



**STRENGTHENING
THE VIETNAMESE
HIGHER EDUCATION SYSTEM
TO IMPROVE GRADUATES'
EMPLOYABILITY AND
ENTREPRENEURSHIP SKILLS**

**Graduate Employment and
Entrepreneurship in Vietnam**

D1.3.1 Analysis Report



Co-funded by the
Erasmus+ Programme
of the European Union

V2WORK



V2WORK partners at Tay Nguyen University in January 2019. Training Module 4 and working session on analysis results

V2WORK



Graduate Employment and Entrepreneurship in Vietnam

D1.3.1 Analysis Report



Authoring information	
Project	V2WORK – “ <i>Strengthening the Vietnamese Higher Education System to improve graduates’ employability and entrepreneurship skills</i> ”
Grant number	# 586252-EPP-1-2017-1-ES-EPPKA2-CBHE-SP
Document author	Victor F. Climent, Associate Professor, University of Alicante and Cristina Beans, Senior Project Manager of the International Project Management Office, University of Alicante

V2WORK consortium:

European Union:

- University of Alicante (Spain), Project Coordinator
- University of Coimbra (Portugal)
- FH Joanneum (Austria)

Vietnam:

- Hanoi University of Science & Technology
- Industrial University of Vinh
- The University of Danang
- Tay Nguyen University
- Nha Trang University
- Thu Dau Mot University
- Ho Chi Minh University of Social Sciences & Humanities
- Ministry of Higher Education and Training
- Vietnam Chamber of Commerce and Industry Ho Chi Minh City
- AIESEC Vietnam

Contact information:

International Project Management Office (OGPI) – University of Alicante

Website: www.ogpi.ua.es

V2WORK: www.v2work.eu

Acknowledgments: To the dedicated staff in the partner institutions who are truly invested in the success of this project and were responsible for implementing the survey which provided the data for this analysis and contributing to the regional analysis; as well as to the European Commission for supporting and co-funding this project through the Erasmus+ Programme.

Legal Notice

The present document was developed and edited by the partner institutions of the Erasmus+ project V2WORK “*Strengthening the Vietnamese Higher Education System to improve graduates’ employability and entrepreneurship skills*”, under the coordination of the University of Alicante. The results, views and opinions expressed in this publication are those of the authors, and the European Commission cannot be held responsible for any use which may be made of the information contained therein.

All contents generated by the V2WORK project are protected by intellectual property laws, in particular copyright.

Edited by the University of Alicante, Spain

© **Universidad de Alicante** 2020. All rights reserved. Reproduction is authorised provided the source is acknowledged.

Please cite this publication as: *Climent V, & Beans C. (2020). Graduate Employment and Entrepreneurship in Vientam, Analysis Report. V2WORK project. Erasmus+ programme.*



Co-funded by the
Erasmus+ Programme
of the European Union

The V2WORK project is co-funded by the Erasmus+ Programme of the V2uropean Union (reference # 586252-EPP-1-2017-1-ES-EPPKA2-CBHE-SP).

Table of contents

1. INTRODUCTION	9
1.1. The V2WORK project	9
1.2. The analysis report	10
1.3. Objective	17
1.4. Methodology overview	18
1.4.1. Key Performance Indicators	19
1.5. Survey Distribution Instructions	21
1.6. Sample overview	21
2. THE REGIONAL SCOPE OF EMPLOYABILITY AND ENTREPRENEURSHIP ..	24
2.1. Red River Delta	25
2.2. Northern Midlands and Mountain Areas	26
2.3. North Central area and Central Coastal area	28
2.4. Central Highlands	30
2.5. Southeast	32
2.6. Mekong River Delta	34
2.7. Summary	36
2.7.1. Labour force at 15 years by Province	36
2.7.2. Percentage of employed workers at 15 years of age and above among population by Province	38
2.7.3 Percentage of trained employed workers at 15 years of age and above by province	40
2.7.4. The unemployment rate of the labour force at working age by region	41
2.7.5. Underemployment rate of the labour force at working age by region	42
3. EMPLOYMENT SITUATION & ENTREPRENEURIAL ACTIVITY OF VIETNAMESE GRADUATES	44
3.1. Students & Graduates	44
3.2. External Stakeholders (employers)	48
3.3. Academics	52
3.4. Career Centre & Management Staff	55

4. IDENTIFICATIONS OF POTENTIAL MISMATCHES AND NEEDS IN THE LABOUR MARKET	56
4.1. Potential mismatches	57
4.2. Needs	67
5. ENTREPRENEURSHIP	71
6. RECOMMENDATIONS	78
6.1. Students and Graduates	78
6.2. External Stakeholders (employers)	80
6.3. Academics	80
6.4. Career Centre & Management Staff	81
7. BIBLIOGRAPHY	83
8. STATISTICAL ANNEX	87

List of figures

Figure 1. NUMBER OF ANSWERS BY CATEGORY OF STAKEHOLDER	11
Figure 2. NUMBER OF ANSWERS BY V2WORK HEI PARTNER	12
Figure 3. NON-PARTNER HEIs WHO COLLABORATED WITH THE V2WORK PROJECT BY ANSWERING QUESTIONNAIRES FOR THE ANALYSIS	13
Figure 4. LOCATIONS OF NON-PARTNER HEIs WHO PARTICIPATED IN THE DATA COLLECTION	15
Figure 5. METHODOLOGY AND DATA COLLECTION PROCEDURE STRUCTURE	17
Figure 6. TARGET GROUPS	19
Figure 7. POPULATION DEFINITIONS	20
Figure 8 SAMPLE DEFINITION AND FINAL SAMPLE	23
Figure 9. MAPPING VIETNAMESE POSITIVE AND NEGATIVE LABOUR MARKET FEATURES .	36
Figure 10. EVOLUTION OF LABOUR-FORCE BY REGION	37
Figure 11. EVOLUTION OF THE PERCENTAGE OF EMPLOYMENT WORKERS ABOVE 15 Y-OLD	39

Figure 12. EVOLUTION OF THE PERCENTAGE OF TRAINED PEOPLE	40
Figure 13. EVOLUTION OF THE UNEMPLOYMENT RATES	42
Figure 14. EVOLUTION OF THE UNDEREMPLOYMENT RATE	43
Figure 15. GENDER DIFFERENCES IN INFORMAL AND FORMAL SOURCES ON INFORMATION	45
Figure 16. STUDENTS AND GRADUATES DIFFERENCES IN INFORMAL AND FORMAL SOURCES ON INFORMATION.	46
Figure 17. SOURCES OF INFORMATION ABOUT CAREER CENTRES	47
Figure 18. EMPLOYERS AWARENESS OF UNIVERSITY CACE	49
Figure 19. KNOWLEDGE ABOUT CACE AT HEI	50
Figure 20. PROBABILITY OF CONTACTING THE HEI EMPLOYMENT PROGRAMS	51
Figure 21. DIRECTOR OF CACE PROFILE	53
Figure 22. AREA OF KNOWLEDGE FOR CaCe STAFF.	54
Figure 23. AREA OF KNOWLEDGE FOR HEI STAFF	55
Figure 24. THE LABOUR MARKET ECOSYSTEM	56
Figure 25. WHAT PERCEPTIONS ABOUT ACADEMIC FACTORS FOR EMPLOYABILITY MAKE EMPLOYERS AND ACADEMICS SIMILAR?	59
Figure 26. WHAT PERCEPTIONS ABOUT ACADEMIC FACTORS FOR EMPLOYABILITY MAKE EMPLOYERS AND ACADEMICS DIFFERENT?	60
Figure 27. PERSONAL FACTORS THAT INCREASE THE EMPLOYABILITY	62
Figure 28. DIFFERENCES BETWEEN ACADEMICS AND EMPLOYERS ABOUT PERSONAL FACTORS FOR EMPLOYABILITY.	66
Figure 29. THE DIFFERENCES AMONG TARGET POPULATIONS ON THE MOST IMPORTANT NEEDS IN THE VIETNAMESE LABOUR MARKET	68
Figure 30. THE DIFFERENCES AMONG TARGET POPULATIONS ON THE MOST IMPORTANT NEEDS IN THE VIETNAMESE LABOUR MARKET	72
Figure 31. REASONS WHY TO GO FORWARD IN THE ENTREPRENEURSHIP SUPPORT	73
Figure 32. WHO IS DIFFERENT AND WHO IS SIMILAR IN THE OPINION TO SUPPORT ENTREPRENEURSHIP?	74
Figure 33. CLUSTERS OF REASONS TO GO FORWARD WITH ENTREPRENEURSHIP SUPPORT PROGRAMS	75
Figure 34. EXPLORATION OF STUDENTS' ENTREPRENEURSHIP PROFILE WHILS AT UNIVERSITY	77

List of acronyms

ACRONYMS	NAME IN ENGLISH
<i>General Acronyms</i>	
HEI	High Education Institution
EU	European Union
CaCe	Career Centre
<i>Partner Acronyms</i>	
HUST	Hanoi University of Science and Technology
IUV	Industrial University of Vinh
UD	The University of Danang
TNU	Tay Nguyen University
NTU	Nha Trang University
TDMU	Thu Dau Mot University
VNUHCM-USSH	University of Social Sciences and Humanities – Viet Nam National University Ho Chi Minh City
TVU	Tra Vinh University
UA	Universidad de Alicante
UC	Unversidad de Coimbra
FHJ	FH Joanneum University of Applied Sciences

1. INTRODUCTION

1.1. The V2WORK project

V2WORK: “*Strengthening the Vietnamese Higher Education System to improve graduates’ employability and entrepreneurship skills*”, is a three-year Erasmus+ Capacity Building structural project co-financed by the European Commission.

The overall objective of V2WORK is to strengthen the capacities of the Vietnamese Higher Education System in order to improve the employability & entrepreneurship skills of its graduates, and to reinforce its relationships with the labour market, in line with the Vietnamese government’s priority of improving graduate employment at a national level.

V2WORK specifically aims to:

- Modernise the career support services of eight Vietnamese Higher Education Institutions (HEIs) by building institutional & human capacities in employability and entrepreneurship skills so they can become efficient & dynamic instruments to promote & support employment & entrepreneurship among HEI students & graduates.
- Reinforce university-enterprise relationships through the development of mechanisms to foster active involvement of enterprises in the Career Centres.

V2WORK will achieve these objectives by

- An in-depth analysis of the current situation of graduate employability & labour market needs to define partner training & institutional needs

- Building capacities of Vietnamese HEI Career Centre staff on professional competences & sectoral skills
- Launching new employment, employability, and entrepreneurship services in each HEI
- Undertaking targeted networking actions between HEIs & industry
- Creating a Network of HEI Career Centres in Vietnam

1.2. The analysis report

This document contains the final report resulting from the data analysis of four surveys that were carried out from July to November 2018 to meet the objectives and tasks described in WP1 “PREPARATION” of the V2WORK project proposal:

This corresponds with deliverable 1.3.1.: *Analysis Report “Graduate Employment and Entrepreneurship in Vietnam”*, that is described in the proposal:

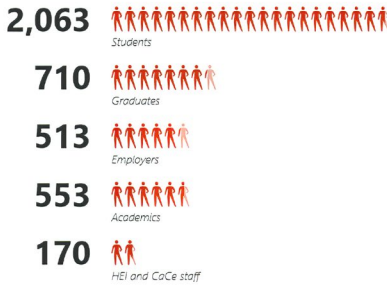
The in-depth needs analysis report “Graduate Employment and Entrepreneurship in Vietnam” will be produced as a result of the analysis of the data on graduate collected from surveys and interviews, following the methodology prepared (D1.1.1.). It will include the analysis on the employment situation of the HEI graduates and entrepreneurial activity, HEI students’ entrepreneurship intentions, the labour market identified needs from potential employees and identifications of potential mismatch.

The purpose of this document is to communicate and highlight the most important results of the analysis among all the participants and collaborating stakeholders of the V2WORK project, as well as the overall Vietnamese Higher Education System.

For the analysis, responses were collected a total of 4009 participants, distributed as shown in the figures below.

Figure 1. NUMBER OF ANSWERS BY CATEGORY OF STAKEHOLDER

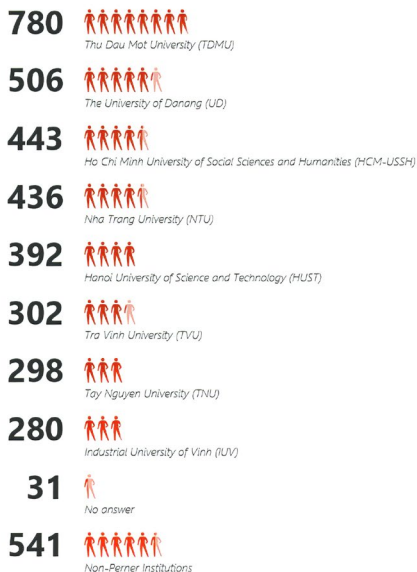
FINAL NUMBER OF ANSWERS BY STAKEHOLDER



Every V2WORK partner contributed to the dissemination of the on-line questionnaires. In figure 2, we show the total number of answers that have been contributed by V2WORK HEI partners where, for each partner, we summarized the answers from the 4 groups of target populations that have been studied.

Figure 2. NUMBER OF ANSWERS BY V2WORK HEI PARTNER

FINAL NUMBER OF ANSWERS BY PARTNER



We consider necessary to highlight the enormous effort that V2WORK partners did to disseminate the questionnaires also to other universities in Vietnam. This effort resulted in 541 answers that fed into the sample with information that extended the national context in Vietnam about Career Centres, as well as with the opinion of the HEIs' internal and external stakeholders.

This successful result, apart from the large sample sizes for every target group, makes the databases a powerful instrument created in the context of the V2WORK project that can and must be exploited beyond the V2WORK deliverables. This output can be considered as a strength for sustainability as well as a disseminative strategy for the project after EU funding.

In figure 3, we list the Non-V2WORK HEIs that have contributed to the data collection.

For 100 respondents the name of the non-partner HEI has not been successfully identified. However, as they could be classified by their target population, they have been considered in the analysis.

Figure 3. NON-PARTNER HEIs WHO COLLABORATED WITH THE V2WORK PROJECT BY ANSWERING QUESTIONNAIRES FOR THE ANALYSIS

Name of the University in English	ANSWERS
University of Khanh Hoa	130
Da Nang University of Technology	51
Can Tho University	44
Binh Duong University	38
An Giang University	25
Eastern International University	25
Binh Duong Economics and Technology University	12
Association Internationale des Etudiants en Sciences Economiques et Commerciales	11
Ho Chi Minh city University of Technology	8
RMIT university	8
University of Economics and Law	7
Duy Tan University	6
Ho Chi Minh city University of Education	5
Ho Chi Minh city University of Law	5
NationalEconomics University	5
Vinh University	5
Hue University's College of Education	4
Nghe An College of Economics	4
University of Economics and Business Administration - Thai nguyen University	4
Nguyen Tat Thanh University	3
University of Languages and International Studies	3

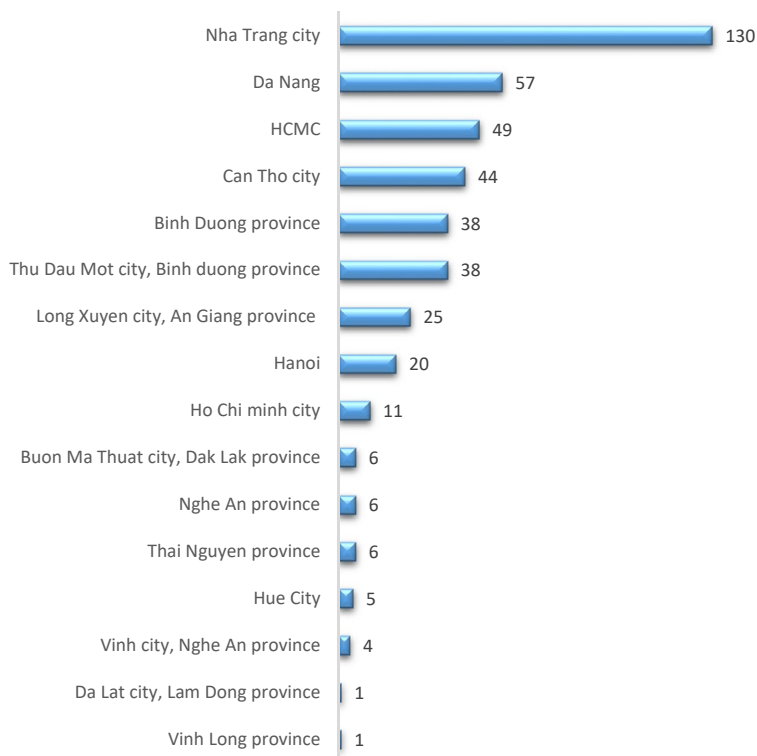
Graduate Employment and Entrepreneurship in Vietnam

Vietnam National University HCMC, University of Science	3
Banking Academy	2
Buon Ma Thuot University	2
Dak Lak Technical College	2
Dak Lak Vocation College	2
Diplomatic Academy of Vietnam	2
Hanoi National University of Education	2
Hanoi University of Industry	2
International University	2
University of Economics Ho Chi Minh city	2
Da Lat University	1
Dong Do University	1
Foreign Trade University	1
Ho Chi Minh City University of Foreign Languages and Infomatics	1
Ho Chi Minh City University of Technology and Education	1
Hoa Sen University	1
Hue University of Agriculture and Forestry	1
Mien Tay Construction University	1
National University of Civil Engineering	1
Saigon University	1
Thai Nguyen University	1
University of Finance and Marketing	1
University of Information and Communication Technology	1
Van Lang University	1
Van Xuan University of Technology	1
Vietnam German University	1
Vietnam National University Hanoi, University of Social Science and Humanity (VNU-USSH)	1
Vietnam National University of Agriculture	1
Total general	442

The external HEIs who answered the questionnaire correspond to 18 different locations in Vietnam (Fig. 4).

