] The **Action 2** promotes partnership as a basis for enhancing academic cooperation and exchanges of students and academics, contributing to socio-ekonomic development of non-EU countries targeted by EU external cooperation policy. Action 2 provides: Support for the establishment of cooperation partnerships between European Higher Education Institutions and Higher Education Institutions from targeted Third Countries; Scholarships of various lengths.

2 Literature Review

2.1 EXCHANGE PROGRAMS AND STUDENTS MOBILITY

With increasing internationalisation of education, variety of mobility programs between institutions all over the world is offered to youth. Nowadays, students can take part in different forms of educational travels, ranging from field trips, study exchanges, international research projects and international internships. Participation in such program is often perceived as important component in the school to work transition. In this chapter we looked at targeted program Erasmus Mundus and at the effects that such mobility programs might have on their participants.

2.1.1 Erasmus Mundus Programme

Among the main objectives of the Bologna Process since its adoption in 1999 was to improve mobility of students within EU (EACEA, 2012). Students mobility was mainly supported through Erasmus program that has been open only to Europeans. Parallel to this program, the Erasmus Mundus program was established, oriented towards globalization of European education (EACEA, 2015). This program aims to enhance quality in higher education through scholarships and academic cooperation between Europe and the rest of the world. Many european HEIs are managing mobility projects within the Erasmus Mundus family and publishing tracer studies of alumni satisfaction and procurement of these programmes. What however has been missed, how these programs effect the situation at the labour market in targeted developing countries and how this concept is perceived by the employers.

2.1.2 Impact of Students´ Mobility

According to (Pavlin, 2010), graduates´ professional success is a multidimensional concept that needs to be modified when applied to the specific study domain. The transition from university to work is determined not only by the alumni characteristics and competence but also by the educational pathway that one selected. In this context, exchange study programmes may play an important role as they provide general knowledge, transferable

competences, attitudes and personal skills that are valued by the employers in highly skilled professions (Hemmer, 2011).

Several research papers were already published on the positive effect of the mobility on the attitudes, skills and future career perspective of its participants. Studies found that studying and living abroad leads to increased levels of international understanding. The group of students who studied abroad showed higher levels of international political concern, cross-cultural interest, cultural cosmopolitanism and appreciation of foreign language than those who studied in their home country. Students also seemed to become less materialistic, more adaptable, more independent in their thinking and better in communication with others (Carlson and Widaman, 1988; Hansel, 1988).

On the other hand, such programs might also bring some negative aspect. Mobility is often connected with difficulties in culture adjustments due to displacement from home environment. Study by Selmer, Chiu and Shenkar (2006) found that German expatriates were better adjusted to the USA than American expatriates in Germany. In the context of the overseas internship it is unlikely that, for example, a Danish student interning in Vietnam will experience the same kind of cultural distance as his Vietnamese counterpart interning in Denmark, due to the increase in power distance in the first case and a decrease in the second case.

The next point is, these exchange programs are designed to attract young and highly skilled students. In case of Erasmus Mundus, the target is on students from developing countries. As it was discussed by other authors, mobility of students from developing countries directly supports the phenomenon of brain drain (Vinokur, 2006). The term brain drain is addressing the international transfer of resources in form of human capital and mainly referres to transfer of relatively highly educated individuals from developing to developed countries (Frederic and Marfouk, 2006). In the research we concentrated on what happened after the mobility termination and what motivation alumni had to return back to their home country.

2.2 SOCIO-ECONOMIC BACKGROUND

2.2.1 Cambodian Economics and Development

In past decades, the Cambodian economy has gone through many changes. Despite the global financial crisis in 2009, Cambodia managed to keep GDP growth positive at 0.1%. GDP growth rebounded quickly to 7.4% in 2013 (World Bank, 2015). Noticeable progress has been achieved in reaching the Cambodia Millennium Development Goals (CMDGs) while four have been achieved including the reduction of child mortality rate, improvement of maternal health, HIV/AIDS combat and global partnership for development. The country has been successfully integrated into the international community on both a regional and global level which has positively affected the support for national development (RCG, 2013).

Despite recent success, Cambodia is still facing many development challenges and has potential to grow in every area and sector. The Global Competitiveness Report 2011-2012 specifically highlighted warning numbers in terms of labour productivity. Cambodia comes in at number 97 in a list of 142 countries with productivity lower than in neighbouring countries (Schwab, 2011).

The following table illustrates recent changes in basic indicators of economy and demography on Cambodia.

Table 1 Overview of Cambodian economy and demography

	2000	2003	2006	2009	2010	2011	2012	2013	2014
GDP per capita (constant 2005 US$)	329.4	389.4	471.2	580.0	605.2	637.3	672.0	708.8	-
Agriculture value added (% of GDP)	37.8	33.6	31.7	35.7	36	36.7	35.6	33.5	-
Gross agricultural production value (constant 2004-2006 million US$)	1,643	1,871	2,639	3,408	3,749	4,888	5,036	-	-
Population (1000)	12,223	12,934	13,555	14,144	14,365	14,606	14,865	15,135	15,408
Agricultural labour (1000)	3,956	4,367	4,631	4,953	5,046	5,137	5,226	5,313	5,394

Source: FAOSTAT, 2015; World Bank, 2015

2.2.1.1 Governmental Interventions and Policy Trends

The Royal Government of Cambodia (2013), in its Rectangular Strategy for Growth, Employment, Equity and Efficiency, among other challenges identified two that are crucial in the sector of education and labour. There is the need to develop high quality and capable human resources to improve competitiveness during Cambodia´s socio-economic development and ensure continuity of development. In the education sector, focus should be given to strengthening the quality and responsiveness to labour market demand and the development of technical skills for the youth to increase their job opportunities in the full geographic context of Cambodia.

Considering these challenges, the Royal Government of Cambodia (RGC) set out four strategic objectives, two of them important in the context of this research:

"Creating more jobs for people especially for youth through further improvement in Cambodia´s competitiveness to attract and encourage both domestic and foreign investments;
Further strengthening institutional capacity and governance, at both national and sub-national levels, and ensuring the effectiveness and efficiency of public services to better serve people."

According to the fifth Legislature of the Royal Government, among four priority areas focused on infrastructure development, is as well the importance of human capital. Thus among four priority areas RGC focus on the following:

"Development of human resource to ensure competitiveness in an increasingly open regional labour market through:

(1) Training of skilled and productive labour to meet market demand and increase value added;
(2) Develop regulatory frameworks and build educational and vocational training institutions;
(3) Encourage private sector participation;

(4) Strengthen the quality of education and promoting scientific research, technology development and innovation" (RGC, 2013).

