2020 GRADUATES' EMPLOYABILITY TRACKING

The First Pilot Report

MOTIVE

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1st Pilot report

Hanoi, December 2022
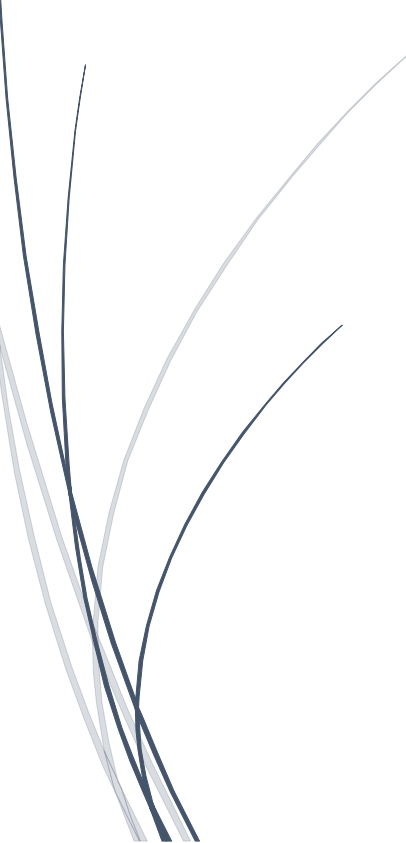
"Monitoring Trends In Vietnamese graduates' Employment"

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TABLE OF CONTENTS

LISTS OF TABLES

LIST OF FIGURES

2020 GRADUATES' EMPLOYABILITY TRACKING: The First Pilot Report

EXCUTIVE SUMMARY

This report is written under the umbrella of MOTIVE Project with the aims of building a joint center for the Ministry of Education and Training of Vietnam and higher educational institutions in Vietnam to track the employability of the graduates with the high quality data that allow policy makers and other stakeholders to improve the educational system as a hole through better and targeted policies.

This is the first pilot of the employability tracking survey which was conducted online in late 2021 with 4,112 respondents (valid questionnaires) out of 9,477 fresh graduates of 2020 contacted from 9 Vietnamese member institutions of the Project. The survey took into consideration the bachelor and diploma degree levels (full time university and college graduates), no Master, no associate degree levels or others.

The proportion of two genders of the sample is 26.0% for male and 74.0% for female. This survey subjects are classified into 10 different main study fields as defined by Circular 24[2] issued by the Ministry of Education and Training in 2017, namely: Education Science and Teacher Training (6.1%); Arts (4.3%); Humanities (16%); Social and behavioral sciences (13%); Press and information (6.7%); Business and management (20.9%); Computer and information technology (3.9%); Agriculture, forestry and fishery (4.7%); Tourism, hospitality, sports and personal services (12%); and other sectors (12.4%). In terms of graduation ranking, there are 19.9% of graduates achieve Average, 63.3% achieve Merit, 8.2% got Distinction and 8.6% got High Distinction.

The main areas studied in the report include: Employment rate, Working experience after graduation, The influence of graduation on employment, Employment status by gender, study fields, graduation ranking, Characteristics of unemployed graduates like the length of unemployment, reasons for unemployment, their activeness in job seeking, their readiness to start a new job and reasons for not seeking job, Unemployment description by gender, study fields, graduation ranking, Characteristics of employed graduates with the employment description, their self-evaluation and gender discrepancy across different employment status.

The key findings of the report are as follows:

The percentage of graduates who had a job at the time of survey is quite high (86%). Among them, almost the graduates got their first job very early right at the time of graduation or even before their graduation (76.2%). 81.3% of the surveyed graduates assumed that earning bachelor degree had positive effects on their job with the order of effects from higher to lower levels on the dimensions of higher positions in the organisation, higher personal income, improved professional skills, functions upgrading.

Comparing the employment status according to gender, study fields, graduation ranking, several results have been reported. The two genders of male and female have a quite balance between each other (more than 85% employed). The highest probability of getting jobs after

graduation can be seen in the study fields (higher to lower order) of Technical sciences and technology, Manufacturing and processing, Veterinary medicine and health, Engineering, Agriculture, forestry and fisheries, Social service, and Computer science and information technology, Educational and training science, Arts, Humanity, Social science and behaviour, Journalism and information, Business and Administrative studies, Laws, Computer science and information technology, Environment and protection. The percentage of employment after graduation seemed not to be affected much by the graduation ranking.

Regarding the unemployed graduates (14%), the jobless time was around 1 to 6 months. The most popular reasons of unemployment were personal ones, unsuitable positions and no more interests in the organisation.

Among the unemployed graduates, 87.3% were actively looking for work, 44.1% were ready to start a new job in 2 weeks, 153 respondents (29.4%) were ready to start a new job after 2 weeks. Comparing the unemployment status by gender, study fields, graduation ranking, the results show that the ratio between the two genders was equal. Concerning the aspects of study fields, Tourism, Hospitality, Sport and Personal Services; Arts, and Environment and Protection are three fields that have got the highest rates of graduates being able to find a job.

The description of employed graduates cover different dimensions:

In terms of job location, Hanoi occupied half of the graduates. In terms of organizational types, the largest proportion was private enterprises (59.5%), followed by government entities (16.9%), and foreign joint venture (16.8%). About job tittle, there were quite equal portions among jobs requiring a high level of specialization, jobs requiring technical specialization, clerical jobs and other jobs. 75.3% of respondents have low-level/operational level job positions, while only 4.3% of response graduates have high level jobs. 41.4% of respondents worked completely in the same category, 42.2% graduates worked partly in the same category, only 16.4% of graduates did not work in the same category. Nearly 50% and 30.7% of the graduates got a fixed-term employment contract and a permanent employment contract, respectively. 93.6% worked in a full-time job. 38.3% of the graduates got the monthly income of 6 - 9 million VND, while graduates who earn above 9 - 12 million VND and above 3 - 6 million VND take up 23.1% and 29.0% respectively. More than 90% of the graduates were satisfied of different levels with their job.

Regarding the self-evaluation, most students felt from normal to totally satisfied with skills built from the university. More than three – quarters of the respondents appreciated knowledge obtained from the university. Nearly 70.0% were satisfied and very satisfied with the job seeking skills equipped by the university.

A further detailed analysis of the employment status between male and female was conducted in this report. Some interesting findings were found. The relationship between gender and the current employment situation was not statistically significant. There was a significant association between gender and the type of private sector and governmental sector where respondents worked. In term of jobs requiring a high level of specialization, there were two third of female. In the job title of Director/Executive, the graduated students

in 2020 reached the minor ratio as 1.6% for women and the men was higher slightly as 2.5%. About the job position, a large majority of graduate students in both genders worked in operational level (around 75.0%). In the middle level and top level, the percentage of male was accounted higher slightly than female by 2.0%. An equal rate can be observed between the two genders according to fulltime or part time work. The female graduates tended to prefer to the job having contract while the male ones chose self-employed job or short-term agency contract. There was a slightly higher rate of male graduates to work in the job of completely the same with their major. Regarding monthly income, men were more dominant than women at high salaries level (above 9 million VND/month). Especially, the percentage of men was double women with the salaries from 15 million VND. In average salary (from 6-9 million VND/month), the proportion of women was counted higher significantly than men by 13.0%. Female graduates tended to be at the average level of job satisfaction while male ones chose the contrary options as totally satisfied and dissatisfied with their jobs.

Putting all together, the ability of approaching the job after graduation, the effectiveness of seeking a job, especially in senior management level of the male was greater than the female. On the other hand, the fresh graduate women tended to pay more attention to stable job even of the average salary, and feel satisfied with the average position level in their career.

I. INTRODUCTION

1.1 The societal functions of higher education sector

Higher Education played major societal functions: i) equip their graduates with the skills, knowledge and competencies needed to successfully enter competitive labour market, and more importantly to obtain good jobs and maintain their employability throughout their working lives; ii) contribute to national economies and societies in terms of creativity, innovation, entrepreneurship needed to ensure economic growth, to boost the innovative capacities of society and to keep up with rapidly changing labour market demand and technologies; iii) promote international mobility, as a powerful means to foster intercultural understanding, more competencies and work options. For achieving these goals, it is important to collect high quality data that help to produce better and targeted policies over teaching and training activities. The Motive project uses graduate tracking as a way of collecting high quality data. Through the set-up of the first Center for Graduates Tracking in Vietnam which regularly runs surveys on Vietnamese graduates to monitor graduate transition from Higher Education to the labour markets as well as their employment status, the project aims to support the governance of the Higher Education system in Vietnam.

1.2 Background

It was recorded in the Statistical Yearbook of 2021 of Vietnam that in 2020, there were 242 higher education institutions, training 1,909,000 students and achieving the number of 242,000 graduates. Every year, thousands of young college and university graduates enter the labour market in Vietnam, with an average annual number of 240,000 graduates from 2019 to 2021. However, it is reported by the Ministry of Education and Training that the number of graduates who suffer from unemployment has reached 200,000 since 2015 and for those who work, 60% are not working in their study fields. This poses big questions for policy makers and educational institutions in terms of strategic planning and training quality management.

In Vietnam, the General Statistics Office is responsible for collecting national and regional statistical information and producing reports on the status of labour market participation. Those reports draw a general picture of the labour market in Vietnam, but there is no in-depth analysis of the factors constituting employability of young workers, especially new graduates. This report is written under the umbrella of the Motive project aiming at building a Center for Graduates tracking for Vietnam academic institutions.

The Center has the mission of providing a scientific approach and tool for collecting graduate data. In late 2021, the first pilot survey was conducted with the participation of 9 higher education institutions in Vietnam, representing 3.7% of the total HEIs in Vietnam. The total graduates population of the 9 higher education institutions involved in MOTIVE project are 12,727, representing 5.2% of the total population of graduates in Vietnam. This report aims to analyze and better understand the employability of new graduates in Vietnam, with the two-fold objective of helping orient the students who are about to graduate and to offer universities an effective, timely tool for analyzing and assessing the professional success of their graduates. Specifically, the report looks into the employment condition of new

graduates in the labour market using a wide range of indicators like employment rate, type of contract, job position, salary and identifying the impact of factors like gender, study field, graduation ranking on employability.

1.3 Structure of the report

The structure of the report follows the above discussed four societal functions of higher education and presents core indicators with respect to:

- Employment rate
- Working experience after graduation
- Influence of graduation
- Employment status by gender, study fields, graduation ranking
- Unemployed graduates
- Length of unemployment
- Reasons for unemployment
- Activeness in job seeking
- Readiness to start a new job
- Inactive graduates: Reasons for not job seeking
- Unemployment description by gender, study fields, graduation ranking
- Employed graduates
- Employment description
- Self-evaluation
- Gender discrepancy

The first pilot report intends to provide a concise picture based on core indicators on all of these outcomes.

1.4 Sample and Methodology

This report is written based on a survey conducted under the umbrella of the MOTIVE Project with the participation of nine colleges and universities in Vietnam:

- Thai Nguyen University
- Halong University
- Hanoi University
- Academy of Journalism and Communication
- Vietnam National University of Agriculture
- Posts and Telecommunications Institute of Technology
- Hanoi Tourism College
- Hanoi University of Home Affairs
- National University of Art Education

The questionnaire was built according to the survey form of the Consortium of Italian Universities AlmaLaurea (2019) - the organization that provides professional support for the MOTIVE Project. This survey has been conducted with graduates of 78 universities in Italy since 1994, and has now been revised and applied to suit Vietnam context.

The data of this report was collected online in late 2021 with respondents being students who graduated in 2020 from the above institutions. In 2020, there were 12,727 graduates from these institutions with the proportion of female graduates of nearly 60%. The survey was conducted 1 year from graduation day to ensure the ability to track graduate employability after one year participating in the labour market. Were contacted 9,477 graduates, representing 74.4% of the total graduates population belonging to the 9 HEIs involved in the survey. From the survey were excluded graduates already contacted for previous surveys carried out by some HEIs in order to avoid double survey (and as consequence a decrease in the response rate).

The sampling data (i.e. lists of graduates) and the contact details of the graduates are only accessible locally at the higher education institutions and it is not possible for the higher education institutions to pass them on. The samples will be drawn locally by the higher education institutions and will invite the selected graduates to participate in the survey.

The quality of the sample depends on how well the sampling frame covers the target population. The non-covered group are those not representative for the survey (e.g. low number of graduates), those already contacted for the previous surveys (to avoid double survey and low response rate) and graduate groups that cannot be reached (e.g. the lack of contacts).

Depending on where the sampling frame (or frames) and contact details of the graduates can be accessed, different strategies will apply. It is also possible that participating institutions will have to use a mix of strategies, e.g. if there is a central register for only one of the higher education sectors.

In case the contact details are not already included in the sampling data, it will be necessary to find the correct contact details of the selected graduates. Therefore, both the sampling data frame(s) and the contact detail source must include information that allows for clear identification on an individual level (e.g. a personal ID code, matriculation number, combination of name and date of birth, etc.).

The field phase was scheduled from September 2021 until mid-January 2022. To attain comparable data, the field phase in single institution should not deviate more than one month from this. The field phase does not need to last three months, but is recommend one month at least.

The MOTIVE consortium recommends the use of an online questionnaire, because it is relatively inexpensive and easy to implement on a large scale compared to other modes of data collection. Because of the high degree of digitalisation in higher education, online questionnaires also do usually not cause any remarkable undercoverage in student and graduate surveys as it would in surveys of the general population.

Regarding the survey programme/software used for the MOTIVE surveys, there is a vast number of options and possibilities available. Some of them are free of charge (e.g. Google Form, some versions of LimeSurvey, SurveyMonkey), some must be purchased (e.g. Qualtrics, IBM SPSS Data collection), some are (self-)developed within the research institutions. Among these vast possibilities, MOTIVE consortium does not advise the usage of one specific programme. However, you should make sure that the features included in the software package allow for:

- provision of individual access links (with the option to pause the completion of the questionnaire and resume later);
- filter questions/routing based on (multiple) answers;
- complex questionnaire designs/all question types required in MOTIVE survey;
- no limit on how many participants can be invited to take part;
- compatibility with desktop computers mobile devices;
- data safety and compliance with National Data Protection Regulations.

It is a key challenge for a reliable data collection procedure to have access to a body of contact details that is not systematically lacking certain groups – neither because of under-coverage of certain graduates in the contact data itself, nor because of a particular high share outdated contact data for certain groups.

In the case of graduates, private e-mail addresses should generally be preferred over institutional e-mail addresses, as the latter are mostly used by students during their studies, but not so much after their graduation.

The data collection process includes 3 main steps. The first step is to invite students to participate in the survey. The next step is to match administrative graduate data with their self-reported responses in the survey. The final step is cleaning the data, coding and reporting data.