Figure 4. LOCATIONS OF NON-PARTNER HEIs WHO PARTICIPATED IN THE DATA COLLECTION

Where are non-partner respondents located?



For this matter, this “Graduate Employment and Entrepreneurship in Vietnam” report aims to organize and clearly and coherently present the most important and relevant findings obtained in the research phase of the V2WORK project that can contribute to a higher impact of V2WORK actions.

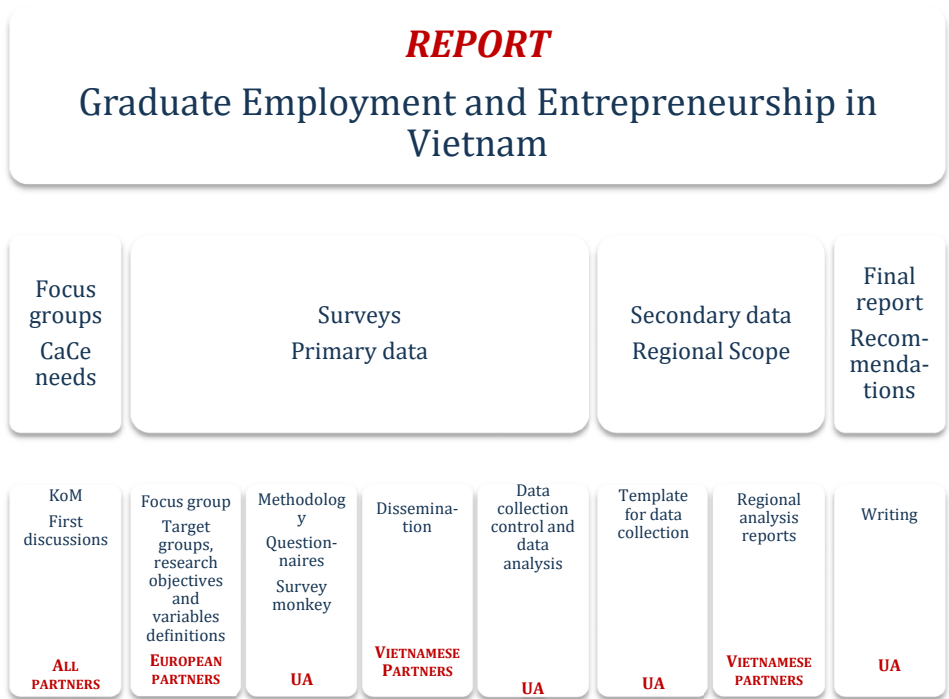
As the data collection task has produced several statistical outputs that exceed the expectations and the results described in the proposal, this report does not contain all tables and statistics for all variables that were analysed. The number of variables as well as the answers is particularly large and, for that reason, this report is accompanied by a “Statistical Annex” produced in January 2019, where the analysis of every variable included in the study is reported.

The Statistical Annex Document is an open resource that every partner, external and internal stakeholder as well as any researcher, is/are invited to make use to go forward in the quantitative analysis on the current situation of employment and entrepreneurship at HEI level in the Vietnamese context. Any use of it should cite this report and the V2WORK project as a source. It can be downloaded from the resources page of the V2WORK website: www.v2work.eu/resources

Finally, a set of recommendations has been provided at the end of this report. They have been elaborated taking into account the statistical analysis from the data collected from the four target group surveys, the regional scope introduced through the analysis of secondary data sources, and several qualitative inputs raised from the different group discussions that V2WORK partners have carried out in the first steps-meetings of the project.

Although the University of Alicante conducted and produced the research tasks for the data analysis that feeds into this report, every V2WORK partner had a critical role to help make this in-depth analysis possible. The following diagram describes the partners’ participation.

Figure 5. METHODOLOGY AND DATA COLLECTION PROCEDURE STRUCTURE



1.3. Objective

The main objective of WP1 *Stakeholder and context mapping: identification of good practice and development needs* is to gain an in-depth understanding of five main aspects of the Vietnamese labour market:

- **labour market** gateways for Vietnamese graduates
- **labour market mismatches** affecting Vietnamese HEI's graduates
- **intermediation procedures** that currently are implemented by Vietnamese HEI's Career Centres
- **entrepreneurship programs** that currently are implemented by Vietnamese HEI's Career Centres

- **entrepreneurial intentions** by students and graduates at Vietnamese Universities

1.4. Methodology overview

In order to develop the *in-depth* quantitative analysis, and following the instructions in the methodology document, four surveys were designed and created in order to collect data from five target groups:

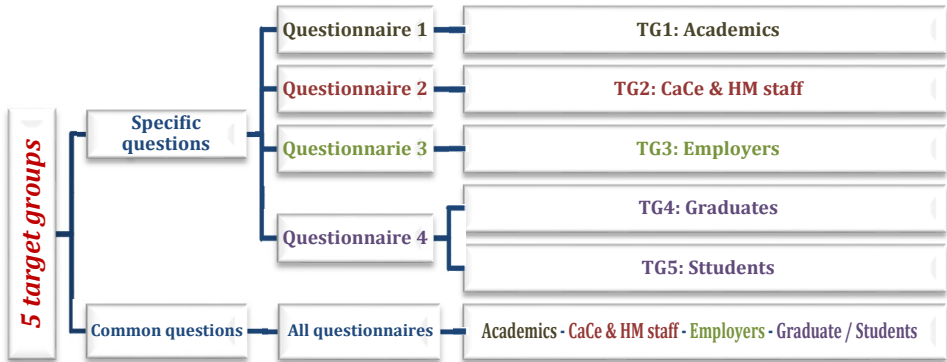
- Academics
- Management staff (Career Centre & Higher Management)
- Employers
- Students (these should *not* include 1st or 2nd-year students)
 - Graduates (recent graduates, up to 3 years' post-graduation, so their knowledge on the partner institution is still up-to-date)

Each questionnaire has sections with common questions referring to all target groups, as well as other specific questions introduced separately to capture and measure each target group's features.

Sections include:

- Socio-demographic and educational status
- Career and Business/Entrepreneurship Centre: regarding services available in an institution (and cooperation with HEIs for employers)
- Employability in Vietnam HEIs: regarding employability skills, factors, etc.
- Entrepreneurship in Vietnam HEIs: regarding entrepreneurship skills, opportunities, support etc.

Figure 6. TARGET GROUPS



The four surveys were drafted in English, reviewed by the V2WORK steering committee and translated into Vietnamese. All surveys were uploaded to the online platform Survey Monkey.

1.4.1. Key Performance Indicators

A minimum number of responses (385) was fixed as a requirement to

- Ensure the statistical relevance of data
- Meet KPIs detailed in the project proposal

This minimum number corresponds to each

- Category of respondent
- Area of knowledge (humanities, health sciences, engineering etc.)

For the data collection, the Vietnamese partners were guided by the premise that the higher the number of responses, the better the results of the analysis. Partners were therefore requested to make an extra effort to help surpass this minimum number of answers, and pay particular attention to collecting responses from the different areas of knowledge (distribute the questionnaires to *all* faculties and departments):

- *Education*
- *Arts and Humanities*
- *Social Sciences, Business, Economics and Law*
- *Science, Mathematics and Computing*
- *Engineering, Manufacturing and Construction*
- *Agriculture and Veterinary*
- *Health and Welfare*
- *Services*

The **minimum number of questionnaires to be obtained by each partner** (within their institution or stakeholders) has been set as follows:

Figure 7. POPULATION DEFINITIONS

	<i>Academics Quest.1</i>	<i>Higher Management Quest.2</i>	<i>CaCe staff Quest.2</i>	<i>Employers Quest.3</i>	<i>Students Quest. 4</i>	<i>Graduates Quest. 4</i>
HUST	40	2	All staff	40	100	50
IUV	40	2		40	100	50
UD	40	2		40	100	50
TNU	40	2		40	100	50
NTU	40	2		40	100	50
TDMU	40	2		40	100	50
HCM-USSH	40	2		40	100	50
TVU	40	2		40	100	50
VCCI	N/A	N/A	N/A	50	N/A	N/A
AIIESEC	N/A	N/A	N/A	N/A	100	50

Additionally, HEI partners have been requested to contact at least three other universities and ask them to collect surveys from at least:

- 5 academics (different areas of knowledge)
- 3 Career Centre staff
- 2 Higher Management staff
- 5 employers

- 5 non-first year students (different areas of knowledge)
- 5 recent graduates (different areas of knowledge)

1.5. Survey Distribution Instructions

The four surveys have been translated to Vietnamese and uploaded to the platform Survey Monkey, as indicated above. All results should, therefore, be input in this platform.

E-mail templates were prepared to send the questionnaires to each of the target groups, with the link for the corresponding survey. These templates were translated and adapted by partners as needed, and sent to members of each of the target groups with the link to the corresponding questionnaire. It was recommended that partners follow-up on the e-mail about a week later to ask if the questionnaire had been completed or if there were any questions, in order to help increase the response rate.

The surveys were also prepared in a printable pdf format for partners to use in case they considered that some respondents could feel more willing to answer on a paper template rather than the online survey link. In this case, partners were responsible for later uploading the answers to the corresponding Survey Monkey.

1.6. Sample overview

For the design of the sample, non-probabilistic methods were considered, as the procedures to reach the individuals selected meeting probabilistic requirements were impossible to carry out.

On the one hand, the time and budget available would be insufficient to fully study even a single target group. On the other hand, the initial objectives of this work can be amply covered by using non-probabilistic samples, as the obtained results are considered rather exploratory/descriptive than correlational or causal.

The WP1 Preparation phase for the V2WORK project is needed as an explorative/descriptive research to capture the most important Vietnamese labour market features that are considered efficient to go through in the aim of developing the HEI capacities to improve Vietnamese students' and graduates' employability and entrepreneurship skills.

As was mentioned previously, a minimum number of questionnaires has been required for each stakeholder group. As the population for each stakeholder group is considered unlimited, that means over 20000 people for each of four samples have been calculated applying the following parameters and formula:

- *Number of students from 8 universities > 20000*
- *Number of graduates from 8 universities > 20000*
- *Number of academics from 8 universities > 20000*
- *Number of employers in Vietnam > 20000*

$$n = \frac{z^2 * p (1 - p)}{e^2}$$

- *$z = 1,96$ (for a confidence interval of 95 %)*
- *$p = 0,5$*
- *$e = 0,05$*

In the case of HEI Management and CaCe Staff, there was no information about the size of the population; as a result, we calculated the error of the final sample reached with the answers and the calculated the error considering the population unlimited:

$$e = z \sqrt{\frac{p+q}{n}}$$

Where:

- $z = 1,96$ (for a confidence interval of 95 %)
- $p = 0,5$
- $n = 170$

The final samples and answers are as follows:

Figure 8 SAMPLE DEFINITION AND FINAL SAMPLE

Target group	Population	Sample size for error	Error	Confidence Interval	Number of answers	Final error
<i>Students</i>	Unlimited	384	5,00%	95,00%	2063	2,04%
<i>Graduates</i>	Unlimited	384	5,00%	95,00%	710	3,61%
<i>Employers</i>	Unlimited	384	5,00%	95,00%	513	4,27%
<i>Academics</i>	Unlimited	384	5,00%	95,00%	553	4,11%
<i>HEI and CaCe staff</i>	Unlimited	170	7,48%	95,00%	170	4,48%

All the Vietnamese V2WORK partners were deeply committed with the data collection tasks. As a result, the number of answers exceeded the sample designed on several occasions.

Every data collected was introduced for the analysis and the error recalculated.

The higher level of responses obtained allows to explore some details that would be impossible to know with only the answers expected. In any case, it is important to insist in the exploratory and descriptive limits for this research.



V2WORK

2. The regional scope of employability and entrepreneurship

The main objective of this chapter is to highlight the most important features that make a Vietnamese Region different from the others in terms of employment.

For this matter, a statistical analysis based on secondary data collected from the “General Statistics Office of Viet Nam”, has been carried out.

An *ex post facto* methodology design requires the use or a comparison of at least two data sources to ensure the statistical reliability and the findings strictness.

In this respect, as the use of more than one data source exceeds the limitations of resources and available time to introduce a regional scope in the analysis, only one data source has been devoted for the analysis. For this reason, the data has been exclusively used for internal comparisons among regions, but not to deepen in any labour market trait or attribute of the studied regions singularly considered. The aim for this analysis section is to capture differences and highlight the trends. Therefore, the analysis raised from this data sources is well-thought-out to capture such differences, as any deviation from real situation is supposed to operate in the same way as other sources of information.

In all events, we need to point out that the General Statistic Office of Vietnam is in charge of the analysis of macro-figures that do not necessarily meet the same aims as V2WORK analysis work package. In this sense, the data from the General Statistic Office of Vietnam that have been used, have been considered a very suitable input for a first cursory analysis of regional differences. This data break down has been used to feed into a later and

deeper analysis that has been mainly carried out through the analysis of the data collected from the questionnaires that were created within the V2WORK project.

The comparative analysis of the labour market has been carried out by breaking down the data from the following variables:

- a. Labour force at 15 years by province
- b. Percentage of employed workers at 15 years of age and above among population by province
- c. Percentage of trained employed workers at 15 years of age and above by province
- d. The unemployment rate of the labour force at working age by region
- e. Underemployment rate of the labour force at working age by region
- Unemployment and underemployment rate of the labour force at working age by region

2.1. Red River Delta

■ *Labour force at 15 years by province*

The Red River Delta region had 120151 workers aged above 15 years old in 2017. The labour force in this region has been continuously increasing for the last ten years. Despite the fact that this region covers a small area of Vietnam, the Red River Delta represents the biggest supply of labour force in Vietnam as it includes the municipality of Hanoi. The feminization rate is about 50,6 %, while more than 60 % of workers are aged between 25 and 50 years old.

This region concentrates the largest workforce with the highest rate of trained workers in comparison with other regions in Vietnam.

■ *Percentage of employed workers at 15 years of age and above among population by province*

The percentage of employed people among workers in the Red River Delta region has been increasing in the last 10 years. However, relative work force

rates compared with other regions reached the lower percentages. This phenomenon may be related to the high population and urban density making this area more attractive for older people to whom services and infrastructures can be more available.

- *Percentage of trained employed workers at 15 years of age and above by province*
- *Red River Delta focuses on the highest rate of trained employed workers as this region is being consolidated as a key for the national economy. The unemployment rate of the labour force at working age by region*

Unemployment rates in the Red River Delta are small if we compare it with other developing regions in Vietnam, and it is showing a slope in a constant reduction.

- *Underemployment rate of the labour force at working age by region*

The underemployment rate in the Red River Delta is also being reduced, showing a constant reduction in the last 10 years.

- *Unemployment and underemployment rate of the labour force at working age by region*

The reduction of both rates is showing the economical projection of the economy and labour market of this region.

2.2. Northern Midlands and Mountain Areas

- *Labour force at 15 years by province*

Bac Giang has the largest labour force at the age of 15 due to a good network of the industrial zone with many factories. Whereas, Lai Chau has the lowest of such kind of labour force. Labour force at 15 years in the Northern Midlands and Mountain Areas increases, except for Tuyen Quang and Phu Tho.