2.2.1.2 Agricultural Sector Development in Cambodia

The agriculture sector in Cambodia has recently been going through a noticeable evolution. Large-scale developments were based on private companies through making economic land concessions (Open-development, 2014). Not only are private companies involved in this development but also NGOs and the public sector. Today, there are many local and international NGOs working in agriculture and rural development in Cambodia and most of them work in inter-disciplinary sectors, not only in the agriculture field but also in other activities related to rural development such as health, food security and nutrition, human rights, hygiene and sanitation, clean water, gender and community empowerment and development etc. (Domashneva, 2013). This creates a number of job opportunities for skilled labour. Moreover, in 2014, the Royal Government of Cambodia recruited 307 members of staff to work at the Ministry of Agriculture, Forestry and Fisheries (MAFF, 2014). The Royal Government of Cambodia also continues to provide scholarships to students who pass their high school exams with excellence, to the poor and to women through the Ministry of Education Youth and Sport.

Cambodian agriculture continues to play an important role in supporting national economic growth. The promotion of the agriculture sector in the country became the subject of the first "rectangle" in the national strategic plan of the Royal Government of Cambodia where agriculture was set as priority sector to ensure food security in the country, contribution to GDP growth and decrease in poverty levels.

Nevertheless, Cambodian agriculture keeps facing challenges including vulnerable farming systems, low productivity and low value-added outputs. With the majority of the Cambodian population living in the rural areas, livelihoods are heavily dependent on agriculture. Mechanisation in the form of modern farming equipment is being introduced into the agricultural sector. Farming is predominantly rainfall dependent. The expansion of agricultural activities including rice farming and agro-industrial crops such as cassava and rubber is important in increasing production. There are two lowland areas around the

Mekong river and around Tonle Sap lake that play a crucial role in the agricultural production of the country. Approximately 52% of the population lives in the plains region, 30% in the Tonle Sap plains and only 7% in coastal areas. The remaining 11% lives in the plateau/mountainous area which covers 38% of the total land area (IFPRI, 2013).

2.2.2 Vietnamese Economics and Development

Vietnam is a country in rapid transition. The country is undergoing economic growth and transition from a centrally planned to market oriented economy and strives to become an industrialized state by 2020. Yet, Vietnam is still a country in development and thus poverty reduction remains an important development goal. The incidence of poverty varies significantly between regions, i. e. areas with a large ethnic minority population have the highest incidence and severity of poverty. The consequence of centralized government, high levels of bureaucracy and corruption are however causing obstacles (Visser and Lap, 2011). Education and training plays an important role in development. Offering opportunities to young academicians to get exposed to diverse values and different pedagogical models is contributing to this process of transformation.

The following table illustrates recent changes in basic indicators of economy and demography on Vietnam.

Table 2 Overview of Vietnamese economy and demography

	2000	2003	2006	2009	2010	2011	2012	2013	2014
GDP per capita (current US$)	433.3	530.9	796.7	1,232.4	1,333.6	1,543.0	1,755.3	1,910.5	-
Agriculture value added (% of GDP)	22.7	20.9	18.7	19.2	18.9	20.1	19.7	18.4	-
Gross agricultural production value (Constant 2004-2006 million US$)	10,311	12,338	14,419	16,466	16,822	17,613	18,076	-	-
Population (1000)	80,888	83,353	85,748	88,200	89,047	89,914	90,796	91,680	92,548
Agricultural labour (1000)	26,654	27,950	28,819	29,739	30,034	30,310	30,566	30,796	30,994

Source: FAOSTAT, 2015; WorldBank, 2015

As a direct result of economic reforms, Vietnam moved from being a rice importer in the mid-1980s to become in 1997 the world's second largest exporter of rice after Thailand, including the two major rice baskets of the Red River and the Mekong river deltas. Major industries which have flourished include food processing, machine building, mining and the production of oil, cement, chemical fertilizers, glass, tires, textiles, foot ware and ceramics. Private enterprise is officially encouraged and it is estimated that over 70 % of domestic trade can be attributed to the private sector. Moreover state-owned firms are now required to be profitable in order to stay in business (VLIRUOS, 2011). With a population over 90 million, robust growth of the country´s consumption has made a significant contribution to the development of Vietnamese enterprises.

The state of economic entities changed dramatically from the beginning of the 2000s. In the field of agriculture, forestry and fisheries, a shift from collective to individual management and scale expansion by the individual agricultural, forestry and fisheries units was observed. The number of cooperatives has slightly decreased to 6,256 units in 2008, while the number of large-scale individual farms more than doubled from 57,069 in 2000 to 120,699 in 2008 reaching 145,880 in 2010 (GSO, 2015; Sakata, 2013).

A household´s property rights to agriculture land were significantly strengthened due to the newly introduced land certification program. The Vietnamese Government has applied land reforms that recognize the household as the basic unit of production and allocates land use rights to households. Under this law, lands can be transferred, exchanged, leased, inherited and mortgaged (Marsh and MacAulay, 2006). This resulted in the more efficient land use and in extending the credit and land markets in the country. Land reform has been an important element in Vietnamese economic growth and poverty alleviation (National Assembly, 2003). In the last decade, various types of private farms emerged that are not only operated by agricultural households but also by government officials and the rich. Kojin (2013) argues that private farms developed by agricultural households are still limited because of the difficulty of land consolidation.

2.3 LABOUR MARKET TRENDS

Recently, many discussions have been arising aroud the question how skills and competences that were transfered to students during the higher educational training, could be adopted to address the needs of domestic labour market in the specific areas of expertise. Moreover, with recent dynamisation and internationalisation of labour market, new demands for the workshforce are appearing. In this chapter we looked more deeply at the situation specific for Cambodia and Vietnam.

In Cambodia 65.04% of total labour force is employed in agriculture, in Vietnam the situation is similar with 62.3% being employed in the sector. In both countries agriculture labour is more or less gender balanced, for illustration compared with 5.7% or 5.3% of economically active population being engaged in agriculture in the Czech Republic or Europe respectively (FAOSTAT, 2013). With current agribusiness development, the agriculture sector is merging with industry and services and thus new positions and opportunities for graduates are being opened.

2.3.1 Cambodian Labour Market

After successfully putting a decade long civil war behind it, Cambodia faced a baby boom in the 1980s and 1990s. The total population has increased every year leading to an increasing labour force. The strongest annual growth rate of the labour force, with an approximate value of 4%, was noticed from 1998 to 2003, going from 5.22 to 6.35 million (FAOSTAT, 2014). With such a large stock of potentially dynamic workers, Cambodia is facing a big challenge in managing this opportunity.

The majority of the labour force works in agriculture. Although annual population growth is decreasing, the total labour force working in agriculture is increasing. According to new research results published by the National Institute of Statistics in cooperation with the ILO, 67% of 10.8 million people aged 15 years or older were in employment or engaged in economic activities and 47% of them were females. The younger age group from 15 to 34 years old accounts for around 56.2% of the employed population. The highest employment is in rural areas and represents around 75.2% of the employed population while in the urban areas around 24.8% are employed. 23.5% of all employed people were

skilled agricultural workers. In urban areas, the largest share by far, at 41% of the employed population, was in services and sales (NIS & ILO, 2013).

