INSTITUTO
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University graduates' employability: Bringing entrepreneurial intention into the equation

LI Mengting

Doctor of Management

Supervisors:
PhD Nelson Campos Ramalho, Associate Professor,
ISCTE University Institute of Lisbon
PhD WANG Guofeng, Associate Professor,
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I declare that this thesis does not incorporate without acknowledgment any material previously submitted for a degree or diploma in any university and that to the best of my knowledge it does not contain any material previously published or written by another person except where due reference is made in the text.

Signed: Li Mengting Date: 2021.12.30

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作者申明

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Abstract

Nowadays in China, more and more university graduates do not match the competencies required by the job market and there is not enough knowledge about the explanatory models of graduate employability in China, especially when entrepreneurial dimension is considered. This is the research motivation of this thesis which deploys two empirical studies to offer an answer.

The first study is qualitative and intended to understand how university graduation stakeholders evaluate the learning process and outcomes experienced as preparedness to work and adaptation facility in the specific Chinese context. This study provided information to design a mediated moderated model intended to identify predictors as well as the interaction with entrepreneurial intention. This second study is quantitative and tests the model with a sample of 366 recently employed graduates.

Findings show that the successful outcomes of higher education always depend simultaneously on a series of factors, that is, the individual assets comprising adaptability and proactive personality, social assets comprising horizontal collectivism and social capital and organizational assets comprising real-world activities and perceived organizational support which contribute to the employability of the students. The key psychological factor is self-efficacy which is a great facilitator to self-motivate. Entrepreneurial intention was found to be a moderator that changes this process in relating self-efficacy to employability. This thesis aims to help designing curricula and drawing attention so as to increase employability of graduates in the Chinese context.

Keywords: university graduate; student employability; education; Chinese context
JEL: A22-Undergraduate; I21-Analysis of Education

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Resumo

Atualmente, na China, cada vez mais diplomados universitários não correspondem às competências exigidas pelo mercado de trabalho e não existe conhecimento suficiente sobre os modelos explicativos da empregabilidade dos diplomados na China, especialmente quando se considera a dimensão empresarial. Esta é a motivação de investigação desta tese que desenvolve dois estudos empíricos para dar resposta.

O primeiro estudo é qualitativo e destina-se a compreender como os stakeholders do ensino universitário avaliam o processo de aprendizagem e os resultados, tidos como o grau de preparação para o trabalho e a facilidade de adaptação, no contexto chinês específico. Este estudo forneceu informação para conceber um modelo mediado moderado destinado a identificar os preditores, bem como a interacção com a intenção empreendedora. Este segundo estudo é quantitativo e testa o modelo com uma amostra de 366 licenciados recentemente empregados.

As conclusões mostram que a empregabilidade depende sempre simultaneamente de uma série de factores, ou seja, os ativos individuais que compreendem a adaptabilidade e a personalidade proactiva, os ativos sociais que compreendem o coletivismo horizontal e o capital social e os ativos organizacionais que compreendem as atividades do mundo real e o apoio organizacional percebido que contribuem para a empregabilidade dos estudantes. O fator psicológico chave é a auto-eficácia, que é um grande facilitador da auto-motivação. Verificou-se que a intenção empresarial é um moderador que altera este processo na relação entre a auto-eficácia e a empregabilidade. Esta tese tem como objetivo ajudar a conceber currículos e chamar a atenção de modo a aumentar a empregabilidade dos licenciados no contexto chinês.

Palavras-chave: licenciado; empregabilidade estudante; ensino; contexto chinês
JEL: A22-Licenciados; I21-Análise da Educação

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摘要

在当今中国，越来越多的大学毕业生所具备的能力与就业市场所要求的胜任力不匹配。而目前在有关中国毕业生可雇佣性的研究模型中，尚未有针对创业维度的深入研究，此为本论文的研究动机，本论文将试图通过两项实证研究来丰富该研究领域。

第一项实证研究是定性的，旨在了解大学毕业生的利益相关者是如何评价其学习过程和结果的，即在中国的具体环境中，大学毕业生是如何准备工作和适应工作的。该研究旨在设计一个有中介的调节模型，以确定该模型的预测因素及其与创业意向的关系。第二项研究是定量的，以近年就业的 366 名大学毕业生为样本，对该模型进行检验。

研究结果表明，高等教育能否获得成功的结果取决于一系列因素，即由适应性和主动性人格组成的个人资产，由横向集体主义和社会资本组成的社会资产，以及由真实性学习和感知组织支持组成的组织资产，这些因素都会影响到大学毕业生的可雇佣性。关键的心理因素是自我效能感，它是自我激励的一个重要促进因子。在自我效能感与可雇佣性的关系中，创业意向是改变这一过程的调节变量。本论文旨在为高校人才培养提供借鉴并引起社会各界的重视，以期提高中国大学毕业生的可雇佣性。

关键词：大学毕业生；学生可雇佣性；教育；中国情境

JEL: A22-大学教育；I21-教育分析

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Chapter 1: Introduction

1.1 Research background

The study of employability originated in the 1960s, and prevailed in 1990s. From the perspective of labor supply and demand, the Canadian Labour Force Development Board defined employability as the relevant abilities that make a person qualified to get a job based on the interaction between individual and labor market. Employability is the ability that people can unleash their potential with free labor mobility within the labor market to find early employment, maintain it, get a new employment, and progress during their careers (Hillage & Pollard, 1998). To individuals, they need to understand the external factors affecting their own abilities so as to operate effectively in the labor market.

Since the 1980s, society underwent profound changes in education (Scurry & Blenkinsopp, 2011) witnessing a shift from an elite to a mass educational system in higher educational system in developed and emerging economies (D. P. Baker, 2009).

Nowadays in China, undergraduate students' enrolment has increased rapidly since the initiation of higher education reform in 1977. This higher enrolment rate has resulted in a dramatic increase of diplomas granted by universities. Every year, a great number of graduates floods into the labor market. The government report of the Ministry of Education of the People's Republic of China showed that the number of graduates from higher education institutions in China was around 6.81 million in 2015, 7.04 in 2016, 7.36 in 2017, 7.53 in 2018, 7.59 in 2019 and steadily increased to reach about 7.9 million in 2020. In China, it is a custom that the Ministry of Education and Ministry of Human Capital and Social Security will jointly release the first-employment rate by July every year. According to the report released by the Chinese government, employment rates after half a year of graduation for recent graduates were 91.5 percent in 2018, which remains flat compared with the year 2017 (91.9 percent), 2015 (91.7 percent), and 2016 (91.6 percent), but is slightly lower than the year 2014 (92.1 percent). For the year 2016, the average monthly income of graduates after their six months of graduation was 3988 yuan higher than the average disposable monthly income 2801 yuan of urban resident of that year.

However, university graduates are challenged to find jobs that match their qualification.

A considerable proportion of them are not qualified for their job (Teng et al., 2019; Verma et al., 2018). Employers believed that some of the graduates do not have the qualities and skills that are required by their jobs. People believed that to help students make full preparation for their future professional work experience is the mission of higher education institutions. Employers hope students are trained to not only become effective professionals, but also be ready to deal with the requirements related to their jobs quickly and shortly after graduation. Graduates who enter the labor market are expected to be armed with the abilities in their degree program and a series of soft skills, like teamwork, communication, critical thinking, problem solving, attitudes, and leadership (Finch et al., 2013). In recent years, educational scholars and employers have attached increasing attention to the importance of these soft skills (Chamorro et al., 2010). Employers carry out talent recruitment with an expectation that employability skills can be expressed as fundamental knowledge and some other skills, and graduates require such skills to boost the likelihood of career success. Other soft skills become a decisive factor in differentiating and shortlisting candidates who have similar educational background. There is no doubt that education is still regarded as a necessity and an entrance ticket to the labor market. Interpersonal skills, social networks, communication skills, knowledge in information technology, personal characteristics, general competence as well as humanistic ability tend to become increasingly important than ever before (Hesketh, 2000).

Because of the tremendous changes taking place in the labor market, employability has become a major consideration for will-be graduates (Shafie & Nayan, 2010) and people tend to blame universities for insufficiently preparing students for their employment. It is therefore important to understand how in-school education impacts on graduates' employability, their later job-hunting process and promotion opportunity so as to develop relevant support strategies for their chances of success after graduation. One important way to improve the labor market outcomes for university students is to enhance their employability. From an employer's point of view, recruitment of graduates who are well-educated and fully-trained in school is significant and beneficial to the future development of an enterprise.

1.2 Research problem description

Every year in the month of July, a large number of graduates in China obtain their degrees, and then start their career in all walks of life after four years of university study. Increasing understanding of the relationship between graduate's in-school education and their

employability after their university graduation is critical. It is believed that graduates' employability remains high on the agenda for the government (Harvey, 2001), with belief that higher education should facilitate the development of national economy and make a contribution to the society as a whole. More and more people became aware that it is not only significant for graduates to have knowledge related to their own majors and study areas when seeking employment, but also that their hard skills should be complemented by good personal qualities and skills that can facilitate and enhance their employability (M. Jones et al., 2017). Various educational stakeholders including educational institutions, governments, employers and the graduates themselves pay more and more attention to employability of graduates (Y. Xie et al., 2017).

Educational institutions are suggested to have a better understanding of the impact of in-school education on employability so as to produce workforce who are well prepared with the qualities and skills that required by employers in the Chinese setting. The purpose of this thesis is to investigate the relationship between in-school education and the perceived employability of graduates to propose some effective and practical suggestions for universities based on the Chinese setting.

1.3 Research contents and framework

College students' individual, organizational and social assets can improve their abilities to adapt to the environment, solve problems and communicate with others. These abilities have a positive impact on the employment of individuals after graduation as well as their future psychological and professional development.

The research contents of this thesis are as follows. Firstly, we demonstrate the current situation and the realistic dilemma of college students' employment, and then figure out the theoretical and practical problems to be solved and analyzed in this thesis based on employability issues. Secondly, we clarify and review the basic theories needed in the first study, and carry out interviews to judge on the representation of variables focused on literature review and see whether any new dimension emerges. The first study will indicate on better choices for the survey, namely, which variables should be central, which should be less important in the model within the Chinese context. Thirdly, this thesis sorts out the effects of college students' individual, social and organizational assets based on existing studies on employability, moderating effects of entrepreneurial intention and mediating effects of psychological factor self-efficacy on college students' employability. The second study is

carried out to test a comprehensive model of student employability intended to better understand the predictors and consequences of student employability. Fourthly, a questionnaire was designed based on the theoretical model, and hypotheses were verified based on the theoretical model. Fifthly, based on the empirical results, the conclusion of the study is drawn. On this basis, suggestions and prospects are given to the cultivation and improvement of employability of university students.

The structure of this thesis is presented as follows:

Chapter one: Introduction. This chapter firstly introduces the background of the topic and the current reality, and extracts the theoretical research problems from the actual situation. Then the main content and the concrete structure of the study is presented, and explains the research thinking and writing logic of the study. Finally, the methods of this study are described, and it points out the theoretical and practical significance of the study.