Out of this number of graduates, the survey received 5,657 responses, counting for 44.3% of total population. After cleaning and filtering the data, the usable data included 4,112 observations (72.7% of the responses and 32.3% of the total graduates population). Among these observations, the percentage of the male and female is 26.0% and 74.0% respectively. These survey subjects are classified into 10 different main study fields as defined by Circular 24 issued by the Ministry of Education and Training in 2017, namely: Education Science and Teacher Training (6.1%); Arts (4.3%); Humanities (16.0%); Social and behavioural sciences (13.0%); Press and information (6.7%); Business and management (20.9%); Computer and information technology (3.9%); Agriculture, forestry and fishery (4.7%); Tourism, hospitality, sports and personal services (12%); and other sectors (12.4%). In terms of graduation ranking, there are 19.9% of graduates achieve Average, 63.3% achieve Merit, 8.2% got Distinction and 8.6% got High Distinction.

The data is processed using Nvivo, MAXQDA and SPSS, software package for qualitative data analysis and mixed methods research software, in which the main analytical method is descriptive statistics. Descriptive statistic method is used to measure the employability of new graduates through descriptions of current employment and job status in aspects such as type of business organization, type of contract, type of job, position in the organization and average income.

The data processing took place considering a specific statistic strategy: after the survey period ended, it was proceeded with the survey export file checks, data import into processing software, transforming/recoding data into target variables, missing value definition, labelling and coding checks. Following it was proceeded with the plausibility checks, identifying and removing (in)valid cases.

II.   EMPLOYMENT STATUS

2.1 Employment rate

Among 4,112 graduates participating in the survey, there are 3,536 respondents who have a job, accounting for 86.0%; 381 have no job at the moment, accounting for 9.3%; 195 could not find a job at all, accounting for 4.7%. The findings show that the percentage of graduates who have a job is quite high (86.0%) in the comparison with the overall figure of 67.7% in 2021 recorded by the Vietnam Government Statistics Office. The number of graduates without a job at the time of survey and those who have not yet found a job is relatively low, but it also shows the need for reasonable policies and solutions to solve the problem of unemployment after graduation.

Table 1: Number of employed and unemployed graduates

No. of interviewed	Employed	%	No job at present	%	Haven't found a job at all	%
4,112	3,536	86.0	381	9.3	195	4.7

2.2 Working experience after graduation

With regards to working experience after graduation, nearly half of respondents 45.6% showed that they continued the job that they had got before graduation. While 30.6% of respondents had got the job before graduation but changed their jobs at least once after graduation and another 23.8% of respondents have just found their first job within one year after graduation. These meaningful numbers reflect positive information that graduates could find a job very early.

Figure 1: Working experience after graduation (%)
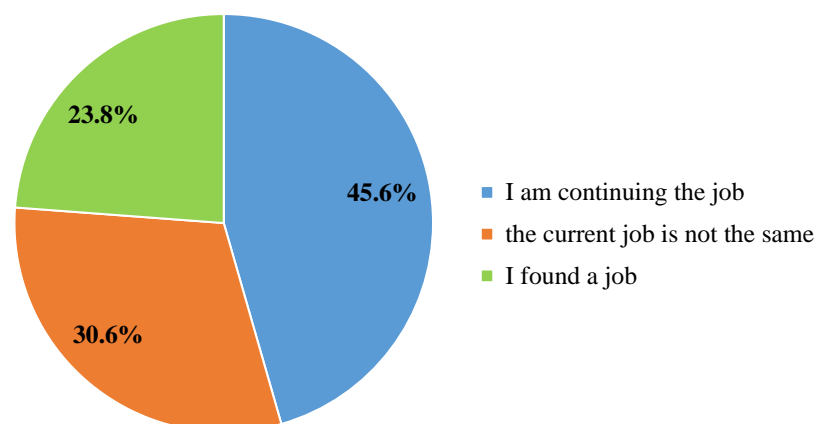
The number of months to find a job after graduation is listed in following table:

Table 2: Number of months to find a job

I found a job…. months after graduation (months)	Number	%
0	99	21.5
1.0	77	16.7
2.0	64	13.9
3.0	63	13.7
4.0	48	10.4
5.0	30	6.5
6.0	34	7.4
7.0	7	1.5
8.0	8	1.7
9.0	7	1.5
10.0	2	0.4
11.0	11	2.4
12.0	6	1.3
14.0	1	0.2
15.0	2	0.4
18.0	1	0.2
TOTAL	460	100.0

As it can be seen from the table, 99 of 460 who got their first job after graduation (excluding those who got their job before or at the time of graduation), accounting for 21.5% said that they get the job right after graduation. 16.7%, 13.9% and 13.7% of respondents have been recruited after 1, 2, 3 moths of graduation respectively 415 out of 460 of respondents have jobs within 6 months from graduation. These numbers show us the positive signal that a large number of graduates has a good preparation for joining the labour market.

2.3. The Influence of graduation

Regarding the effect of graduation on students' employment, 81.3% of graduates assume that earning bachelor's degree had a positive effect on their job. Among that, 714 respondents (20.2%) think from an economic perspective (higher income); 4 graduates (0.1%) think from an economic perspective and workplace status; 852 graduates (26.5%) think from the work position status; 426 graduates (13.2%) think from the perspective of the functions upgrading; 54 graduates (1.7%) think from the perspective of the functions upgrading and professional skills; 469 graduates (14.6%) think form the point of the professional skills; 99 graduates (3.1%) think from other aspects.

Table 3: Influence of graduation

Influence of graduation	Number	%
Yes, from an economic point of view	714	20.2
Yes, from an economic point of view and organizational status	4	0.1
Yes, from the point of view of your organizational status	852	26.5
Yes, from the point of view of the functions upgrading	426	13.2
Yes, from the point of view of the functions upgrading and professional skills	54	1.7
Yes, from the point of view of the professional skills	469	14.6
Yes, for other aspects	99	3.1
No, only from a personal point of view	407	12.6
No, not from any point of view	196	6.1
Total respondents	3,221	100.0
No answer	315	
TOTAL INTERVIEWED	**3,536**	

2.4. Employment status by gender, study fields, graduation ranking

2.4.1. Employment status by gender

Table 4: Employment status by gender

	2020 Graduation	Employed	%
Male	1,071	908	84.8
Female	3,041	2,628	86.4
TOTAL	4,112	3,536	86.0

The table shows that in 2020, the total graduates were more than four thousand graduates of different study fields. Of which, the female graduates accounted nearly triple compared to the male graduates.

It is important to take into consideration that in the 9 universities involved in MOTIVE project, about 60.0% of graduates are women and it is known that in Vietnam women have a higher propensity to answer to surveys.

The percentage of male graduates who had jobs after graduation was 84.8%, a little lower than that of female graduates at 86.4%. In total, female graduates also account for higher probability of getting jobs after graduations.

2. 4.2. Employment status by study fields

The table shows the study fields that graduates are the most likely to get jobs after graduation. Accordingly, Technical sciences and technology, Manufacturing and processing, and Veterinary medicine and health are three jobs that have got the highest probability of getting jobs after graduation, with 100.0% of student respondents confirmed that they were employed. The second tier of highly probable employment, with the percentage from 94.0% to 99.0%, includes study fields of Engineering, Agriculture, forestry and fisheries, Social

service, and Computer science and information technology. These jobs have been at high trend recently. The third tier of students that are most likely to get jobs after students, with the percentage above 80%, include Educational and training science, Arts, Humanity, Social science and behaviour, Journalism and information, Business and Administrative studies, Laws, Computer science and information technology, Environment and protection.

In table 5 can be observed a low employment rate of graduates in Tourism, Hospitality, Sport and Personal Services (for both the code 681 and the code 781). From some preliminary analysis by the researchers it is supposed that this situation is the consequence of the pandemic situation at global level and in Vietnam as well, with a negative impact particularly in this sector. The future surveys will overcome this problem and will allow the Vietnamese institutions to better apprehend the extent of the Covid-19 impact on-graduates' employment status. In fact, if the first pilot survey conducted in 2021 is related to 2020 graduates who strongly affected by the pandemic period, the second pilot survey will be carried out at the end of 2022 and would involve 2021 graduates. This survey will give us more information about the employment status of graduates in tourism sector as well as information not biased by the Covid-19 effects.

Table 5: Employment status by study field

Code	Study fields of diploma and bachelor levels	No. Student Respondents	Employed	%
614	Educational and training science	57	42	73.7
622[3]	Humanity	79	61	77.2
681[4]	Tourism, Hospitality, Sport and Personal Services	400	260	65.0
714	Educational and training science	289	252	87.2
721	Arts	205	166	81.0
722[5]	Humanity	655	556	84.9
731	Social science and behavior	440	372	84.5
732	Journalism and information	254	229	90.2
734	Business and Administrative studies	969	900	92.9
738	Laws	107	100	93.5
748	Computer science and information technology	153	144	94.1
751	Technical sciences and technology	30	30	100.0
752	Engineering	69	68	98.6
754	Manufacturing and processing	10	10	100.0
762	Agriculture, forestry and fisheries	136	134	98.5

[3] Study field "Humanity" having code 622 refers to Higher education Institutions as Colleges.
[4] Study field "Tourism, Hospitality, Sport and Personal Services" having code 681 refers to Higher education Institutions as Colleges.
[5] Study field "Humanity" having code 722 refers to Higher education Institutions as Universities and Academies.

764	Veterinary medicine and health	22	22	100.0
776	Social service	18	17	94.4
781[6]	Tourism, Hospitality, Sport and Personal Services	174	134	77.0
785	Environment and protection	20	17	85.0
	Total respondents	4,087	3,514	85.5
	No answer	25		
	TOTAL INTERVIWED	4,112		

2.4.3. Employment status by graduation ranking

Table 6: Employment status by graduation ranking

	2020 Graduation	%	Employed	%
Average	820	20.0	689	19.5
Merit	2,600	63.3	2,276	64.4
Distinction	340	8.3	275	7.8
High Distinction	350	8.5	295	8.3
Total respondents	4,110	100	3,535	100
No answer	2			
TOTAL INTERVIEWD	4,112			

The table shows the employment status by graduation ranking. In 2020, most students got Merit graduation status, followed by Average graduation status. The students who graduated with either distinction or high distinction accounted for a percentage of less than 20.0%. The ratio of employed graduates among graduation ranking are somehow similar to that of total graduates among all the ranking. It seems that the percentage of employment after graduation is not affected too much by the graduation ranking. In particular, 84.3% of responding high distinction graduates got jobs while the percentages for the distinction, merit, and average graduates were 80.9%, 87.5%, and 84.0%, respectively. Further look on the gender differences across the rankings of the employed graduates would be discussed in the later parts of the report. However, the report should further consider the other characteristics of the jobs that the graduates take. Moreover, within a short period of time, we might not see the clear impacts of graduation ranking on students' careers because it takes time for one person to climb up the success ladder. Therefore, other surveys might be carried out on this issue.

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[6] Study field "Tourism, Hospitality, Sport and Personal Services" having code 781 refers to Higher education Institutions as Universities and Academies.

III.   GRADUATES NOT IN EMPLOYMENT

According to Oxford English Dictionary, unemployment is defined as the fact of a number of people not having a job. This section is attempted to provide a description of those who do not have a job at the moment of the survey, both being active and not active looking for job, no matter how long they are ready to start a new job. Among 4,112 surveyed graduates, there were 576 ones (14.0%) reported not to be in an employment, among who 381 had ever had jobs after graduation and 195 had not been employed at all.

3.1 Length of not in employment

Among the graduates not employed who answered, in table 7 can be seen that the time without work is mainly from 1 to 3 months after graduating. This is easy to explain because it is a transition period for graduates to gradually adapt to a new environment, switching from a learning environment to a working environment to study and equip themselves with the necessary requirements for their jobs.

Table 7: Length of unemployment (months)

Length of unemployment (months)	Numbers	%
0	29	7.6
0.5	4	1.0
1.0	65	17.1
2.0	73	19.2
3.0	69	18.1
4.0	33	8.7
5.0	31	8.1
6.0	22	5.8
7.0	10	2.6
8.0	11	2.9
9.0	12	3.1
10.0	9	2.4
11.0	1	0.3
12.0	9	2.4
13.0	1	0.3
18.0	2	0.5
Total respondents	217	100.0
No answers	359	
TOTAL INTERVIEWED NOT IN EMPLOYMENT	576	

3.2 Reasons for not in employment

As mentioned above, we should research more about the reasons why the graduates were unemployed so as to recommend the solutions for universities to increase the rate of employed graduates. The respondents were listed as follows:

Table 8: Reasons for unemployment

Reasons for unemployment	Numbers	%
End of contract or dismissal	11	1.9
Company bankruptcy	11	1.9
No longer interested in the last organization	80	14.0
Have not found any suitable positions since graduation	82	14.3
Have worked before but have not found any suitable positions	87	15.2
Unresponsive the needs of the employer	47	8.2
Personal reasons	161	28.1
Others	93	16.3
Total respondents	572	100.0
No answers	4	
TOTAL INTERVIEWED NOT IN EMPLOYMENT	576	

We find that the most popular reasons of being not in employment of graduates are personal ones which made up for 28.1% of respondents. Then, the reason of others and the reason of unsuitable positions though having experience make up for respectively 16.3% and 15.2%. The graduates seem to pursue a better job after quitting. They are willing to be themselves unemployed rather than stand for the job that they lost motivation.

3.3 Activeness in job seeking

Out of 576 respondents, 537 (87.3%) are actively looking for work. This is reflects the needs of most not yet employed graduates for job search.

*Figure 2: Actively seeking a job (%)*
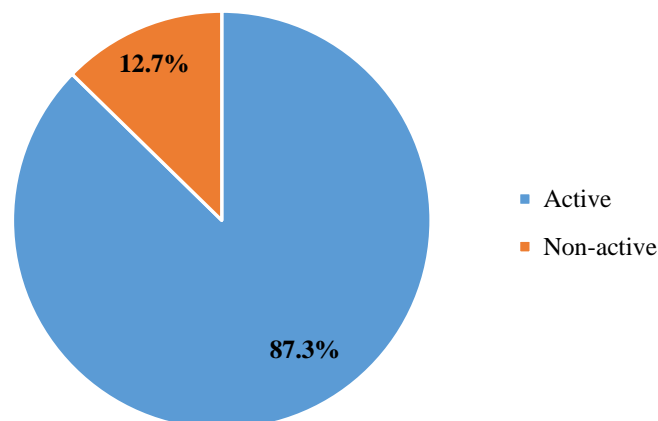
3.4 Readiness to start a new job

According to the survey, up to 230 respondents (44.1%) were ready to start a new job in 2 weeks, 153 respondents (29.4%) were ready to start a new job after 2 weeks; 138 respondents (26.5%) were not yet ready to start a new job. As there was still a quite high portion of

graduates of not being ready for a new job, further study on the reasons would be conducted to find out whether high education institutions should consider equipping learners with necessary skills so that they can adapt and immediately meet job requirements right after graduation.