Table 3 Employed population aged 15 or older, by age group, sex and area, 2012

Occupation (ISCO-08)	Cambodia			Urban			Rural		
	Both	Male	Female	Both	Male	Female	Both	Male	Female
Total	**7 197 416**	**3 797 706**	**3 399 710**	**1 783 646**	**933 323**	**850 323**	**5 413 770**	**2 864 383**	**2 549 387**
Managers	149 685	103 460	46 225	93 372	53 808	39 565	56 313	49 653	6 660
Professionals	314 523	189 864	124 659	155 797	94 657	61 140	158 725	95 207	63 518
Technicians	265 524	178 911	86 613	100 556	70 387	30 168	164 968	108 523	56 445
Clerk	144 618	96 037	48 581	81 625	60 772	20 853	62 993	35 265	27 728
Services and sales	1 577 288	547 882	1 029 406	730 947	260 626	470 321	846 341	287 256	559 085
Skilled agriculture workers	1 688 213	886 099	802 114	46 993	28 219	18 774	1 641 220	857 879	783 341
	100%	52.48%	47.52%	100%	60.05%	39.95%	100%	52.27%	47.73%
Craft and related trades	856 551	542 549	314 002	195 091	137 285	57 806	661 460	300 208	392 530
Elementary occupation	1 253 258	777 605	475 653	154 838	82 649	72 189	1 098 420	694 956	403 464
Armed forces	62 043	61 622	421	31 450	31 450	0	30 592	30 171	421

Source: National Institute of Statistic and International Labour Organization, 2013

The Cambodian economic census shows the numbers of economic establishments in the country (NIS, 2011). Trading activities and vehicle repair services have the highest prevalence of 56% (almost 300,000 establishments), followed by manufacturing with 18.7%. The high concentration of these two main economic sectors shows that current demand on the Cambodian labour market is for low-skilled rather than high-skilled workers. Moreover, most of the establishments in these economic sectors are in the informal economy, operated without proper registration or without proper records of financial transactions (Sopheap, 2012). Thus, these positions may not require such high skills as are provided by universities and a mismatch between demand and supply on the labour market is being created.

The Royal Government of Cambodia is also promoting the development of the labour market through implementing its strategic objectives. A challenge remains particularly in the availability of skills, labour productivity, a shortage of engineers and technicians and the need for forecasting market demand for labour by profession and skills. Despite a

decade of rapid growth that improved the livelihoods of Cambodian people particularly in the urban areas, productivity counted as output per worker has been one of the lowest in the region. In 2010 output per worker in Cambodia was two-thirds of that in Vietnam and less than one-fifth of that in Malaysia (ILO, 2013).

In such a context, the quality and relevancy of training at both tertiary and vocational training levels and the high internal migration of workers are pending issues identified by the Royal Government of Cambodia. The results published by Walker (2012) show evidence of a wide-spread belief that universities in Cambodia need to establish clear links between the study programmes they offer and market needs for skilled labour. A current goal is to implement policy linking industry with improvement in labour conditions in textile, garment and foot-ware factories specifically, to provide vocational training to meet market demand, disseminate labour market information, to develop a statistical system for labour and a national qualification standards framework and to implement the labour law (RGC, 2013). The Royal Government has already established the National Employment Agency to provide employment services and disseminate labour information among job seekers. Additionally, in recent years, the Ministry of Agriculture, Forestry and Fisheries has been increasing the number of staff recruited, coming from the new, younger generation of students. The number of governmental staff that is working at the provincial department of agriculture and also at the ministerial level increased from 169 in 2013 to 344 in 2014. This younger generation is replacing retired staff and filling new positions (MAFF, 2013 &2014).

2.3.2 Vietnamese Labour Market

Robust population growth over recent decades has placed enormous pressure on the Vietnamese labour market. With the population increasing across all age groups, many people have been added to the country's labour force. Apart from a few large cities, Vietnam has remained mainly rural. However, as cities expand with people constantly moving in from the countryside, the urban population is growing. In 2009 the share of agriculture in the total employment of the labour force over 15 years was 47.6%, a slight decrease from the previous years. According to the Labour Force Survey (GSO, 2014), employment expanded with the majority of job growth concentrated in the services

sector and agriculture, forestry and the fishery sector in the first quarter of 2014 and in industry and the construction sector in the second quarter of 2014. The unemployment rate decreased slightly to 2.21% in 2014. However unemployment among young people aged 15-24 increased to 34.9%. The main income-generating asset for many Vietnamese is labour, and participation in the labour market is crucial for many to survive (ILO, 2010). Concretely, there are approximately 1,165,000 employers to 39,855,000 own-account and wage workers. Moreover, over 11 million workers had unpaid family worker status in 2014 (GSO, 2014).

In Vietnam, education is considered a top priority for the country´s development. A study conducted by Dung Tien shows that the returns on education in Vietnam are still low, especially for tertiary level education (Dung Tien, 2012). It indicates either low demand for skilled workers or, more likely, the mismatch between education and job availability, and the low quality of tertiary education. Investments in higher levels of education in a number of sectors such as real estate services, health and social services and agriculture do not pay off.

According to the 2011 Vietnam labour force survey, the unemployment rate among labour that has not received any technical training is higher than the overall level in urban areas (3.82% compared to 3.6%). The unemployment rate of labour that has received university education is the lowest, 2.28%. Moreover, the most favoured mode of job search among males and females in Vietnam is to search through friends and relatives (Ministry of Planning and Investment, 2012).

2.4 OVERVIEW OF HIGHER EDUCATION IN CAMBODIA AND VIETNAM

2.4.1 Main characteristics of tertiary education in Cambodia

In 2012, approximately 80% of the population aged 15 or older was literate. In urban areas, literacy is around 91.2%, higher than in rural areas where it is about 76.3. About 11.8% of the population was attending school at the time of the survey, while 15.9% had never attended school, 40.4% had completed primary level, 28.8% had completed secondary school, 1% had completed vocational school and 2.1% had completed university (NIS & ILO, 2013). There are 253,764 students taking higher education courses

in 2013, increase of 9.45%, comparable to 136,156 in 2008 (Mak Ngoy Eng, 2010). Out of the total number, 40.12% are female students, it indicates 10.47% increase. 229,414 students are taking Bachelor courses, 28,348 are scholarship students and 201,066 are tuition-free students (MoEYS, 2014).

In Cambodia, students spend around 12 years in general education which is divided into three different levels (primary, secondary and high school). Students start attending primary school at the age of six. The enrolment ratio in primary education has improved, the majority of school drop outs are observed during secondary and higher education. In primary school, students spend around 6 years, 3 years in middle school and 3 years in high school. To finish grade 12 which is the last year of high school, students have to take the national state exam. During that year the Ministry of Education provides the students optional subjects or study at the university under a scholarship quota system. Students can apply for three areas of study by priority. Students are selected to study at the university with a scholarship according to the results of the national state exam.