Chapter two: Higher education and employability. This chapter starts by explaining the Chinese Higher Education situation and challenges it faces in linking with the corporate world. It will then explore the central issue of employability and related existing employability research both in the West and in China. And then the qualitative study 1 is conducted to explore the dimensions related to antecedents of graduate employability in China. Namely, it approaches two sorts of important stakeholders in this process: 1) recent graduates or recent employees, and 2) employers and team supervisors. This section will then further detail the procedure, the data collection instruments with the interview scripts, the target sample and the finding results.

Chapter three: Study 2 - Testing a model of graduate employability. This chapter reviews and sorts out the relevant research results according to the results of study one. Based on the literature review, we summarize the factors that contribute to the employability. The first is aggregated at the individual level and was named individual assets comprising adaptability and proactive personality. The second is aggregated at the social context level and was named social assets, comprising horizontal collectivism and social capital. Lastly, the third, is aggregated at the organizational level (the university) and is named organizational assets, comprising real-world activities and perceived organizational support. This part lays the theoretical foundation for the following model construction. The key psychological variable is self-efficacy which is a great facilitator to self-motivate. This research is also intended to test how entrepreneurial intention can change this process. And then we proposed the conceptual model with hypotheses. To empirically test these hypotheses, we took a set of steps to design a method conducive to the adoption of suitable measures, data collection, definition of the

sample, and data analysis strategy. Analysis tools are adopted to test the proposed hypotheses with data, and explain the testing process and results.

Chapter four: Discussion of results. This chapter explores the theoretical contribution and practical implication of this research. This research finds out some idiosyncratic features in Chinese culture and job market dynamics change the way current models actually operate in Chinese professional context. Then present the enlightenment and suggestions to stakeholders. The study has several important implications for investment in university students' employability. It is of great significance for college students, schools, enterprises and government to understand the connotation of employability of college graduates.

Chapter five: Conclusion. This chapter firstly reports the research summary of this study. The purpose of this study is to conduct a closer examination on the distinction influences of individual, social and organizational assets on graduates' employability. We tested these influences by considering self-efficacy as a psychological facilitator and entrepreneurial intention as a moderator. The results of our empirical research suggest the distinction influence on employability. The employability of college graduates has great influence on graduates, universities and employers. According to the findings and results of the empirical analysis, this thesis puts forward the corresponding countermeasures and suggestions in the practical implication part, mainly from the perspective of college students themselves, universities, and the government. Through the implementation of countermeasures, a more fair and favorable employment environment for graduates can be created so as to improve the employment rate of university students and continuously. Finally, the limitations of this research and the direction of future research are discussed.

1.4 Research method

After cross-reviewing a large number of researches in related fields, the research method of this thesis combines the actual requirement with previous research methods, mainly adopts the method of literature research, interview, questionnaire survey to collect data, and adopts software analysis method to analyze the data obtained from the questionnaire. This paper mainly adopts the following research methods.

1) Literature research

Through the analysis of domestic and foreign literature in the field of employability of university students, we get a thorough understanding of the progress and achievements of existing research as well as the research methods commonly used in this research field, and

we can further find the possible innovation points of this research. After reading a large number of relevant literatures published at home and abroad, we sort out the key variables related to the employability model of university students in the literature review part to understand the definition and measurement methods of each variable. A research framework is constructed to explore the relationship between variables and form the research model of this research. We try to clarify the research direction and construct research ideas based on the combination of existing research and the current social background. Through the review and analysis of a large number of literatures of various types and sources, this paper lays a solid theoretical foundation for this research.

2) Interview

Information and data collection took the form of interviews. The interview script was built by incorporating a set of open-ended questions that targeted issues emerged from literature review, both in the West and China. We design two interview scripts reflecting the differential value of information to collect information from the following two groups, namely, employees/recent graduates and employers/team supervisors.

3) Questionnaire survey

This research mainly collects data by means of online questionnaire survey, and sends the link of questionnaire to the graduates. The questionnaire designed in this paper refers to authoritative scales at home and abroad, and forms a preliminary draft of the scale based on the modification of the scale. We collect information from the following aspect: graduates' individual asset, social assets, organizational assets, self-efficacy, entrepreneurial intention and their self-perceived employability. Data were gathered from a university located in Zhongshan, Guangdong Province, China. We got in touch with this group of graduates with the help of the university's alumni association. We targeted graduates who finish their study within the last three years. After we got the graduates' contact information, we sent the link of the questionnaire to them and asked them to fill in the questionnaire according to their actual situation. Since the subjects of the survey are university graduates, they are relatively cooperative to answer the questions. In addition, online questionnaire survey is more convenient, and it will not take long time for students to finish the questionnaire survey. Online questionnaire survey method also has the advantages of fast collection, low cost, not limited by time and space, and it can quickly obtain a large amount of first-hand data. In order to ensure the high quality of questionnaires and data, we must maintain a rigorous attitude at every stage of questionnaire design, distribution and collection.

4) Empirical analysis

In the data analysis stage, this study adopts frequently used statistical tools to analyze the original data, test the reliability and validity of the scale through factor analysis, and gradually analyze and verify the research hypotheses of this paper through several different analysis methods. In terms of data analysis methods, descriptive statistics, correlation analysis, reliability and validity analysis and regression analysis are mainly used to test the relationship between variables and further explain the internal mechanism of research problems.

1.5 Significance of the study

1.5.1 Theoretical significance

This research attempts to further explore the structure and dimensions of employability of college students from the perspective of students on the basis of the existing theoretical research. Although there is a strong emphasis on providing college students with tools to follow entrepreneurial paths, extant employability models have been mostly assuming graduates will follow a professional role as employees more than future employers, via starting entrepreneurial activity. This is a significant research gap because entrepreneurship gained a central role in the renovation of competitiveness and opening of innovation economy in China. Therefore, this study intends to introduce the students' entrepreneurial intention into the employability equation thus offering an extension of employability models and theory. To some extent, this study intends to enrich the research on college students' employability in the field of organizational psychology in China. The structure model of employability of college students can provide theoretical basis for future research, and can also provide secure guidelines for schools to cultivate college students' employability including entrepreneurial intentions.

1.5.2 Practical significance

At present, China's economy is in a critical transition from high-speed growth to high-quality and innovation growth, and is also in urgent need of high-quality talents who possess the competences that are in line with the requirements of economic development. However, the graduates provided by colleges and universities as talent training bases have not kept up with the pace of economic development. One of the important tasks of the 13th Five-Year Plan was to solve the mismatch between the talents needed for China's economic development and the actual talent supply, which is mainly reflected in the lack of employability of college

graduates.

At present, the employment problems of college graduates have been widely concerned by the local government, universities and all sectors of the society. Some people think that the employment difficulty for college graduates to find a suitable job comes from the structural contradictions between employers, universities and graduates. Schools produce few or no graduates in majors that are urgently needed in the labor market. Some people think that this situation is caused by the immature development of talent market and unclear understanding of the operation mechanism. The employment market does not create a good employment environment for college graduates, leading to single, embarrassing, and difficult employment channels which may be full of obstacles, resulting in a phenomenon that graduation means unemployment to graduates. But faced with the same social environment, we have to wonder why some graduates can successfully find satisfying jobs, while others are faced with the embarrassing situation.

In the meantime, with the rapid development of higher education, the number of graduates from institutions of higher learning has been increasing year-by-year, but the employment prospects of college students have become more difficult. At present, most of the researches on employability of college students in China focus on summary research with few empirical studies. This study endeavors into making the results more accurate, more practical and psychologically significant. Based on the expected findings concerning employability drivers and entrepreneurial student's intention, this study offers guidelines of substantial applied value to design policies and strategies intended to leverage graduate employability.

The research will be divided into two stages. The first study is intended to understand how university graduation stakeholders including graduates and employers evaluate the graduates concerning how easy they can perform in their job so as to gain a view on the issue in China. Interviews are conducted separating recent graduate (<3 years) from graduates (3-5 years), employers or business owners, and direct supervisors or team leaders. Interviews will provide the most central dimensions based on content analysis.

After crossing literature review and results from the first study, the second study is intended to quantitatively test a comprehensive model of student employability to better understand the predictors and consequences of students' employability. The questionnaire includes all variables in the model extracted by crossing literature review with findings from interviews. This study is intended to explore the path that college students can follow in order to become self-employable by considering the moderation role of entrepreneurial intention. It will answer the question: to which extent does an entrepreneurial oriented education at

university increases employability? A quantitative survey will be carried out with a questionnaire including self-efficacy as a key variable and entrepreneurial intention as a contextual variable.

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Chapter 2 : Higher Education and Employability

This chapter starts by explaining the Chinese Higher Education situation and challenges it faces in linking with the corporate world. It will then explore the central issue of employability and literature pertaining to its research both in the West and in China.

2.1 Higher education in China

The Chinese President delivered a speech aimed at promoting the "985 project" to develop world well-known universities in May 1998. After nearly twenty years' development, thirty three out of thirty nine 985 universities, like Tsinghua and Peking University, entered the name list of world's top 500 universities (H. Zhang et al., 2013). Besides building high-quality universities in the "985 project", the Chinese government made a strategic decision to launch a Great Leap Forward in higher education in 1999. China further encourages universities to set up undergraduate and graduate schools to improve the quality of higher education (S. Hu & Chen, 2012). According to the data released by the government, there were 3.4 million students enrolling into higher education in the year of 1998. But only after a decade, the number increased to more than 20 million. This means that the scale of the Chinese higher education expansion was made with a significantly rapid speed, that is to say, with a nearly six-fold growth in the number of enrolments. The number of students who make an effort to achieve higher degrees after undergraduate levels has increased steadily with every passing year. From then on, the numbers of students admitted into the university and also graduates produced by the university have increased continually. As for the number of people who has received or is receiving higher education in China, the Chinese higher education system is currently the largest in the world (S. Hu & Chen, 2012). Therefore, the employment of graduate students has aroused wide public concern.

The influence of curriculum on employability of students received little attention from scholars, although some of them have realized the importance of employability (Dacre & Qualter, 2013). When we discuss curriculum, the course workload and course challenge will be taken into consideration, and the workload and challenge represent the volume and difficulty of the course. Although the course requires great efforts to study and commit, these courses are believed to trigger academic achievement, generic skills, innovation.

In China, the students' academic performance in university is generally reflected in the

grade point average GPA (Imose & Barber, 2015), which is an evaluation of the performance in academic courses (McKinney et al., 2003). GPA is so important for students that it is usually used to screen candidates from educational institutions (Johansen, 2014) and compare between the new graduate applicants (C. N. Baker, 2008). It is generally speaking that during the prescreening stage, job applicants with high GPA are more likely to be invited to have a job interview (Thoms et al., 1999). Studies also showed that higher GPA provides more opportunities to graduates in the selection process, such as gaining the job and receiving higher salary (Roth & Bobko, 2000). In addition, favorable GPA is a signal that the applicants have better communication and reasoning skills (Brown & Moore, 2012). They are more intelligent, motivated and with other job-related skills (Roth & Clarke, 1998). For some students, they take employability as their ultimate goals of their successful university curriculum.