Figure 3: Readiness to start a new job (%)
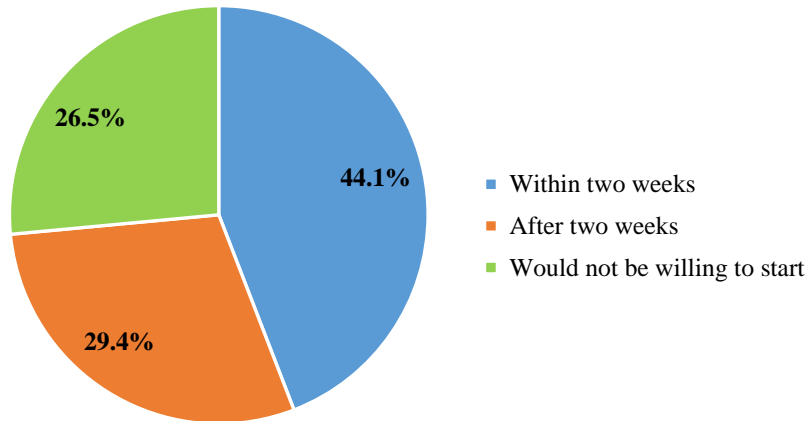
3.5 Inactive graduates: Reasons for not job seeking

Graduates are inactive mainly due to the pursuit of further study (26.9%), personal reasons (17.9%), no job opportunities (16.7%) and opening their own activities (15.4%). In general, the fact that graduates do not actively seek jobs right away mainly coming from personal or subjective reasons can be of not much worry, meanwhile the reason of no job opportunities worth considerations from the academic institutions and the society to conduct further study to support them.

Table 9: Reasons for not job seeking

Reasons for not job seeking	Numbers	%
Continuing studies	21	26.9
Voluntary civil service	2	2.6
Waiting to be called back after having passed a test	4	5.1
Opening own activity	12	15.4
Having a break for self-orientation	7	9.0
Personal reasons	14	17.9
No job opportunities	13	16.7
Other reasons	5	6.4
Total respondents	78	100.0
No answers	498	
TOTAL INTERVIEWED NOT IN EMPLOYMENT	576	

3.6 The description of not being in employment by gender, study fields, graduation ranking

3.6.1 Not being in employment status by gender

Table 10: Unemployment status by gender

	2020 Graduation	No job at present	%	Haven't found a job at all	%
Male	1,071	105	9.8	58	5.4
Female	3,041	276	9.1	137	4.5
TOTAL	4,112	381	9.3	195	4.7

Regarding the unemployment status, of more than four thousand students who graduated in 2020, the percentage of female graduates who had no job at the survey time was nearly the same with that of male graduates, accounting for about 10% of the respondents. Similarly, the percentage of graduates who hadn't found a job at all was about 5% for both male and female graduates. Despite the high proportion of female graduates in this year of graduation, it seems that female graduates are doing better than male graduates in getting jobs after graduation, with the percentages of female graduates having no job at present and not having found a job at all are lower than that of male graduates, by 0.7% and 0.9% respectively.

3.6.2 Not-in-employment status by study fields

The table below shows the unemployment rate of each study field. Accordingly, Tourism, Hospitality, Sport and Personal Services; Arts, and Environment and Protection are fields that have got the highest rates of unemployed graduates, with about 10% confirmed that they hadn't found a job at all. Regarding the temporary unemployment status, graduates of two fields of Educational and Training Science and Tourism, Hospitality, Sport and Personal Services had the highest proportion (more than 20%) among the total surveyed graduates of these fields. The reason might be the severe impacts of the Covid-19 pandemic on the tourism sector, and the graduates during the pandemic time were struggling with looking for a job.

Table 11: Unemployment status by study fields

Code	Study fields	No. of Students respondents	No job at present	%	Haven't found a job at all	%
614	Educational and training science	57	12	21.2	3	5.3
622[7]	Humanity	79	13	16.5	5	6.3

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[7] Study field "Humanity" having code 622 refers to Higher education Institutions as Colleges.

681[8]	Tourism, Hospitality, Sport and Personal Services	400	99	24.8	41	10.3
714	Educational and training science	289	19	6.6	18	6.2
721	Arts	205	18	8.8	21	10.2
722[9]	Humanity	655	76	11.6	21	3.2
731	Social science and behaviour	440	37	8.4	31	7.1
732	Journalism and information	254	19	7.5	6	2.4
734	Business and Administrative studies	969	36	3.7	33	3.4
738	Laws	107	3	2.8	4	3.7
748	Computer science and information technology	153	9	5.9		
751	Technical sciences and technology	30				
752	Engineering	69			1	1.5
754	Manufacturing and processing	10				
762	Agriculture, forestry and fisheries	136	1	0.7	1	0.7
764	Veterinary medicine and health	22				
776	Social service	18			1	5.6
781 [10]	Tourism, Hospitality, Sport and Personal Services	174	35	20.1	5	2.9
785	Environment and protection	20	1	5.0	2	10.0
	Total respondents	4,087	378	9.2	193	0.1
	No answers	25				
	TOTAL INTERVIEWED	4,112				

[8] Study field "Tourism, Hospitality, Sport and Personal Services" having code 681 refers to Higher education Institutions as Colleges.

[9] Study field "Humanity" having code 722 refers to Higher education Institutions as Universities and Academies.

[10] Study field "Tourism, Hospitality, Sport and Personal Services" having code 781 refers to Higher education Institutions as Universities and Academies.

3.6.3 Not-in-employment status by graduation ranking

Table 12: Unemployment status by graduation ranking

	2020 Graduation	No job at present	%	Haven't found a job at all	%
Average	820	84	9.9	48	5.8
Merit	2,600	207	8.0	117	4.5
Distinction	340	53	15.6	12	3.5
High Distinction	350	37	10.6	18	5.1
Total respondents	4,110	381		195	
No answers	2				
TOTAL INTERVIEWED	4,112				

Table 12 shows the not-in-employment status by graduation ranking. These was a very small proportion of graduates of all types of ranking who have not found a job at all. This proportion was quite equal among the ranking groups. However, a slight difference among the groups could be found in the situation of those who had found a job but no longer stayed in that job. Surprisingly, the students who graduated with either distinction or high distinction accounted for a little. This requires a further study on the specific reasons for not having a job for each ranking group.

IV.   EMPLOYED GRADUATES

4.1 Employment description

4.1.1 Job location

The survey results show that after graduation, most graduates choose to work in Hanoi with 1,781 people (50.4%), after that is 555 people in Thai Nguyen (15.7%), followed by Quang Ninh with 304 people (8.6%). Other provinces and cities are almost only 1.0%. As all of the studied universities are located in the North of Vietnam (specifically Hanoi, Thai Nguyen and Quang Ninh), these figures can be easily explained that most of the graduates stayed in the North. However, there was still a small but noticeable percentage of those moving to work in the further distance to the Middle Vietnam (0.4%) or to the South like Ho Chi Minh City (1.1 %), or even to the High Land of Viet Nam with 0.5%. Moreover, it is interesting to notice that 0.7% of the studied graduates were working abroad, which shows a start of mobility of workforce internationally. Yet, getting back to those who stayed in the North, graduates after graduation tend to choose jobs in big cities like Hanoi to have more opportunity to work and have more job options that are suitable for themselves, or choose their professions in places where they were trained. There was only a very modest portion of graduates moving to the mountainous areas in Northern Vietnam (6.4%). This picture is not going against the common allocation of high skilled labour in Vietnam.

A further study on whether the graduates worked in their home town should be conducted.

Table 13: Job location

No	Name of province	Numbers	%	No	Name of province	Numbers	%
1	Hanoi	1781	50.4	25	Yen Bai	14	0.4
2	ThaiNguyen	555	15.7	26	Ha Giang	12	0.3
3	Quang Ninh	304	8.6	27	Nghe An	11	0.3
4	Bac Giang	110	3.1	28	HaTinh	8	0.2
5	Bac Ninh	96	2.7	29	DienBien	8	0.2
6	Vinh Phuc	59	1.7	30	Lai Chau	7	0.2
7	Hai Phong	47	1.3	31	Danang	7	0.2
8	Bac Kan	42	1.2	32	Ninh Binh	5	0.1
9	HaiDuong	41	1.2	33	QuangBinh	3	0.1
10	Nam Dinh	39	1.1	34	QuangNam	2	0.1
11	HCMC	39	1.1	35	Dong Nai	2	0.1
12	TuyenQuang	36	1.0	36	ThaiNguyen City	1	0.0
13	Lang Son	34	0.1	37	Bac Giang City	1	0.0
14	Thanh Hoa	33	0.9	38	QuangTri	1	0.0
15	HaNam	33	0.9	39	BacLieu	1	0.0
16	Hung Yen	28	0.8	40	LongAn	1	0.0
17	NinhBinh	24	0.7	41	LamDong	1	0.0

18	Overseas	24	0.7	42	Kon Tum	1	0.0
19	ThaiBinh	22	0.6	43	Hai phong	1	0.0
20	PhuTho	21	0.6	44	Gia Lai	1	0.0
21	Cao Bang	20	0.6	45	DakLak	1	0.0
22	SonLa	18	0.5	46	Ca Mau	1	0.0
23	Lao Cai	18	0.5	47	Binh Dinh	1	0.0
24	HoaBinh	17	0.5	47			
	TOTAL					4,112	

4.1.2 Job activity sector

After graduating, students who want to work in state-owned units must perform a probationary process, make a contract, and then become an official state employee. The number of vacancies on the state payroll is very limited. Long contract period and low salary. That is why the rate of working in the state is not high, accounting for only 16.9% of the respondents. Meanwhile, in private enterprises, job positions are very diverse, salaries are paid according to the capacity and qualifications of the recruited people, so graduates can easily choose. That is why more graduates choose to work in private enterprises. Another number worked in joint ventures with foreign countries, accounting for 16.8%. This is also a working environment with many vacancies but requires students to have a certain level of foreign language to do the job. The number of self-employed students accounted for only 5.9%, because independent work requires a lot of factors from experience, economic resources and ability of students upon graduation.

Figure 4: Job activity sector (%)

- Government
- Private Sector
- Non-Profit
- Foreign Joint venture
- Self employed
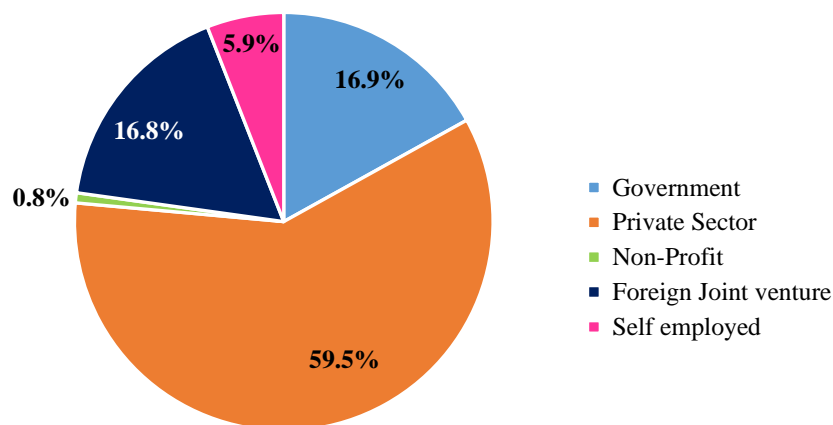
4.1.3 Current job

Figure 5 illustrates the ratio of graduates in different job title in current jobs. The job titles are classified based on the AlmaLaurea's graduate tracking survey used in Italy for 78 universities over the past 30 years (See the Appendix). With regards to job titles of graduates, a quite large percentage of the answers (35,7%) are other jobs which we could not define; the percentage which made up for 20.1% belongs to clerical jobs. It is clear that the positions

of newly graduate cannot be at high level job. They were required much more experience before being promoted.

Figure 5: Current job (%)

- Director/executive
- Jobs requiring a high level of specialization
- Jobs requiring technical specialisation
- Clerical jobs
- Other jobs
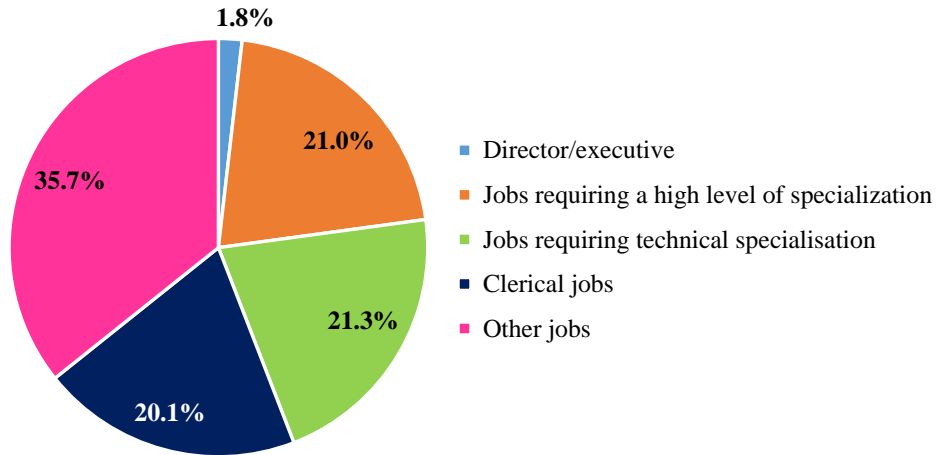
4.1.4 Current Job level

Current position is referred to the level of management in the organization, which is divided into three levels: low level/operational level, middle level like supervisors, heads of department and top level. A similarity between the responses to questions 11 and 12 on job title and position respectively is found as the majority of recent graduates have low-level/operational level job positions. 2,664 graduates who made up for 75.3% of respondents have low-level/operational level job positions. While only 4.3% of response graduates have high level jobs.