2.4.1.1 Schools and Institutions of Agriculture and Life Sciences in Cambodia

There are 105 higher educational institutions (HEIs) in Cambodia (2013), of which 39 are public and 66 are private, located in 19 capital provinces. Out of the total, 65 are under the Ministry of Education, Youth and Sports, while another 40 are under the supervision of another 13 ministries/agencies (MoEYS, 2014). Some of the universities offer doctoral study programmes in agricultural research however there are no post-doctoral programmes available in Cambodia. With the privatization of higher education, the total number of students enrolled in HEIs increased tenfold within a decade (Kwok et al., 2010).

Currently, there are 3 educational agriculture institutions under the MAFF providing agricultural education (The Royal University of Agriculture, Prek Leap and The Kampong Cham National Agriculture School) and another 4 comprehensive universities under the

MoEYS[3], each having one of its faculties offering higher education in agriculture and related life-sciences (The University of Battambong, Mean Chey University, the Chea Sim University of Kamchaymear, and Svay Rieng University). Moreover, with the increasing development of global partnerships, there is a significant amount of private institutions offering education in Cambodia at all levels. The active involvement of the private sector in education is indicated by the number of private institutions that were opened in recent years. Out of the 255,791 students enrolled in HEIs in 2012/2013, 59% of them were studying at private institutions. Among these, the doctoral enrolment rate in private HEIs is 78% compared to only 13% in public HEIs (MoEYS, 2013).

2.4.2 Main Characteristics of Tertiary Education in Vietnam

The Ministry of Education and Training (MOET) is responsible for the education system in terms of the regulation of new institutions, the creation of textbooks and curricula, decisions on admissions criteria, and the issuing of certificates and diplomas. Primary education is five years in duration (grades 1-5), and is followed by four years of lower secondary (6-9) and three years of upper secondary. The first five years are compulsory and start at the age of six. So the system implies 12 years of schooling followed by a possible four-year bachelor degree, a two-year master's degree and a three- to four-year Ph.D. The school year runs from September to June. Admission to the university is restricted to those who have a certificate of secondary school graduation by passing the national university entrance exam.

Top public universities receive the largest number of applicants, with lesser-known? Or less? private universities receiving the fewest. University-level higher education is offered at three main types of institution: multidisciplinary universities, senior colleges with a narrower teaching focus, and institutes which also tend to have a narrow disciplinary focus, but with a specialized research capacity. Although the number of university students has doubled since 1990, the number of teachers remains essentially unchanged. This is despite recent increases in budgetary allocations, liberalized private sector

3 Ministry of Education, Youth and Sports

involvement, and the encouragement of foreign participation in education and training services. Foreign provision will not, however, solve the problem of under-capacity or poor teaching standards (Clark, 2014). Agriculture, Medicine and Physics were the central focus of science education between 1997 and 2007. From 2008, Vietnam has shifted its focus to Computer Science and Engineering, along with Medicine. Japan and the United States are the top collaborators with Vietnam, followed by France and the Republic of Korea. The compound annual growth rate of its publications is 15.5% (UNESCO, 2014).

The Government has detailed its aspirations for higher education in the Higher Education Reform Agenda (HERA). Enrolment at the tertiary level in Vietnam has grown dramatically over the last decade, with the national gross enrolment ratio rising from 10 % in 2000 to 16 % in 2005, and 25 % in 2013 (UNESCO Institute of Statistics, 2015). However the system is facing a challenge in responding to the needs of the labour market as the country´s economy is growing and moving away from low-wage manufacturing to modern industry.

Vietnam has become a significant source of foreign students for a number of countries worldwide, most noticeably Australia and the United States which enrolled approximately 36 % of a total of 106,000 Vietnamese students studying in 49 foreign countries in 2012 (Clark, 2014). The United States is still seen as the gold standard among a majority of Vietnamese students looking at overseas study opportunities and is considered as their first-choice study destination (IIE, 2010). The internationalization of higher education in Vietnam plays a very important role particularly at the doctorate and Master 's level. The share of foreign-trained doctorates is significantly large. In Vietnam, domestic doctoral enrolment was approximately 4,700 in 2011; however, during the same year, there were over 3,400 Vietnamese enrolled in doctoral programmes overseas (UNESCO, 2014). Through international cooperation, the quality assurance system was introduced in Vietnamese higher education, firstly through a World Bank project via the establishment of quality assessment centres at selected universities. Since 2005 there have been many discussions about QA, the initial preparation of procedures, the introduction of external accreditation as well as the conduct of self-evaluation, often with the participation of the international projects (Tram, 2012).

While the Ministry of Education and Training oversees all higher education, a recent education reform has allowed universities more autonomy over financing, research and human resources. Thanks to the International Comparative Higher Education and Finance Project that started in 2008, universities are allowed to control their own budgets and prepare their own spending plans. Access to higher education is influenced by factors including income level, the social status of the parents, region, race, religion, ethnicity and gender. Since the open door policy was implemented, and some market factors have started to have an impact on higher education, access to higher education for students from low-income families has increased. Unlike in rural areas and in ethnic minorities, there is no significant gender difference in accessing higher education in urban areas.

2.4.3 Adaptations of Study Exchange Programs to the Asian Context

Quality of both, home and international education supply may require some adaptation to the local Asian contexts and environmental conditions. The question which is now arising is whether the supply of training that has been offered so far is adapted to the needs of the employers in Cambodia and Vietnam (EC, 2011). Since employers are the most influential stakeholders when it comes to the employment of graduates, their perception on the issue of employability is crucial and thus is a centre of studies (Singh et al, 2013). There are many examples of topics which are relevant in Asia without having the same interest in Europe or vice versa. This question is especially complex in agriculture, as far as quality in agricultural higher education is not only linked with the scientific quality of the graduating university (Sin and Gautier, 2001). It is also linked to the adaptation of the curricula to the local contexts.

3 Hypotheses

This study was based on the overall hypothesis that study exchange programs are bringing benefits to its alumni in facilitating their personal growth. The specific hypotheses of the study are summarized in Table 3.

Table 4 Hypothesis of the Study

Hypothesis	Summary of hypothesis
H1	Asian Alumni with experience in EU higher education are better equiped with competences and skills comparing to those who only studied at home university in Cambodia and Vietnam.
H2	The higher education system in Cambodia and Vietnam is not fully in compliance with the professional labour market in agriculture-related sciences.
H3	Erasmus Mundus program is widely recognized and desired among university students and staff.
H4	Participation in Erasmus Mundus helps to increase success in early career perspective.
H5	Erasmus Mundus program has implemented procurements to avoid the brain drain phenomenon of skilled educated labour and thus it promotes capacity building of institutions in Cambodia and Vietnam.

4 Objectives

4.1 THE MAIN OBJECTIVE

Little is known about how the labour market in agriculture and related fields is ready and open to the highly skilled graduate labour in Cambodia and Vietnam. The principal aim of the research is to assess how the graduates in agriculture and related life sciences who had the experience with exchange study programmes perform on the professional job market in Cambodia and Vietnam. Goal is to identify whether the supply of higher education and training provided to these graduates is adapted to the needs of the employers in agriculture and life sciences domain and if graduates are provided with comparative advantage in meeting the expectations of their first destination employers following the education/ training period.