2.2 Universities link to the corporate world

It is recurrently seen in relevant literature that the skills and knowledge learned from university programs do not necessarily meet the demands of the future employers (Teng et al., 2019), which leads to a call for the amendment and reform of the methods students are trained and taught in universities. Some graduates do not obtain a job that is related to their learning in university. The graduates opt for off-target jobs mainly because what they have learned in university is out of date and unwanted in the labor market, which trigger a mismatch of acquired and required skills (Suleman, 2018).

People pay to be educated and trained with a hope of gaining skills and being rewarded by their future employers. It means that through education and training, the learners earn a series of marketable skills with a consequence that their productivity and working efficiency are greatly increased, which will significantly improve their income (Suleman, 2018). However, the necessity to improve graduates' employability has been discussed and it also leads to debate around the relationship between education and the labor market. The society has put some pressures on higher education to help their students who are defined as the future employees with suitable and marketable skills based on the need of the economic and labor market. So, to some extent, higher education has a new institutional mission to fulfill. It is about enhancing the employability of their graduates (Hartmann & Komljenovic, 2021).

Employers are believed to be the people who transfer employee's employability into employment, and graduates should be educated and trained to be equipped with skills that fit

employers' needs (Bridgstock, 2009). Therefore, universities should provide the labor market with graduates who possess useful skills and are ready to work. This assumption implies employability is not only an issue of the graduates themselves, but also that it should not be ignored by the educational institutions, thus expected to take action to respond to the changing labor market.

In today's society, it is generally believed that universities graduates cannot enhance their practical capability without real internship experience that will continue to propel them in further studies and future work (Silva et al., 2016). Some universities in developing countries including China built up the so-called collaborative arrangements with some local industries, which was called as university-industry linkages (S. Hu & Chen, 2012). Universities are primarily educational institutions that produce highly educated graduates (Suraweera, 1985). However, the traditional teaching model of universities has been heavily criticized because it inadequately prepares students for their future work. University is suggested to cooperate with the industrial world through the following methods: training and education-related activities, the provision of services and other consulting activities, and research-related activities (Brimble & Doner, 2007).

To be specific, as for training and education-related activities, students can be given opportunities to pay a visit to companies and their plant to experience the real working environment, and industrialists or business people can be invited to deliver speech or talks to university students (Suraweera, 1985). These kinds of activities can be realized through university-student internship or vacation employment, that is, this group of students work for companies for a few months under co-supervision of university and industry (Ayarkwa et al., 2012).

Services and other business consulting activities can be regarded as a two-way contribution to both sides. Certain working periods in the industry offered to teachers in universities, industrial experts and business people came to universities to help design particular courses and lecture arrangement (Oyebisi et al., 1996). In return, universities give some technological and knowledge support to enterprises (Vega-Jurado et al., 2008).

Research-related activities can be divided into two groups. One is some research collaboration projects carried out by university academics and their counterpart in the corresponding industry (Suraweera, 1985) such as cooperative research, contract research and the exchange for research people. Another group is associated with sharing tangible assets like equipment, facilities and laboratory between the sides (Vega-Jurado et al., 2008) .

Faced with the increasing number of graduates and the increasingly fierce competition,

the new graduates have a feeling that they are eager to be distinctive in employability, and hope that they can acquire more work experience and engage in some other extracurricular activities (Roulin & Bangerter, 2013). Evidence of influence of these strategies to improve employability seems to be insufficient (Cole et al., 2007) although there is abundant research has paid attention to the predictors and outcomes of academic performance and the motivations to participate in extracurricular activities (Pinto & Ramalheira, 2017). What requires a deeper investigation is the extent to which academic performance that can be evaluated by GPA, combined with the participation in extracurricular activities can increase the employability of graduates. Moreover, whether extracurricular activities can overcome or make compensation for academic performance (Pinto & Ramalheira, 2017) such as sports, artistic activities, volunteering events, cultural events, social associations and school-organized vocational activities (Roulin & Bangerter, 2013). The results of participation in different extracurricular activities tend to be various in the fields of specific skill progress and, eventually, later employability (Cole et al., 2007).

Participating in artistic activities was found to be beneficial to boost creativity, while sport activities enhance the formation and development of leadership skills (Roulin & Bangerter, 2013). In addition, according to the same study, students consider that being a member of a students' union and association can enhance a series of skills, like leadership, creativity, initiative, organizational and communication skills. In addition, from the employers' side, there is an opinion that by engaging in these kinds of associations, leadership and communication skills can be further promoted, meanwhile, taking part in volunteer activities primarily motivated citizenship behaviors.

In general, the combination of good academic performance and the participation in extracurricular activities is believed to contribute to higher employability. Studies emphasize that for graduates, the outstanding of academic performance and extracurricular activities can be a precious pre-working experience to ease the difficulties of entrance and involvement in the labor market (Pinto & Ramalheira, 2017) .

From a Job Demands Resources theory perspective (A. B. Baker & Demerouti, 2007) the curriculum workload and challenges propose demands for students (Gu et al., 2018). In order to finish the courses, great amounts of efforts are required, but through this process students can develop themselves and promote personal growth. This theory displays the influencing and outcome mechanism of challenge demands on students, and motivation as a mediating factor and resources as boundary conditions are included. The Job Demands Resources theory has been successfully used in the studies on education.

From the students' perspective, the demands consist of workload, time pressure, and responsibility (Crawford et al., 2010), while resources consist of social support, feedback, and development opportunities (Tadic et al., 2014). Demands and resources exert great influence on students' academic performance, physical health and psychological health through motivational processes (Pluut et al., 2015). Students' career goal commitment was connected with four proactive career behaviors including career planning, skill development, career consultation and network building. Scholars have used this theory to research the later career success of students (Clements & Kamau, 2017). For example, with this theory, these researchers justified how motivational processes shaped the proactive career behaviors of students, including employability. Job Demands Resources theory can be used to analyze the influence of curriculum on the students' employability. Course workload and course challenge play a significant role by means of motivational belief, that is to say, on one hand, with a good supervisor–student relationships, the effect of course challenge will increase positively. On the other hand, better student–student relationships further improve the effect of course workload. The study offers valuable guidelines to universities with respect to how to improve the employability of students through curriculum and also help them succeed in their future careers.

2.3 Competence

When it comes to the researches about employability, competence is usually to be mentioned frequently and discussed repeatedly because it is about some personal characteristics that help graduates understand and meet the demand and requirements of the job market. Although it is not intended to play a central role in the current study, it is important to clarify its nature and role when thinking about employability and what education can do for it.

According to scholars' work, competence is a concept that belongs to management (McClelland, 1973). To achieve efficiency and good performance in job, knowledge, cognitive and behavioural skills, self-concepts, attitudes or values, traits, and motives are the elements that should be taken into consideration (Boden & Nedeva, 2010). It is defined as the quality of a person to be able and fit, consequently turning it a reliable factor to predict graduates' employability.

Moreover, this connection demands an effective practice of the knowledge and skills they have acquired in universities. So, scholars attached more attention to the gradually increased importance of the notion of competence in high education because of the close relationship

between education and job market, attention also has been attached to the high education reforms (García & Van der Velden, 2008). As a result, graduates are required to be able to avail their previous acquisition of appropriate knowledge and skills, with a purpose to meet the demand, address the requirements, and perform well in the specific work environment (Warn & Tranter, 2001). Studies try to differentiate competence and employability skills, and accordingly, competence means application and exploitation of employability skills in a particular workplace (Suleman, 2018).

The word Competency comes from the Latin word which means suitable. In the early 1970s, David McClelland, a professor of Harvard University, published an article called Testing for Competence Rather Than for Intelligence. This study aims to challenge the phenomenon that higher education generally uses intelligence as a tool to select freshmen. The findings suggest that students should be selected for competency rather than intelligence, which actually affects learning performance(McClelland, 1973). He believed that traditional intelligence tests could not predict and reflect job performance, so he used the concept of "competency" as a tool to predict job performance.

Competency researchers led by McClelland pointed out that traditional intelligence tests, professional tests and academic performance could not effectively predict the actual job performance of workers in the past (McClelland, 1973). At the same time, these scholars pointed out some factors that could lead to excellent performance behavior, such as attitude, cognition, and personal characteristics. It is also believed that a series of knowledge, technologies and abilities that can accomplish the main work results are called competency (Mclagan, 1980).

In addition, many scholars have put forward their own views on the concept of "competency". According to Hay, competency is any characteristic that distinguishes college workers from workers in general. It is believed that competency refers to various skills required by a staff to complete tasks (Hartline, 1996). Competency is a kind of ability used to describe a special group and distinguish it from other people (Ito & Peterson, 1986). In fact, generally speaking, competency is defined as a characteristic that enables a person to complete a task, and this characteristic can be measured, for example skills, attitude, and knowledge.

Boyatzis (1982) was one of the first scholars to systematically combine and classify a large number of competency-related materials by using competency assessment tools. He believed that competency is a potential trait of an individual, which can be motivation, characteristics, skills, self-concept or social role (Boyatzis, 1982). Competency is a complex

concept, which includes rich levels, and different scholars have different understandings of it. He emphasized that emotional intelligence is an important part of competency, and it is necessary to add the dimension of emotional intelligence into the competency framework existing by then.

According to the personal and social aspects, it is further divided into self-awareness, self-management, social awareness and social skills (Boyatzis, 1982). He spent eight years studying twelve companies and organizations, with a total of two thousand managers, and identified six categories of 21 personal traits that could contribute to good management performance. The six categories are: leadership competency, management of goals and actions, emphasis on others, human resource management, expertise and memory, and command of subordinates (Boyatzis, 1982).

Its contents are detailed as follows:

1. Target and action management: mainly includes performance orientation, action motivation, concern about the impact of results, and judgment.

2. Leadership competency: mainly includes confidence, speaking skills, logical thinking, and conceptual thinking.

3. Human resource management: mainly includes social power, positive caring, managing group programs, and accurate self-evaluation.

4. Command: mainly includes using one-way power, and spontaneity.

5. Relationship with others: mainly includes self-control, objectivity, resilience, and concern for intimate relationships.

6. Professional knowledge and memory: mainly includes expertise and memory.

L. M. Spencer and S. M. Spencer (1993) extended Boyatzis' research and defined a competency model including experts, managers, technicians, salesmen and entrepreneurs by using competency as an evaluation tool (L. M. Spencer & S. M. Spencer, 1993). Since then, competency model has become a widely used analysis tool. He believed that competency is the underlying characteristic of a person, which refers to the deep and persistent role a person plays in his personality. Even in different roles, the underlying characteristic can be used as the basis to predict his possible actions. He also used the tool of competency assessment to define competency models including technicians, experts, salesmen, managers and entrepreneurs in more than two hundred posts around the world based on behavioral case interviews (L. M. Spencer & S. M. Spencer, 1993). The two scholars proposed the iceberg model to analyze the levels of competency and divided competency into five types, which are as follows:

1.Motivation: refers to a person's intention to continue to desire something and then take action.