■ *Percentage of employed workers at 15 years of age and above among population by province*

Yen Bai and Lai Chau are the two provinces in the Northern Midlands and Mountain Areas which have an increase on many employed workers at 15 years of age, whereas most of the other provinces show a decrease. Comparing with the whole country, the number of employed workers in the region shares a common decrease.

■ *Percentage of trained employed workers at 15 years of age and above by province*

The development of technology and science also affects the need for trained employed workers. Most provinces in the region had an increased rate. Only four provinces including Tuyen Quang, Lang Son, Bac Giang, Dien Bien had a moderate reduction. Total in Vietnam increased from 18.2 to 21.4, whereas the Northern Midlands and Mountain Areas have the same trend increasing from 15.6 to 17.1.

■ *The unemployment rate of the labour force at working age by region*

The unemployment rate of the labour force at working age in the Northern Midlands and Mountain Areas is considerably lower than in the whole country. However, they keep the same increasing trend in the unemployment rate in 2014 and 2015. There is an increase of the unemployment rate in the Northern Midlands and Mountain Areas but the whole country gets a reduction in 2016. The situation is contrary in 2017 between the region and the whole country.

■ *Underemployment rate of the labour force at working age by region*

In general, there is a fluctuation in the underemployment rate of the labour force at working age in the Northern Midlands and Mountain Areas in which there is an increase from 2014 to 2015, then a reduction from 2016 to 2017. However, the whole country keeps a considerable reduction from 2014 to 2017.

■ *Unemployment and underemployment rate of the labour force at working age by region*

The unemployment and underemployment rate of labour force at working age in the Northern Midlands and Mountain Areas increases from 2014 to 2016 but falls in 2017. However, the whole country shows a continuous fall from 2014 to 2017.

2.3. North Central area and Central Coastal area

■ *Labour force at 15 years by province*

Currently, the labour force at 15 years old and above in North Central & Central Coast makes up approximately 22 % compared to the whole country, in the second position after Red River Delta region (accounting for over 22 %). The reason is that these regions have large areas of land, gathering many big cities, urban areas and many industrial zones, which are convenient for production and business, thus attracting a large number of workers concentrated in these areas.

From 2014 until 2017, along with the growth of population of the whole country, the labour force is also increasing.

■ *Percentage of employed workers at 15 years of age and above among population by province*

Percentage of employed workers at 15 years of age and above among population in the region and the whole country is similar (57 % - 59 % of the population). However, the percentage was reducing lightly year by year due to low quality workforce who cannot meet the developing requirements of the workplace. The rate of trained workers is still low; the physical strength of Vietnamese workers is inadequate, failing to meet the working intensity and requirements in using equipment according to international standards.

■ *Percentage of trained employed workers at 15 years of age and above by province*

Percentage of trained employed workers at 15 years of age and above in region and in the whole country is similar (around 20 %) and increases year by year. Percentage in Region in 2014, 2015 is lower than the whole country but reaches the same percentage as the whole country since 2015. This can be thanks to the education level of the labour force in this region, which is increasingly improved. The positive changes in education levels have created many advantages for promoting vocational training activities, creating jobs and creating new jobs for the labour force.

■ *The unemployment rate of the labour force at working age by region*

Vietnam is still a surplus labour market in agriculture and rural areas, such as North Central and Central Coastal, with low labour supply quality, irrational distribution and limited mobility. The demand for labour is low in quantity and there is still a large proportion of workers working in simple jobs, which do not require technical expertise, and the wage sector is growing slowly. Therefore, many newly graduated students cannot find jobs after graduation due to lack of demand.

. Every year, human resources are supplemented with more than 1 million workers, plus the number of people who had no jobs the previous year, which increases the rate of unemployed people. While the quality of labour is not satisfied, it causes difficulties in employment issues for workers.

Therefore, the unemployment rate of the labour force is increasing slightly year by year.

The unemployment rate of the labour force at the working-age in North Central and Central Coast Area is higher than in the whole country. This happens because of the unbalance in supply - local labour demand. The Vietnamese labour market is mainly concentrated in big cities, or key economic regions, where there are many IPs and EPZs like in the Southeast. Nevertheless, in North Central and Central Coast Area, there are not many IPs and EPZs.

■ *Underemployment rate of the labour force at working age by region*

Underemployment rate of the labour force at working age in North Central & Central Coast Area is higher than in the whole Vietnam. However, since 2017 the underemployment rate in the region reached near the rate of the whole country. The reason maybe is that the quality of labour is improved due to the higher number of people trained. Labour structure shifted more positively. For example, the number of people working in industry and services has increased, the proportion of people working in the informal sector has decreased; the number and proportion of people working in wage employment increases.

■ *Unemployment and underemployment rate of the labour force at working age by region*

The unemployment rate in the region is higher than the whole country and it is increasing from 2014 to 2016. However, since 2017, the situation is better as the unemployment rate has a slight decline.

The underemployment rate in the region is much higher than the whole country from 2014 to 2016. Since 2017, the underemployment rate in the region falls remarkably and has reached a similar rate to the whole country.

2.4. Central Highlands

■ *Labour force at 15 years by Province*

It is noticeable that the number of labour force (15 years of age and above) increased slightly from the year 2014 to the year 2017, from 331680 to 3527900 people.

The labour forces in the mentioned years of the Central Highlands region just accounted for around 6% - 7% of the whole country's total number in the age range of 15 years+.

Looking at the five provinces, it is easy to recognize that the labour force of 15 years of age and above increased in 4 years in all the provinces except for Daknong where the preliminary number for 2017 was around 3800 people lower than that of the previous year, 2016.

The province that experienced the highest increase in the period is Kon Tum (with an increase of nearly 7900 people). It is, however, the province with the smallest labour force with 228400 people, just 1/5th of Daklak's labour force.

■ *Percentage of employed workers at 15 years of age and above among population by Province*

The percentages of employed workers at 15 years of age and above among the population of the Central Highlands region were interestingly higher than those of the whole country. From 58.3 % to the highest of 63.3 % of the population in the regions were 15 years of age and above.

The differences in terms of percentages among the five provinces in the Central Highlands were not significant from 2014 to 2017, with a slight fall and rise over the years.

■ *Percentage of trained employed workers at 15 years of age and above by province*

Compared to the percentages of trained employed workers (at 15 years of age and above) of the whole country, the Region's average percentages are roughly 6 % to 7 % lower but have increased slightly over the years.

However, we must admit that the overall percentages (ranging from 12.3 % to 14.3 %) are not high.

■ *The unemployment rate of the labour force at working age by region*

As for the unemployment rate of the labour force at the working age, the Central Highlands region's rates are just half that of the whole country. The year with the lowest rate was 2015, just 1.03 %, but in the year 2016, the rate

rose again to 1.24 % (0.02 % higher than the 2014 rate). However, in 2017, the rate decreased to 1.05. The country's trend of rising and fall in terms of rate of unemployment was slightly different with the year 2014 having the lowest rate (2.10 %) and the following year, 2015, having the highest (2.33 %).

■ *Underemployment rate of the labour force at working age by region*

As for the underemployment rates, it is noticeable that in the two years of 2014 and 2016, the rates of the Region were even higher than the same for the whole country (2.49 % vs. 2.35 % and 2.00 % vs. 1.66 %). For the other two years, the region's rates were lower, but not significant.

■ *Unemployment and underemployment rate of the labour force at working age by region*

The region's average rates of the two variables, the unemployment and underemployment rate of the labour force at working age were lower than those of the whole country. However, while the whole country's rates decreased steadily over the years, the region's rates fluctuated. The highest rate of 1.86 % was found in 2014. One year after, it went down to 1.38 % but rose up again to 1.62 % in the year 2016. The rate in 2017 was the lowest of the four years, at 1.31 %.

2.5. Southeast

■ *Labour force at 15 years by Province*

The labour force at 15 years by province: Binh Duong, Binh Phuoc, Tay Ninh, Ba Ria – Vung Tau has seen increasing statistics through the years.

■ *Percentage of employed workers at 15 years of age and above among population by Province*

Binh duong: the percentage of employed workers at 15 years of age decreased year by year from 2014 to 2017, from 66.1 % to 62.3 %.

Regarding total region, the percentage witnessed a slight increase, from 54.5 % to 57.1 % in 2017, whereas that statistics experienced a decline from 58.1 % in 2014 to 57.4 % in 2017.

■ *Percentage of trained employed workers at 15 years of age and above by province*

Ho Chi Minh City has the highest percentage of trained employed workers at 15 years of age and above in the Southeast region with 35.7 % in 2017, more than double compared to Binh Duong with only 16.3 %, and that of the total region was 21.1 %.

■ *The unemployment rate of the labour force at working age by region*

In general, the unemployment rate of the labour force at working age in the Southeast region observed a slight increase by 0.21 %, from 2.47 % in 2014 to 2.68 % in 2017. At the same time, that of the total country also experienced a small rise from 2.1 % to 2.24 % in 2017.

■ *Underemployment rate of the labour force at working age by region*

In terms of the whole country, the underemployment rate of labour force witnessed a gradual reduction by 0.78 %, from 2.4 % to 1.62 % in 2017, whereas that of the Southeast region experienced a slight reduction by 0.1 %, from 0.61 % to 0.51 % in 2017.

■ *Unemployment and underemployment rate of the labour force at working age by region*

In terms of the Southeast region, the statistics fluctuated from 2014 to 2017, from 3.08 % to 3.19 %. On the other hand, unemployment and underemployment rates gradually dropped from 4.5 % in 2014 to 3.86 % in 2017.

2.6. Mekong River Delta

■ *Labour force at 15 years by Province*

Overall, the labour force of the Mekong Delta and Vietnam increased slightly in the past 4 years.

Specifically, from 2014 to 2015 the labour force of Mekong made an increase of 46 (thousd.per) while that of Vietnam was made 5-fold increase.

Between 2015 and 2016, the labour force of the region made a faster increase, nearly 200, and the whole country raised to 500.

Until 2017, the labour force continued to be on the increase of 80, and in VN, it increased from 445 to 823.

■ *Percentage of employed workers at 15 years of age and above among population by Province*

In short, the percentage of employed workers in the past 4 years from 2014 to 2017 of Mekong had a slight increase while that of the whole country made a slight decrease.

As can be seen, from 2014 to 2015, the percentage of the Mekong Delta was reduced by 4 % and that of Vietnam was also reduced by 5 %.

In contrast, in the next 3 years, from 2015 to 2017, the Mekong Delta increased from 57,3 % to 57,9 % and 58,2 % respectively, with Vietnam reducing slightly by 1 % each year.

■ *Percentage of trained employed workers at 15 years of age and above by province*

As a whole, the percentage of trained workers of the Mekong Delta and the whole country increased gradually each year.

Furthermore, for the first three years, the Mekong Delta and Vietnam had a similar growth, near 1 % each year.

In 2017, the Mekong Delta had a small climb of 0,1 %, while Vietnam remained.

■ *The unemployment rate of the labour force at working age by region*

In summary, the rate of unemployment of the Mekong Delta rose annually; as opposed to that of Vietnam which fell each year.

Specifically, in the first 2 years, the Mekong Delta had a strong increase to 0,71 % in 2015 and a smaller one from 2016 to 2017.

Conversely, Vietnam had a big growing change from 2014 to 2015 with 2,10 % to 2,33 %. However, it had a drop of 0,03 % in 2016 and 0,09 % in 2017.

■ *Underemployment rate of labour force at working age by region*

As a whole, the underemployment rate of the Mekong Delta had a dramatical change while Vietnam showed a downward trend each year.

From 2014 to 2015, the rate of the Mekong Delta declined from 4,20 to 3,05 %. However, that rate remained in 2016 and climbed up to 3,24 % in 2017.

In contrast, the rate of Vietnam fell each year from 2,40 to 1,62 in 2014 and 2017.

■ *Unemployment and underemployment rate of labour force at working age by region*

It was easy to see that the unemployment and underemployment rate of the Mekong Delta had a dramatical change over 4 years while that of Vietnam had a gradual fall.

In 2014 and 2015, the rate of the Mekong Delta went up 0,64 %, while in the same period it went down 0,3 % in 2015 in Vietnam.

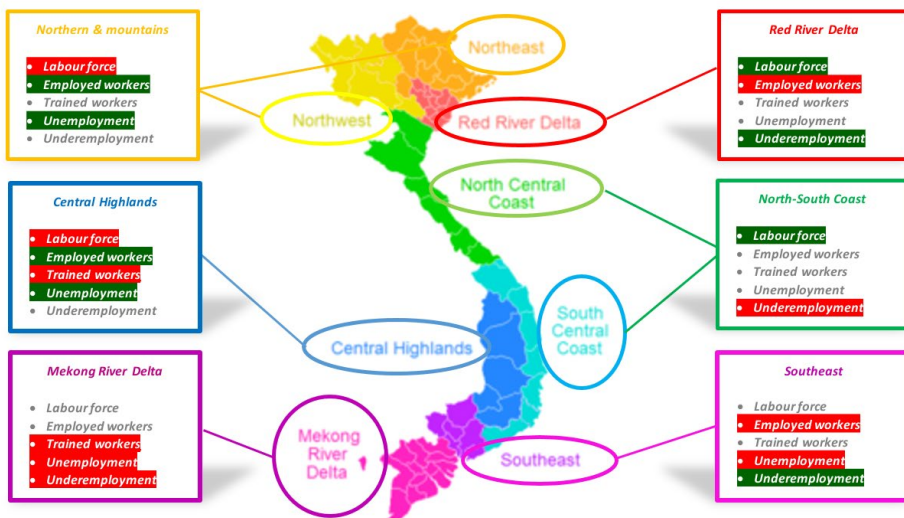
In 2016, the rate of the Mekong Delta suddenly had fell from 6,82 % to 5,94 %, after which it started to climb slightly to 6,02 %. However, in Vietnam it kept going down each year.

2.7. Summary

The regional analysis has been useful to bring to light the most important features that distinguish each region from the others in terms of the labour market.

In the following map, the boxes highlighted in green the most positive features while the negative ones are coloured in red.

Figure 9. MAPPING VIETNAMESE POSITIVE AND NEGATIVE LABOUR MARKET FEATURES



Although the most important characteristics from each region have been captured by the internal/comparative analysis, some aspects require a deeper data break down, as they can complete the map of features that characterize the Vietnamese regions.

2.7.1. Labour force at 15 years by Province

The labour force has seen substantial growth in every region in Vietnam. However, Northern Central and Central coastal area, as well as Red River Delta, have steeper slopes in the line that measures such growth.

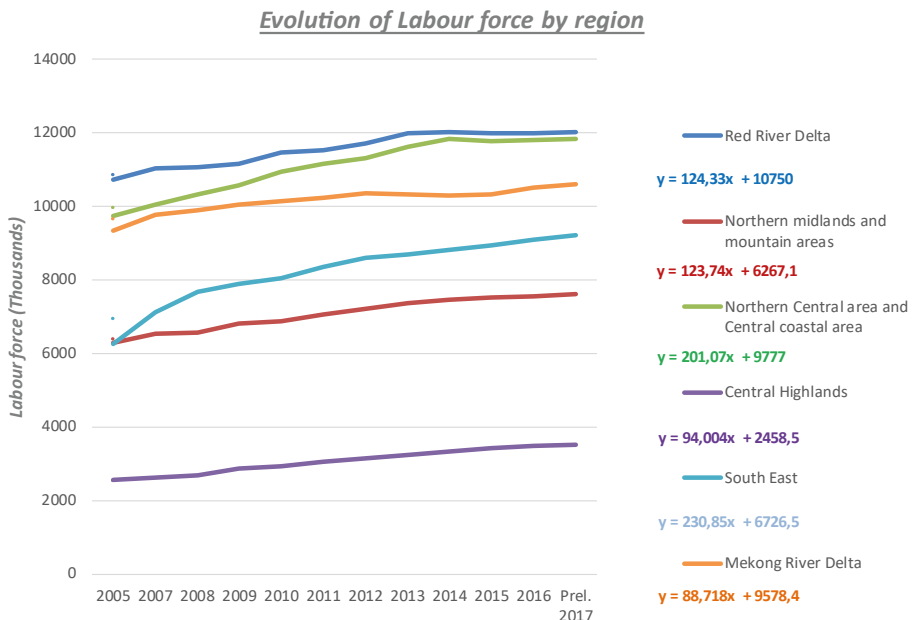
According to the International Labour Office (ILO) definition:

*“The **labour force** is the sum of persons in **employment** plus persons in **unemployment**. Together these two groups of the population represent the current supply of labour for the production of goods and services taking place in a country through market transactions in exchange for remuneration.”*

Following this definition, we calculated that the labour force in the Central Highland region is by far smaller than in the other regions. Northern midlands follow the same trend as Central Highlands.