4.1.1 Specific Objective

(i) To identify **specific competences, knowledge and skills** that graduates developed during their exchange programme and compare them with the **expectations of their first destination employers**;

(ii) To **assess needs** in adjustment of the educational approaches at Cambodian and Vietnamese universities towards what competences and skills are desired by the employers;

(iii) To investigate how international mobility during the studies may or may not **promote employability** of graduates in agricultural sector of Cambodia and Vietnam;

(iv) To determine the **effectiveness** and **the weaknesses** of the study exchanges within the **Erasmus Mundus programs**.

5 Methodology

The research was mainly inspired by study done by Hemmer et al. (2011) that is dealing with the problematic of employability of Erasmus Mundus alumni. Our study was brought a step forward, putting high importance on the perception of employers as those, who receive the skilled labour. Cambodia and Vietnam were selected due to the fact that there already was representative number of alumni released from the Erasmus Mundus programme in the area of agriculture and related life sciences and moreover, these sectors play an important role in the economy of each country. No such study focusing particularly on the perspective of employers in agriculture and life sciences was published in targeted countries.

5.1 LITERATURE REVIEW

A systematic review of the literature was performed using an electronic search of scientific papers, abstracts, monographs, institutional publications and databases. Tools used for search of related literature were ISI Web of Knowledge, Google Scholar, Scopus, EBSCO and Google Books.

5.2 PRINCIPAL PROCEDURE AND SAMPLE SELECTION

To reach the objectives above mentioned, a multidisciplinary research approach was designed, combining both quantitative and qualitative methods (Bamberger, 2000; Hemmer et.al, 2011; Creswell, 2013; Kumar 2005). In order to improve validity and reliability of data, various data collection techniques were used. Individual techniques are described in the following chapter.

The research procedure was scheduled as follows:

Table 5 Time Schedule

December 2013 – December 2015 ***Literature review***	Background data and literature sources collected on exchange study programs, labour market and higher education in agriculture and related life sciences in

	Cambodia and Vietnam;
December 2013 – January 2014 ***Questionnaire***	Common database of Erasmus Mundus alumni from Cambodia and Vietnam created, including alumni of international exchange study programmes in agriculture and related life sciences;
January 2014	Pilot testing of online questionnaire, final revision of questionnaire;
March – August 2014	Alumni contacted with request for completing questionnaire published in Lime survey software (*An.1 Draft questionnaire for graduates*);
April-August 2014	Questionnaires cleaned and evaluated, decision made on what types of respondents were the best suited for inclusion into the survey;
June – October 2014 ***Research in the field***	Based on results of the alumni survey, employers identified and interviewed (*An. 2 Interview guideline for employers*); Additional key informants who play important role in regards to employment in agriculture-related sector identified and interviewed; Simultaneous analysis of the results of those discussions;
November 2014	Focus group discussions organized with selected alumni and employers in Cambodia and Vietnam during national workshop;
December – February 2015	Data processing; Comparison of results from different target groups; Results discussion
February 2015	Collected data discussed during regional conference in Thailand;
March - July 2015	Conclusion of the findings, recommendations;
September 2015	Results discussed and focus groups organized during the final conference in the Czech Republic;
September - November 2015	Manuscript preparation;
	November 2015 state exams – opponent and supervisor evaluation and discussion
June 2016	Dissertation Thesis Defence.

5.2.1 Quantitative Approach, Questionnaire Design:

In the first research phase, quantitative data from Erasmus Mundus alumni were collected through electronically distributed **questionnaire**. The target group selection was organized according to a precondition. The online survey was targeted at alumni from Cambodia and Vietnam who participated in one of the Erasmus Mundus programmes offering the field of study in agriculture and life sciences. Alumni who finished their studies between 2005 and 2013 were considered as the study sample, having the chance to enter the labour market and thus, while applying for a job, demonstrate or not their comparative skills and competences.

Common database of Erasmus Mundus alumni who finished their studies within a time frame 2005-2013 was created in cooperation with partner universities in Cambodia and Vietnam as well as European coordinators of the Erasmus mundus projects. Database covered alumni from Vietnamese and Cambodian life science universities who participated in exchange study program at some of the partner universities, particularly alumni from projects Agris Mundus, International Master in Rural Development (IMRD), Eurasia 1 and Eurasia 2, Lotus 1, 2 and 3 are included. Coordinators of other projects from non-partner universities were addressed to provide contacts on alumni as well. Those are listed in table below:

Table 6 List of European Coordinators That Were Addressed During Graduates Database Creation

Name of project	Coordinator	Country of coordinator
LOTUS 1	Ghent University	Belgium
Experts 1	University of Goettingen	Germany
EMME-East	University of Nice Sophia Antipolis	France
MAHEVA	Université Montpellier 2	France
LOTUS 2	Ghent University	Belgium
Experts 2	University of Goettingen	Germany
Mover	University of Murcia	Spain
Areas	Politecnico di Torino	Italy
LOTUS 3	Ghent University	Belgium
Experts 3	University of Goettingen	Germany
Techno II	Université Paul Sabatier – Toulouse	France

PANACEA	University Montpellier 2	France
GATE	Johannes Kepler University Linz	Austria
Agris Mundus	Monpellier SupAgro	France
IRMD	Ghent University	Belgium
Eurasia 1	BOKU University, Vienna	Austria
Eurasia 2	Czech University of Life Sciences Prague	Czech Republic

Database is supplemented with contacts on Asian graduates who did obtain part of their education in Europe via a study program different from Erasmus Mundus and thus as well have the experience from life in multicultural environment.

Structured questionnaire was created as a modification of former questionnaire used by Kalinova (2013). List of skills and competences that were identified for the research were inspired by Verd (2004) and finally taken over from a study done by Hemmer et al. (2011). Before the questionnaire was finalised, important issues that were not covered by the initial formulation were revealed based on pilot testing. It was meant to determine if the questions were properly worded, sequenced and could be easily understood.
In order to provide comprehensive picture of the alumni perception, questionnaire covered a number of issues connected to the study exchange program and to their current position at the labour market. Questionnaire contained four groups of questions, with 47 questions in total covering the following areas (see *Annex 1 for the full questionnaire*):

a) The first part of the questionnaire aimed to collect general demographic data about the respondent;
b) second part collecting data about study program and its duration in general;
c) third part was designed as a self-evaluation regarding skills, knowledge and competences acquired during studies in home/foreign country;
d) fourth group of questions about alumni employment.

The online questionnaire was open during the period March – August, 2014. The respondents were primarily contacted through email, secondly through social and personal networks. Data were collected via online survey. Questionnaire was conducted in English. Specifically Lime Survey software was used. This software is shared into an

online platform enabling to create mailing list, distribute questionnaires and collect data without manual intervention. Thus errors from manual data transfer are eliminated.