2.Trait: physical characteristics possessed by an individual and their responses to specific situations or information.

3. Self-concept: a person's attitude, values and self-image.

4. Knowledge: Refers to one's expertise in a particular field.

5. Skill: Refers to a person's ability to perform tangible or intangible tasks.

Among the five types, knowledge and skill competency tend to be visible and superficial. Self-concept, traits, and motivation are hidden, deep, and central to personality. Superficial knowledge and skills of competency, are relatively easy to develop, and education and training can be used to improve the ability of university students in this respect. Competency of core motivation and traits is more difficult to explore and develop in the iceberg of personality.

After the concept of competency was promoted, some scholars believed that while defining and developing competency, the core competency or professional competency in other fields should be combined with the current goals, visions, cultures, strategies and core values of the organization to develop corporate policies and organizational operations. In addition, scholars also agree that competency is a hierarchical relationship (Prahalad & Hamel, 1994).

Through the above analysis, it can be known that the academic circle still lacks a unified definition of competency. However, from another perspective, the above definitions all believe that competency is related to an individual's attitude, knowledge, skills and other characteristics, and is related to an individual's ability to complete tasks, that is, it is closely related to work performance, and can be used to judge or predict an individual's work performance, career path and future employment.

Chinese scholars have also done a lot of research on competency, and discussed the structure of competency, for example, competency-based management development model (C. M. Wang, 2001), the structure of management competency model, and structural equation model test of management competency (X. J. Chen & Wang, 2001). The researches verify the competency characteristics of senior managers proposed by foreign scholars (K. Shi et al., 2002). Scholars studied and analyzed the competency characteristics of senior managers in family-owned enterprises and proposed a model suitable for evaluating the competency characteristics of senior managers in family-owned enterprises in China, which includes eleven characteristics (D. F. Wang et al., 2007).

Scholars have different views on the definition of college students' general competency in employment. From the definition of foreign scholars, the representative one is Harvey's opinion. Harvey (1999) believes that employment competency is the behavioral characteristics that college students can show in future positions, and work effectively to meet or even beyond the expectation of their employers(Harvey, 1999). The definition adopted by Zheng (2002) is most widely used by domestic scholars: Employment competency refers to the ability of college graduates to realize their employment goals, meet social needs and realize their own value in social life through knowledge learning and comprehensive quality development (Zheng, 2002).

Although scholars have different definitions of university students' general competency in employment, in summary, scholars have reached the following consensus on the concept of general competency in employment. First, general competency in employment is a general quality, which is essentially a potential trait. Unlike vocational or technical competence, universal competency in employment will not change with different industry types, enterprise scales and job levels. Second, it is believed that general competency in employment is not a specific work ability, but an ability that is related to all industries in cross section and all positions in vertical direction, Including job hunting ability, career maintenance and development ability(X. F. Wen, 2002). Third, general competency in employment is a comprehensive concept that includes knowledge, skills, and other individual characteristics for example, motivation and attitude.

In 1993, American labor and employment agencies and the business community jointly developed eight competency requirements for college students' employment. First, self-esteem refers to the belief in self-worth and ability. Second, achievement motivation refers to the strong desire to improve performance through competition in the face of constantly improving work standards. Third, basic skills are listening, speaking, reading, writing and arithmetic skills that must be possessed by high performance personnel, and these skills should be learned for a lifetime and constantly improved. Fourth, technical knowledge and skills of a particular occupation refer to the knowledge, technology and ability necessary for the completion of a particular job. Fifth, thinking ability refers to the ability to find and solve problems, decision-making ability, analytical thinking ability and innovative thinking ability. Sixth, learning ability refers to the ability to correctly assess one's own needs and adopt appropriate ways and means to carry out learning. Seventh, social skills include interpersonal understanding, team spirit and negotiation ability. Eighth, organizational cognitive skills refer to the ability to evaluate organizational culture, reasonably demonstrate

self and maintain interpersonal relationship.

Goldschmid (1999) investigated and studied more than 3,400 college students with different majors including engineering, architecture, medicine, law, economics, and found that the individual elements of successful employment include: Job motivation and good personal qualities (contain indomitable perseverance, the rigorous work style, full of strength and energy, self-management autonomy, flexible strain capacity), interpersonal skills (communication skills, adaptability, ability to cooperate with other), rich knowledge of science (broad, comprehensive, interdisciplinary knowledge and multicultural education background) and effective working method (specific problem analysis and problem solving ability, ability of planning management, management capacity), sensitivity and wide field of vision (namely entrepreneurs and entrepreneurial spirit, multi-dimensional analysis, critical thinking way) (Jacquelyn, 2000).

D. C. Wang et al. (2008) conducted interviews with twenty graduating seniors and summarized the competency characteristics required by college students for successful employment. These characteristics were ranked according to the frequency of occurrence in interviews, and the top fifteen characteristics were as follows: confidence, initiative, interview skills, assertiveness, support seeking, professional skills, personality characteristics, oral expression, professional knowledge, information collection and processing, social orientation, toughness, integrity, active learning, problem sensitivity (D. C. Wang et al., 2008).

Lou et al. (2009) conducted interviews with six college students' employment experts and twenty senior students, and concluded the general competency model for college students' employment including eight dimensions: Sureness, learning and development, responsibility, confidence, interpersonal communication, oral expression, persistence and achievement orientation (Lou et al., 2009).

2.4 Employability

The large body of literature on employability has produce a set of complex models that were mainly developed and tested in the Western countries which intrinsically reflect its specific societal context. However, for the Chinese context there is yet room to explore to which extent do models directly apply or if they require some adjustments namely by bringing into the model the domain of entrepreneurial intentions. The literature review will thus cover both societal contexts.

2.4.1 Employability research in Western countries

Although employability skills, transferrable and transversal, are acquired in specific situations, they can be used in practice and in different settings. The European Commission stipulates that employability also depends on the ways workers are allocated into the job market and on the specific economic and social situation (Suleman, 2018). This researcher summarized employability skills that should be called core or key skills, namely communication skills, team work skills, technical skills, analytical skills, critical thinking skills, and leaning skills. All these skills require attention from educational institutions. As a result, this same author defines employability as the combination of elements which makes individuals to be able to progress towards or enter into employment, stay in employment and make progress and promotion during their careers.

The rapidly changing work landscape poses new challenges to workers, that is they have to make themselves to be more adaptable and flexible (Guan et al., 2014). Studies suggest that the working environment in society has been pushing for some decades workers to possess some new skills, such as higher adaptability and ability to manage different identities (Hall & Mirvis, 1995). In order to survive in this serious job environment, workers are required to be able to manage change. Moreover, it is significant for workers to realize the importance of adaptability to achieve career success (Pulakos et al., 2000) and adaptability is also an important influential factor in the transition from university to workplace (Monteiro et al., 2019).

Some scholars hold a view that employability, a characteristic of the individual, should be redefined since economic environment and the changing conditions of the labor market can affect the result of employment (Yorke & Knight, 2007). Employability, a set of achievements, is the characteristics of a person, like his or her skills, understanding, and personal attributes. All these favorable characteristics facilitate graduates to be employed and succeed at their chosen jobs, which not only brings benefits to graduates, the corporation, the organization, the community and the whole society (Hills et al., 2003).

If we are going to analyze the specific content of graduate employability, four main competence areas should be covered, and this is the USEM model (Yorke & Knight, 2007). U stands for understanding, for example, people should grasp a specific subject of a field. S refers to skillfulness, like generic skills and skills for a particular subject. E and M means efficacy beliefs and metacognition. It is about to be aware of how a person acts, for example, an individual's own competencies and limitations, and understanding about how to learn and

develop his or her abilities. However, it is believed that not all employability skills are equally important, their importance may be different when it is taken into consideration different stakeholders.

Researchers also proposed the so called the "key to employability" model which covers the CareerEDGE components: self-efficacy, self-confidence and self-esteem, and the former components are career development learning, experience, degree and major related knowledge, understanding and skills, generic skills, and emotional intelligence (Dacre & Sewell, 2007). This model illustrates the essential parts of employability and also shows the relationship between these different elements.

It is widely believed that employability is a combination of three person-centered dimensions, namely, career identity, personal adaptability, and social and human capital (Fugate et al., 2004). Scholars hold a view that each dimension has its own value, and are independent from each other. It is said that they all together give conceptual and predictive power to create employability (Aspinwall & Taylor, 1992), which will later have an impact on adaptive behaviors during their work. Career identity is about the question "who am I", and goals, hopes, and fears; personality traits; values, beliefs, and norms; interaction styles; time horizons may be included. A clear career identity is a picture that is about the description of a person's specific ideas about their personal goals and how to reach those goals. The second key element of employability involves approaching it as a social construction.

People who are adaptable are willing and able to change themselves to meet the requirements of new environments and circumstances. This kind of employees are usually the contributors to an organization and company, and for themselves they are people who are most likely to achieve career success (Pulakos et al., 2000). Employability must be considered within the context of a particular social system, and it is a product of social regulations and power relations among social groups. From this perspective, employability is a process that builds on the individual and group history of individuals and societies.

The social context is a set of nested structures surrounding the person, which leads us to identify another issue in the emerging debates on employability, defining its components (Rothwell et al., 2008) or set of indicators (S. H. Li, 2018). These indicators allow us to recognize competences for training, learning, and assessment (Fugate et al., 2004). In other words, social and human capitals are assets people possess with a hope that they will gain some returns from this kind of connections in the future. Social capital gives information and exert influence on people through their personal networks. People's job searching process is greatly influenced by their social capital, which means that they usually avail themselves of

the informal job search networks. This process is also influenced by their human capital. There are a lot of elements that may have an impact on people's career achievement, like age, education, work experience, the training they have received, emotional intelligence, and other related abilities. Based on human capital theory, we can see that the impact of education and training on a person when they enter into the labor market and even the entry.

One of the most universally recognized model is the competence-based and multidimensional measure of employability (Heijde & Heijden, 2006). This model put forward the most relevant competencies of workers which are regarded as the ways to improve university students' employability and bring benefits to both sides, namely, employee and employer. Five dimensions of employability are proposed in the research, namely 1) occupational expertise, 2) anticipation and optimization, 3) personal flexibility, 4) corporate sense, and 5) balance.

Another model is depicted by the self–perceived employability scale which tries to analyze the meaning of employability based on the conditions of their experiences, aspirations, and their capability to compete in the job market (Rothwell et al., 2009). In addition, the dispositional measure of employability mainly discusses the dispositional employability (Fugate & Kinicki, 2008). The authors define it as a collection of individual differences that reconstruct individuals to have the so-called "proactive adaptability", and then adjust to specific work and careers. For example, in order to remain employable, the individual must have the ability to adapt to changes in the changing job market.