Figure 6: Current Job level (%)

- Top level
- Middle level
- Low level/ Operational level
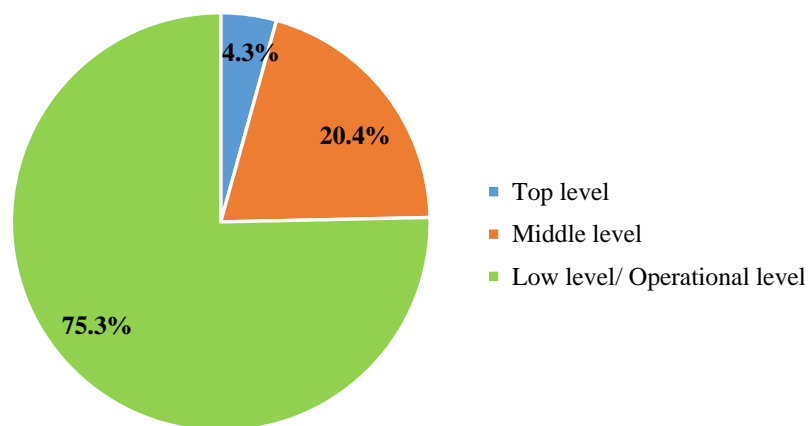
4.1.5 Matching with major

Figure 7: Jobs matching with major (%)
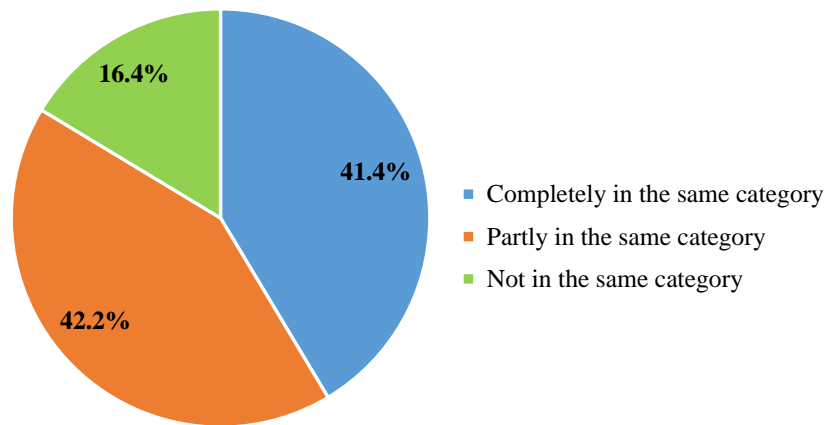
It can be observed that 41.4% of respondents (1,456 graduates) work completely in the same category. The highest proportion belongs to 1,485 graduates who wo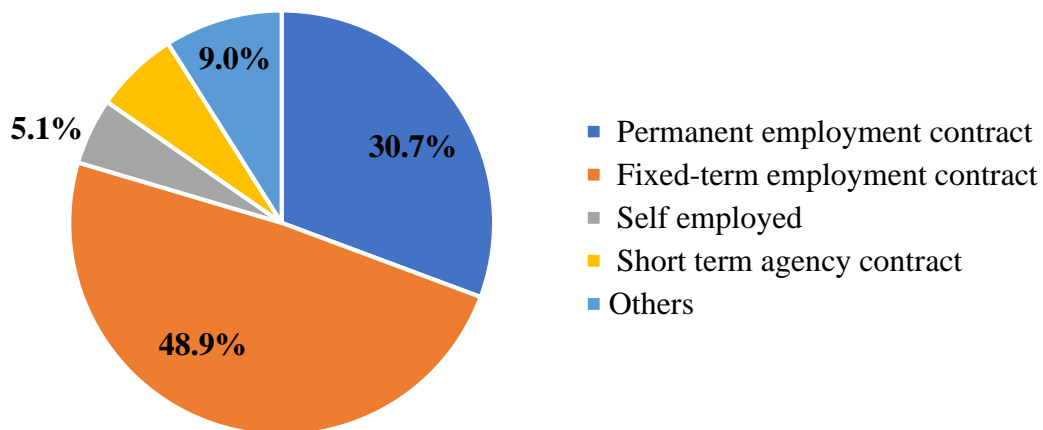rk partly in the same category (42.2%). Only 16.4% of graduates do not work in the same category. From the pie chart, it is evident that graduates tend to choose a job matching with their majors.

4.1.6 Contract types

Figure 8: Contract types (%)

Regarding respondents' contract type, permanent and fixed-term employment contracts are the two highest proportions while self-employed accounts for the lowest one. Specifically, 48.9% of respondents (accounting for 1,720 graduates) involve in a fixed-term employment contract after graduation and 1,079 graduates are employed with a permanent employment contract (30.7%). On the contrary, the self-employed takes up the lowest proportion, which is 5.1%. Additionally, there is also a small portion of graduates which works on a short-term contract or other types of contract (6.4% and 9.0% respectively).

4.1.7 Job type

Figure 9: Job type (%)
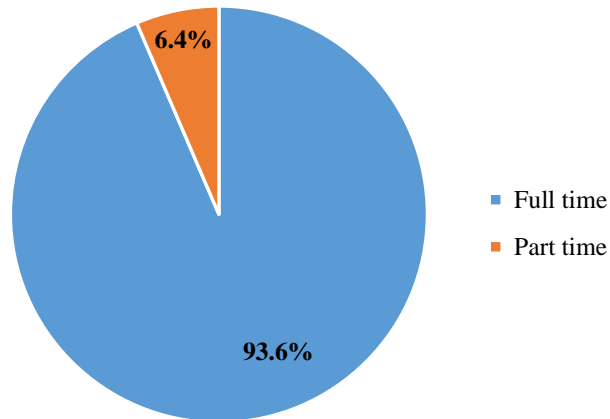
According to the data, there is a considerable difference in terms of job type among respondents. Almost all students are employed in full time work, which accounts for 93.6% (representing 3,308 respondents) whereas part - time employment only comprises 6.4%. In general, most of graduates can seek a full time job after leaving the university.

4.1.8 Monthly income

Figure 10: Monthly income (thresholds %)
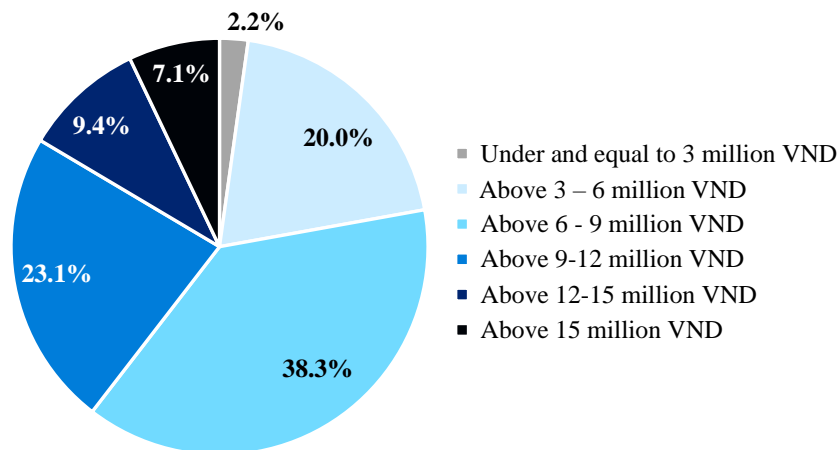
Regarding the pie chart which presents the monthly income, majority of respondents have a salary above 3 - 12 million, about over three quarters. In particular, the proportion of respondents who are paid above 6 - 9 million VND take the highest proportion (38.3%). In addition, graduates who earn above 9 - 12 million VND and above 3 - 6 million VND take up 23.1% and 29.0% respectively. Lastly, respondents who have a monthly income of under and equal to 3 million VND account for only 2.2%.

4.1.9 Job satisfaction

Figure 11: Job satisfaction (%)
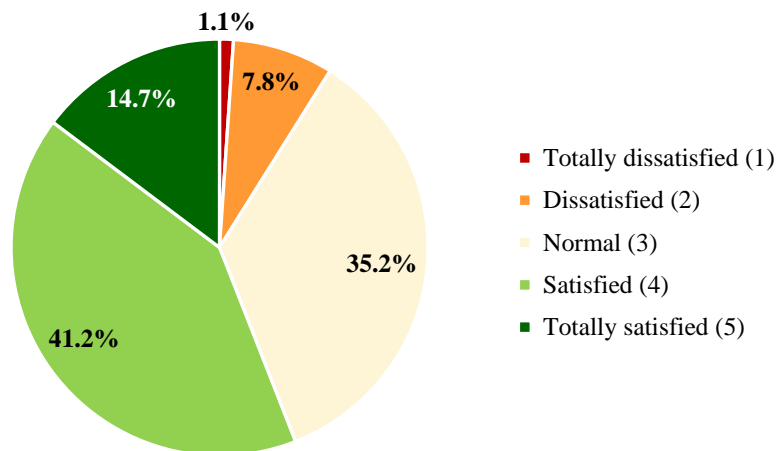
In terms of the level of students' job satisfaction, data strongly indicate that most graduates develop a positive attitude towards their current job. Specifically, 41.2% of respondents are satisfied with their job (representing 1,456 students). Normal and totally satisfied levels account for 35.2% and 14.7% respectively. In contrast, the lowest proportion belongs to students who are totally dissatisfied with their jobs (1.1%), followed by dissatisfied level, with 7.8%.

4.2 Self-evaluation

4.2.1 Satisfaction towards skills/competences built from university

Respondents are required to evaluate a number of skills/competences built from university, namely, Technology skills, Communication skills, Ability to work individually, Ability to work in teams, Autonomy, Flexibility/Ability, Achievement of objectives, Problem Solving Skills, Self-oriented skills.

Figure 12: Satisfaction toward skills/competences (%)

- ■ Totally dissatisfied (1)   ■ Dissatisfied (2)   ▢ Normal (3)   ■ Satisfied (4)   ■ Totally satisfied (5)
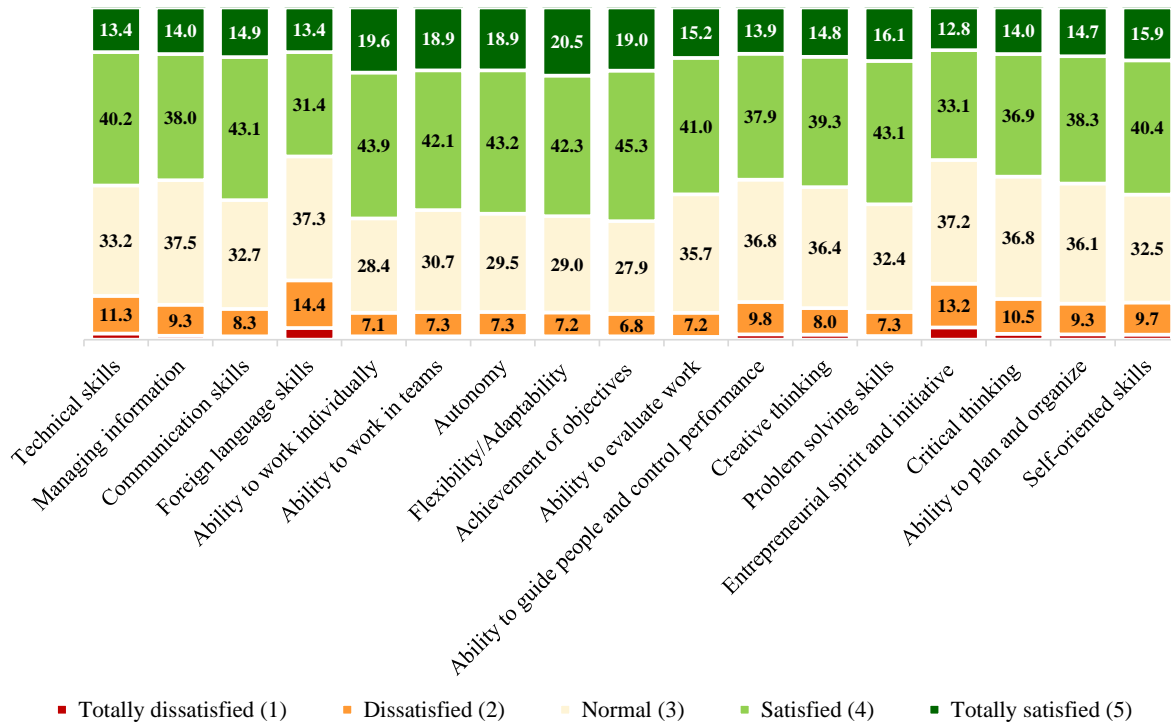
Regarding satisfaction towards skills built from the university, most students feel normal, satisfied, and totally satisfied. More specifically, normal and satisfied levels are the main trend. The normal level ranges from 28.0% to 37.0%, followed by the satisfied category ranging from 31.0% to 45.0% approximately. In more details, among the 17 skills evaluated, ability to work individually, ability to work in team, flexibility/adaptability, and achievement of objectives are skills with the highest satisfaction. Foreign language skills and entrepreneurial spirit and initiative competencies are the two lowest with 3.5% and 3.7% satisfaction. In common, skills equipped at the university play a certain role to students.

4.2.2 Level of use of knowledge/skills acquired from university

Figure 13: Use of knowledge/skills (%)

- ■ Totally dissatisfied (1)
- ■ Dissatisfied (2)
- ▢ Normal (3)
- ■ Satisfied (4)
- ■ Totally satisfied (5)
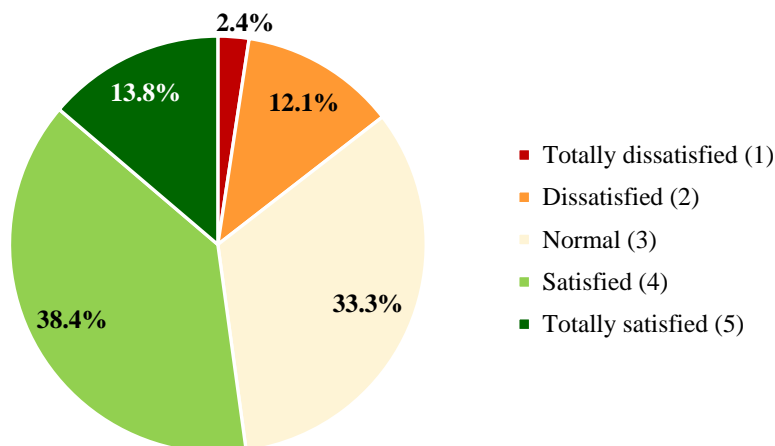
The given pie chart illustrates the graduates' satisfaction towards the level of use of knowledge acquired from the university. At a first glance, it is clear that more than three – quarters of the respondents appreciate knowledge obtained from the university. It is reported that students who are quite satisfied with the knowledge gained from the university take up the highest proportion of 38.4%. A slightly lower proportion of graduates (33.3%) feels normal. The lowest percentage belongs to the total dissatisfied level (2.4%). There two remaining, totally satisfied and dissatisfied categories seemed to be moderately equivalent, with figures reaching 13.8% and 12.1% respectively. In short, the knowledge provided at the university is relatively useful for students.