The total number of alumni who responded to the online survey was 86; 52 from Cambodia and 34 from Vietnam. Database was cleared of those who studied in non-agricultural fields and thus the total sample size decreased to 53; 26 in Cambodia and 27 in Vietnam.

Graduates were motivated to fill in the questionnaire in exchange for the possibility to be invited to the national workshop that was organized in both selected countries and was, together with selected graduates, hosting representatives of employers, experts in agriculture education, representatives of international organizations or Erasmus Mundus alumni.

5.2.2 Fieldwork, Qualitative Measures:

The backbone of the study combined two means of research. **Qualitative semi-structured interviews** with employers and/or human resource managers from both private and public institutions were conducted in order to assess the expectations and requirements demanded on the labour. Complementary **focus-group discussions** were organized with selected respondent. The principle field work was carried out in the period July – November, 2014. The proceedings were adopted to meet the specific features of Cambodian and Vietnamese culture, economy and employment structure.

5.2.2.1 Interview Proceedings

Contacts on the particular institutions that employed Erasmus Mundus alumni were obtained through alumni responses to the online survey. Complementary, array of interviews were conducted with the key informants in the government, UN agencies, international and local NGOs and in selected business enterprises. The complementary respondents were chosen on the precondition of being engaged in agriculture-, life-sciences- and rural development-related fields and on recommendations from local institutions. The sectors and occupation types relevant for the analysis were identified

according to the International Standard Classification of Occupations in order to ensure comparability with other studies conducted in other countries (ILO, 2007).

Snowball sampling technique is used throughout the research as sample size might increase based on word recommendation (Noy, 2008).

Interviews proceeded according to a semi-structured interview guideline (see *Annex 2 for the interview guideline*). The chief researcher was accompanied by a consultant fluent in local language to facilitate the cultural appropriateness and eliminated occasional language barrier.

Seven topics related to the development of the agriculture sector, the specific recruitment process, the labour market and set of skills and competences required were discussed. The length of the interview ranged between 45 and 90 minutes. Respondents were preferably interviewed face to face, alternatively via phone call or email communication, only in rare cases. Resume of recorded notes was then sent back to the interviewees for additional feedback and clarification of misunderstandings.

In total 41 interviews were conducted; 21 in Cambodia and 20 in Vietnam.

Table 7 List of Institutions Interviewed in Cambodia

Public sector (universities, ministries, national agencies etc.	
1. CARDI	*Cambodian Agricultural Research and development Institute*
2. Chae Sim University of Kamchaymear	
3. Ecoland	*Research centre based of the Faculty of Agriculture Economics and Rural Development, RUA*
4. Ministry of Agriculture, Forestry and Fisheries	
5. National Employment Agency	*Technical body of the National Training Board providing employment and labour market information services*
6. Preak Leap School of Agriculture	
7. Royal University of Agriculture	
8. Royal University of Phnom Penh	
9. University of Battambang	

NGOs and International Agencies

10. CamKids	*Cambodian children charity implementing and financing medical, education, nutrition and development projects*
11. CEDAC	*Development oriented research and training, business establishment*
12. FAO	*Food and Agriculture Organisation of United Nations*
13. WFP	*World Food Programme of United Nations*
14. GIZ	*German development cooperation towards rural development, health and good governance*
15. Open Development	*Open data website providing free objective information to public about Cambodian development*
16. US Aid	*US government agency promoting development*
17. World Vision	*Holistic development with focus on education, nutrition and disease prevention*
18. Fauna and Flora intl.	*Promoting biodiversity conservation for sustainable future for the planet*
19. UNDP	*United Nations Development Programme*

Private sector

20. FinTrac	*Consulting company for aquaculture and agriculture*
21. SCG trading Co., Ltd	*Trading and distribution, logistics of agriculture products, general merchandise and recycling business*

Table 8 List of Institutions Interviewed in Vietnam

Public sector (universities, ministries, national agencies etc.

1. Hanoi National University of Agriculture	
2. Hanoi University of Science and Technology	
3. Research Institute of Aquaculture Nb. 1	
4. Vietnam National University of Aquaculture	
5. Can Tho University	
6. Ministry of Labour / Department of Employment	
7. Southern Center of Agricultural Rural Policy and Strategy	*Research center under the ministry of Agriculture and Rural Development*

NGOs and International Agencies

8. IFAD	*The International Fund for Agricultural Development of United Nations*
9. FAO	*Food and Agriculture Organisation of United Nations*
10. OXFAM	*International confederation of 17 organisationis working against poverty and injustice around the world*
11. World Vision	*International Evangelical Christian humanitarian aid, development and advocacy organisation*
12. IUCN – International Union for the Conservation of Nature	*International organisation working in the field of nature conservation*
13. WWF	*International organisation working in the field of biodiversity conservation*
Private sector	
14. Phi Long DC	*Real estate, infrastructure development in rural areas*
15. Agricare	*Sale of agricultural inputs, quality control and development of market information*
16. Issviet	*Veterinary medicine*
17. Vinaseed	*Research center for agricultural seeds improvement*
18. GreenFeed	*Food sciences and biotechnology*
19. VCC Engineering Consultants JSC.	*Consultancy regarding infrastructure of water resources and sanitation in rural areas*
20. Hai Nguyen	*Sustainable rural development, agriculture and biotechnology*

5.2.2.2 Focus Group Discussions

As a follow-up of the previous data collection, national workshop was organized in each country in order to create platform for **focus group discussions** with selected representatives of alumni, employers, consultants and representatives of European, Cambodian and Vietnamese institutions. It was a complementary element in the research approach.

a) The national workshop in Vietnam was organized on 12th November, 2014 with support of the Hue University in Vietnam. In total 19 representatives participated

in the workshop and discussed the results of the survey with alumni and employers.

b) The national workshop in Cambodia was organized on 14th November, 2014 in Siem Reap, Cambodia with support of the Royal University of Cambodia, together with a "Workshop on Academic Recognition and Credit Transfer" organized by Erasmus Mundus Action 2 coordinators. In total 21 representatives of alumni, employers, EU and Asian universities participated the focus group discussion.

Moreover, regional workshop was organized from February, 2nd till 4th, 2015 in cooperation with the Prince of Songkla University, Thailand. The main objectives of the workshop were (i) to discuss the results of surveys that proceeded previously along with the focus group discussions conducted at the national workshop; (ii) to conclude the research and finalize recommendations based on the findings.

During the final workshop that was held in Prague, September 21st-23rd, 2015, results and conclusions were handed over to the respective representatives of institutions involved. Additional focus group discussions were organized, concentrating on recommendations and improvements to be adopted in future projects.

5.3 DATA ANALYSIS

Data collected from the questionnaire survey were further cleaned and transmitted into electronic database and analyzed using Microsoft Excel 2010. Descriptive statistics were used in order to characterise the researched population sample.

Data transcribed based on the interviews and focus group discussions were processed according to the content analysis (Hsieh, 2005; Keogh, 2009). This method enabled us to break down the content of the interviews and focus group discussions into smaller units. Those were later organized into different categories. Materials were read over several times before the analysis started. Color coding of text was used in order to identify the common themes. All records from interviews were read several times to ensure that the issues really belong to identified category.