The model called DOTS also boosted the study of employability (Dacre & Sewell, 2007). It concerns the planned experiences designed to facilitate the development of an individual. D stands for decision learning, that is decision making skills. O is opportunity awareness, and it is about to know what job opportunities are and what their requirements are. T refers to transition learning, which includes job searching and self-presenting skills. S means self-awareness, and it is about knowing oneself as regards to interests, abilities, or values (Dacre & Sewell, 2007).

According to the general social cognitive theory (Bandura, 2002), the question on how people succeed in their education and career is very important. As for the theory, the interaction between variables about the person and the environment around him or her could have an impact on his or her future career success (Lent et al., 2000). So, when intending to conduct in-depth study of employability, both personal and contextual elements (Qenani et al., 2014) should be taken into consideration.

When mentioning personal factors, the individuals' characteristics, and their personal

surroundings (that can help or hinder their efforts to find a favorable job) are usually discussed by scholars (Fugate et al., 2004). Personal characteristics include self-confidence, generic skills, academic performance, and personal surroundings related to the personal circumstances and the contacts that university students have (Dacre & Sewell, 2007) .

Contextual factors which are also decisive to employability refer to the environment surrounding a person. These are essential factors to explain individual employability (Thijssen et al., 2008). Scholars classified contextual factors and divided them into two kinds, namely organizational and social (Alvarez et al., 2017). Organizational factors consist of the study environment that students have in the university plus their teachers. It is related to the student's evaluation of the university's commitment to promoting employability for its students by organizing activities to complement those covered by the curriculum. The teaching staff refers to the student's viewpoint of the quality of teaching. Social factors are the existing job market. The labor market is about the student's understanding of demand in the special or particular field of study that students have majored in, especially in their future working cities.

2.4.2 Employability research in China

Although international studies are more in-depth developed, these research results may not be suitable for China considering the differences in social, economic and cultural backgrounds. Xie and Song (2015) constructed a feasible employability model of Chinese college graduates by referring to international studies and combining Chinese reality. They quantified the employability level of Chinese college graduates and the construction status of colleges and universities by using the operable index system, providing a basis for the development and construction of employability (Xie & Song, 2005).

G. Q. Wu and Zhang (2007) combined employability skills with competencies. They emphasized the importance of employability concept, holding that employability maintains sustainable competitive advantage at the company level on the one hand, and maintains sustainable career success at the individual level of college graduates on the other hand (G. Q. Wu & Zhang, 2007). This research perspective is a great progress in the research field of employability and has great theoretical and practical significance.

At present, the basic consensus is that employability is a core concept related to the employment of college students. Employability provides the basis and premise for the transition from the role of students to workers. This ability not only affects the employability of students, but also affects the success of students' employment. How each university

improves the employability of its students in the process of popularization, which is not only the key factor affecting the career development of students in the future, but also the leading factor for universities, enterprises and institutions to maintain sustainable competitive advantages. However, we find that it is rare for Chinese and foreign scholars to put forward employability development strategies based on the different functional orientation of universities, teachers and students.

There have been in-depth international studies on employability, but foreign scholars focus more on how enterprises improve employees' employability. At present, Chinese scholars have begun to study different issues from the perspective of employability, like college students' career choice, college students' employability, college students' study reform. In recent years, Chinese scholars have conducted in-depth research on how to improve college students' employability skills. However, most Chinese research is based on Western employability models which lacks analysis and discussion based on the specific Chinese context.

Chinese scholars have also conducted research from a macro perspective, providing feasible solutions for Chinese universities in curriculum design and setting as well as employment guidance, and providing a basis for the development and construction of employability (Song, 2008). However, it can be said that on the basis of the different responsibilities of universities, employers and governments, the research on the reform of university curriculum teaching has always been the weak stage of employability research in China.

Fortunately, Chinese studies from the perspective of employability also have carried out by scholars. For example, some scholars focused on the employability and development of college students (Song & Xie, 2008). It is believed that the cultivation logic of employable talents is the inevitable choice for the development and reform of higher education (Y. Zhao & Hao, 2005). Studies in China focused on college students' vocational ability from the perspective of employability are relatively mature, like the employment standards of famous enterprises and requirements on applicants' abilities and characteristics investigated by China Youth Research Center of The Central School Department of the Communist Youth League. Based on the investigation of students, it is found that the employability includes twenty four factors, including thinking ability, social adaptability, autonomy ability, social practice ability and some other employment abilities (L. H. Zhang & Liu, 2005). Li Ying et al. (2010) divided employability into three dimensions, including intrinsic quality, ability to handle work and social leadership based on the investigation of students, and proved that it has an impact on

employment quality from the perspective of quantitative analysis (X. J. Chen & Wang, 2001).

Survey shows that the top five quality indicators of college students that employers value most are professional knowledge and skills, professional dedication, learning willingness and plasticity, communication and coordination, and problem-solving ability (X. Q. Zeng, 2004). On the whole, Chinese studies have some foundation, but they mainly focus on the initial employability of college students, without considering the job quality of graduates, and lack the integration of employability and competency from the perspective of employability. This is bound to lead to some problems: it facilitates stressing college student's development of vocational ability to pay attention only to the entry of the first-job while neglecting the future career development plan. Of course, whether college graduates are qualified for work depends on their future exploration and learning, but the higher the level of education in the pre-career stage, the more likely individuals are to succeed in finding employment and in the later career development.

At present, the methods of employability skills development in foreign universities mainly focus on curriculum teaching reform, promoting students to obtain work experience and strengthening employment guidance. Chinese researches on the development of employability skills mainly focus on the introduction of foreign advanced theories and experience. Although some scholars put forward many opinions and suggestions on the development of employability skills, most of them are theoretical, macroscopic and instructive, lacking practical and operational significance (H. Q. Zeng & Xiao, 2013).

Obviously, the analysis of university graduate employment strategies is the most pragmatic and rational strategic choice for the country, society, universities, and graduates themselves.

In the research on the concept definition of college students' competency in China, some researchers considered only the occupational view of competency, i.e. that competency is merely related to exerting a profession. College students' employment ability refers to the college students' knowledge learning and the development of the comprehensive quality during the period of school, which makes them meet the social demand and realize their value in social life, and it is a kind of dynamic development process (Zheng, 2002). Another study (E. P. Li et al., 2010) holds the opposite view; that employability is different from vocational ability. Some scholars excluded professional knowledge and skills when they define the university students' employability. They proposed that employability is essential in the process of college students' employment. It is the ability required in different workplaces, and is the most direct, the most basic factors to determine the career success of university students

(E. P. Li et al., 2010).

Overall, the individual and social dynamics that generate employability are subjected to cultural context. So, we set ourselves to explore to which extent the dimensions that operate in Chinese context match those that are already studied, especially in the western models.

For such purpose we designed a qualitative exploratory study as follows.

2.5 Method for study 1

This qualitative study is intended to explore the dimensions related to antecedents of graduate employability in China. Namely, it approaches two sorts of important stakeholders in this process: 1) recent graduates / recent employees, and 2) employers and team supervisors. This section will detail the procedure, the data collection instruments (interview scripts), and the target sample.

2.5.1 Procedure

Data collection took the form of interviews. In this case the interview script was built by incorporating a set of open-ended questions that targeted issues emerged from literature review, both in the West and China.

2.5.2 Interview script

There are two interview scripts reflecting the differential value of information collected from employees/recent graduates and from employers/team supervisors. This is the list of questions that will enact answers that are informative for the first study purpose.

2.5.2.1 Script for recent graduates / recent employee

The interview script addressing recent graduates/employees was designed to cover firstly, the interviewee judgment about his or her own 1) graduation experience, 2) job search and finding experience, 3) feeling and thoughts about adaption to the job, 4) their current experience, 5) their expectations, and 6) views on self-employment. As regards "graduation experience", interviewees were asked to think about their overall experience as a graduation student and offer opinion about their universities' capacity to provide competencies along the education program.

About the graduation experience

- Cognitive competencies (do you know the concepts that were required to do a good job?)

- Technical competencies (do you have the know-how to perform the task effectively?)

- Social competencies (can you work as a team member and build positive relations with others?)

- Learning competencies (are you able to adapt and learn quickly?)

- Attitudes (do you show the socially valued attitudes towards job duties, and hierarchy?)

- Values (how do your work values match those that companies have?)

- How practical-focused were classes? How much contact did you have with real-work settings along your courses?

- What internship experience did you have during your courses?

About the way graduates got their job

- How did you find this job?

- Why this one? (we want to know if this was purposefully pursued or if this was just an opportunity that happen to occur)

About the feelings and thoughts, graduates have on adapting to their job

- What were the main difficulties you found when starting to work in your job?

- And what about team work?

- Did you find yourself able to perfectly fit in or were there challenges?

About current experience

- How do you feel about your job's current level of challenge? Is it still challenging for you or you think is has become more of a routine work?

- Have you thought of or already done, any additional training after graduation?

- How strongly your current employer invests in your skills development (training)?

About graduates' expectable future in their job

- How probable is a promotion for you in the next couple years?

- To which extent do you see yourself working here in the next 3 years? Why?

Self-employment

- Have you ever thought of building your own business? As an entrepreneur?

- If positive, why haven't you? / If negative, why haven't you considered that option?

- How many courses or topics on entrepreneurship did you have in your graduation?

- If you haven't built your own company, and wish to do so, when do you think it will happen?

- What are the missing knowledge and competencies for you to start it immediately?

- What teaching do you think you would have liked to had in your graduation to make yourself an entrepreneur / your own boss?

2.5.2.2 Script for employers and team supervisors

The interview script addressing employers/team supervisors was designed to cover 1) their conception of employability, 2) their judgment on the professional quality of graduates, 3) cooperation with universities, 4) their staffing experience, 5) difficulties in new hires adaptation to work, 6) recommendations for improvement.

Conceptual view of employability

- How would you define and conceive employability? (most of respondents will stress the utility of students to do their job. See whether they also conceive it on the long run, as their ability to provide the best opportunities for them to grow and use their skills)

- How would you evaluate and judge employability of university students?

- How would you improve and enhance employability of university students?

About the graduation quality

- Cognitive competencies (do they know the concepts that were required to do a good job?)

- Technical competencies (do they have the know-how to perform the task effectively?)

- Social competencies (can they work as a team member and build positive relations with others?)

- Learning competencies (are they able to adapt and learn quickly?)

- Attitudes (do they show the socially valued attitudes towards their job duties, and hierarchy?)

- Values (how do their work values match those that companies have?)

Cooperation / proximity with universities

- How strongly does your company interact with universities in providing students with real-work settings learning experiences?

- What internship experience cooperation do you have with universities?

- Do you have structured internship programs in place here?

Staffing

- How do you attract and select young graduates?

- What sort of techniques do you use to choose the best?

Adaptation

- What difficulties in adaptation have you found in recent graduates that you have hired?

- And how do they succeed in overcoming difficulties?

Improvement recommendations

- What would you change in the current graduate education system to improve students'

employability?

- What are the future market competency needs that current graduates might be missing?
- At the business system level, what would you recommend to increase the average skilled worker's employability?