However, in the case of South East, a significant increment of the labour force in the last ten years can be noticed in the graphic, as it can also be appreciated through its linear equation whose (x) multiplier coefficient (m) for the $y = m(x) + b$ is the highest.

Figure 10. EVOLUTION OF LABOUR-FORCE BY REGION



2.7.2. Percentage of employed workers at 15 years of age and above among population by Province

The evolution of the employed workers rate of is perhaps the most irregular among the variables that have been studied in this regional analysis.

This irregularity can be the result of the methodology that has been used by the statistical operator to collect data in the labour market.

According to ILO, it depends on the period of reference that the operator uses in its methodology:

The employed population is measured in relation to a short reference period of one week or seven days, to produce a snapshot picture of employment at a given point in time. When statistics on the employed population are collected at frequent intervals, these can serve to monitor changes over time in the levels, structure and characteristics of employment in countries.

The employed population comprises two main groups:

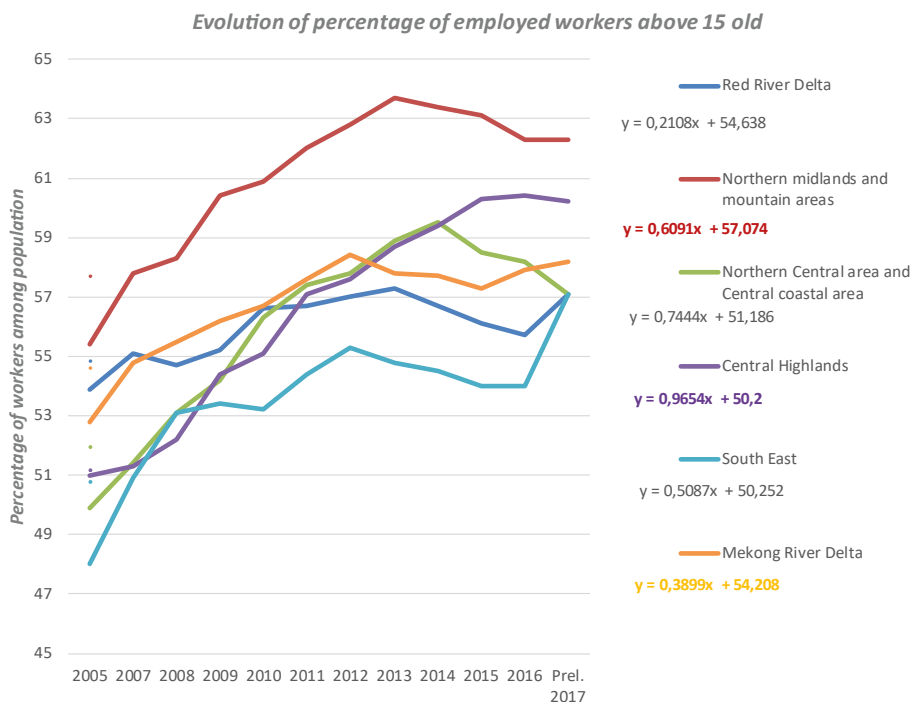
- persons employed, at work —i.e. who worked for at least one hour for pay or profit in the short reference period.
- persons employed, not at work —i.e. who had a job but did not work in the short reference period due to temporary absence from the job, for example, due to sick leave, annual leave, maternity leave, etcetera, or due to the nature of their working time arrangement, such as shift work, compensatory leave for overtime, flexitime.

However, two regions, Northern Midlands and Mountain areas as well as the Central Highlands, can be distinguished for its “more regular” evolution pattern. These regions concentrate the Vietnamese provinces with the higher rates of employed workers. On the other side, unemployment rates for both regions are the lowest considering the whole country.

The Central Highlands is distinguished for having the highest increment in the rate of workers who have employment.

At the bottom of the graphic we find the other regions employed workers rates evolutions that, despite being quite irregular, they all have positive trends, but not as notable as for the Central Highlands and Northern Midlands and Mountain areas.

Figure 11. EVOLUTION OF THE PERCENTAGE OF EMPLOYMENT WORKERS ABOVE 15 Y-OLD



Nonetheless, the irregular evolution is in general the pattern for all the regional analysis. Such irregularity could be the result of other labour market dynamics, like internal migrations, that should be considered in a deeper analysis. ILO provides detailed data and analysis on international labour migrations. The estimations for international migrations are above 80.000 for Vietnamese workers. However, the number of internal migrations is not easily reachable for research on this issue.

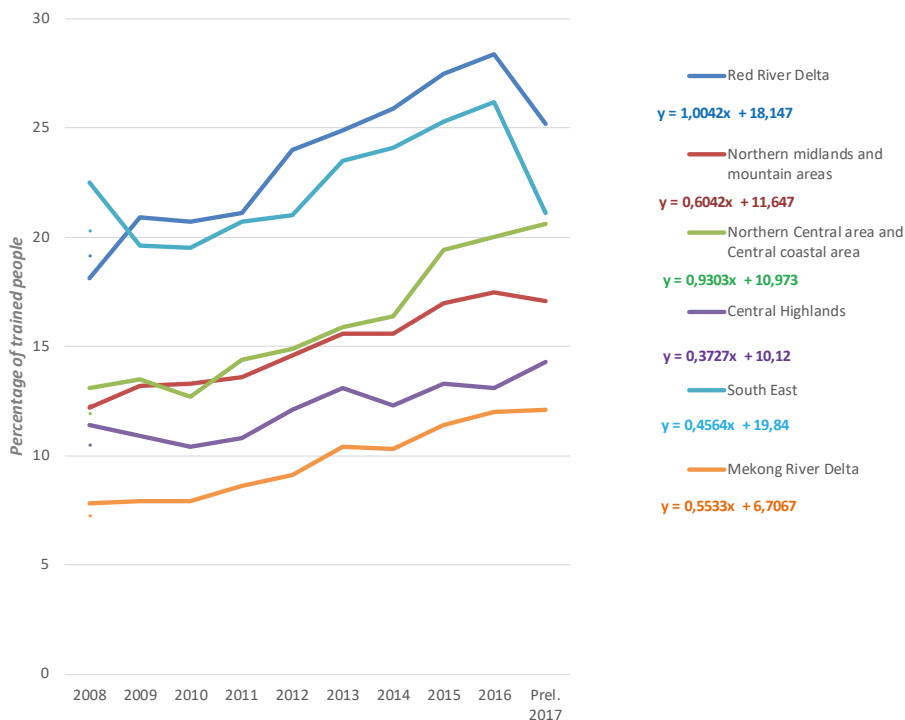
2.7.3 Percentage of trained employed workers at 15 years of age and above by province

The percentage of employed and trained people is continuously increasing. The educational capital is being introduced in the Vietnamese labour market, meaning that the workforce is being more and more trained to face the different challenges that the industry and labour market are currently facing.

Four regions have regular trends. However, Red River Delta and Southeast regions have the highest rate of the trained labour force, even though they both have dramatically broken this trend in 2017.

Figure 12. EVOLUTION OF THE PERCENTAGE OF TRAINED PEOPLE

Evolution percentage of trained people



Several studies suggest that the low rates of productivity of Vietnamese workers are due to the limited opportunities to improve their skills and productivity through appropriate training and education. This issue is going to be discussed in the following chapter as it meets the core for the need analysis. In this chapter, it is only pretended to highlight differences in this variable as they make differences between one region and the others.

2.7.4. The unemployment rate of the labour force at working age by region

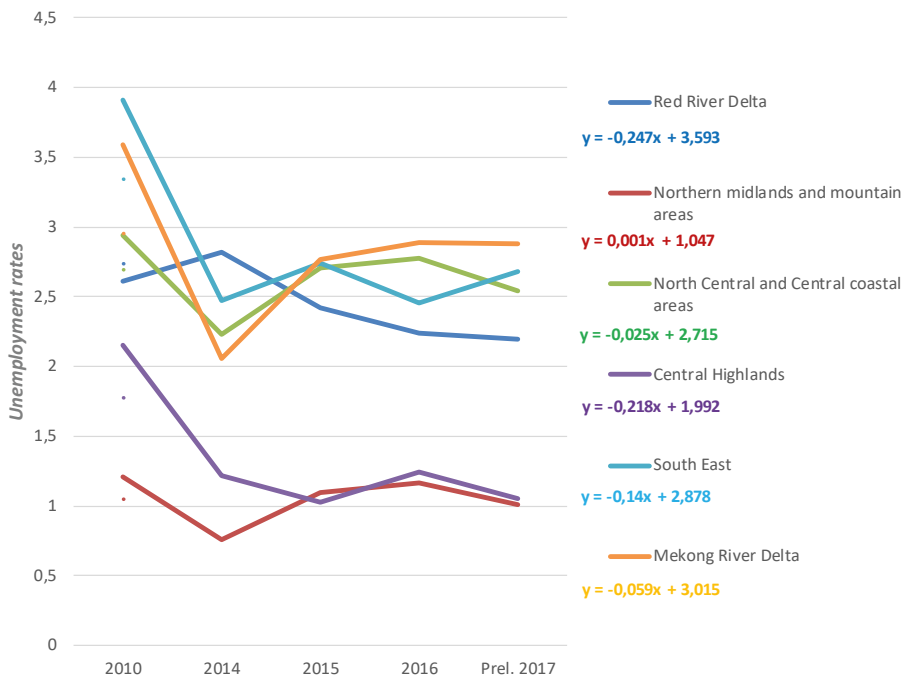
The graphic for the evolution of the unemployment rate describes two groups of regions.

- Higher unemployment rates
 - Red River Delta
 - North Central and Central Coastal area
 - South East
 - Mekong River Delta
- Lower unemployment rates
 - Northern Midlands and Mountain areas
 - Central Highlands

Even though every region is addressing a low unemployment rate labour market situation, the Northern Midlands and Mountain areas, as well as the Central Highlands, are highlighted for their low rates that move these both regions away from the others' trends.

Figure 13. EVOLUTION OF THE UNEMPLOYMENT RATES

Evolution of unemployment rates



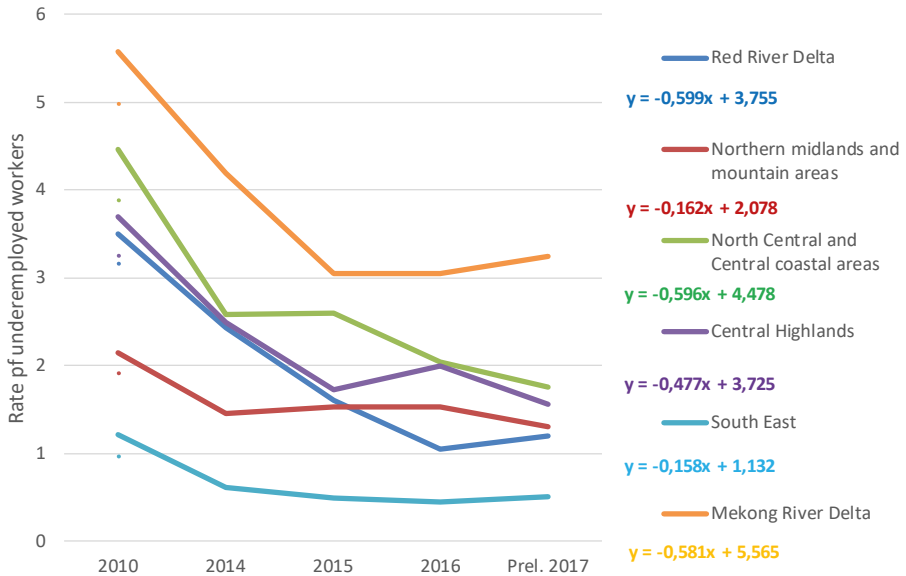
That is something that also may be related to different internal and international migration patterns. While Vietnam remains a large population in a rural area, it is gradually shifting to urban higher rates of the urban population, where unemployment rates are normally low.

2.7.5. Underemployment rate of the labour force at working age by region

The underemployment rate is also related to the unemployment rate. Actually, for this analysis, we find that the Mekong River Delta has the highest level of underemployed as well as unemployed workers and also the lowest rate of trained workers in the labour market.

Figure 14. EVOLUTION OF THE UNDEREMPLOYMENT RATE

Evolution of underemployment rate



These findings suggest that there is a lot of work to do to solve educational mismatches in the Vietnamese labour market.

Career Centres are not just a necessity for HEIs, there also seems to be a need for them within the whole labour market system.

In the following chapters, we will address our analysis to the specific needs of HEIs in terms of transitions from education to work of their graduates. However, findings obtained in this regional scope will provide a suitable contextual schema for a better understanding of the HEI role in the labour market.



V2WORK

3. Employment situation & entrepreneurial activity of Vietnamese graduates

3.1. Students & Graduates

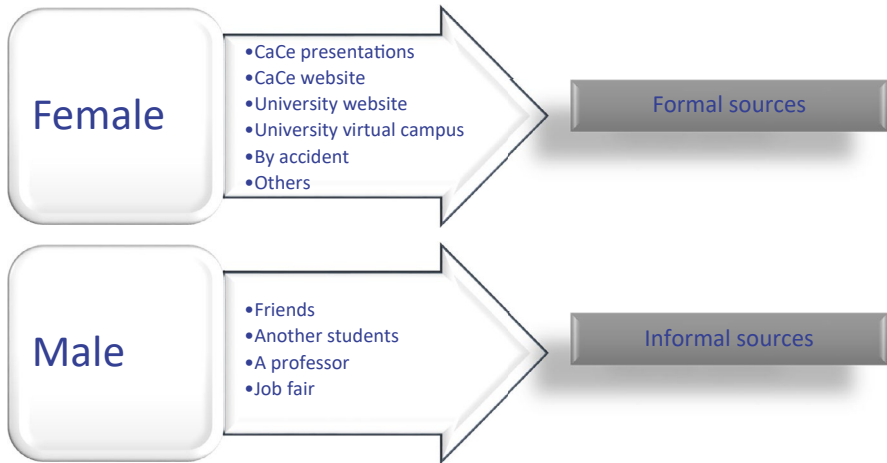
■ AWARENESS OF EMPLOYMENT SERVICES

More than **35 %** of graduates and students **are not aware** of any Career Centre (CaCe) or employment programme in their universities. The test hypothesis confirms that there is no difference between graduates' and students' profiles in terms of awareness of the availability of this kind of services. The level awareness is also independent of the gender status.

■ SOURCES OF INFORMATION ABOUT EMPLOYMENT SERVICES

Chi-square tests showed that **depending on gender**, students and graduates who are aware of the availability of an employment centre have used **different sources of information**:

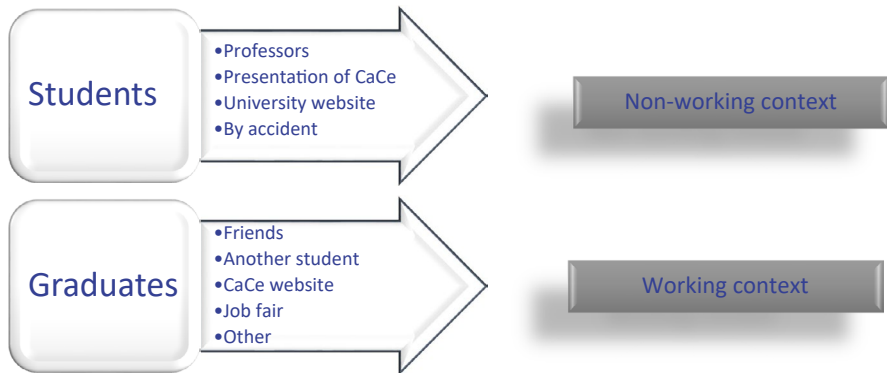
Figure 15. GENDER DIFFERENCES IN INFORMAL AND FORMAL SOURCES ON INFORMATION



Women use more formal sources, like official programs and websites. On the other hand, men find the information on the labour market from informal situations, for example through friends or academically but in extra-curricular contexts.

The academic status (student or graduate) is also associated with the source of information about employment programs. Depending on their academic status, students and graduates are informed by using different sources.

Figure 16. STUDENTS AND GRADUATES DIFFERENCES IN INFORMAL AND FORMAL SOURCES ON INFORMATION



Despite the employment programs, the University is not considered as an employment context in itself. This means that the employment programs are perhaps perceived as something closer to education rather than to work. As a result, the flow of information about labour market and Career Centres is mostly accidental. In contrast with this, graduates have a higher awareness of employment resources such as the job fairs or the CaCe websites.