4.2.3 Usefulness of knowledge acquired in job seeking

Figure 14: Usefulness of knowledge acquired in job seeking (%)
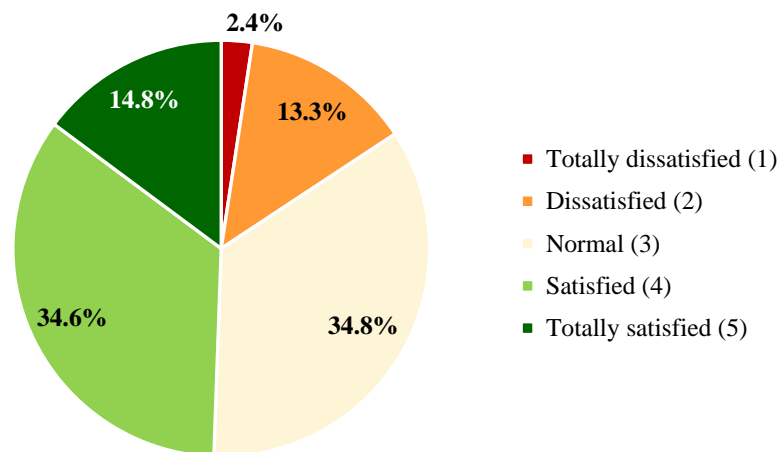
Almost 50.0% of graduates (49.4%) express a positive assessment of the usefulness of knowledge acquired in the job seeking (Figure 14), in particular, 14.8% is totally satisfied. Just over a third of graduates (34.8%) expresses a normal position and, on the other hand, 15.7% is dissatisfied or totally dissatisfied.

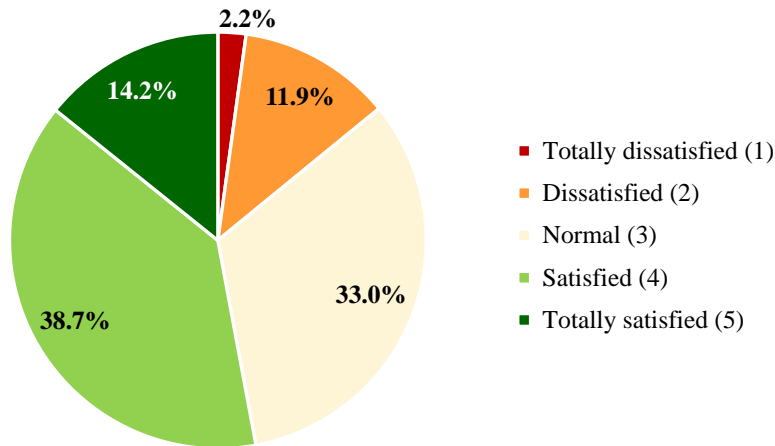**4.2.4 Usefulness of skills acquired in job seeking**

Figure 15: Usefulness of skills acquired in job seeking (%)

The presented pie chart demonstrates the usefulness of skills that students attained at the university in job seeking. As can be seen, the highest percentage represents the satisfied students, at 38.7%. After that, 33.0% of the students determine at the normal level and totally satisfied students comprise 14.2%. The proportion of students who feel the skills acquired at the university unuseful in job seeking just accounts for 2.2%. On the whole, the skills equipped at the university are considerably advantageous for students in seeking jobs.

4.3 Gender discrepancy

In this section, based on the data collection of surveyed graduates, results are mainly made through differentiating by gender (male vs. female). In the first section, the employment situation of both men and women was focused to analyse at the time they responded to questionnaires. Then, more results relating the employed and unemployed were indicated by gender.

4.3.1 Employment status by study field and by gender

Most graduates declared that they had worked since graduation. There were no significant differences between male and female graduates in terms of the study fields (Figure 1). Both men and women took various choices of study fields in accordance with Vietnamese education and training regulations.

Figure 16: Employment status by study fields (%)

The chart shows employment status by study fields for Male (blue) and Female (orange):

Study field	Male	Female
Educational and training science		74
Humanity	69	84
Tourism, Hospitality, Sport and Personal Services	69	62
Educational and training science	96	85
Arts	79	82
Humanity	79	86
Social science and behavior	76	87
Journalism and information	94	89
Business and Administrative studies	89	93
Laws	95	93
Computer science and information technology	93	96
Technical sciences and technology	100	100
Engineering	98	100
Manufacturing and processing	100	100
Agriculture, forestry and fisheries	99	98
Veterinary medicine and health	100	100
Social service	100	93
Tourism, Hospitality, Sport and Personal Services	72	79
Environment and protection	90	80

4.3.2 Graduation ranking by gender

The relationship between gender and the graduation ranking was not statistically significant. Most of working men (81.9%) and women (84.6%) got on average and merit ranking of higher education (Figure 2). Percentages of men and women corresponding to distinction and higher distinction ranking were always below 10.0%.

Figure 17: Graduation ranking by gender (%)
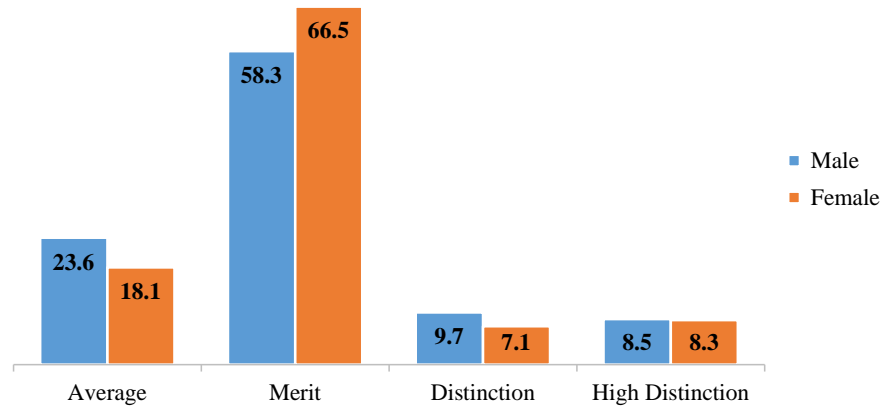
### 4.3.3 Employers' organization by gender

When it comes to investigation on employers' organisation by gender, women worked in all sectors were more responsive to survey than men (72.8% and 27.2%, respectively). In the foreign joint venture perspective, the percentage of women recipients filling the questionnaires (78.3%) was accounted more than men (21.7%). Likewise, the self-employed women (75.0%) was found more than men (25.0%) regarding responding to the survey.

Figure 18: Employers' organisation by gender (%)
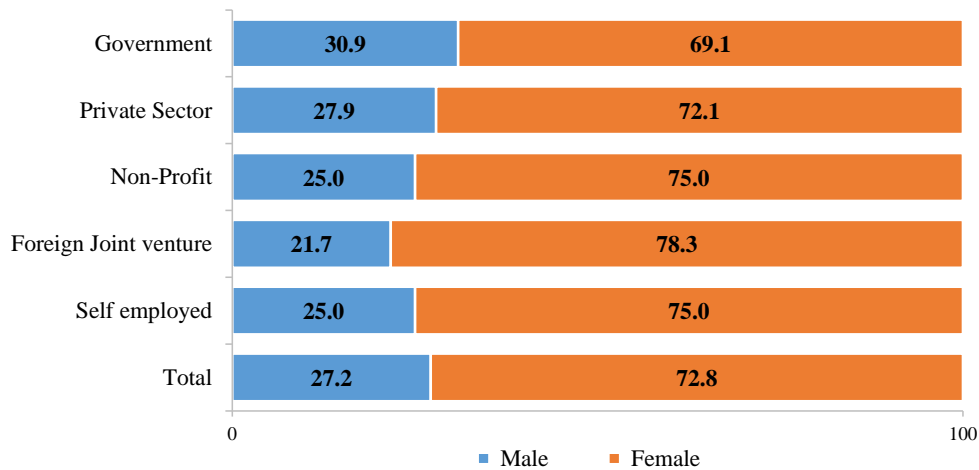
As can be seen in the graph below, the largest number of graduates working engaged in private sector (approximately 60.0%) there was a significant association between gender and the type of private sector and governmental sector where respondents worked. Graduates worked for government were more often than graduates in foreign joint venture. Women worked in governmental organizations and private companies more often than women. By contrast, women worked in foreign joint venture and the self- employed more often than men.

Figure 19: Organisation type by gender (%)
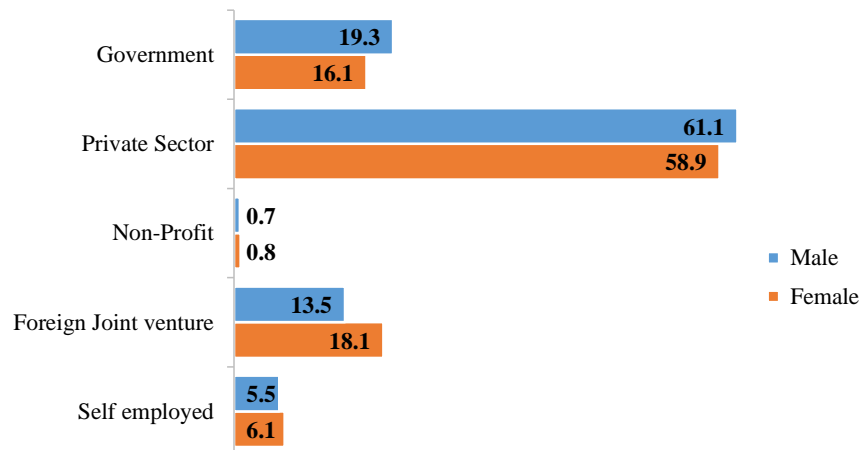
Significantly, nearly 50.0 % of both male and female graduates showed the decision to live and work in Hanoi capital city concerning job location by gender (Fig. 20).

Although working in Hanoi predominated among graduates, there was the alternative in job location of graduates worked in Thai Nguyen (13.4%), Quang Ninh (18.0%), Vinh Phuc (9.1%). Women worked more in Hanoi, and Thai Nguyen city in order to closer to their families live than men. Conversely, men worked more in Quang Ninh, Vinh Phuc, Hai Phong where their families live than women.

Figure 20: Job location by gender (%)
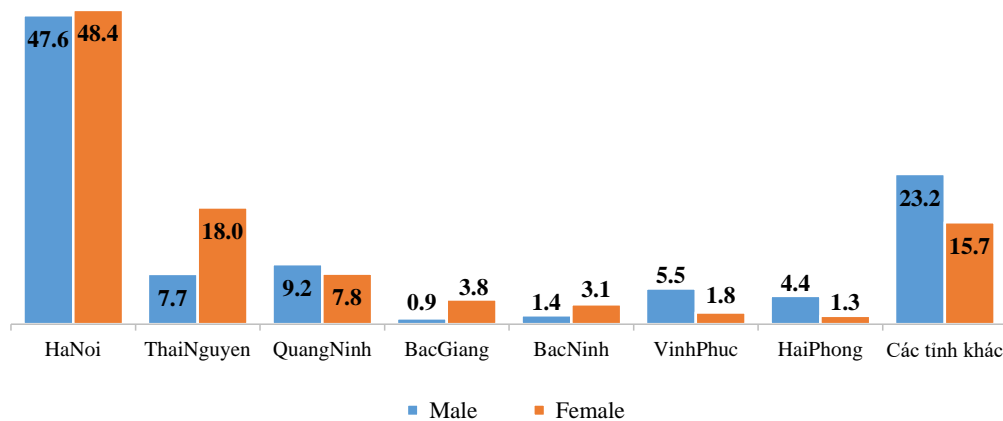
4.3.4 Job title by gender

Figure 21: Job title by gender (%)

The number of women working the clerical jobs and jobs requiring technical specialization were nearly the same around 22.5% while the figure for male were around 15%. In term of jobs requiring a high level of specia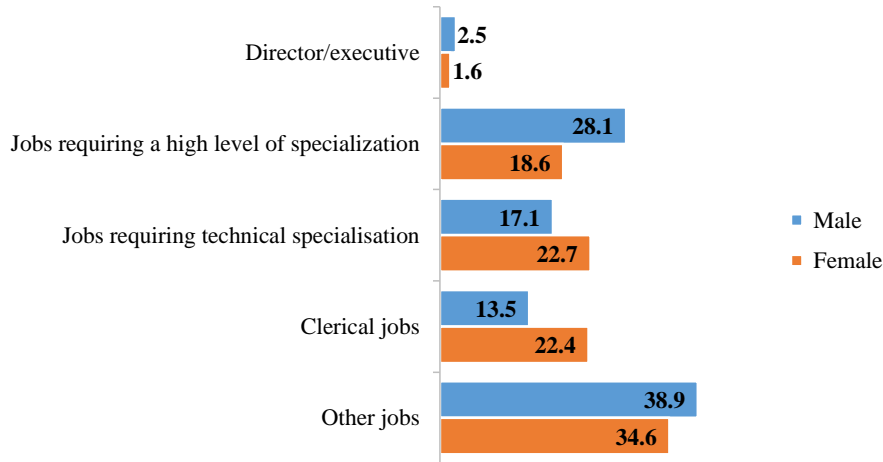lization showed that two third of female in this kind of jobs comparing with male (18,6% and 28,1% respectively). In the job title as Director/Executive, the graduated students in 2020 reached the minor ratio as 1,6% for women and the men was higher slightly as 2,5%. This figure shows that the percentage of men who have a job requiring a high degree of specialization or executive leadership skills as a director was perfectly higher than women. While the female have their own strength with the jobs that require meticulousness, patience and technique.

4.3.5 Hierarchical level by gender

Figure 22: Hierarchical level by gender (%)
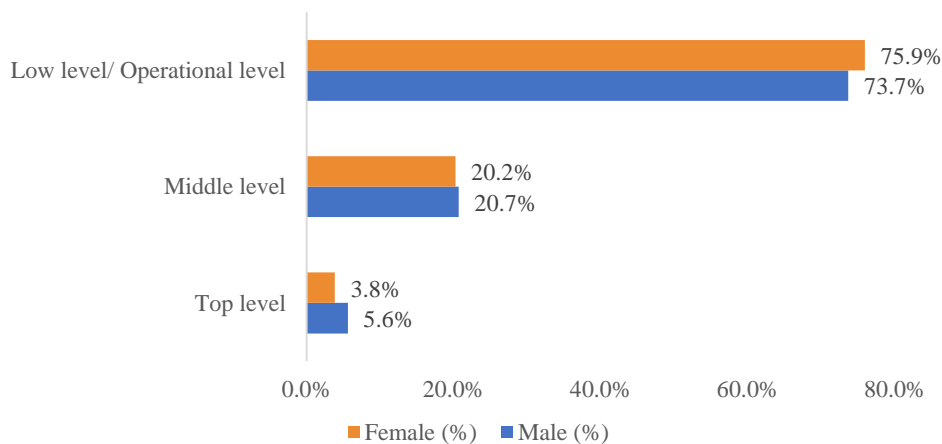
In order to find out a large majority of graduate students in both genders worked in operational level (around 75.0%). In the middle level and top level, the percentage of male was accounted higher slightly than female by 2.0%. The graduated students for 1 year tended to approach on a low-level job obviously. However, from 4.0 to 6.0% of them had the ability to access senior management positions showing the good signal about the competitiveness of fresh graduates in the high-level job market. The data also showed that men are more dominant in "Top level" category (1.47 times more than women).