2.5.3 Sample

The suitable stakeholders in this process are the graduates themselves and the employers. Because the experience of employability requires being actively working in a paid job we opted to target recent graduates, working, dividing them by two segments: those that have graduate for less than 3 years, and those that graduate for more than 3 years. This 3-year period is a reasonable time to test the capacity of the graduates to cope with the challenges and requirements of being an active worker. These individuals are those that have better memory on contents they learn in university and contrast those with the competencies they believe are needed in their current job, and they have sufficient experience to accommodate a longer view of their training in college.

To judge on graduate employability, one needs to understand what employers think about it. Therefore, we target also employers that have had the experience of hiring graduates in the last 6 years. This time frame was judged important because the memory of past hiring decisions and experience, especially in the early adaptation period to the job, will fade with time. We reason six years to be more than enough to formulate a solid judgment on graduate employees and how prepared they came from university. They have contacted also with new graduates to judge on their ability to work.

As a requirement for qualitative research, interviews should proceed as long as new information is gathered. The saturation of information is the most accepted criterion to judge on sufficiency of interviewees. Therefore, we have interviewed 3 Recent graduates (<3 years), 3 Graduates (3-5 years), 2 Employers / business owners, and 2 Direct supervisors / team leaders (Table 2.1).

Table 2.1 Interviewees' profile

	Age/ work tenure	Gender	Major	Occupation
Recent graduate	24 / 2	Male	Biotechnology	Public Servant
Recent graduate	23 / 1	Female	Engineering	State-owned enterprise staff
Recent graduate	23 / 1	Female	Chinese language	Private-owned enterprise staff
Graduate (3-5 years)	26 / 4	Male	Administrative management	Private-owned enterprise staff
Graduate (3-5 years)	27 / 5	Male	Business English	Private-owned enterprise staff
Graduate (3-5 years)	26 / 4	Female	Administrative management	Entrepreneur
Employer / business owner	35 / 12	Male		Business owner
Employer / business owner	42 / 19	Male		Business owner
Direct supervisor / team leader	38 / 15	Female		Director supervisor
Direct supervisor / team leader	40 / 18	Male		Director supervisor

2.6 Results

The study is carried out to research perceived employability of interviewees and collect information on their understanding based on competencies. These competencies are believed as being attributes that contribute to employability.

With regard to personal assets, participants (graduates) recognized the influence of adaptability, while the other group (recent employees) highlighted their possession of proactive personality characteristics. Examples can be listed as follows:

"I am an adaptive person".

"taking initiative and being proactive is very important in the work".

"I am able to work under pressure and deal with uncertain situations".

"I am optimistic".

I am able to cope with negative emotions"

"I am always looking for a better way to do things."

"I can manage bad emotions to help myself cope when I suffer difficulty under uncertain situations"

Another group of interviewees (employers and supervisors) referred to the willingness to learn and ability to adapt to the working environment. Examples can be listed as follows:

"You find small difficulties in the practice, and it is not a bad thing

at all. You should try to adapt to the new circumstances".

"People who can quickly seek or new information are more likely to get promotion".

"Employees who have their clear career goals are able to get the job done efficiently".

"We hope that people will be able to adapt to the new working environment more quickly".

"I will make full preparation in advance".

As for the category of social context level, respondents viewed successful employment in terms of interpersonal relationship, cooperation and team spirit. Examples can be listed as follows:

"How to deal with people is extremely important".

"I am a good team member".

"I like to work with my team member".

"My friends help me a lot when I try to find a job".

"To accumulate social assets is important for me".

"People who can get along well with others are more likely to succeed".

"Employees who can maintain a harmonious relationship with the others can gain more supports from people".

Other responses related to the university level, particularly with regards to the training opportunities and some other practice related activities offered by the university. Examples can be listed as follows:

"I have the opportunity to increase my employability during my school days"

"Alumni are invited to my university to deliver lectures to me"

"My current employer is invited to my university to do the recruitment and it is a very important opportunity for me to find a good job"

"My university cares about my ideas and my feelings"

"We found that employees who graduated from a caring school are more likely to be considerate to other people"

"I am being trained as a result of more effective work"

Self-efficacy and self-confidence have also been viewed as favorable elements to maintain employability. Examples can be listed as follows:

"I am confident"

"My educational background is quite good. I am proud of my achievement"

"I have experience that are useful in my work".

"Even if there are difficulties, I am confident that I can overcome them".

"I believe I can achieve my goals".

"I can do my job very well".

"When facing uncertainty, I have full confidence in a bright future. I believe I can do the best."

The intention to be an entrepreneur was also considered as an important aspect to be employable. The entrepreneurial education received in university has a great impact on graduates' intention to start their own business and be self-employed. Examples can be listed as follows:

"I have a goal to have my own business".

"I would like to run my own company and be a successful businessman".

"My teachers gave me some suggestions about how to set up my own business".

"I know it's hard, but I really want to be an entrepreneur".

"When I was in school, we have the course to learn the knowledge about how to start a business, and the university also provided a platform for us to accumulate experience".

"Starting a business is no easy endeavor. People should take their time to carefully find the right business."

"Succeeding as an entrepreneur takes hard work and persistence. And I am ready to be a successful entrepreneur."

The characteristics that received most considerable attention and that were most frequently mentioned when thinking about finding a job and remaining employable are related to: 1) being adaptive and proactive, 2) collectivism, and 3) social support. The university education program, the level of training and experience, and the university support were also seen as important to enter the labor market.

2.7 Discussion and conclusion

The first study is intended to understand how university graduation stakeholders including graduates and employers evaluate the graduation experience concerning how easy they can perform their job on the basis of knowledge and practice they had in the program versus the competencies and attitudes they show in their job setting.

The detailed and thorough interviews show a set of elements that improve individuals' opportunities to secure employment and further maintain employability. These core skills or competences are becoming increasingly necessary in a changing labor market where demands are continuously changing. The most important dimensions that emerged from the interviews are being adaptive and proactive, collectivism, social support, university real-life activity education, the level of training and experience, and university support. We can infer that the western models are not directly usable in China to study graduate employability.

Adaptability is a core requisite because nowadays in China, continuous changing environment and the rapid pace of life are the typical features of the modern society. Each person is required to manage new knowledge, understand it, select what is useful and applicable in a new context, and continuously learn and understand to adapt to the changing and new situations.

The ability to transform information into new knowledge and productivity are key capabilities that must be acquired, and it requires more complicated competences, like being adaptive, proactive and taking initiative. The participants who are invited to share their ideas presented and illustrated the significance of these capabilities and competences, which serve as advantages to enter into the labor market and cope with new demands, and support their employability with harmonious relationship in the working place, strong and abundant social capital, and reliable university support.

A Chinese feature that is contrasted with the Western findings, is the collectivism as against individualism, especially in English speaking western countries where most literature is published on this topic of employability. Collectivism is also a broader category than usually understood. According to Triandis (1995) it comprehends both vertical collectivism (where people accept the subordination of their own self-interest to that of the group) and horizontal collectivism (where people interact in a tight network of peer relationship, valuing solidarity, cooperation and mutual help). Although both are found in the Chinese culture, in the context of JDR theory, most resources will come from the network of relationships, peer-like network, where information, advise, and help to bridge socially, which means that in

the context of young graduates, horizontal collectivism gains a centrality.

Considering such differences, albeit apparently minimal, will have cumulative impacts on how the models operates. It is important to carry out researches on competences related to employability and study on people's opinions about their own employability in China. The intervention courses and projects based on career guidance and entrepreneurial education are also of great importance as they have a specific institutional context and framework in China. The model should then consider these individual, social, and organization assets which deserve empirical testing to ascertain whether it can be offer predictive value, via self-efficacy, in the Chinese context.

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Chapter 3 : Study 2- Testing a Model of Graduate Employability

3.1 Literature review

To structure theorization about employability, it is necessary to comprehend the complexity of factors that contribute to building this outcome while simultaneously design a parsimonious – but not oversimplistic – model that offers a clear view of the interplay between such factors. For this purpose, we have aggregated some key factors into larger categories and opted to approach them as assets. Additionally, any behavioral model must accommodate the process through which predictors produce the outcome. At the central position of such process lie the intermediate variables, which are the focal points of the model. They are the immediate or sequential psychological consequence that factors (or predictors) produce and show the nexus linking factors to outcomes. In the case of employability literature one of such focal points is self-efficacy. Lastly, processes may be conditioned by the context or any special condition that changes how the model operate. Thus, due to the inquiry this research does on entrepreneurship, entrepreneurial intention is the boundary condition that must be accounted for to answer the research question.

Therefore, the literature review will start by focusing on the focal psychological state, self-efficacy, and explain its nature and important role in behavioral models. Then it will explore some key assets, explaining them by nature, starting with the individual assets, group assets and organizational assets. It will then develop entrepreneurial intention and explore its interplay with the process.

3.1.1 Self-efficacy

The concept of self-efficacy was first proposed by Bandura (1977) who is an American psychologist. As an important concept in social cognition theory, it refers to an individual's subjective judgment of self-ability, which will affect an individual's life and activities (Bandura, 1977). This concept is mainly proposed at the individual level. Bandura's research shows that self-efficacy is influenced by success and failure experience, situational conditions, emotional arousal, verbal persuasion and alternative experience.

Gist (1987) defined self-efficacy as an individual's perception of a confidence and satisfaction in oneself to complete a task. Stevens and Bavetta (1991) believe that self-efficacy refers to an individual's judgment of various determinants before completing a

task. It is also believed that self-efficacy is a subjective perception of the effectiveness of an individual's own behavior and a psychological tendency (X. D. Yang et al., 1993). That is, if individuals think the behavior is effective, they will hold a positive and optimistic attitude. On the contrary, if they think the behavior is invalid, they will hold a negative and pessimistic attitude. Thus, self-efficacy is an individual's cognitive ability to predict the success of a certain behavior in the future by summarizing past failures and successful behaviors (Lent & Brown, 2006).

Most of the above researches on self-efficacy are based on the individual level. In the late 20th century, Bandura further proposed collective self-efficacy on the basis of individual self-efficacy, which refers to the degree of confidence that all members of a collective have to complete a specific task before they jointly complete a task (C. B. Chen, 2014). Group self-efficacy is not only affected by the knowledge skills and behavior attitudes of each member of the group, but also affected by the coordination ability and cooperation ability of individuals in the group.

Bandura divides the sense of self-efficacy into general sense of self-efficacy (GSE) and specific sense of self-efficacy (SSE), which is a kind of confidence degree of individuals to complete tasks and overcome obstacles in different environments. Schwarzer, a German psychologist, defined general self-efficacy as an individual's overall self-confidence under different environmental conditions, which is a generalized self-efficacy belief (Lv, 2010).

To sum up, the definition of general self-efficacy mainly includes three points. Firstly, general self-efficacy is not a practical skill, but a subjective feeling of an individual, that is, the self-confidence of an individual to complete a specific task in different environments. Secondly, self-efficacy generally occurs before the individual's behavior. Finally, the general sense of self-efficacy is different from the specific sense of self-efficacy. The specific sense of self-efficacy is targeted at the specific field, like the sense of learning self-efficacy and occupational self-efficacy. However, the general sense of self-efficacy is not specific to any given field, but more universal.