In the following classification tree, we show the gender and academic status combined to analyse the awareness according to four different combinations of pairs:

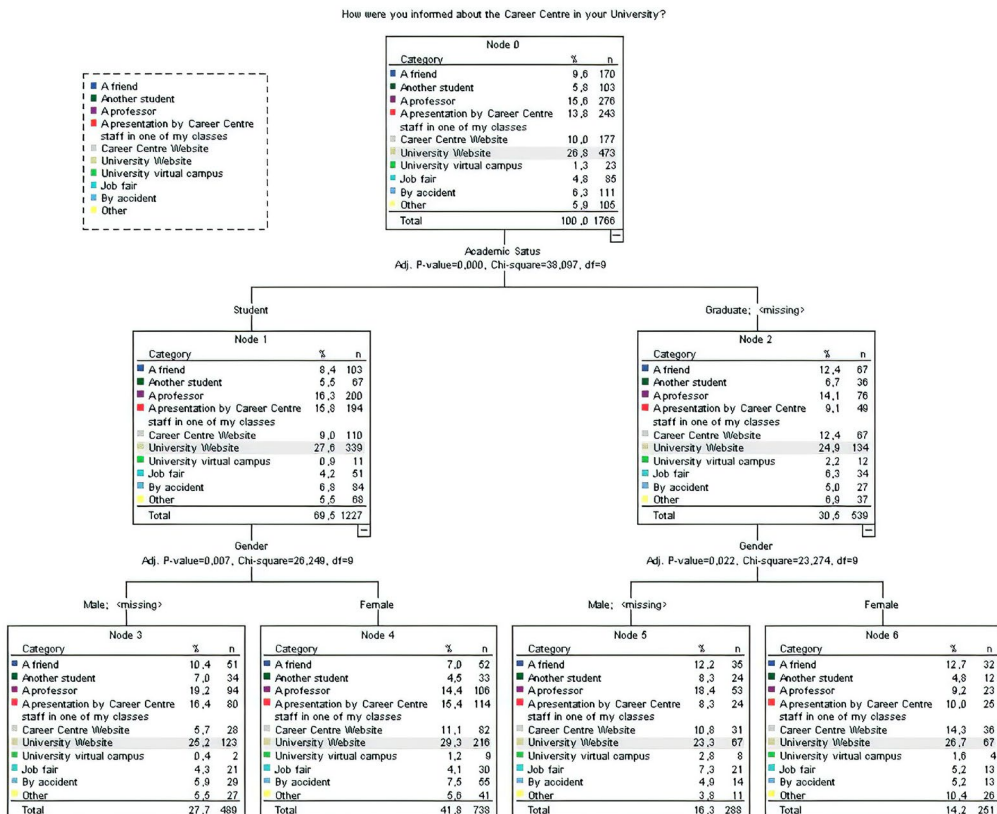
- Female – Student
- Male – Student
- Female – Graduate
- Male – Graduate

We can observe an interesting finding if we compare Nodes 3, 4, 5 and 6.

For instance, in the case of females (Figure 6) we found friends do not mean a differential source of information while they are students, but friends become important to find a job once they get a degree.

This finding should lead us to ask if the reason for this is that women are in general more focused in academic performance than men are while they are students, while men start creating an informal information network on employment opportunities since they are students. In addition, if it could be the reason why the information on employment resources at HEIs is more accidental for women than for men. The latter can somehow begin to express their job interests before they finish their studies, being a more common conversation topic among friends while they are still students.

Figure 17. SOURCES OF INFORMATION ABOUT CAREER CENTRES



- (1) We can also appreciate that for every subgroup the university website is the most important source of information about employment resources. However, for men the core role of the University website is significantly lower than it used to be while they were students and also lower for other subgroups of men compared with every subgroup of women. On the contrast, the CaCe website picks up the set of male graduates who do not use the University website as frequently as they did when they were students.
- (2) According to the classification tree, professors are an important source of information about employment programs for male students and graduates, and for female graduates. This finding is related to the one whereby for the male students the employment interest is perceived as necessary to be built as soon as possible, or just sooner if we compare with women.
- (3) Finally, job fairs are more frequented by female students and graduates, and for male students than for male graduates.

■ WILLINGNESS TO RECOMMEND CAREER SERVICES

About **86 % of students and graduates** would recommend the services delivered by the Employment Programmes to other students or graduates.

Chi square test does not show any association between the willingness to recommend the services of Career Centres to others, not with gender nor with academic status.

3.2. External Stakeholders (employers)

■ CHALLENGES TO COOPERATE WITH UNIVERSITIES IN TERMS OF EMPLOYMENT

More than **25 % of employers** think that the **improvement of employability** of graduates is a target that **does not contribute to the visibility of the company** or institution.

Besides, more than **20 %** said that there are **not enough human resources** in their companies or that a suitable **cooperation with HEIs** through formal or informal agreements **does not exist** to develop employability programs for HEI students and graduates.

No associations have been identified between gender of respondents or with the type of company or institution and the type of challenge for face by companies to cooperate with HEI in the field of employability of students and / or graduates.

■ EMPLOYERS AWARENESS ABOUT UNIVERSITY EMPLOYMENT SERVICES:

- Almost **73 % of companies are aware of the Career Centres** or Employment Programs carried out by universities.

No dependent relationship could be identified between being aware or not of the CaCe and the type of employer with $\sigma = 0,435$.

Figure 18. EMPLOYERS AWARENESS OF UNIVERSITY CACE

Employers awareness of university CaCe * Type of employer Crosstabulation

		Type of employer					Total
		Government/ Administration	Company with 25 employees or less	Company with more than 25 employees and less than 250	Company with more than 250 employees	Self-employed	
Employers awareness of university CaCe	Yes	29 85,3%	42 70,0%	96 69,6%	112 74,2%	21 72,4%	300 72,8%
	No	5 14,7%	18 30,0%	42 30,4%	39 25,8%	8 27,6%	112 27,2%
Total		34 100,0%	60 100,0%	138 100,0%	151 100,0%	29 100,0%	412 100,0%

However, when the analysis is focused on employers who are aware of CaCes, the Chi-Square confirms with $\sigma = 0,023$ that depending on the type of employer such awareness varies significantly.

Figure 19. KNOWLEDGE ABOUT CACE AT HEI

Do you have any knowledge about the Career Centres at Universities? * Type of employer Crosstabulation

		Type of employer					Total
		Government/ Administration	Company with 25 employees or less	Company with more than 25 employees and less than 250	Company with more than 250 employees	Self- employed	
Do you have any knowledge about the Career Centres at Universities?	Yes, I know several Universities that have Career Centre Services	23 79,3%	26 61,9%	64 66,7%	93 83,0%	14 66,7%	220 73,3%
	Yes, I know at least one University that has one	6 20,7%	16 38,1%	32 33,3%	19 17,0%	7 33,3%	80 26,7%
Total		29 100,0%	42 100,0%	96 100,0%	112 100,0%	21 100,0%	300 100,0%

While in the private sector: self-employers, micro enterprises and SMEs have lower awareness. The bigger the company, the higher the level of awareness. Public Administration also has a high level of awareness.

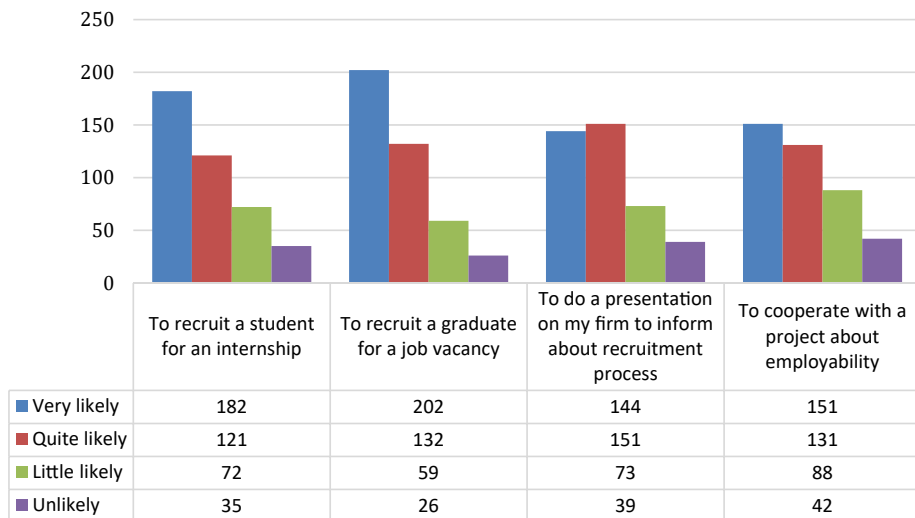
For instance, the awareness of several University Career Centre Services is considerably higher for Public Administrations and big companies. The knowledge of one University Career Centre is quite more common among entrepreneurs and SME.

■ **WHICH ARE CaCe SERVICES THAT THE EMPLOYERS WILL MORE LIKELY DEMAND IN THE FUTURE**

There are significant differences in the probability that employers contact will HEI employment services depending on the type of services that can be required.

Figure 20. PROBABILITY OF CONTACTING THE HEI EMPLOYMENT PROGRAMS

Probability of contacting the HEI employment programs for different services



Chi-square test for $\sigma = 0,002$ demonstrates that the **intermediation for employers is focused on advertising internships and job vacancy services**. Firm presentations as well as cooperation initiatives are also likely, but in a significantly lower intention than for the other options.

On the other hand, there also are some differences among the employer categories with regards to the intention to use the different services in the future. The chi-square test showed dependence. It pointed out that CaCes and/or employment HEI programs are more likely to be used as a source of human resources to feed directly into the recruitment processes. While, other types of programs like business presentations or cooperation that are normally set to work in a long term labour market provision, are less interesting or known by companies.

3.3. Academics

■ AWARENESS OF EMPLOYMENT SERVICES / CENTRES:

A high percentage of **academics (84,7 %)** have expressed that **their universities have a Centre** to support students and graduates' employability. Among the different areas of knowledge, there are no variations in such awareness.

Regarding the awareness of programs supporting employment other than those of the Career Centre, the percentage decreases lightly until 82,9 %. For this case, no differences depending on the area of knowledge or gender have been found either.

■ WILLINGNESS TO PARTICIPATE AS MENTORS TO SUPPORT STUDENTS

A high percentage of **academics, 82,5 %**, are also willing to support students and graduates as mentor or tutors to help develop their employability. No differences have been identified when comparing within the different categories of the area of knowledge, or for gender categories.

■ OPINION ABOUT THE BEST POSITION OF A CAREER CENTRE WITHIN THE HEI HIERARCHY

The majority of academics **56,8 %** understand that the best position for a Career Centre within the HEI hierarchy is in the **General Central Service's** section, department, unit, etc.

However, a large percentage of academics consider other options, among which we can number: Faculties, Student Affairs Vice – Presidency, University Foundations and Student Associations. **University Foundations and Faculties can be considering as the most important second options** in the opinion of academics.

There is no evidence of dependency about the opinion for the best position of CaCe's in the Institution for gender or area of knowledge categories.

■ OPINION ABOUT THE BEST STAFF TO OCCUPY THE POSITION OF DIRECTORS OF A CAREER CENTRE

The majority consider that Administrative Staff should carry out the direction tasks for the CaCe. Academic Staff and Technical staff are in the second and third position respectively.

Nonetheless, while the majority of **academic men, 57,7%, consider that Administrative Staff** more suitable **to guide a CaCe**, the opinion of female is more relative, as **women** who **think that Academic staff can also be an alternative** is significantly higher than men. Chi-square test reach $\sigma = 0,04$.

Figure 21. DIRECTOR OF CACE PROFILE

Crosstab

		Gender		Total
		Female	Male	
In your opinion, who from the following possible university staff members would best fit the role of the Director of Career Centre?	Academic staff	78 35,9%	35 23,5%	113 30,9%
	Technical staff	33 15,2%	28 18,8%	61 16,7%
	Administrative staff	106 48,8%	86 57,7%	192 52,5%
Total		217 100,0%	149 100,0%	366 100,0%

On the other hand, there are also some differences among the areas of knowledge. For $\sigma = 0,001$, a dependent relationship has been determined. While **humanities, educations and social science**, in spite of being oriented to Administrative Staff, are also quite **close to Academic profiles**, we found that **formal sciences** are **strongly associated with Administrative Staff** in their opinion about the type of staff for leading an HEI - CaCe.

Figure 22. AREA OF KNOWLEDGE FOR CaCe STAFF

Crosstab

		Please, indicate the area of knowledge where you develop your research or teaching work:						Total
		Education	Arts and Humanities	Social Sciences, Business, Economics and Law	Science, Mathematics and Computing	Engineering, Manufacturing and Construction	Agriculture and Veterinary	
In your opinion, who from the following possible university staff members would best fit the role of the Director of Career Centre?	Academic staff	43 36.8%	7 35.0%	38 34.5%	5 11.9%	7 17.1%	3 17.6%	103 29.7%
	Technical staff	18 15.4%	3 15.0%	9 8.2%	11 26.2%	15 36.6%	5 29.4%	61 17.6%
	Administrative staff	56 47.9%	10 50.0%	63 57.3%	26 61.9%	19 46.3%	9 52.9%	183 52.7%
	Total	117 100.0%	20 100.0%	110 100.0%	42 100.0%	41 100.0%	17 100.0%	347 100.0%

■ *ACADEMICS' AWARENESS ABOUT STUDENTS' AND GRADUATES' PARTICIPATION IN PROGRAMS TO DEVELOP EMPLOYABILITY*

More than **83 % of academics** are **aware** of the efforts of their students and graduates to face labour market challenges.

Such awareness does not distinguish gender or any of the area of knowledge that academics belong to.

■ *ACADEMICS' CONTRIBUTION TO STUDENTS' AND GRADUATES' PROGRAMS TO DEVELOP EMPLOYABILITY*

A smaller number of **academics have declared having participated in some programs to develop students and graduates' employability**. However, the percentage of these academics does not reach **66 %**.

Although there are no evidences of differences among areas of knowledge, the participation in this type of program is significantly more frequent among men than women. While the percentage of men is close to 76 %, the percentage of women does not reach the 59 %, so **male academics** are **22 % more involved in students' and graduates' employability** than female academics.

3.4. Career Centre & Management Staff

■ UNIT OF WORK OF STAFF DEVOTED TO EMPLOYABILITY PROGRAMS

A simple majority of employment service staff in Vietnamese HEIs work in services including academics: 44,7 %. In the second position, we find that 38,2 % of the staff work in CaCe units.

Figure 23. AREA OF KNOWLEDGE FOR HEI STAFF

Please indicate the University unit that you belong to

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Career / Employment Centre	47	27,6	38,2	38,2
	Entrepreneurship / Business Centre	5	2,9	4,1	42,3
	Career and Business Centre (when they are a same administrative unit)	16	9,4	13,0	55,3
	Other services including academics involving both employment and entrepreneurship (move onto question 10)	55	32,4	44,7	100,0
	Total	123	72,4	100,0	
Missing	System	47	27,6		
Total		170	100,0		

■ POSITION IN THE HEI STRUCTURE OF THE UNIT FOR THE EMPLOYABILITY PROGRAMS

45,3 % of employment services position depend on **General – Central Services**, following by University Foundation by the 25,5 % of cases.



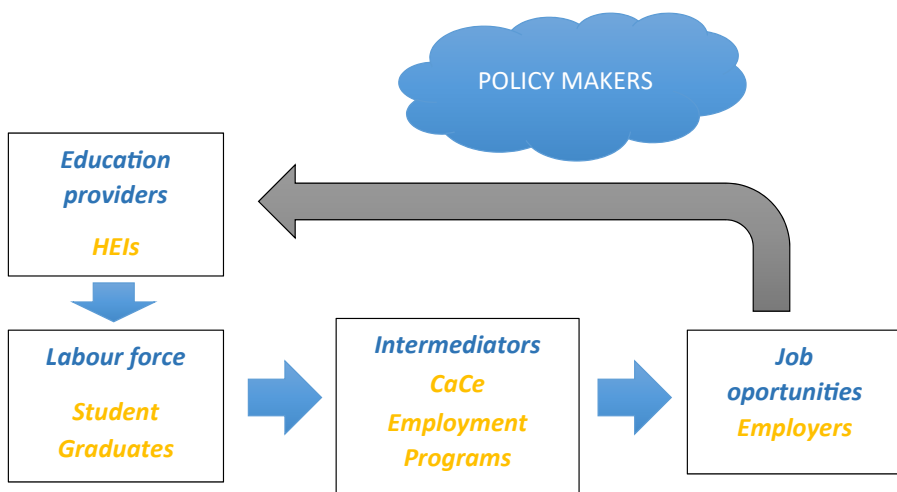
V2WORK

4. Identifications of potential mismatches and needs in the labour market

Apart from the questions addressed specifically to each target group, a set of questions were designed in such a way as to be answered by every person from every sample.