4.3.6 Full time and part time job by gender

Figure 23: Fulltime and part time job by gender (%)
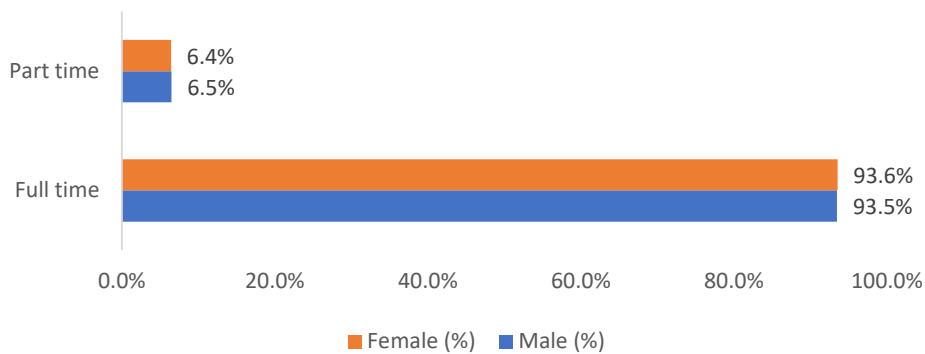
As mentioned in the earlier parts and seen in the above figure, 94% of graduated students in 2021 worked as full-time job. Moreover, the figure of boys and girls in part-time and full-time job categories was nearly the same. The valuable number described the students' ability to access jobs effectively and high motivation to seek jobs within one year after graduation. Moreover, the equilibrium indicators show that employment opportunities for both of them are equivalent, which also reflects social equality in employment opportunities for both genders.

4.3.7 Duration of contract by gender

Figure 24: Duration of contract by gender (%)
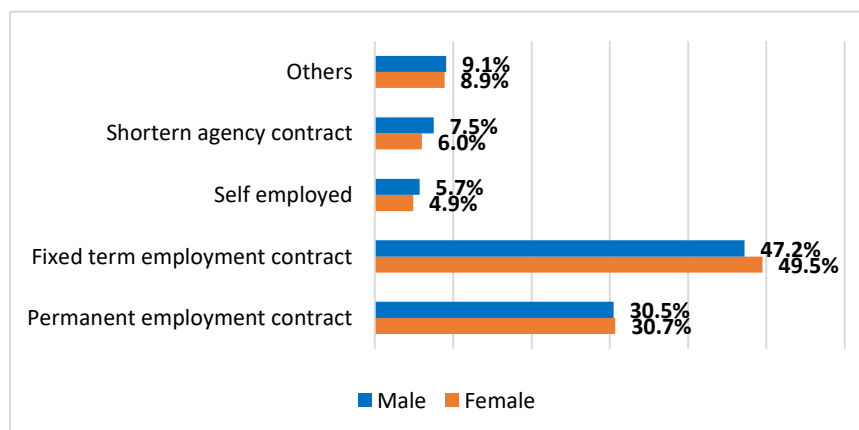
One year after graduation, nearly a half proportion of the graduates signed the fix-term

employment contract. The following percentage was counted in permanent employment contract. The highlight is that the female graduates tended to prefer jobs having contract while the male ones chose self-employed job or short term agency contract. Nearly under 10.0% of two genders worked as no contract. Women within graduated first year had higher rate of stable employment, then combined with the high rate in low-skilled positions, indicating a tendency for women to be more satisfied with their positions. In contrast, in the view of men, they had a prominent proportion of short-term jobs or start up new business among men, combined with a high percentage in senior management positions, indicates a tendency to experience various positions and achieve the specialist positions.

4.3.8 Major match by gender

Figure 25: Major match by gender (%)
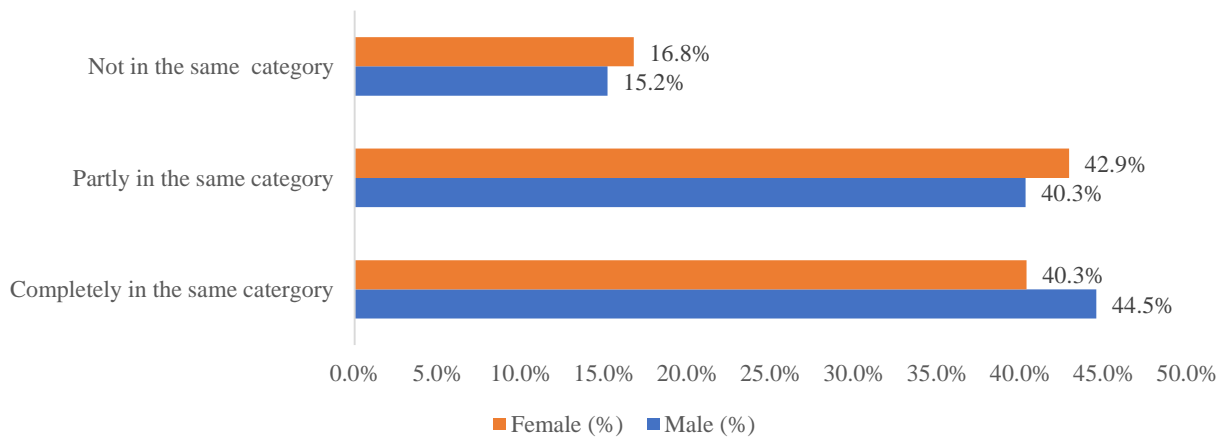
Figure 25 shows the portion of male and female graduates who had the jobs that match or not match with their majors. 44.5% graduated men said that their job had been corresponding with their cerificate in comparison with 40.3% of women. While the percentage of female went the opposite side with their career was partly the same/different with knowledge in university. The graph shows that men had the ability to apply and met their jobs' target better than women. Moreover, men had the high percentage of short-term jobs, it might prove that men were willing to work in short-term, temporary or/and even change jobs to find out the most suitable jobs and positions. Whereas women might be contented and willing to work for a long time even the jobs were incomformative.

4.3.9 Monthly income by gender

Figure 26: Monthly income by gender (%)
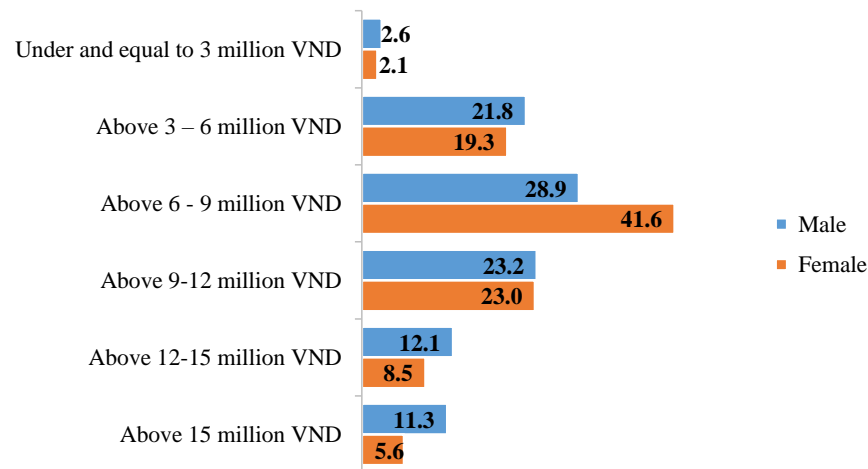
There is a significant evidence showing that men were more dominant than women at high salaries level (in rank from 9 million VND/month or more), a low salary (in the rank from 3 millionVND/month and lower). Especially, the percentage of men was double women with the salaries from 15 million VND(11.3% and 5.6% respectively). In average salary (from 6-9 million VND/month), the proportion of women was counted higher significantly than men by 13.0%. This number confirmed in agreement with the above statements when men had the development orientation according to their own demand such as high position, suitable career; they got more advantageous in earning the high income.

4.3.10 Work satisfaction by gender

Figure 27: Work satisfaction by gender (%)
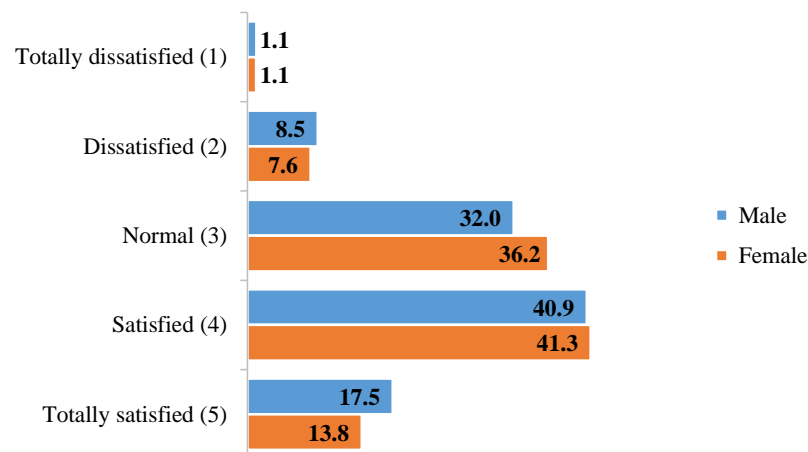
In general, with the average level of satisfaction (satisfied/normal), the percentage of women was higher than men, then these categories also received the most choice of students as around 40.0% and 35.0%, respectively. The men chose the contrary options as totally satisfied and dissatisfied. The noticed number is that 17.5% of men feel extremely gratified with their current job. The percentage of men who were satisfied completely with the job 1-

year after graduation were higher than women. This figure indicates that men were motivated in seeking a job till feel statisfying perfectly while the women went in the opposite trend.

4.3.7 Overall picture

Comparing the percentage of each gender in some of factors that specifically affected employment opportunities and status (Figure 28), the figure showed that the ratio between male and female greater than 1 which indicated male reaching the higher position in work (1.46), higher salary (1.26), and positions requiring many different skills (1.51) than female enormously. To answer the question whether receiving a diploma supported to be appointed to a higher position in the job (the ration between male and female is 0.77). The figures recored the contrast of ratio which may be commented that the sucessful performance of male after graduation was independent with the usefulness of a diploma.

Moreover, the proportion of men said that knowledge and soft-skills in university only partially support in finding a job (2.06 and 1.35), they also told about the limitation of university's knowledge and skills adapted to the current job (1.35) is higher than women significantly. The result shows that the current education system in universities was restricted in supply the various skills which the domain of senior management jobs and jobs with high salaries required. The higher proportion of men compared with women in changing jobs within one year of graduation (1.16) also indicates men's flexibility in seeking for a job. The large amounts of male respondents confirmed that they were satisfied with the current job than the female.

Figure 28: The ratio of successful performance after graduation by gender

2020 GRADUATES' EMPLOYABILITY TRACKING: The First Pilot Report
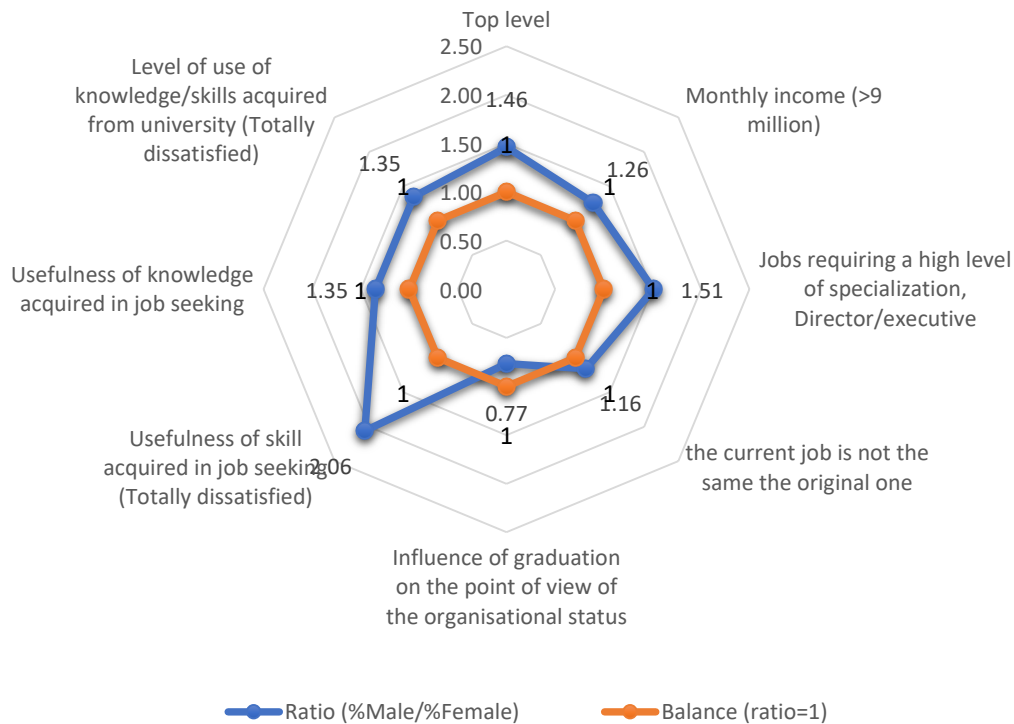
To sum up, the survey shows that the ability of approaching the job after graduation, the effectiveness of seeking a job, especially in senior management level of the male was greater than the female. However, some figures did not lead to the distinctiveness. On the other hand, the proportion of women showed the trend that they paid more attention to stable jobs even receiving the average salary, and felt satisfied with the average position level in their career.

V.   CONCLUSION

The report has presented some statistics that demonstrate employability of new graduates in 9 universities and colleges in Vietnam. Although majority of 2020 graduates are employed (86.0%) and work full time, only 41.4% can work in a field that absolutely matches their major. For those who are unemployed, the length of unemployment often lasts from 1 to 3 months and the main reasons for being unemployed tend to relate to personal issues and unsuitable positions. The report also shows that, most of the unemployed are active in job-seeking and some are inactive just because they want to study further. Other factors that illustrate employment status of new graduates like job types, income, job location, etc. have been also analysed. Especially, training quality at educational institutions in Vietnam are evaluated through a number of graduate satisfaction criteria.

The report has drawn a detailed picture about employment status of young graduates in Vietnam. The report would prove useful for those educational institutions in improving their training programs, as well as for policy makers to compose action plans to improve employability of young people.

Regarding the quality of tracking measures, there are different elements to be considered. The key limitations include the lack of contact details and in some cases a low response rate. Low response rates are the most common difficulty faced in the implementation of graduate surveys. Non-respondents may well be reluctant to participate if they have not obtained a satisfying employment or started an intended career. If they differ from those graduates who participate in the survey, this has implications for the extent that they can infer from the sample to the target population. In addition, low response rates hinder the analysis of disaggregated data for particular graduate subgroups (e.g. graduates from different programmes or with different socio-economic backgrounds).

Some countries are using more robust sampling techniques and have developed strategies and devoted resources to ensure high response rates from samples and whole populations. Often, high response rates are linked to the use of short survey questionnaires or using mixt methods for data collection (for example CAWI and CATI methodologies). Combining surveys and administrative data by matching individuals can help keep questionnaires short without losing relevant information on individuals' trajectories after graduating. But this aspect depends of teach national legislation, availability of data and data protection rules.