An ongoing discussion pertains to how it should be conceived, as a general construct that applies to all situations (general self-efficacy, GSE) or just to specific situations (a state-like specific-task construct, SSE) which would imply measures cannot be used universally, but rather developed for specific situations. Although specific measures have been preferred due to poor GSE scales accuracy (Locke & Latham, 1990), the challenge such fragmentation of scales represents inhibits theory integration on self-efficacy. So, in recent years, scholars in China and abroad have studied general self-efficacy and developed mature scales to measure

general self-efficacy based on relevant theories.

Copple (1980) has developed a one-dimension general self-efficacy scale (GSES) with 22 items, mainly measuring whether individuals can effectively complete behavioral tasks as expected. Another single-dimension scale GSES compiled by Jerusalem and Schwarzer (1981) is mainly used to measure the self-confidence of individuals in completing various tasks effectively in different environments. Zhang (2000) translated the simplified English version of GSES into Chinese version, which is the scale most used in relevant studies. Some multidimensional measures seem to diverge as regards the nature of factors. For example, Sherer and Maddux (1982) built a two-dimension general self-efficacy scale comprehending self-efficacy and social self-efficacy. The self-efficacy dimension included 17 items, and the social self-efficacy dimension included 6 items, with a total of 23 items, which had good reliability and validity. The scale is mainly used to measure self-expectation of college students in a random environment. An alternative scale in China is based on Bandura's self-efficacy theory, and proposed by Qian (1995) who created the General Self-efficacy Scale (SEI), which included efficacy expectation and efficacy judgment. To tackle some issues and resume GSE scales, G. Chen et al. (2001) published a new GSE scale that gained popularity due to its integrative nature. It is quite parsimonious comprising only eight items organized into a single dimension, and has good psychometric qualities and has also been often used in China and in academic context (Z. Song & Chon, 2012; X. Sun et al., 2018; H. Zhao et al., 2021).

Discussions pertaining to the cross-cultural validity of GSE emerged. Schwarzer et al. (1997) studied college students from China and European countries, and found that the GSE of Chinese students was lower than that of Western students (Schwartz, 1999). This is mainly caused by the cultural differences between the East and the West. Different cultural backgrounds will affect the formation of individual self-recognition and values. Therefore, judging from this study, college students in western countries are more self-confident than those in China. Likewise, there were gender differences found for the Chinese and German samples. However, Da (2000) found that gender had no significant influence on individual's GSE.

Another interesting finding pertain to how GSE evolves with age. Wang (2005) took junior high school students, senior high school students and college students as research targets and found that individual's GSE would increase with age (C. K. Wang et al., 2001). A possible explanation for such evolution can be found in off-campus practices during school education. They were found to affect college students' general sense of self-efficacy (Song,

2008). This is because off-campus practice can enrich college students' life experience, accumulate work experience and improve their ability to solve problems.

Zhao and Wang (2017) found that college students who served as class leaders and student union leaders had a higher GSE than those who did not hold any positions.

The relevant research of Jerusalem (1990) shows that there is a significant positive correlation between individual's GSE and their coping style facing a problem. Li and Kong (2006) found that individuals with high GSE take the initiative and adopt mature methods to deal with problems. However, individuals with low GSE will escape from reality and responsibility due to feelings of inferiority. Wang (2005) and X. Q. Zeng (2004) found that GSE had a positive impact on withdrawal, endurance, and problem solving.

Individual self-efficacy has a positive impact on learning motivation. Therefore, the motivation to study can be predicted according to the level of self-efficacy (H. Chen et al., 2011).

Fu (2005) and Li (2009) showed that college students' GSE had a negative impact on social anxiety. This is because high GSE makes individuals appear confident, lively and cheerful in social interactions. However, low self-efficacy will make individuals appear inferior, introverted and anxious in social interactions. Schwarzer and Muller (1999) found that general self-efficacy had an opposite relationship with test anxiety, which was corroborated by Chinese scholars Wang and Zhu (1999). In a convergent way, J. H. Sun and Wang (2010) found a positive correlation between college students' GSE and social adaptability. That is, college students with high GSE have stronger ability to adapt to the environment.

GSE also relates to students' mental health and well-being. Relevant studies show that life satisfaction increases with the improvement of self-efficacy. Individuals with higher self-efficacy have stronger self-control in emotion and behavior, and can obtain better experience (F. H. Li et al., 2016). Conversely, low self-efficacy is associated with depression, and individuals with high self-efficacy can better overcome difficulties and relieve anxiety (Zhao & Wang, 2017).

In addition, self-efficacy has an important impact on self-esteem (D. Li et al., 2008). Students with a strong sense of self-efficacy can often be more confident to face various problems and better adapt to the society. At the same time, they can view things optimistically, which helps to cultivate a good psychological state.

It is proposed in studies that college students' feelings of self-efficacy are influenced by family environment. In the parent-child environment, the positive parenting style of parents

can promote the occurrence of individual positive attitude, which is crucial to improve the self-efficacy of college students (B. B. Yu et al., 2013). As far as the school environment is concerned, self-efficacy can also promote the social development of college students. Individuals with high self-efficacy can make full use of resources in the environment, can confidently recognize, and can achieve their ultimate goals (Cicognani, 2011).

One additional reason why self-efficacy is an important predictor of many positive student outcomes lies in its relation with self-esteem, which relates to higher intensity of job search behaviors (Kanfer et al., 2001). In addition, people who have higher level of self-esteem tend to show greater initiative during unemployment because they are self-assured and confident to gain more information from their surrounding environment (Silla et al., 2009). Interestingly, however, lower self-esteem may also push individuals to seek re-employment, thereby motivating job seekers to moderate low self-esteem and mental distress (Dacre & Sewell, 2007).

Self-efficacy in job hunting means people's confidence and incentive in a specific situation, especially in the job hunting process (Dacre & Qualter, 2013). If people only have some relevant knowledge, skills and connections, it is far away from enough. Nevertheless, individual should be capable to combine with them and have a faith that boost this combination when faced with challenges in work and daily life. Thus, self-efficacy seems to be a reliable indicator of career success in the graduates' group in particular (Wittekind et al., 2010). Graduates with higher level of self-efficacy have a greater possibility to better fare in college to work transition period, and they outperform others (L. Jin et al., 2009).

Theoretical studies and empirical studies have been carried out targeting self-efficacy in job searching (Dacre & Qualter, 2013). Measurement tools have been proposed and proven at exploratory and confirmatory levels. At the exploratory level, the reliability of the self-efficacy scale has been tested among 413 Taiwanese students (S. Hu & Chen, 2012). In the western world, scholars put forward a scale and verified it within the group of Spanish university students and graduates by means of factor load analysis and goodness of fit (Pluut et al., 2015).

To sum up, GSE is a subjective feeling, which will change with the increase of age, experience and accumulation of knowledge and can be used to effectively predict many positive outcomes relevant for academic life and success of students, among which employability. We thus hypothesize that:

Hypothesis 1: Self-efficacy is positively associated with employability

GSE can be developed based on a joint set of assets of an individual, group and

organizational nature. The following sections will review such assets, starting with adaptability and proactive personality which are taken as individual assets. Following, it will explore group level assets, namely horizontal collectivism and social capital, moving on then to explore the organizational level assets which comprehend how much universities expose students to real-world activities and generally how much support universities offer to students' efforts and learning.

3.1.2 Adaptability

Adaptability means that people are willing to and have the capability to change their own behaviors, feelings and thoughts in order to react to environmental demands (Fugate et al., 2004). It is largely determined by individual differences. Fugate tended to make analysis of human-centered variables that could serve as indicators of individual adaptability, proposed that generalized self-efficacy is one of these variables.

When individuals face external demands and changes, generalized self-efficacy has a positive impact on individuals' adaptive ability cognition. As a result, generalized self-efficacy develops individual resilience and helps people identify and realize career opportunities and goals in today's changing economy environment (Fugate et al., 2004).

Hall believed that adaptability is an important element to be successful in a specific area or field since the society nowadays is full of career insecurity and uncertainty(Hall & Mirvis, 1995). Savickas (1997) has pointed the relationship between adaptability and thoughts, preparation to deal with and the ability to probe people's own personality and also the surroundings(Savickas, 1997). Uncertainty and ambiguity are not regarded as difficulties and problems to individuals who possess high degree of adaptability. They feel comfortable in new and strange situations and through different organizational and even national boundaries.

Adaptability is crucial in achieving career effectiveness in a changing environment (Creed et al., 2010); indeed, an individual must be able and willing to adapt in order to thrive in contexts in which stability is no longer ensured. Adaptability helps the individual redirect his or her path according to external stimuli, without waiting for external support (Hall, 2004). It is conceived as a self-initiated skill that reflects the ability to change when change is needed or in response to new demands from the environment (Bennett, 2002).

Adaptability is critical to achieve career effectiveness in a constantly changing environment (Creed et al., 2010). In fact, one must have the ability and willingness to adapt in order to thrive in an environment that is full of instability (Crossley & Stanton, 2005). Adaptability facilitates individuals quickly change their paths in response to external

challenges instead of waiting for external support (Hall, 2004).

Adaptability is a psychological development in and interaction with a social environment which refers to the capabilities and available resources that individuals have and need to successfully cope with present and future career transitions(Savickas, 1997). Adaptability helps people to build the awareness and belief that individuals utilize to conduct and control their accommodative behaviors. Adaptability resources make individuals be able to enlarge, improve and ultimately accomplish their vocational self-concepts in the working place, and therefore they can build and pursue their career pathway. Researchers also carried out study to establish a concept that personal adaptability can be thought as a part of their psychosocial formulation of employability, which stands for optimism, propensity to learn, openness, internal locus of control, and generalized self-efficacy (Fugate & Kinicki, 2008). Because today's post-industrial society no longer guarantees the need for an orderly and continuous career for adolescents or adults, individuals are now more likely to change jobs frequently, either by choice or because of the constraints of the work economy (Rossier et al., 2012). In this case, individuals need to have skills that enable them to adapt quickly to various situations and cope with more frequent job changes. Occupational adaptability provides a framework for focusing on how individuals see their future and supports interventions based on their needs (Rottinghaus et al., 2012). Therefore, career adaptability can give people more chances of finding a suitable and matching job, thus increasing the possibilities of career success and even happiness (Hartung & Taber, 2008). Several studies have highlighted the close link between career adaptability and difficulties people will encounter when they make career decisions (Hirschi, 2009).

In conclusion, career adaptability resources should be regarded as self-regulating and psycho-social capabilities, forming adaptation strategies and actions (Ashton & Lee, 2009). It consists of four psycho-social resources or transactional abilities. Concern is awareness and planning for career prospects; Control reflects subjective feelings about self-management and decision-making for the future of the career; Curiosity is defined as a tendency to explore an environment; Finally, confidence is a tendency toward self-efficacy in terms of ability to solve specific career problems (Guzman, 2013). Adaptability and its ingredients are therefore considered a set of resources or abilities that help people successfully manage career transitions.