This set of questions have been elaborated to capture the most important labour market mismatches and needs that can be corroborated by all or at least several approaches represented by the set of the different stakeholders. Stakeholders can perceive a factor singularly and differently from others (mismatches) or reproduce the same structure of perception on individual factors (needs) operating in the labour market system:

Figure 24. THE LABOUR MARKET ECOSYSTEM



Although **mismatches** can also be described as a need themselves, for the analysis that we are carrying out, mismatches are required to be explained as an internal imbalance among the labour market actors and not as a generic labour market need. We therefore understand a mismatch as a labour market problem that requires that of every stakeholder a better comprehension of other stakeholder's roles and needs, to be solved to progress in **creating a harmonised and modern labour market model**.

Needs, on the other hand, are referring to the set of labour market problems that are being raised not necessarily as a result of the labour market stakeholders, requiring a wider scope for their comprehension.

4.1. Potential mismatches

■ HEI COMMITMENT WITH EMPLOYABILITY OF STUDENTS AND GRADUATES

Not every category of stakeholder perceives the same level of commitment of HEIs with employability of students and graduates.

In general, the most frequent category of HEI's commitment perceived is **"Yes, but not enough as it would be necessary"**, that reaches 43 % of people considering every target group.

However, among the stakeholder's perception, we can distinguish two important features that are the basis of an important mismatch in terms of the importance of employability for the different actors in the labour market system:

■ Low level of commitment, or perception of little commitment

More than 41 % of people who were interviewed think that the University of reference is committed with employability, confirming the perception that the efforts are being carried out in the right direction.

However, **43 %** of people think that **more efforts should be done** to satisfy labour market and graduate and students needs for the transition from education to work.

Although very few people perceive that HEIs are not doing any kind of, or too little, effort, there is a large group of people perceiving the need for increasing such effort. As a result, this must be understood not only as of the demand of external and internal stakeholders, but also as confirmation of the central role of the HEI to strengthen students' and graduates' employability.

■ *Heterogeneity among stakeholders*

The perception about the commitment of HEIs strongly depends on the target group with a $\sigma = 0,000$.

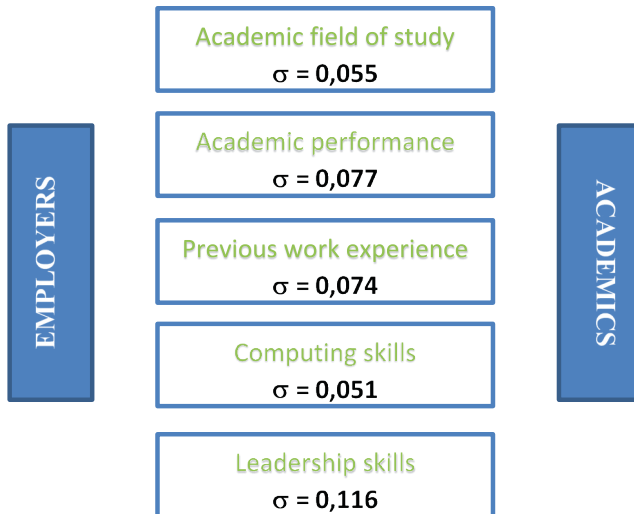
In the case of CaCes and academics (internal stakeholders), the percentage of those that think that the university is committed with employability is higher in comparison with external stakeholders. Students and employers particularly perceive the need of stronger efforts. The higher demand of HEI efforts by students and employers might have to do with their role in the labour market, where they concentrate the biggest expectations for future opportunities, while graduates and academics look at the labour market from possibly more stable positions.

■ *SIMILAR PERCEPTIONS ON THE INDIVIDUAL FACTORS THAT INCREASE THE EMPLOYABILITY OF STUDENTS AND GRADUATES*

The personal factors that have been analysed as determinants for the employability have shown that stakeholders have controversial points of view. Only five factors to contribute to employability are equally perceived by employers and academics:

Figure 25. WHAT PERCEPTIONS ABOUT ACADEMIC FACTORS FOR EMPLOYABILITY MAKE EMPLOYERS AND ACADEMICS SIMILAR?

EQUAL PERCEPTION ABOUT THE IMPORTANCE OF ACADEMIC FACTORS FOR EMPLOYABILITY

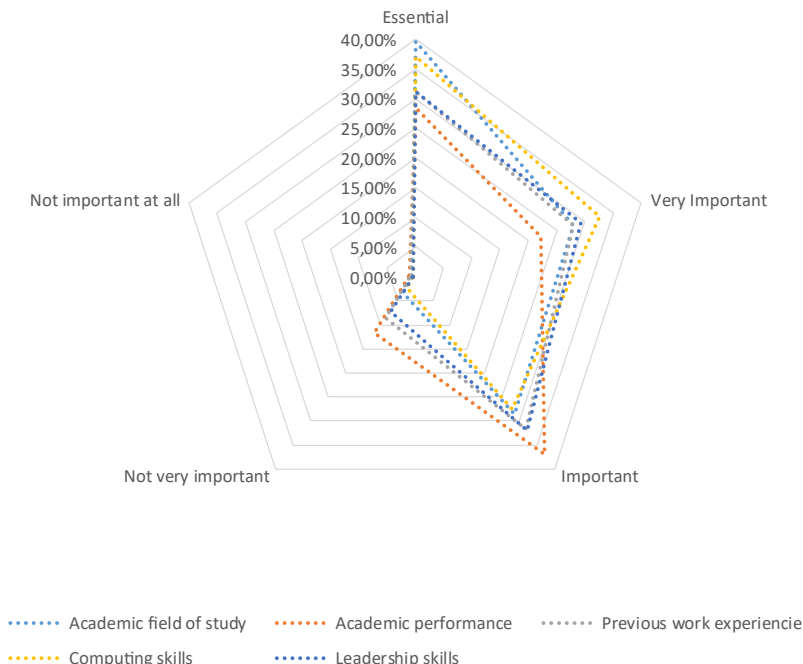


The diagram above shows and demonstrates that every stakeholder follows the same pattern when perceiving the five factors. However, each factor is different from the others.

More precisely, the differences among the five factors that every stakeholder perceives, in the same way, are represented in the graphic below:

Figure 26. WHAT PERCEPTIONS ABOUT ACADEMIC FACTORS FOR EMPLOYABILITY MAKE EMPLOYERS AND ACADEMICS DIFFERENT?

DIFERENCES WITHIN THE FACTORS WITH SIMILAR PATERNS OF PERCEPTIONS BY EXTERNAL STAKEHOLDERS



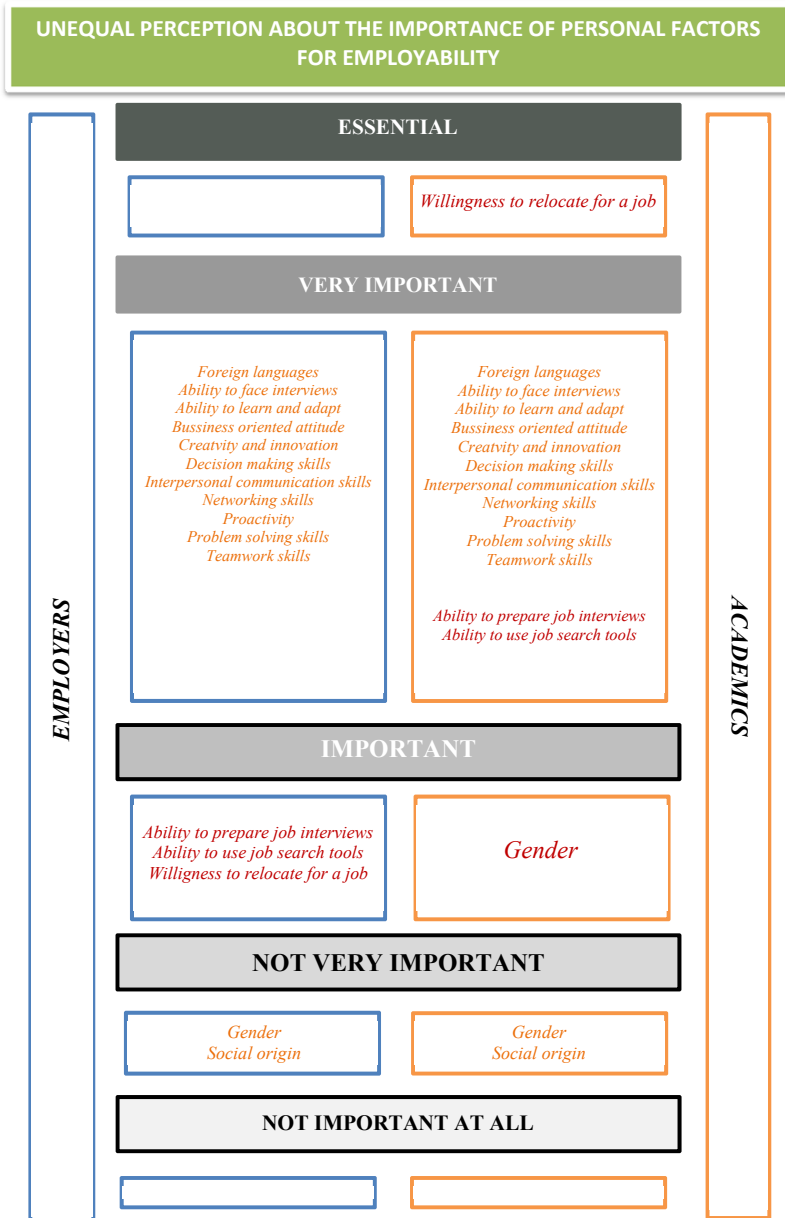
This set of five personal factors can be considered continuous variables describing the Vietnamese labour market. By continuous variables, we understand that they behave in the same way for every labour market stakeholder, although each factor has not the same importance as the others:

- **ACADEMIC FIELD OF STUDY:** This analysis confirms that the **academic inputs** or, what is the same: the competencies that have been acquired in the University, are the **focal point** that **features the labour market opportunities** for graduates. In other words, the **university background** counts a lot to increase employability, this underlines again the central role of University.

- **ACADEMIC PERFORMANCE:** However, the *academic performance* by the students and graduates are not as highly valued as the academic field of knowledge and performance. It has been also demonstrated that the higher importance of the backgrounds is generally repeated for every external as well as internal stakeholder, where we find the academics.
- **COMPUTING SKILLS:** The capacity to deal with new technologies is a generalised factor that is perceived not only as an employability developer, but further on is considered a requirement in the labour market. The transversal and complementary role, although required, that this factor runs in the labour market and in comparison with the academic inputs, places it in a subordinated position compared with academic backgrounds, but higher compared with the academic performance.
- **PREVIOUS WORK EXPERIENCE:** This factor is also considered critical for increasing the employability by every stakeholder, demonstrating the higher value of programs that take students to real labour situations, like curricular and/or non-curricular internships, where students can gain previous experience and knowledge that contribute to softening the transition from education to work. This value is perceived not only by students and graduates but also for employers who highlight the resulting capacity to adapt faster to complex tasks.
- **LEADERSHIP SKILLS:** On the other hand, the focus on leadership skills suggests the higher positions of responsibility that graduates are expected to occupy in companies. Other studies have highlighted this factor as well, and they have placed this factor in a lower position compared with the other competences that have been also included in the analysis, as it occurs in this study as well.

The perception about the importance of these five factors is equally redistributed among all the stakeholders. For this analysis, the potential mismatches could come from the possible controversial factors, something that did not occur, but not from controversial opinions about them. Following, an analysis focused in the differences rather than in similarities of potential mismatches is carried out from stakeholders' perceptions differences.

Figure 27. PERSONAL FACTORS THAT INCREASE THE EMPLOYABILITY



For a better understanding and visualization of potential mismatches within the education and labour market binomial, we have chosen the two actors who best represent the needs of education and labour market:

- **Education: Academics**
- **Labour market: Employers**

Then, we did a comparative analysis in order to put forward the most important differences describing potential mismatches.

All the factors listed in yellow in the diagram above, refer to the factors that, having the central tendency in the same category of importance, its dispersion measures indicates that the distribution of cases are significantly different when we compare them between academics and employers.

On the other hand, factors in red refer to factors whose central tendency, as well as dispersion, draw a distribution for academics that is statistically different from employers for both parameters.

■ **Willingness to relocate for a job**

One of the most important challenges that companies have needed to face has to do with globalisation.

In this context, we have surprisingly noticed that while the willingness to relocate for a job is perceived by academics as essential, employers skip two positions down in the scale considering this factor as just important.

Such a mismatch may have to do with dyssynchrony that is operating in the relationship between employers, whose business reality is somehow more localised, and academics, whose view of the labour market is higher in terms of globalisation and future, where local restrictions are overcame.

■ *Ability to prepare job interviews and to use job search tools*

In the same line as in the analysis of the last item, academics have a more sophisticated vision on the labour market, where the employers are using recruitment tools more associated to the SME, micro enterprises or just family companies.

For such employers, other methods like word-of-mouth are more efficient for the human resources recruitment procedures. This also suggests a potential mismatch in terms of both sides' level of modernisation of the labour stakeholders' tools.

In spite of the fact that this finding is needed for a deeper analysis to bring to light the real situation and magnitudes of the Vietnamese labour market mismatches, we can point out that beyond the reasons why, the different actors are using different criteria to solve the same problem depending on their position as educator or human capital manager.

■ *Gender*

Academics consider that in the labour market, gender is a factor which importance is divided between the Important and Not Very Important categories of relevance, while employers consider it Not Very Important.

According to other findings in this same study, graduates confirm that gender is not perceived as an important factor to have success in the job search. Women and men feel that their work are in the same level related to their studies.

In case of satisfaction, we find that women are happier than men are with their jobs for a $\sigma = 0,091$.

The difference of academics' opinion could be related to the higher knowledge they may have of gender studies. We have also checked out the effects of gender of the academics who express his / her opinion. With a $\sigma = 0,091$ the gender of Academics does not vary the opinion regarding the importance of gender factor in the job search, concluding that any difference is exclusively related to higher awareness of academics when we compare them with employers.

The following table summarises the distributions and chi square test results for the set of variables that make a difference between academics and employers.

For the analysis we did above we have summarised and ordered for a more comprehensive analysis.

Figure 28. DIFFERENCES BETWEEN ACADEMICS AND EMPLOYERS ABOUT PERSONAL FACTORS FOR EMPLOYABILITY

		Essential	Very Important	Important	Not very important	Not important at all	Test chi square
Foreign languages skills	Employers	144	171	82	3	2	$\sigma = 0,000$
	Academics	212	227	52	0	1	
		Essential	Very Important	Important	Not very important	Not important at all	
Ability to face a job interview	Employers	101	149	125	26	3	$\sigma = 0,000$
	Academics	167	213	102	8	2	
		Essential	Very Important	Important	Not very important	Not important at all	
Ability to learn and adapt	Employers	116	188	92	9	2	$\sigma = 0,000$
	Academics	194	237	60	1	1	
		Essential	Very Important	Important	Not very important	Not important at all	
Ability to prepare a job application (CV, Cover letter.)	Employers	109	127	145	16	5	$\sigma = 0,000$
	Academics	168	185	133	6	1	
		Essential	Very Important	Important	Not very important	Not important at all	
Ability to use the job searching resources (job portals...)	Employers	106	133	139	22	3	$\sigma = 0,000$
	Academics	181	186	110	15	1	
		Essential	Very Important	Important	Not very important	Not important at all	
Business orientated attitude	Employers	99	177	114	9	2	$\sigma = 0,000$
	Academics	179	210	95	4	2	
		Essential	Very Important	Important	Not very important	Not important at all	
Creativity and innovation	Employers	108	147	121	22	2	$\sigma = 0,010$
	Academics	180	191	107	12	1	
		Essential	Very Important	Important	Not very important	Not important at all	
Decision making skills	Employers	91	158	132	17	2	$\sigma = 0,000$
	Academics	165	208	107	10	1	
		Essential	Very Important	Important	Not very important	Not important at all	
Interpersonal and communication skills	Employers	113	182	97	7	1	$\sigma = 0,010$
	Academics	182	236	68	4	1	
		Essential	Very Important	Important	Not very important	Not important at all	
Networking skills	Employers	121	160	104	15	2	$\sigma = 0,019$
	Academics	162	226	96	7	1	
		Essential	Very Important	Important	Not very important	Not important at all	
Proactivity	Employers	121	172	99	7	1	$\sigma = 0,001$
	Academics	197	215	77	4	0	
		Essential	Very Important	Important	Not very important	Not important at all	
Problem solving skills	Employers	105	171	118	5	1	$\sigma = 0,000$
	Academics	178	235	70	6	0	
		Essential	Very Important	Important	Not very important	Not important at all	
Teamwork skills	Employers	123	165	103	9	1	$\sigma = 0,000$
	Academics	181	218	89	3	0	
		Essential	Very Important	Important	Not very important	Not important at all	
Willingness to relocate for a job	Employers	97	94	147	50	10	$\sigma = 0,004$
	Academics	157	142	139	49	6	
		Essential	Very Important	Important	Not very important	Not important at all	
Gender	Employers	34	44	81	144	94	$\sigma = 0,018$
	Academics	60	61	83	83	81	
		Essential	Very Important	Important	Not very important	Not important at all	
The social origin (Education and Job status of parents)	Employers	40	40	84	130	103	$\sigma = 0,017$
	Academics	65	66	90	181	89	

4.2. Needs

The classification tree that we can see below, describes the sub-divisions of Academics, Employers and Graduates opinions about several aspects of the labour market.