In Vietnam some problems emerged during the surveys, they are related to some reforms in administrative rules and in higher education sector as change in unique ID number of citizens due to administrative reform or graduation ranking scale that is still different in HE organizations (4 and 5 levels of graduation ranking). This last problem was solved during data analysis process with a weighting strategy so to allow the comparability.

In any case, in this first pilot survey data provide, in terms of analysis, a solid, detailed analysis that relies on the ability to distinguish the results by characteristics that yield different outcomes of higher education, such as characteristics of programme (field study, degree level), time since graduation, characteristics of the higher education institution (type, public/private, region) and characteristic of graduates (e.g. sex, age, etc.). For the future surveys it is recommended a harmonization in the Vietnamese context that refers to the aim

of achieving comparable data and analysis between different institutions/regions and between comparative reports.

As additional recommendation, it is useful to underline that different stakeholders should encourage the higher education institutions to increase the coverage of graduate tracking: introduce it where absent, particularly for continuing vocational education and training graduates, with all graduate cohorts tracked; encourage higher education institutions to work towards convergence: particularly in relation to survey questions, data collected, representative data and longitudinal data. Moreover, consider providing additional capacity building support in the form of drawing together and spreading good practice in establishing and maintaining graduate tracking systems to overcome some of the gaps and deficiencies in implementation. This could be in the form of: peer learning opportunities, mutual learning country groups, task forces, etc.

In order to make HEIs participate in Graduate Tracking surveys could be used: (i) incentives (convince HEIs that survey participation will contribute to making challenges and needs of their HE system visible to policy makers, mention the prospect of HEIs keeping their own graduate data); (ii) information meetings and ownership (inform HEIs and let them give feedback on questions planned to add); (iii) ensure data protection and anonymity on HEI level.

Personal data aspect represents a very important part of data collection and analysis. In our survey context, personal data is relevant in one way: directly identifying information, such as addresses, names, e-mail addresses, etc. This data may be available only to the researchers in order to contact graduates and collect their responses.

As recommendation for data protection base practices, we would like to underline: store (personal) data safely, both in a physical and a digital sense; keep track of copies of datasets and who has access to them; keep informed consent confirmations separate from survey data; do not connect survey data with contact data (e.g. via invitation links).

For the purposes of our survey, "personal data" means any information relating to an identified or identifiable natural person ("data subject"); an identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person.

In conclusion, it is important to underline that the Ministry of Education and Training encourages the bodies representing higher education institutions to increase the advice and guidance they provide on graduate tracking and reflect on the findings of this study's survey results about the quality/scope of surveys and develop the Higher Education Institutions Center for Graduate Tracking activities to increase synergies and convergence.

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APPENDIX 1: THE QUESTIONNAIRE

MOnitoring Trends In Vietnamese graduates' Employment MOTIVE

Project n. 609781 EPP-1-2019-1-IT-EPPKA2_CBHE-SP

With the goal of tracking the employability of students after graduation, thereby assessing the quality of the university's training program via whether the employment of the graduates is of the same category of their major and if it meets the industry's needs. ... University conducts a survey on the working status of the graduates of the year .... We would like you to provide your truthful information according to the following questions by choosing the appropriate options or filling in the blanks.

We assure you that personal data are processed through computer-based tools in order to investigate the educational and employment conditions of graduates. Personal data will be divulged only as aggregate and anonymous statistics. Provision of data is optional, although failure to answer is an obstacle to research. Data will also be used for further surveys, so it will be possible to observe over time the educational and employment conditions of graduates.

Module I. General Information

Full name:
Gender:
Date of birth:
Student Number:
Identity card number:

Type of degree course:
B ☐ Bachelor Degree
AD ☐ Associate Degree
D ☐ Diploma

Name of University/Institution:
Major of training:

(Please specify the broad subject area of your degree:

Educational and training science
Arts
Humanity
Journalism and information
Business and Administrative studies
Law
Life and natural sciences
Mathematics and statistics
Computer science and information technology
Technical sciences and technology

Manufacturing and processing
Architecture and construction
Agriculture, forestry and fisheries
Veterinary medicine and health
Tourism, Hospitality, Sport and Personal Services
Transportation services
Environment and protection
Security and national defense
Others

Month/Year of Graduation:
Graduation ranking:

| Average | Above average | Merit | Distinction | High distinction |

Tel:
Personal/ Company e-mail:

Module II. Employment status

Q1. Are you currently working or have you worked after having achieved your degree?

You should consider as work activities any occasional jobs, even without a formal employment contract (e.g. private lessons, baby-sitting, leafleting etc.) and jobs that are not related to your degree.

[compulsory question]

[01] yes, I am currently working (go to Q2a)

[02] I have worked after the achievement of the graduation, but I am not currently working (go to Q2b)

[03] I have never worked after the achievement of the graduation (go to Module III)

Q2a. Did you have a job at the time you earned your degree? (for those who are working)

[01] yes, I am continuing the job held before the graduation (go to Q3 and then Module 4)

[02] yes, but the current job is not the same as the one held before the graduation (go to Q3 and then Module 4)

[03] I found a job …. months after graduation (go to Module 4)

Q3b. Did earning your degree lead to any improvement in your job?

(NB: choose only one answer, the most significant one)

[01] yes, from an economic point of view

[02] yes, from the point of view of your organisational status

[03] yes, from the point of view of the functions upgrading

[04] yes, from the point of view of the professional skills

[05] yes, for other aspects [SPECIFY: _____]

[07] no, only from a personal point of view (without direct consequences in terms of improvement in job activities)

[06] no, not from any point of view

Q2b. Did you have a job at the time you earned your degree? (for those who are NOT working)

[01] yes, but not any more (go to Q3 and than Module 3*)*

[02] I found a job …. months after graduation (go to Module 3)

Q3b. Did earning your degree lead to any improvement in your job?

(NB: choose only one answer, the most significant one)

[01] yes, from an economic point of view

[02] yes, from the point of view of your organisational status

[03] yes, from the point of view of the functions upgrading

[04] yes, from the point of view of the professional skills

[05] yes, for other aspects [SPECIFY: _____]

[07] no, only from a personal point of view (without direct consequences in terms of improvement in job activities)

[06] no, not from any point of view

Module III – seeking a job (only for those who are not working if Q1 = 2 or 3)

Q4. Since the end of your last job, how many months passed?

Months 1----------12

Q5. Which is the main reason of quitting the last job?

We suggest: please see if you consider useful to add other

[01] End of contract or fired

[02] Company bankruptcy

[03] No longer interested in the last organisation

[04] Have not found any suitable positions since graduation

[05] Have worked before but have not found any suitable positions

[06] Personal reasons (like opening own activity (entrepreneur) or continuing studies)

[07] Other

Q5b. Which is the main obstacle for you to get a job?

[1] Lack of technical knowledge

[2] Lack of technical skills

[3] Lack of working experience

[4] Lack of information about job recruitment

[5] Lack of foreign language skills

[6] Lack of IT skills

[7] Lack of motivation or right attitude

[8] Other

Q6. Are you actively seeking a job?

For the purposes of this survey the search must be active, i.e. you must have performed a practical job-seeking action, such as sending at least one CV to a potential employer.

[01] yes (move to Q8)

[02] no

Q7. You answered that you are not looking a job; why aren't you looking for it?

[01] continuing studies/further training after graduation

[02] voluntary civil service

[03] waiting to be called back after having passed a test/competitive examination/selection or waiting to start a self-employment-activity

[04] opening own activity (entrepreneur)

[05] having a break for self-orientation (gap year)

[06] personal reasons (homemaker, maternity leave, looking after children or relatives, health reasons, retirement, etc.)

[07] no job opportunities

[08] other reason [SPECIFY:

_____]

Q8. If you had the opportunity, you would start a new job (or hasten the start of a job already obtained; also consider the start of a self-employment-activity):

("opportunity" means a job suited to your own expectations)

[01] within two weeks

[02] after two weeks

[03] you would not be willing to start a new job (even if you had already obtained a job which has yet to begin)

Module IV – Characteristics of job (only for those who are working if Q1 = 1)

Q9. Where are you currently working?

Abroad

Hanoi	Ho Chi Minh City	An Giang	Ba Ria Vung Tau
Bac Lieu	Bac Kan	Bac Ninh	Ben Tre
Binh Duong	Binh Dinh	Binh Thuan	Cao Bang
Cà Mau	Cần Thơ	Hải Phòng	Đà Nẵng
Gia Lai	Hòa Bình	Hà Giang	Hà Nam
Hà Tĩnh	Hưng Yên	Hải Dương	Hậu Giang
Điện Biên	Đắk Lắk	Đắk Nông	Đồng Nai
Đồng Tháp	Khánh Hòa	Kiên Giang	Kon Tum

48

Lai Châu	Long An	Lào Cai	Lâm Đồng
Lạng Sơn	Nam Định	Nghệ An	Ninh Bình
Ninh Thuận	Phú Thọ	Phú Yên	Quảng Bình
Quảng Nam	Quảng Ngãi	Quảng Ninh	Quảng Trị
Sóc Trăng	Sơn La	Thanh Hóa	Thái Bình
Thái Nguyên	Thừa Thiên - Huế	Tiền Giang	Trà Vinh
Tuyên Quang	Tây Ninh	Vĩnh Long	Vĩnh Phúc
Yên Bái			

Q10. What is your job activity sector?

[01] Government/Public sector

[02] Private Sector

[03] Non-profit or third sector (social cooperatives, foundations, non-governmental organisations NGOs, voluntary organisations, associations of social promotion)

[04] Foreign joint venture

[05] Self-Employed

Q11. What is your current job?

(If you are performing different job activities, the answer should refer to the prevalent job, according to any criteria; the list below enumerates different jobs, based on the area and level of specialization. You should select only the one you consider closest to your job activity.)

Jobs requiring a high level of specialization:

[01] entrepreneur, legislator, director/executive

[02] engineer, architect

[03] lawyer, notary or legal issues expert (both for companies or public bodies)

[04] doctor (general practitioner or specialist, excluding psychologists)

[05] psychologist or psychotherapist

[06] journalist, translator, archivist and other professions in linguistics, letters and the arts

[07] pharmacist or veterinarian (including biologists, pharmacologists, animal science experts, agronomists and forestry experts)

[08] software analyst or engineer

[09] chemist, physicist, mathematician, statistician

[10] project manager, business expert, market analyst, communication and management expert, administrative official and other commercial or banking experts

[11] teacher, professor (pre-primary, primary or secondary school teacher, university professor; including those who offer private lessons)

Jobs requiring technical specialisation:

[12] surveyor, junior architect, computer programmer, statistical technician, chemical, mechanical, electronic expert, quality assurance or other technical professions in the science or engineering areas

[13] nurse, physical therapist, health care assistant (including dental hygienist, obstetrician, prevention technician), health educator or occupational therapist and any other specialists in

[14] administrative, management, accounting, foreign correspondence secretary, freight forwarder, promoter or other technical professions in the field of organisation and administration

[15] social technician (e.g. social worker), recreational, cultural, sport activities expert (e.g. commercial artist, tour guide, tourist entertainer, social and community educator, instructor or sports coach, organizer of events or fairs) and of public services and security

Clerical jobs:

[16] administrative, secretary clerk, human resources officer, video-terminal or data-entry operator

[17] purchasing department employee, payroll employee, call center operator, counter clerk, warehouse worker other jobs

Other jobs:

[18] shop keeper, salesperson, food server, hostess/steward and other skilled occupations in trades and cultural, security services (e.g. police officer) and also personal services (e.g. baby sitter, children's or elderly's entertainer and social and health operator)

[19] worker, plant and equipment operator, artisan or other unqualified jobs (e.g. keeper, cleaner operator, delivery man)

[20] other job [please specify_____]

Q12. What is your current position in the organization?

[01] TOP LEVEL

Are the very top hierarchical levels and responsible for the whole organisation. Top managers are responsible for the upper layer of middle managers, typically overseeing overall organization planning, working with middle managers to implement planning, and maintaining control over the organization's progress.

[02] MIDDLE LEVEL

Are below top hierarchical levels and directly responsible for lower level managerial work They may be directly responsible for other middle or first line managers. They may supervise operating staff such as administrative assistance and specialists (e.g. engineers or financial analysts etc.). They are responsible for implementing overall organisational plans to achieve organisational goals

[03] LOW LEVEL/OPERATIONAL LEVEL

Are at the lowest hierarchical level, first line managers or supervisors generally operate and are responsible for operational (non-managerial) employee work. First line managers are vital to the success of organisational goals, as they are responsible for smooth daily operations.

Q13. For how long have you been working?

Months: 1-----12 or more than 12

Q14: Is your current job in the same category with your major?

[01] yes, completely

[02] yes, but only for a part of it

[03] no

Q15. In your current job, what kind of contract do you have?

[01] permanent employment contract

[02] fixed-term employment contract

[03] self employed

[04] short term agency contract /temporary work

[05] others

Q16. Are you working full-time or part-time?

[01] full time

[02] part time

Q17. What is your net monthly income?

(Remember that your answers are protected by the legislation on the protection of

personal data and that they will be used for no reason other than statistical purposes).

(If you have more than one job, refer to the main one)

[01] under 3 million dong

[02] 3-5 million dong

[03] 5-8 million dong

[04] 8-10 million dong

[05] 10-15 million dong

[06] over 15 million dong

Q18. Overall, on a scale from 1 to 5 (where 1 = "not at all satisfied" and 5 ="totally satisfied"), how satisfied are you with your current job?

Not at all Satisfied				Totally satisfied
1	2	3	4	5

Q19.To what extent were the skills and capabilities listed below developed on your undergraduate

course?

	Not at all Satisfied				Totally satisfied
	1	2	3	4	5
Technical skills					
Managing information					
Communication skills					
Foreign language skills					
Ability to work individually					

	1	2	3	4	5
Ability to work in teams					
Autonomy					
Flexibility/Adaptability					
Achievement of objectives					
Ability to evaluate work					
Ability to guide other people and control performance					
Creative thinking					
Problem solving skills					
Entrepreneurial spirit and initiative					
Critical thinking					
Ability to plan and organize					
Self-oriented skills					

Q20. On a scale of 1-5, where 1 means 'strongly disagree', and 5 means 'strongly agree', where would you put yourself in relation to the following statements?

a) In order to perform my current job, I use the skills that I acquired during my degree course?