The following data sources were analyzed in order to fulfill specific objectives of the research:

Table 9 Specific Objectives and Related Data Sources

(i)	*To identify specific competences, knowledge and skills that graduates developed during their exchange programme and compare them with the expectations of their first destination employers;* ➔ **Comparison of data provided by students in the online survey, interviews with employers and records from focus group discussions**
(ii)	To assess needs in adjustment of the educational approaches at Cambodian and Vietnamese universities towards what competences and skills are desired by the employers; ➔ **Analysis of records from interviews with employers and records from focus group discussions supplemented with own observations.**
(iii)	To investigate how international mobility during the studies may or may not promote employability of graduates in agricultural sector of Cambodia and Vietnam; ➔ **Comparison of data provided by students in the online survey, interviews with employers and records from focus group discussions**
(iv)	To determine the effectiveness and the weaknesses of the study exchanges within the Erasmus Mundus program ➔ **Comparison of data provided by students in the online survey, interviews with employers and records from focus group discussions**

6 Preliminary Results

6.1 CAMBODIA

In the view of employers, there is high demand for human resources in specific fields of agriculture and rural development in Cambodia. The skilled labour market is very competitive. There are only a small number of highly skilled workers, for whom there is a demand, and an adequate amount of general labour. The required competences are the subject of necessary compromise by employers during the recruitment process. Among the graduate labour force, EM alumni generally stand out on the Cambodian labour market. It has been proven that in some areas of expertise, there is still a mismatch between market demand and supply. It is hard to fill positions requiring technically trained students. Demand was for applicants capable in farm management and agricultural economics; hard to fill positions are offered in extension services, monitoring and evaluation and sustainable agriculture activities. With a high prevalence of malnourished people in Cambodia, food security and nutrition should be prioritized. A comprehensive system of vocational training and linkage among technicians, producers, traders and exporters should be constructed.

The main findings showed that EM alumni expressed satisfaction with their position in the labour market after the mobility programme was terminated. The reasons for their success in employment varied among respondents. This was often given as due to their competence and qualifications in a specific field, their research skills and knowledge of foreign languages (particularly English) that were built up during the mobility programme. Some considered that a degree obtained in Europe itself is a guarantee of a successful career. Particularly soft skills such as the ability to work in a team, self-confidence, independence in work, innovative thinking, flexibility in performing different tasks and social communication were key elements in increased employability.

Although employers do not promise career progression immediately, in reality, most of the employers wish to employ EM graduates as long as they accept the working conditions, salary and the given position. EM alumni usually ask for a higher salary and a

job with responsibility within the organization immediatelly; promotion and work responsibility depend on the output of their work. However, EM alumni usually show better results compared to alumni without international experience and thus have a good chance of building a career. The alumni themselves feel that participation in the EM programme helped them to facilitate and advance their career and resulting living conditions, and developed their competences to be able to compete on the domestic labour market. This fact is as well underlined by the reality that all employers or human resource managers who were interviewed during the research are graduates from foreign exchange programmes.

Feeling grateful for the possibility of studying abroad, alumni tended to convert the knowledge and experience they gained into a contribution to their country´s development, despite low salaries, particularly in the governmental sector. Being exposed to a different environment could cause a change in their approach to social communication which is not always perceived positively by employers in Cambodia.

The set of horizontal skills that were developed by alumni during the study/training period, such as independence in work, responsibility, self-confidence, thinking in an innovative way, their overall approach to work and their language skills are the factors making them advantaged compared to students who did not participate in any mobility programme. Results showed that even experienced EM alumni could advance in academic and policy research skills to be able to conceptualize, theorize and discuss issues academically and become politically relevant. Research and analytical skills usually improved during the mobility abroad unlike in graduates of Cambodian institutions who were found to be inadequate at analysis, synthesis and creativity.

During the research, a number of issues concerning the quality of education at Cambodian universities were identified. Young local graduates lack practical experience and thus, once employed, have to undergo special trainings in specific fields, as facilitated by the employers, who have to make a compromise between language, technical knowledge and horizontal skills during the recruitment process. Even more importantly, young people who graduated in Cambodia do not have sufficient horizontal skills. They are less skilled at working and solving problems independently and often need

to be guided to fulfil their tasks. They lack analytical and critical thinking, having difficulties in re-telling the plot of a story they hear. Active participatory learning techniques should be incorporated in the didactic approach that is applied at home universities to allow students not only to listen and study, but rather to actively contribute to the educational process. Moreover, their knowledge of foreign languages is not sufficient in either oral or written communication. This creates a barrier to accepting graduates in international markets and development organizations that now play an important role on the labour market in Cambodia.

Recent graduates do not have enough practical experience after graduating from either Cambodian or European universities. Practical experience and internships should be not only provided to both local and EM graduates to allow them to learn from and experience reality, but should also be recognized within the curriculum. Public/private partnerships need to be strengthened to provide opportunities for practical experience and to better address the needs of the market. An Increase in internship opportunities during the EM programme and at Cambodian institutions would be of great help in preparing the alumni for their careers. Not only university education, but even more importantly the system of vocational training was found inappropriate. There is an insufficient supply of technically skilled labour coming from vocational training which is reflected in the competitiveness of the skilled labour in agricultural sector.

With a large stock of dynamic young workers, Cambodia is challenged to use its full potential to transform the new generation into a productive labour force by, among other things, providing good quality education that will correspond to market demands. Current development is making agriculture less attractive for the young. These tend to switch towards white collar work, mainly to finance and accounting, while agriculture is often considered a step backwards. Moreover, the young generation see agriculture only at its production stage and does not see the variety of activities carried out along with the value chain and within the lateral fields that have recently become a key interest of government and other institutions. There is a need to promote agriculture broadly speaking to make it more desirable and attractive for the young.

As the agricultural sector is developing towards becoming a more integrated one and includes lateral aspects of development, new positions are opening up. This trend needs to be addressed by providing specialists, capable of facilitating the transition from subsistence agriculture to competitive agri-businesses, in all the aspects of sustainable development in the local context. Moreover, entrepreneurial potential should be supported in the young to create a competitive environment for development in the agricultural sector and to strengthen the country´s economic position within ASEAN.

After the education/training period one fourth of alumni returned to the same organisation and worked in the same sector as prior to the EM programme. This fact might significantly contribute to the capacity building of institutions if it is maintained properly and the “brain drain” phenomenon is avoided. More focus should be put on proper selection of candidates based on the human resources development plan of the home institutions to ensure that the capacities and skills built during the mobility can be transformed to the benefit of the sending institutions.