CaCe and HEI management staff target group have been removed, as this stakeholder's sample is not statistically representative for this analysis as a result of a few answers in comparison with other stakeholders. Students have been considered not being directly involved in the labour market dynamics so that they are not included in the analysis either.

For the analysis of the needs in the labour market, a total of eleven variables have been defined and introduced. Each of them has been valued by the stakeholders considered for this analysis:

- Employers not recruiting graduates
- Lack of job vacancies
- Complex hiring procedures
- Educational mismatch with corporation priorities
- Labour market laws
- Inequality for women
- Inequality for minorities
- Lack of opportunities to work abroad
- Lack of recognition of Vietnamese degrees
- Lack of regulation of work-life balance
- Lack of intermediation agencies

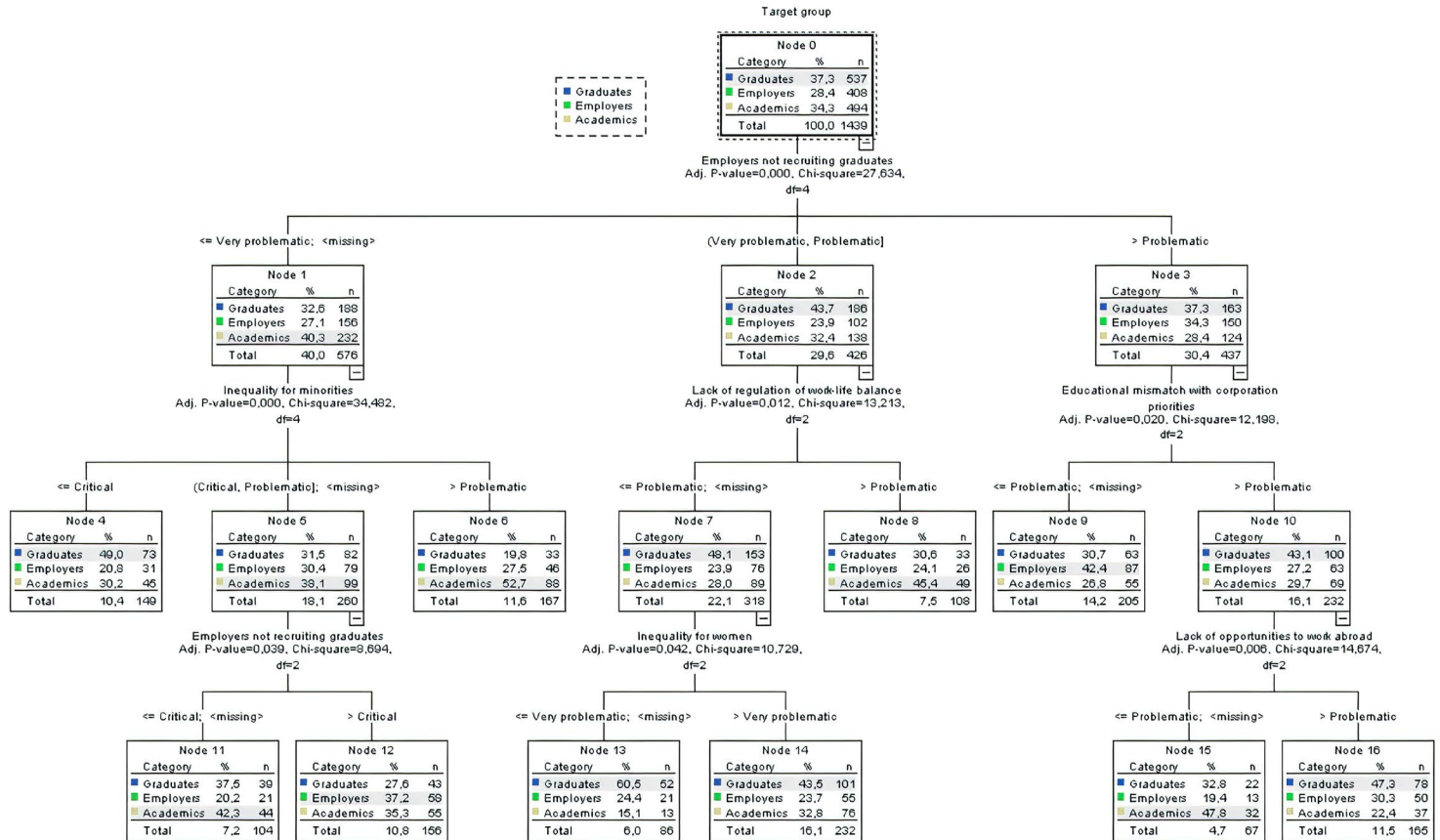
The first variable that is considered by stakeholders is "Employers not recruiting graduates". For this variable, the stakeholders make different statements about the importance it has in the labour market.

From this variable there are different itineraries which ways that that stakeholders break from different opinions that they have from other variables.

In order to distinguish more clearly the different opinion chains, we need to do a bottom up reading of the tree.

Graduate Employment and Entrepreneurship in Vietnam

Figure 29. THE DIFFERENCES AMONG TARGET POPULATIONS ON THE MOST IMPORTANT NEEDS IN THE VIETNAMESE LABOUR MARKET



Following, we summarise the 10 different itineraries expressing the labour market needs:

- **Academics (node 15)** who consider *“Lack of opportunities to work abroad”* is less than problematic, *“Educational mismatch with corporation priorities”* more than problematic, and *“Employers not recruiting graduates”* more than problematic.
- **Academics (node 6)** who consider that *“Inequality of minorities”* is more than problematic, and *“Employers not recruiting graduates”* is less than very important.
- **Academics (node 8)** who consider *“Lack of regulation of labour market balance”* less than problematic, and *“Employers not recruiting graduates”* very problematic or problematic.
- **Employers (node 12)** who consider that *“Employers not recruiting graduates”* is more than critical and *“Inequality of minorities”* is critical or problematic.
- **Employers (node 9)** who consider *“Educational mismatch with corporation priorities”* is less than problematic and *“Employers not recruiting graduates”*, more than problematic.
- **Graduates (node 11)** who consider that *“Employers not recruiting graduates”* is less than critical and *“Inequality of minorities”* is critical or problematic.
- **Graduates (node 13)** who consider *“Inequality for women”* is less than very problematic, *“Lack of regulation of labour market balance”* less than problematic, and *“Employers not recruiting graduates”* very problematic or problematic.
- **Graduates (node 14)** who consider *“Inequality for women”* is more than problematic, *“Lack of regulation of labour market balance”* less than problematic, and *“Employers not recruiting graduates”* very problematic or problematic.
- **Graduates (node 16)** who consider *“Lack of opportunities to work abroad”* is more than problematic, *“Educational mismatch with corporation priorities”* more than problematic, and *“Employers not recruiting graduates”* more than problematic.

- **Graduates (node 4)** who consider that *“Inequality of minorities”* is less than critical, and *“Employers not recruiting graduates”* less than very problematic.

Summarising, the analysis of classification trees brings to light 10 needs defined from the combination of the 11 labour market problems and the three stakeholder views. Classified by stakeholders, the most important characteristics are as follow:

■ **ACADEMICS**

- *Employers not recruiting graduates*
- *Inequality of minorities*
- *Educational mismatch with corporation priorities*

■ **EMPLOYERS**

- *Employers not recruiting graduates*
- *Inequality of minorities*

■ **GRADUATES**

- *Employers not recruiting graduates*
- *Inequality for women*
- *Lack of opportunities to work abroad*

Inequality of minorities meet the Academics’ and Employers’ view about labour market problems.

Graduates have the most singular point of view about the labour market needs, and they are related to the inequality of women and the lack of opportunities to work abroad.

The other labour market problems included for the analysis, are not remarkable for distinguishing stakeholders’ points of view, and comparing with the items that have demonstrated capacity for the sample segmentation.

Lack of employers who recruit graduates is a constant problem that is present in every itinerary.

5. Entrepreneurship

There is an extended consensus for the understanding of entrepreneurship as a key activity for developing countries, where there is a need to create vectors to introduce innovation and modernise industry and society.

In this sense, entrepreneurship is a socio-economic supportive activity that not only facilitates the dissemination of technology and knowledge generated by HEIs to industry, but also means a critical source of transition from education to work for students and graduates who can develop their professional careers as entrepreneurs.

Vietnam is a country that is not excluded of this understanding of entrepreneurship. As pointed out by Khuong and Huu An (2016): *Entrepreneurship activities can be found in almost every corner in Vietnam. They have developed countless numbers of forms and the diversity of scales that turn entrepreneurship into the driving force in the economy recently. (...) Thousands of new firms were established and millions of entrepreneurs attempted to start their own business venture to catch the new wave of economic growth. With this rocket development of private business, entrepreneurship has contributed approximately 40 % of GDP to the economy. In the industrial sector, the contribution of private entrepreneurship has increased from 24.6 % in the year 2000 up to 37 % 5 years later.*

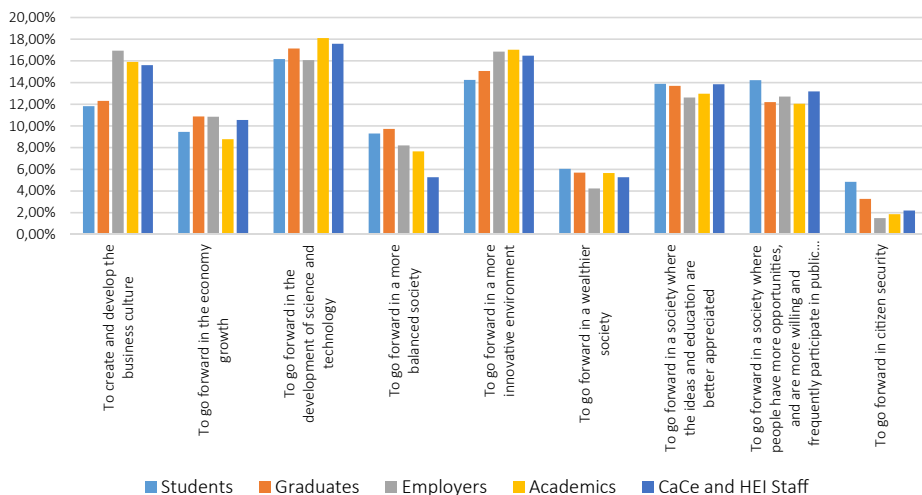
Bearing in mind this fertile field to grow potential ventures in Vietnam, we have carried out an analysis on the potential fields of application that are in the minds of stakeholders, who introduce through their opinions their own entrepreneurship expertise as well as their knowledge about the entrepreneurship context as actors of industry and education.

V2WORK stakeholders were asked about a set of representative fields of application for students and graduates entrepreneurship projects. Even though they are not necessarily drawing from the details of students' and graduates' entrepreneurship ideas, their opinion can more or less guide us to describe the biggest and most important trends and fields where entrepreneurs' intentions are being projected in terms of ventures.

The following bar chart summarises the reasons why entrepreneurship should be supported with public resources. The questions were designed as propositions to develop different fields of application of entrepreneurship, especially for HEI students and graduates.

Figure 30. THE DIFFERENCES AMONG TARGET POPULATIONS ON THE MOST IMPORTANT NEEDS IN THE VIETNAMESE LABOUR MARKET

Differences among stakeholders' opinion about the reasons why to support entrepreneurship



Science and technology is by far the most frequent category. Chi-square test $\sigma = 0,000$, means that there are differences among stakeholder when they give their opinion about the reason to invest in developing entrepreneurship. However, every stakeholder agreed that going forward in the development of

sciences and technology is particularly the most important reason to invest public resources. Technology and sciences then is not only the most frequent category, but also the one that has the highest level of agreement among the stakeholders.

The rest of the categories are distributed very irregularly, with the opinions of stakeholders also irregular, as we can see in the table below.

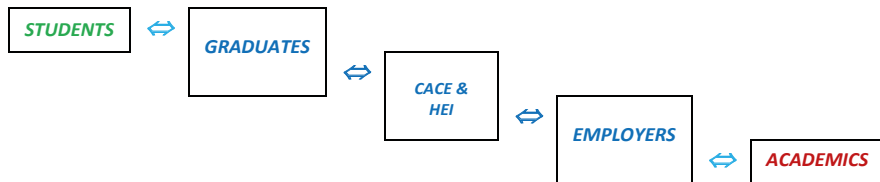
To go forward in the development of sciences and technology and ***To go forward in a society where ideas and education are better appreciated***, are the two categories that have been pointed out because of the number of people who chose both these options, as well as because of the low standard deviation values representing differences among stakeholders.

Figure 31. REASONS WHY TO GO FORWARD IN THE ENTREPRENEURSHIP SUPPORT

Categories of reasons	Students	Graduates	Employers	Academics	CaCe and HEI Staff	TOTAL	Standard deviation
<i>To create and develop the business culture</i>	↓ 11,83%	↓ 12,31%	↑ 16,95%	↑ 15,90%	↔ 15,60%	1199	2,30%
<i>To go forward in the economy growth</i>	↔ 9,45%	↑ 10,87%	↑ 10,86%	↓ 8,78%	↑ 10,55%	878	0,94%
<i>To go forward in the development of science and technology</i>	↓ 16,16%	↔ 17,15%	↓ 16,06%	↑ 18,10%	↔ 17,58%	1492	0,89%
<i>To go forward in a more balanced society</i>	↑ 9,30%	↑ 9,72%	↔ 8,21%	↔ 7,65%	↓ 5,27%	781	1,75%
<i>To go forward in a more innovative environment</i>	↓ 14,25%	↔ 15,07%	↑ 16,86%	↑ 17,03%	↑ 16,48%	1366	1,22%
<i>To go forward in a wealthier society</i>	↑ 6,05%	↑ 5,70%	↓ 4,24%	↔ 5,66%	↔ 5,27%	503	0,70%
<i>To go forward in a society where the ideas and education are better appreciated</i>	↑ 13,88%	↑ 13,69%	↓ 12,62%	↔ 12,97%	↑ 13,85%	1206	0,57%
<i>To go forward in a society where people have more opportunities, and are more willing and frequently participate in public affairs</i>	↑ 14,23%	↓ 12,20%	↔ 12,71%	↓ 12,04%	↔ 13,19%	1178	0,88%
<i>To go forward in citizen security</i>	↑ 4,85%	↔ 3,28%	↓ 1,50%	↓ 1,86%	↓ 2,20%	310	1,35%
TOTAL	4084	1738	1133	1503	455	8913	

Following, we summarise entrepreneurship profiles based on the reasons that they consider as the most important to invest in developing entrepreneurship programs:

Figure 32. WHO IS DIFFERENT AND WHO IS SIMILAR IN THE OPINION TO SUPPORT ENTREPRENEURSHIP?



The diagram above shows how similar each stakeholder is to others. We find in the central positions the stakeholders that share the same type of opinions with at least two other stakeholders, while in the extremes (students and academics), they have a similar profile with only another stakeholder.

This means that Graduates, CaCe Staff and Employers have a higher level of agreement with the whole set of stakeholders with regards to entrepreneurship, while students and academics are more different and have singular perceptions with regards to the reason for supporting entrepreneurship with public resources.

- *What makes academics different from others?*
- **SCIENCE AND TECHNOLOGY**

According to the previous section, academics' view is oriented to developing science and technology. However, this topic has been remarked in the analysis because of its high centrality and low dispersion, which mean that for every stakeholder it is a reason with a similar level of importance.