Strongly disagree · Strongly agree

1	2	3	4	5

b) The undergraduate subject I studied has been an advantage in looking for employment

Strongly disagree · Strongly agree

1	2	3	4	5

c) The skills I developed on my undergraduate course made me more employable

Strongly disagree · Strongly agree

1	2	3	4	5

APPENDIX 2: VIETNAM GRADUATION RANKING

How to calculate the grade of academic achievement according to the letter scale

The ranking of university academic achievement according to the letter scale is assessed as follows:

Grade A: from 8.5-10: Excellent
Grade B+: from 8.0 – 8.4: Pretty good
Grade B: from 7.0 – 7.9: Good
Grade C+: from 6.5 to 6.9: Fairly average
Grade C: from 5.5 – 6.4: Average
Grade D+: from 5.0 to 5.4: Weak average
Grade D: from 4.0 – 4.9: Weak
Grade F: below 4.0: Poor

How to determine graduation ranking on a letter scale

Corresponding to each letter, score of each course will be converted to the score as follows:

A corresponds to 4
B+ corresponds to 3.5
B corresponds to 3
C+ corresponds to 2.5
Point C corresponds to 2
D+ corresponds to 1.5
D corresponds to 1
Point F corresponds to 0

Based on the cumulative GPA, students' graduation ranking is classified into the following categories:

High Distinction: Cumulative GPA between 3.60 and 4.00
Distinction: Cumulative GPA from 3.20 to 3.59
Merit: Cumulative GPA between 2.50 and 3.19
Average: Cumulative Overall GPA between 2.00 and 2.49

APPENDIX 3: CLASSIFICATION OF EDUCATION AT BACHELOR'S DEGREE LEVEL

THE MINISTRY OF EDUCATION AND TRAINING	SOCIALIST REPUBLIC OF VIETNAM
No. 24/2017/TT-BGDDT	Independence - Freedom - Happiness
	Hanoi, October 10, 2017

CIRCULAR

PROMULGATING LEVEL-FOUR CLASSIFICATION OF EDUCATION AT BACHELOR'S DEGREE LEVEL

3. The level-four classification of education at bachelor's degree level Code Description

714 Education Science and Teacher-Training
71401 Education science
7140101 Pedagogy
7140114 Education management
71402 Teacher-Training
7140201 Preschool education
7140202 Primary education
7140203 Special education
7140204 Civics
7140205 Political education
7140206 Physical education
7140207 Sports training
7140208 National defense education
7140209 Mathematics pedagogy
7140210 Informatics pedagogy
7140211 Physics pedagogy
7140212 Chemistry pedagogy
7140213 Biology pedagogy
7140214 Industrial engineering pedagogy
7140215 Agricultural engineering pedagogy
7140217 Literature pedagogy
7140218 History pedagogy
7140219 Geography pedagogy
7140221 Music pedagogy
7140222 Fine art pedagogy
7140223 Bahnar language pedagogy
7140224 Rade language pedagogy
7140225 Jarai language pedagogy

7140226 Khmer language pedagogy
7140227 Hmong language pedagogy
7140228 Cham language pedagogy
7140229 Mmong language pedagogy
7140230 Sedang language pedagogy
7140231 English language pedagogy
7140232 Russian language pedagogy
7140233 French language pedagogy
7140234 Chinese language pedagogy
7140235 German language pedagogy
7140236 Japanese language pedagogy
7140237 Korean language pedagogy
7140245 Fine art pedagogy
7140246 Technology pedagogy
7140247 Natural science pedagogy
7140248 Legal education
71490 Other
721 Art
72101 Fine art
7210101 Fine art history, theory and criticism
7210103 Painting
7210104 Graphics
7210105 Sculpture
7210107 Pottery
7210110 Urban art
72102 Performing art
7210201 Musicology
7210203 Musical composition
7210204 Conducting

7210205 Vocal music
7210207 Western musical instrument performing
7210208 Piano
7210209 Jazz
7210210 Traditional musical instrument performing
7210221 Stage history, theory and criticism
7210225 Playwriting
7210226 Stage actor
7210227 Stage director
7210231 Film-television theory, history and criticism
7210233 Screenwriting
7210234 Drama – film actor
7210235 Film-television director
7210236 Cameraman
7210241 Dance history, theory and criticism
7210242 Dancer
7210243 Choreographer
7210244 Dance teaching
72103 Audiovisual art
7210301 Photography
7210302 Film-television technology
7210303 Sound-lighting design
72104 Applied arts
7210402 Industrial design
7210403 Graphic design
7210404 Fashion design
7210406 Stage and film design
72190 Other
722 Humanities
72201 Vietnamese language and culture
7220101 Vietnamese and Vietnamese culture
7220104 Sino-Vietnamese characters
7220105 Jarai language
7220106 Khmer language
7220107 Hmong language
7220108 Cham language
7220110 Literary composition

7220112 Vietnamese ethnic minority culture
72202 Foreign language, literature and culture
7220201 English language
7220202 Russian language
7220203 French language
7220204 Chinese language
7220205 German language
7220206 Spanish language
7220207 Portuguese language
7220208 Italian language
7220209 Japanese language
7220210 Korean language
7220211 Arabic language
72290 Other
7229001 Philosophy
729008 Scientific socialism
7229009 Religious studies
7229010 History
7229020 Linguistics
7229030 Literature
7229040 Cultural studies
7229042 Culture management
7229045 Family studies
731 Social and behavioral science
73101 Economics
7310101 Economics
7310102 Political economy
7310104 Investment economics
7310105 Development economics
7310106 International economics
7310107 Economy statistics
7310108 Mathematical economics
73102 Political science
7310201 Politics
7310202 Communist party and state government building
7310205 Public administration
7310206 International relations
73103 Sociology and Humanity
7310301 Sociology
7310302 Humanity

73104 Psychology

7310401 Psychology

7310403 Educational psychology

73105 Geography

7310501 Geography

73106 Area studies

7310601 International studies

7310602 Asian studies

7310607 Pacific studies

7310608 Oriental studies

7310612 Chinese studies

7310613 Japanese studies

7310614 Korean studies

7310620 Southeast Asian studies

7310630 Vietnamese studies

73190 Other

732 Journalism and reporting

73201 Journalism and reporting

7320101 Journalism

7320104 Multimedia communications

7320105 Mass communication

7320106 Communications technology

7320107 International communications

7320108 Public relations

73202 Information - Library

7320201 Information - Library

7320205 Information management

73203 Document – Archive - Museum

7320303 Archival science

7320305 Museology

73204 Publishing - Releasing

7320401 Releasing

7320402 Publication business

73290 Other

734 Business and administration

73401 Business

7340101 Business administration

7340115 Marketing

7340116 Real estate

7340120 International business

7340121 Commercial business

7340122 Electronic commerce

7340123 Fashion and garment business

73402 Finance – Banking - Insurance

7340201 Finance - Banking

7340204 Insurance

73403 Accounting - Auditing

7340301 Accounting

7340302 Auditing

73404 Administration – Management

7340401 Management science

7340403 Public management

7340404 Human resource administration

7340405 Management information system

7340406 Office administration

7340408 Labor relation

7340409 Project management

73490 Other

738 Law

73801 Law

7380101 Law

7380102 Constitutional law and administrative law

7380103 Civil law and civil procedure law

7380104 Penal law and criminal procedure law

7380107 Economics law

7380108 International law

73890 Other

742 Life science

74201 Biology

7420101 Biology

74202 Applied biology

7420201 Biotechnology

7420202 Bioengineering

7420203 Applied biology

74290 Other

744 Natural science

74401 Physical science

7440101 Astronomy

7440102 Physics

7440106 Atomic and nuclear physics

7440110 Mechanics
7440112 Chemistry
7440122 Materials science
74402 Earth science
7440201 Geology
7440212 Cartographic studies
7440217 Natural geography
7440221 Meteorology and climatology
7440224 Hydrography
7440228 Oceanography
74403 Environmental science
7440301 Environmental science
74490 Other
746 Mathematics and statistics
74601 Mathematics
7460101 Mathematics
7460107 Computational science
7460112 Applied mathematics
7460115 Mathematical mechanic
7460117 Mathematics and Computer Science
74602 Statistics
7460201 Statistics
74690 Other
748 Computer science and information technology
74801 Computer
7480101 Computer science
7480102 Networking and data communication
7480103 Software techniques
7480104 Information system
7480106 Computer engineering
7480108 Computer engineering technology
74802 Information technology
7480201 Information technology
7480202 Information security
74890 Other
751 Engineering
75101 Architectural engineering and construction
7510101 Architectural engineering

7510102 Construction work engineering
7510103 Construction engineering
7510104 Traffic engineering
7510105 Building material engineering
75102 Mechanical engineering
7510201 Mechanical engineering
7510202 Machine making
7510203 Mechanic-electronics
7510205 Automobile engineering
7510206 Thermal engineering
7510207 Marine engineering
7510211 Industrial maintenance
75103 Electrical, electronic and communications engineering
7510301 Electrical and electronic engineering
7510302 Electronic and communications engineering
7510303 Control and automation engineering
75104 Chemistry, materials, metallurgy and environment technology
7510401 Chemical engineering
7510402 Materials technology
7510406 Environmental engineering
7510407 Nuclear engineering
75106 Industrial management
7510601 Industrial management
7510604 Industrial economy
7510605 Logistics and Supply chain management
75107 Oil and gas technology and extraction
7510701 Oil and gas technology and extraction
75108 Printing engineering
7510801 Printing engineering
75190 Other
752 Engineering
75201 Engineering mechanics and Mechanical engineering
7520101 Mechanical engineering
7520103 Engineering mechanics

7520114 Mechanic-electronics engineering
7520115 Thermal engineering
7520116 Dynamics mechanical engineering
7520117 Industrial engineering
7520118 Industrial system engineering
7520120 Aeronautical engineering
7520121 Space engineering
7520122 Marine engineering
7520130 Automobile engineering
7520137 Printing engineering
75202 Electrical, electronic and communications engineering
7520201 Electrical engineering
7520204 Radar and navigation engineering
7520205 Sonar engineering
7520206 Oceanographic engineering
7520207 Electronic and communications engineering
7520212 Biomedical engineering
7520216 Control and automation engineering
75203 Chemistry, materials, metallurgy and environment engineering
7520301 Chemical engineering
7520309 Materials engineering
7520310 Metal materials engineering
7520312 Textile technique
7520320 Environmental engineering
75204 Engineering physics
7520401 Engineering physics
7520402 Nuclear engineering
75205 Geotechnical, geophysics and geodesic engineering
7520501 Geotechnical engineering
7520502 Geophysics engineering
7520503 Geodesic engineering
75206 Mining engineering
7520601 Mining engineering

7520602 Exploration and survey engineering
7520604 Petroleum engineering
7520607 Screening engineering
75290 Other
754 Manufacturing and processing
75401 Cereal, food and drink processing
7540101 Food technology
7540102 Food engineering
7540104 Postharvest technology
7540105 Fishery processing technology
7540106 Food quality assurance and safety
75402 Manufacturing and processing of textile and garment, footwear and leather
7540202 Textile technology
7540203 Textile and garment material technology
7540204 Textile and garment technology
7540206 Leather and footwear technology
75490 Other
7549001 Forest product processing technology
758 Architecture and construction
75801 Architecture and planning
7580101 Architecture
7580102 Landscape architecture
7580103 Interior architecture
7580104 Urban architecture
7580105 Urban planning
7580106 Urban management and construction
7580108 Interior design
7580111 Preservation of architectural – urban heritage
7580112 Urban studies
75802 Construction
7580201 Construction engineering
7580202 Waterworks engineering
7580203 Marine work engineering
7580205 Traffic work engineering

7580210 Infrastructure engineering
7580211 Geotechnical construction
7580212 Water resources engineering
7580213 Water supply and drainage engineering
75803 Construction management
7580301 Construction economy
7580302 Construction management
75890 Other
762 Agriculture, forestry and fishery
76201 Agriculture
7620101 Agriculture
7620102 Agricultural extension
7620103 Soil science
7620105 Animal husbandry
7620109 Agronomy
7620110 Crop science
7620112 Plant protection
7620113 Horticulture and landscape technology
7620114 Agricultural business
7620115 Agricultural economics
7620116 Rural development
76202 Forestry
7620201 Forestry studies
7620202 Urban forestry
7620205 Silviculture
7620211 Forest resources management
76203 Fishery
7620301 Aquaculture
7620302 Fisheries pathology
7620303 Fishery science
7620304 Fishing
7620305 Fishery management
76290 Other
764 Veterinary
76401 Veterinary
7640101 Veterinary
76490 Other
772 Health
77201 Medicine
7720101 Medicine
7720110 Preventive medicine

7720115 Traditional medicine
77202 Pharmacy
7720201 Pharmacy
7720203 Medicinal chemistry
77203 Nursing and midwifery
7720301 Nursing
7720302 Midwifery
77204 Nutrition
7720401 Nutrition
77205 Orthodontics (Dentistry)
7720501 Orthodontics
7720502 Dental prosthesis
77206 Medical engineering
7720601 Medical examination engineering
7720602 Medical imaging techniques
7720603 Rehabilitation techniques
77207 Public health
7720701 Public health
77208 Health management
7720801 Health organization and management
7720802 Hospital management
77290 Other
7729001 Biomedical Engineering in Sports Medicine
776 Social services
77601 Social work
7760101 Social work
7760102 Youth work
8760103 Education for people with disabilities
77690 Other
781 Tourism, hotel, sports and personal services
78101 Tourism
7810101 Tourism
7810103 Tourism and travel administration
78102 Hotels and restaurants
7810201 Restaurant administration
7810202 Restaurant administration and food and beverage services

78103 Sports
7810301 Sports management
78105 Home economics
7810501 Home economics
78190 Other
784 Transport services
78401 Transport operation
7840101 Transport operation
7840102 Flight operation management
7840104 Transport economics
7840106 Marine science
78490 Other
785 Environment and environment protection
78501 Resources and environment management
7850101 Resources and environment management
7850102 Natural resources economics
7850103 Land management
78502 Occupational safety and industrial hygiene
7850201 Personal protective equipment
78590 Other
786 Security and national defense
78601 Security and social order
7860101 Security reconnaissance
7860102 Police reconnaissance
7860104 Criminal investigation
7860108 Criminalistics
7860109 State monitoring in security and order
7860110 Traffic safety and order management

7860111 Criminal judgment enforcement and judicial assistance
7860112 People's public security commander
7860113 Fire safety, firefighting and rescue
7860116 People's police logistics
7860117 Security intelligence
78602 Military
7860201 Infantry commander
7860202 Navy commander
7860203 Air force commander
7860204 Antiaircraft commander
7860205 Artillery commander
7860206 Armored vehicle commander
7860207 Commando
7860214 Border defense
7860217 Military intelligence
7860218 Military logistics
7860220 Information commander
7860222 Grassroots military
7860220 Engineering commander
7860226 Antiaircraft tech commander
7860227 Armored vehicle tech commander
7860228 Engineer tech commander
7860229 Chemical tech commander
7860231 Technical reconnaissance
7860232 Navy tech commander
7860233 Electronic warfare tech commander
78690 Other
790 Other