Various methods of recruitment are applied in different sectors of employment. Becoming a permanent governmental member of staff working at universities and governmental institutions is controlled by passing a national exam that is limited to the age of 35 for the MoEYS and 30 for the MAFF respectively. This is a burden for the candidates who do not fit into that age range, among those, many are EM alumni with a Master's or a Doctoral degree and thus this age limitation causes a loss of quality human resources capable of building the capacities of the home institutions. The Royal Government of Cambodia could come up with an alternative recruitment approach or extend the age limit so that candidates are able to apply to be permanent governmental officers and not only contractual staff, so they would feel more comfortable contributing to the institutional settings with their knowledge and experience while being more secure for their future, rather than being simply contractual staff.

6.2 VIETNAM

Agriculture is the most important economic sector in Vietnam. With good natural conditions and agricultural resources available, in recent years the Government of Vietnam has been giving more attention to agricultural development, so many changes are implied. The most obvious evolution in Vietnamese agriculture in recent years is the formation and development of private companies. The involvement of private companies has made the agricultural job market more volatile with many new employment opportunities for graduates. Besides support from government, agriculture has received numerous investments from other countries around the world. However from 2012 onwards, the Vietnamese economy has developed significantly, so the number of foreign funds has decreased and co-financing is now required.

According to this survey, alumni and employers are satisfied with the availability of the exchange study programmes and they enjoy the international experience. In the university and research environment, being exposed to different structures and approaches is even a precondition for career progression, particularly with regards to the establishment of international cooperation. Besides a diploma, alumni obtain important skills and competences such as the ability to think critically, responsibility, time management and, particularly, to improve their language abilities. However, more practical experience and internship opportunities would be appreciated during the EM programme. Employers believed that local graduates still have their own advantages in understanding the local situation and working conditions. Practical work should be included as an obligatory part of the curriculum in the EM programmes and as well at Vietnamese universities. Public-private partnerships need to be strengthened to provide opportunities for practical experience and to better address the needs of the market. During the research, a number of issues concerning the quality of education at Vietnamese universities was identified. Active participatory learning techniques need to be incorporated in the didactic approach that is applied at home universities to allow students not only to listen and study, but rather actively contribute to the educational process.

The main findings showed that the EM programme helped build the capacities of Vietnamese alumni who became very competitive and are able to stand out on the

domestic labour market. Being exposed to different and often dynamic structures in Europe can bring new ideas and efficient approaches to the institutional settings in Vietnam and thus increase business productivity. However, with the increasing number of scholarships offered to Vietnamese students around the world, competition is increasing. The general image of European higher education should be raised so the quality of education becomes equally valued to that of the USA or Australia.

Currently there is a surplus in the supply of graduates with insufficient quality of skills and competences in the country. With an increasing quantity of students enrolled in higher education, the future quality of education is not guaranteed. The concentration of work opportunities is strongly influenced by geography. More positions are opened in the North and in the Central part of Vietnam. Most of the competent labour force is available there, contrary to the situation in the South, where job opportunities for skilled agricultural labour are lacking. With the trend of migration from the provinces to the cities, knowledge and technologies are, however, staying in the cities, leaving the rural areas behind. Moreover, the employers from the public sector are facing difficulties keeping competent employers in the public sector as there are job opportunities opening in the private sector providing higher salary and incentives. However, the role of social insurance based on family relationships still plays a very important role particularly in the public sector.

In a competitive market, staffing is a crucial issue that leads the organization to success. With the goal of assembling the best quality team, employers in Vietnam often go through a thorough recruitment process. The employers use the internet and newspapers as their two main channels where they want to announce their information for recruitment because of the huge number of people looking at the internet and newspapers every day. Besides this, they also use personal contacts and relationships, personnel agencies and headhunting from universities.

Implementation of land policy has had a significant impact on agricultural sector evolution but there are still questions remaining regarding land accumulation. Rich land owners are avoiding policy regulations, thus new policies and controls are being adopted. The quantity of agricultural production in Vietnam has increased rapidly, however the competitiveness of agribusiness remains low. Developing the private sector is a way to

provide work. However there are still non-technical barriers towards private sector investments coming from old socialist policies. Training in public policy education is lacking in regards to understanding the role of the private sector. Besides the field of land management, the fields of veterinary studies, rural development and economics are becoming more attractive than agriculture itself. They are perceived to provide graduates with a wider range of expertise. Agriculture as a field of employment is nowadays lagging behind industry and services.

6.3 PRELIMINARY RECOMMENDATIONS

1. More focus should be given to establishing more equal gender distribution of EM alumni coming from Cambodia to counter-act the fact that the majority of participants in the past were male, as well as to ensuring a more equal information share among possible applicants. This should be complementary to the improving gender balance at Cambodian HEIs.

2. A good proportion of alumni originally come from rural areas which, considering the paucity of rural job opportunities, leads to migration into the cities after the study/training period.

3. Results showed that information about EM mobility is not spread well at the sending institutions and potential applicants do not have equal access to this information.

4. EU scholarship opportunities are not widely-enough known in Vietnam. EU higher education is undervalued compared to that of the US or Australia. More effort is needed to work against the misrepresentation of European higher education, so that it becomes as valued as that in the US. Contrary to USA or Australian mobility programmes, EM application seems to be protected and hard to do. The application process is complex and the information about available study programmes is not always easily accessible.

1. We recommend the creation of a more attractive and stronger marketing system to promote EU higher education under a good quality brand. We recommend organising

promotional tours about EU higher education directly to the partner universities in Vietnam and to the students. Innovative approaches in information sharing about the scholarship and education possibilities in Europe should be implemented. The general standing of European higher education should be raised and a sense of ownership created among the EM alumni so they feel proud of being part of this programme. This would help to build the EM alumni community in Vietnam.

5. As a part of this strategy, there is a necessity to maintain the professional relationship of both sending and hosting institutions with the alumni through continuing cooperation projects. That should help to facilitate the promotion of the programme, to continue the development of higher education and to establish economic links between private and public institutions at a national and international level.

6. Moreover, official support from the European Commission provided to EM alumni in regards to the recruitment process in governmental institutions in Cambodia could eliminate the age restriction with respect to the national exam and the public institutions could use the potential of all alumni returning from Europe.

7. The scholarships should provide a specific package for a pre-departure intensive English preparatory course, particularly for poor and vulnerable students who do not have the financial resources to study English apart from basic university courses, which leaves them worse off in competing at the higher levels of English. They often even lack the courage to apply for the scholarship.

8. Besides these preparatory courses, it is very important to regularly implement re-adaptation orientations for alumni who are leaving Europe and coming back to Cambodia after the programme is terminated. As they were exposed to a different environment and cultural values, their methods of communication might have changed. This is not always appreciated by the employers. The re-adaptation courses would help to facilitate reintegration to the home society and prepare the alumni for the return to their homeland.

9. Short-term mobility programmes for management staff should be supported in order to develop and build up research capacities, time management and didactic approaches.

10. Scholarships for doctoral students should be adjusted to three and four years respectively, according to the length of the doctorate programmes provided in Europe, as it is difficult for the alumni to co-finance the programme, so that unfinished programmes can be eliminated.

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Annex

Annex 1 Online Survey on Alumni Experience with EM Program

Annex 2 Interview Guideline