On the other hand, academics are a bit closer to employers than to graduates, as they share with them similar ideas about going forward in a more innovative environment as well as to create and develop business culture. See figure below:

Figure 33. CLUSTERS OF REASONS TO GO FORWARD WITH ENTREPRENEURSHIP SUPPORT PROGRAMS

Academics	Employers	CaCe and HEI management staff	Graduates	Students
	<i>To go forward in the economy growth</i>	<i>To go forward in the economy growth</i>	<i>To go forward in the economy growth</i>	
			<i>To go forward in a more balanced society</i>	<i>To go forward in a more balanced society</i>
			<i>To go forward in a wealthier society</i>	<i>To go forward in a wealthier society</i>
		<i>To go forward in a society where the ideas and education are better appreciated</i>	<i>To go forward in a society where the ideas and education are better appreciated</i>	<i>To go forward in a society where the ideas and education are better appreciated</i>
<i>To go forward in a more innovative environment</i>	<i>To go forward in a more innovative environment</i>	<i>To go forward in a more innovative environment</i>		
<i>To create and develop the business culture</i>	<i>To create and develop the business culture</i>			
<i>To go forward in the development of science and technology</i>				
				<i>To go forward in a society where people have more opportunities, and are more willing and frequently participate in public affairs</i>
				<i>To go forward in citizen security</i>

■ *What makes students and graduates different from others?*

■ **THE SOCIAL FACTORS**

Students and graduates perceive entrepreneurship from a social point of view. Creating more opportunities for people and participating in public decision making as well as increasing the level of citizen security, are the most important reasons for them.

In any case, the student profile is very close to graduates', as they share the same opinions on three of the whole set of categories of reasons: (1) To go forward in a more balanced society, (2) To go forward in a wealthier society and (3) To go forward in a society where the ideas and education are better appreciated.

Graduates also consider going forward with economic growth a reason to invest in entrepreneurship.

■ *Employers, CaCe staff and graduates similarities*

■ **ECONOMIC GROWTH**

These three target groups agree in two of the reasons why to invest in entrepreneurship programs: (1) To go forward in economic growth and (2) to go forward in a more innovative environment.

■ **SHOULD STUDENTS EXPLORE THEIR ENTREPRENEURSHIP POTENTIAL WHILST AT UNIVERSITY?**

Every stakeholder thinks that students' entrepreneurship potential should be explored as both curricular and extracurricular activities. In case of having to choose between the two options, extracurricular activities are preferred.

In general, only 8,3 % of stakeholders consider that entrepreneurship should not be explored whilst in university studies.

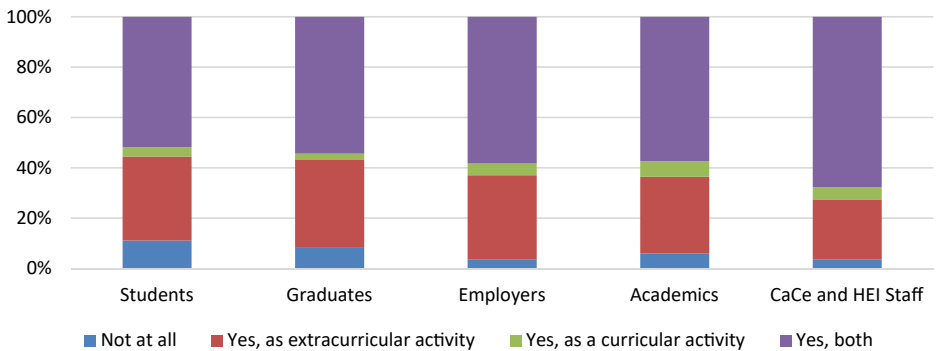
However, there are some differences among stakeholders that have been confirmed for $\sigma = 0,000$.

Stakeholders can be sorted from more to less level of agreement with the idea that entrepreneurship potential should be explore by students:

1. *Students*
2. *Graduates*
3. *Academics*
4. *Employers*
5. *CaCe and HEI staff*

Figure 34. EXPLORATION OF STUDENTS' ENTREPRENEURSHIP PROFILE WHILS AT UNIVERSITY

Exploration of students' entrepreneurship profile whilst at University



As a result, we can settle that entrepreneurship capacities are more demanded in extra-academic context and also by intermediation stakeholders. Although there are very little differences in the rejection of the idea of developing entrepreneurial skills, it is more frequent among the students, academics and graduates.



V2WORK

6. Recommendations

6.1. Students and Graduates

1. DRIVE THE ATTENTION OF THE YOUNGEST STUDENTS TO BUILD THEIR OWN EMPLOYABILITY:

Graduates actively use the intermediation resources delivered by their University. However, the awareness of students about the availability of intermediation services is not high enough.

Programs that stimulate the commitment of students with their employability from their very first university courses can strongly contribute to more efficient intermediation results, as the students roll back their future professional aims to the present. They can thus increase their level of awareness about their employment objectives, as well as their strengths and weaknesses, creating an optimal context for Career Centres (CaCe) where activities can be allocated to students' real employability needs.

Graduates keep in contact from their time at University, and this contact is usually an active network to be informed on CaCe activities and job opportunities.

2. INTRODUCE A GENDER PERSPECTIVE

It has been demonstrated that female students are first focused on academic performance when they are students and on their employment objectives when they are graduates.

Male students, on the other hand, are more involved in employability issues than female students.

As a result, a more balanced implication among women and men with regards to employability and academic performance should contribute to equality in the labour market.

3. 12F (INFORMAL TO FORMAL)

Some informal employability practices have been identified in the present study. An example of informal is the source of information about a job opportunity, normally provided by academic staff. A closer involvement of every employment stakeholder with CaCe activities can contribute to create a better understanding and awareness of employment potentials for students and graduates. CaCes can perform an interrelational role that increases the efficiency and employability results, as well as its visibility within the HEIs.

4. SOCIAL AND ENTREPRENEURSHIP IDENTITY

Entrepreneurship and Social Identity among HEI students and graduates contributes to developing a “positive social influential context” to attract attention of this target and raise the intention of being entrepreneurs, in general, and social entrepreneurs, in particular.

University students and graduates as pioneers of social entrepreneurship can contribute to channeling opportunities of entrepreneurial solutions for social problems by students and graduates and making the solutions provided as visible as possible.

In this sense, the students’ and graduates’ entrepreneurial and social identity can be used to break down the barriers for a successful introduction of entrepreneurship, not only at HEI level but also in the HEI context.

6.2. External Stakeholders (employers)

1. VISIBILITY

In general, CaCes need to be more visible for external stakeholders and for employers in particular. Employers consider that collaboration with HEIs for the employability of students is not a visible activity for them at the moment.

Increasing the visibility of CaCes must be associated with the visibility of employers in such a binomial working model. Giving visibility to employers works to break the subjective boundaries of HEI bureaucracy and increase the willingness and commitment of external stakeholders with students' and graduates' employability.

2. TECHNOLOGY

The analysis of the employers' survey pointed out their technological profile, which is running in the same direction as the social and economic changes in Vietnam. CaCes need to capture the technological labour market shapes to create and adapt specific tools and activities where technology can work as vectors for the transition from education to work.

6.3. Academics

1. RESEARCH AND SCIENCE. DRAW THE ATTENTION OF RESEARCHERS TO EMPLOYABILITY AS AN ACADEMIC TOPIC IN ITSELF

Employability can be considered a field of research in itself. That can contribute to the commitment of Academic staff with the CaCe tasks satisfying at least two critical needs. On the one hand, gaining knowledge on the labour market. And, on the other, increasing the commitment of Academic staff with students' employability.

2. OBSERVATORIES FOR EMPLOYMENT AND ENTREPRENEURSHIP

Academics can strongly contribute by creating within CaCe structures, services, programs, etc., any kind of tasks for a better understanding of transition from education to work Vietnamese features, where measurements and outputs are produced with scientific standards. Data from official sources have been demonstrated as being insufficient to capture HEIs' needs of labour market knowledge. As a result, HEIs need to go forward in the design of theoretical frameworks for appropriate methodologies.

6.4. Career Centre & Management Staff

1. SYNCHRONIZATION

The analysis of the Vietnamese HEI employability context has demonstrated that stakeholders are highly aware of the critical challenge that the employability of students and graduates means for the development and balance in the labour market.

However, the statistical test for measuring differences among stakeholders very frequently demonstrates significant gaps from one target group to the others.

In this sense, CaCes, as intermediators in the labour market, need to design, develop and introduce tools for the harmonization of everyone's labour market interest.

2. NETWORKING – CORPORATE CULTURE

Networking activities at the national level can contribute to developing corporate culture, where the interest of CaCes, representing also the other stakeholders, can be created and consolidated.

Vietnamese CaCes need a higher cohesion level, through which their interests can be better defined, consolidated and communicated, resulting in a higher visualization from other stakeholders.

At the same time, NETWORKING can also contribute to fix changes, challenges and impacts that can be reached in terms of employability of students and graduates as well as the CaCes as central actors for changes in this field at HEI level.

7. Bibliography

Ajzen, I. 1991. The theory of planned behavior. *Organisational Behavior and Human Decision Processes*, 50: 179-211.

Ajzen, T. 1998. Models of human social behaviour and their application. *Psychology and Health*, 13: 735-740.

Ajzen, T. and Fishbein, M. 1980. *Understanding Attitudes and Predicting Social Behavior*, Englewood Cliffs, NJ.: Prentice-Hall.

Babbie, E. R. 2007. *The basics of social research (4th Ed.)*. Australia: Thomson/Wadsworth.

Berg, Bruce L. 2008. *Qualitative research methods for the social sciences*. 7th ed. Boston, MA: Allyn & Bacon.

Berkowitz, A. D. (2004). The social norms approach: theory, research, and annotated bibliography (Available at: https://www.researchgate.net/publication/255579949_The_Social_Norms_Approach).

Braverman, M.T., and Slater, J.K. (Eds.). (1996). *Advances in survey research*. San Francisco: Jossey-Bass.

Brenner, M., Brown, J., & Canter, D. (Eds.). (1985). *The research interview, uses and approaches*. London: Academic Press.

Creswell, John W. 1997. *Qualitative inquiry and research design: Choosing among five traditions*. Thousand Oaks, CA: Sage Publications.

Denscombe, Martyn. 2007. *The good research guide for small-scale social research projects*. 3rd ed. Maidenhead, UK: Open University Press.

- DeVaus, D.A. (1995). *Surveys in social research* (4th ed.). St. Leonards, NSW: Allen & Unwin., F.J. (1995). *Improving survey questions: design and evaluation*. Thousand Oaks, CA: Sage.
- Dooley, David. 2001. *Social research methods*. 4th ed. Upper Saddle River, NJ: Prentice Hall.
- Foddy, W. (1993). *Constructing questions for interviews and questionnaires: theory and practice in social research*. Cambridge; New York: Cambridge University Press.
- Fowler, F.J., & Mangione, T.W. (1990). *Standardized survey interviewing: minimizing interviewer-related error*. Newbury Park, CA: Sage.
- Glicken, Morley D. 2002. *Social research: A simple guide*. Boston, MA: Allyn and Bacon.
- Gorman, G. E., & Clayton, P. 2005. *Qualitative research for the information professional*. 2nd ed. London.
- Gray, David E. 2004. *Doing research in the real world*. London, UK: Sage Publications.
- Grieco, C. (2015). *Assesing Social Impact of Social Enterprises*. London: Springer.
- Hakim, C. (1987). *Research design: strategies and choices in the design of social research*. Boston: Allen & Unwin.
- Harkins, S. G., & Latane, B. (1998). Population and political participation: A social impact analysis of voter responsibility. *Group Dynamics: Theory, Research, and Practice*, 2, 192-207.
- Hessler, R.M. (1992). *Social research methods*. St. Paul: West Pub. Co. , T. (1993). *Social research: issues, methods and process*. Buckingham; Philadelphia: Open University Press.
- Kerlinger, Frank Nichols and Howard B. Lee. 1999. *Foundations of behavioral research*. Fourth ed. Belmont, CA: Wadsworth. Xxv.

- Kvale, S. (1996). *Interviews: an introduction to qualitative research interviewing*. Thousand Oaks, CA: Sage.
- Latane, B. (1981). The psychology of social impact. *American Psychologist*.
- Latane, B., & Wolf, S. (1981). The social impact of majorities and minorities. *Psychological Review*, 88, 438-453.
- Lauer, R. & Lauer, J. (2014) *Social Problem and the quality of life*. New York: MacGraw Hill.
- Lyberg, L. et al. (Eds.). (1997). *Survey measurement and process quality*. New York: Wiley., T.W. (1995). *Mail surveys: improving the quality*. Thousand Oaks, CA: Sage.
- Merriam, Sharan B. (Ed.). 2002. *Qualitative research in practice*. San Francisco, CA: Jossey- Bass.
- Miller, Delbert C., and Neil J. Salkind. 2002. *Handbook of research design and social measurement*. 6th ed. Thousand Oaks, CA: Sage Publications. Xxii.
- Mischler, E.G. (1986). *Research interviewing: context and narrative*. Cambridge, MA: Harvard University Press.
- Neuman, W. Lawrence. 2006. *Social research methods: Qualitative and quantitative approaches*. 6th ed. Boston, MA: Allyn & Bacon.
- Neuman, W.L. (1997). *Social research methods: qualitative and quantitative approaches (3rd ed.)*. Boston: Allyn and Bacon.
- Outhwaite, W., & Turner, S. P. 2007. *The SAGE handbook of social science methodology*. Los Angeles (Calif.); London: SAGE.
- Patten, Mildred L. 2004. *Understanding research methods: An overview of the essentials*. 4th ed. Glendale, CA: Pyczak Publishing.
- Platt, J. (1996). *A History of sociological research methods in America: 1920-1960*. Cambridge; New York: Cambridge University Press.
- Schwarz, N., & Sudman, S. (Eds.). (1996). *Answering questions: methodology for determining cognitive and communicative processes in survey research*. San Francisco: Jossey-Bass.

Seidman, I.E. (1991). *Interviewing as qualitative research: a guide for researchers in education and the social sciences*. New York: Teachers College Press.

Silverman, D. (1993). *Interpreting qualitative data: methods for analysing talk, text, and interaction*. London: Thousand Oaks, CA: Sage.

Simon, Julian Lincoln. 2003. *Basic research methods in social science: The art of empirical investigation*. New Brunswick, NJ: Transaction Publishers.

Singleton, Jr., R.A., Straits, B.C., & Straits, M.M. (1993). *Approaches to social research*. New York: Oxford University Press.

Stanfield, J.H., & Dennis, R.M. (Eds.). (1993). *Race and ethnicity in research methods*. Newbury Park, CA: Sage.

Summers, Gene F. (1976) *Attitude Measurement*. Rand McNally & Company: Chicago.

Weisberg, H.F., Krosnick, J.A., & Bowen, B.D. (1996). *An Introduction to survey research, polling, and data analysis (3rd Ed.)*. Thousand Oaks, CA: Sage.

Williams, M., & May, T. (1996). *Introduction to the philosophy of social research*. London: University College London Press.

Yates, Simeon J. 2004. *Doing social science research*. London, UK: Sage Publications: Open University.

Mai Ngoc Khuong and Nguyen Huu An (2016) *The Factors Affecting Entrepreneurial Intention of the Students of Vietnam National University — A Mediation Analysis of Perception toward Entrepreneurship*. *Journal of Economics, Business and Management*, Vol. 4, No. 2, February 2016.

8. Statistical Annex

The data analysis results from the four surveys are available to consult in the *Statistical Annex: Analysis Report 'Graduate Employment and Entrepreneurship in Vietnam*, available to download on the V2WORK website resources page: www.v2work.eu/resources

This report presents the results of the data analysis done following the implementation between July and November 2018 of four surveys organized by the V2WORK project, targeting Higher Education staff, students, graduates, as well as employers. The surveys addressed the capacities of Vietnamese universities to support students' and graduates' employability and entrepreneurship efforts, and have been supplemented by a regional analysis done on secondary data. The purpose of the report is to gain an in-depth understanding of five main aspects of the Vietnamese labour market:

- **labour market** gateways for Vietnamese graduates
- **labour market mismatches** affecting Vietnamese HEI's graduates
- **intermediation procedures** that currently are implemented by Vietnamese HEI's Career Centres
- **entrepreneurship programs** that currently are implemented by Vietnamese HEI's Career Centres
- **entrepreneurial intentions** by students and graduates at Vietnamese Universities

Finally, the report identifies potential mismatches between HEIs and the labour market and provides a series of recommendations aimed at the various target groups involved in the study: Higher Education students & graduates, academics, career centre and management staff, and employers.



V2WORK

www.v2work.eu



Co-funded by the
Erasmus+ Programme
of the European Union