Employability is one of the most important outcomes of the adaptability of fresh graduates, especially after higher education programs (Rudolph et al., 2017). Moreover, career adaptability is a key factor of psychological capital, and the psychological capital constitute a

newly conceptual model of employability together with human capital, social capital, cultural capital and identity capital (J. Thompson, 2005).

Theoretically, there is a positive relationship between career adaptability and employability. This relationship is also empirically proven. For example, researches have shown a positive correlation between career adaptability and employability-related adaptation outcomes (Rudolph et al., 2017). If the scores on career adaptability is higher, graduates have greater confidence in handling internal and external demands related to employability (Rudolph et al., 2017).

Considering that career adaptability is included in the theoretical concept of employability, and the existing empirical evidence supports that the important relationship between career adaptability and employability skills and the ability to get a job, it is assumed that adaptability is positively correlated with the employment status of graduates.

3.1.3 Proactive personality

Initiative is a concept derived from social interactivity theory. It refers to the spontaneity and initiative of taking action in accordance with self-set goals. And the initiative behavior refers to people's spontaneous and active behavior to change or create a suitable environment. Proactive personality is an internal factor affecting individual differences in proactive behavior and a stable personality tendency of individuals to take actions to influence the environment.

As early as 1983, psychologist Lewin believed that proactive personality is a personality trait, which emphasizes the initiative of individuals to change and adapt to the environment spontaneously and is influenced by both heredity and environment. In 1993, Bateman and Crant formally proposed the concept of proactive personality while exploring the proactive component of organizational behavior. They believed that proactive personality refers to a stable tendency of an individual to take proactive actions to influence the surrounding environment (Bateman & Crant, 1993). At the same time, the difference between proactive and non-proactive individuals is further pointed out. People with high proactive personality can break through environmental constraints and take the initiative to adapt to the environment or actively create the environment. They are forward-looking, proactive, proactive, good at finding problems, identifying opportunities, in the continuous progress to achieve their best state. On the contrary, individuals with low-degree proactive personality tend to be pessimistic, disappointed and negative to adapt to new environment. In short, Bateman and Crant's proactive personality focuses more on the impact of individual initiative

on organizations from the perspective of organizational groups.

Seibert et al. (1999) further analyzed the behavior of individuals with proactive personality and non-proactive personality, and make the connotation of proactive personality into details. People with proactive personality will actively participate in all kinds of learning and training activities, strive to improve knowledge and skills, and constantly surpass themselves. At the same time, they are enterprising and good at seizing opportunities to carry out professional self-management and constantly improve their career (Seibert et al., 1999). Campbell (2001) proposed five core characteristics of proactive personality on the basis of previous studies: (1) leadership, strong interpersonal skills and credibility; (2) Positive and enterprising characteristics, such as high work involvement, initiative, independent judgment ability; (3) Be competent for their own work and have high performance, strong professional technical ability and transaction processing ability; (4) Integrity and higher value pursuit; (5) Have values consistent with the organization, be proactive in work, have a strong sense of responsibility, and have a high level of organizational commitment (Campbell, 2000).

Proactive personality is a stable state in which individuals take active actions to cope with the surrounding environment. It is not restricted by situational resistance. A large number of empirical studies have shown that proactive personality has a significant impact on improving college students' job-hunting performance and employees' innovative behavior (Shang & Gan, 2009). Proactive personality also plays a positive role in the early career of college students, and environmental pressure plays a moderating role. The quality of community participation also has an important impact on college students' employability (Long & Zhang, 2011). Proactive personality has a positive moderating effect on the quality of community participation and college students' employability (Zhou & Lin, 2012). These research results show that proactive personality contributes to the success of college students' early career (S. M. Hu & Liu, 2016), so whether proactive personality has a significant impact on the sustainable development ability of college students' career in the middle and later period, namely the employability development plan?

In a word, proactive personality, as a stable internal psychological structure, not only affects the individual's reaction to things, but also profoundly affects people's work, life and study. People with obvious proactive personality traits are usually not satisfied with the status quo, willing to forge ahead, with a high sense of self-efficacy and a high level of career success.

At the end of the 20th century, proactive personality studies mainly focused on the field of organizational behavior with the majority of empirical studies (Shang & Gan, 2009).

Studies focused on the relationship between proactive personality and other factors, related to self-efficacy, adaptability, leadership effectiveness, career success, work performance, entrepreneurship and other aspects (Xiang & Wang, 2006). With the deepening of proactive personality research, it no longer stays at the organizational level, but pays more attention to the individuals in the organization. At the same time, the research field also extends to the field of education, such as the characteristics and measurement of students' proactive personality, and the impact of proactive personality on college students' entrepreneurship, career planning, career decision-making self-efficacy, employment pressure and learning adaptability.

Based on proactive personality proposed by Bateman and Crant, scholars conducted a large number of studies, and found that proactive personality directly or indirectly affects organizational performance, career development, adaptability, and self-efficacy (Liang & Cheng, 2015).

A large number of studies on proactive personality, organizational behavior and career management had been carried out, and achieved considerable results. Proactive personality is studied in the field of organizational behavior. Scholars mainly use it to shape the positive psychological quality of employees and strengthen their enthusiasm. The research shows that proactive personality plays a significant role in promoting organizational citizenship behavior and team performance. In terms of career, the study of proactive personality leads the development of organizational behavior and human resources to a new direction. Studies have shown that proactive personality has a significant relationship with subjective and objective career success, job performance, job satisfaction and job burnout.

In 2005, J. Thompson analyzed the mechanism of how proactive personality positively affects work performance. Based on the theory of social capital, he believed that proactive individuals have a good relationship construction, which can not only directly promote the improvement of work performance, but also indirectly through bringing opportunities and social support to individuals. Chinese scholars investigated this relationship in Chinese enterprises and made a comparative analysis based on the Five Big personalities (Y. Wen & Gan, 2008). The results showed that proactive personality also had a predictive effect on job performance in Chinese context, and found that this predictive effect was moderated by individual-organization matching (Y. Wen & Gan, 2008). Researchers studied the effect of proactive personality on college students' job-hunting performance by taking Chinese college students as the research targets, and found that college students with higher level of proactive personality had stronger control ability and higher job-hunting performance in the job-hunting

process (H. B. Yu et al., 2016).

Scholars pointed out that proactive personality on the subjective and objective career success are significant, and positively promote and influence the initiative tendency strong individuals through active action to adapt to the environment, higher vocational elasticity in career development, and has a good ability to adapt to the adverse environment (H. R. Li & Hong, 2012). Compared with employees with low proactive tendency, employees with high proactive personality have higher objective work performance and efficiency, and subjective career success and job satisfaction (X. Li et al., 2013). Some Chinese scholars explored the mechanism of proactive personality's significant influence on career success based on career construction theory, and the study showed that proactive personality promotes career success through the mediation of career adaptability, and this relationship is also regulated by leader-member exchange (H. B. Yu et al., 2016).

It is found that proactive personality has a significant predictive effect on career adaptability (Qu et al., 2015). Environmental variables have a certain influence on proactive personality (Shang & Gan, 2009). They also explore the relationship between proactive personality and career decision-making self-efficacy, and the study found that the higher the proactive personality of college students, the higher their career self-efficacy will be.

Proactive personality is associated with a series of important outcomes, such as learning, preparation for change (Sturges et al., 2010), career initiative, creativity, and career success (Fuller & Marler, 2009).

As proposed by Bateman and Crant (1993), proactive personality refers to a stable personal tendency to look for opportunities, show initiative, take actions, and persist by bringing about changes in the surrounding environment. In addition, according to their natural inclination, proactive individuals are able to recognize opportunities for personal development, show creativity, to be a new self, improve the status quo, and manage their careers more effectively (Crant, 2000).

It is argued that proactive individuals can exert an influence on environmental change, relatively unhindered by situational restrictions (Seibert et al., 1999). Proactive personality is associated with opportunity identification and behaviors, sense of control, persistent determination, self-efficacy, self-orientation, difficulty coping and information searching (Seibert et al., 2001).

In addition, proactive personality, being optimistic, openness, self-efficacy, and uncertainty endurance (Crant, 2000), the direction provided by career identity can also avoid loss of morale in difficult times and stimulate individuals who are qualified and ready to work

to energetically seek reemployment.

Overall, adaptability together with proactive personality taken as individual assets are important factors contributive to self-efficacy and, thus, we hypothesize that:

Hypothesis 2: Individual assets are positively associated with self-efficacy.

3.1.4 Horizontal collectivism

The Former Soviet Union famous educator and researchers Makalenko believed that a collective is a psychological community with a common purpose, and it is a common organization as the carrier to organize people to unite (Makalenko, 1983). It has organic coordination within the collective, clear organizational discipline, and adheres to the value orientation to serve the society. According to this thinker, collectivism-oriented education should adhere to the theory of parallel education and equal education. Suhomlinski (1984) pointed out collectivism education is a set of study, labor and life of students, which means to coordinate the educational organization process of various educational factors, including teacher collective involvement, learning activities, extracurricular activities, class collective construction and other theoretical and practical activities (Suhomlinski, 1984). The former Soviet Union scholars agreed that collectivism education could promote the all-round development of students' personality, and it is helpful to correctly deal with the relationship between individuals, the team, community and even the state, so as to gather people's hearts and power.

Collectivism is the research object of philosophy, economics, ethics, law, psychology and other subjects. Different disciplines have made different interpretations and definitions of this concept from different perspectives and levels. For example, scholar tried to deconstruct collectivism from the perspective of psychology, holding the opinion that collectivism and individualism are not two polar structures of opposites, but two independent dimensions, and that "altruism" and "egoism" are two moral attributes of collectivism (Shao, 2006). From the perspective of ethics, collectivism is actually a kind of public morality and emphasized the essential elements of the collective operation of justice which was also believed by the western ethicists (Ding & Wang, 2014). The concept of family advocated on the basis of consanguinity is actually a kind of moral relativism. Collectivism is not the opposite of individualism, and a real collective should fully respect individual will and safeguard individual freedom. The biggest characteristic of collectivism is to safeguard the legitimate demands of the majority of individuals. Three principles of collectivism are pointed by researchers, namely, the priority of collective interests over individual interests; The

dialectical unity of collective interests and individual interests; collectively safeguard the legitimate interests of individuals (Luo, 2012).

First of all, both the socialist core value system and collectivism are guided by Marxism. The core value of Marxist theory is to correctly handle the relationship between the human and society. It is of positive significance to change and correct the wrong values orientation of suppressing individual legitimate interests in our traditional thought and emphasizing "individual unconditionally subordinate to the collective" and "emphasizing only collective interests rather than individual interests". In addition, the real collectivism insists on the dialectical unity of the collective and the individual, and only in the collective can the individual interests be better realized. Secondly, in the development process of the past five thousand years, China has formed the family and country feeling that "everyone is responsible for the rise and fall of his country". This kind of patriotic national spirit is a kind of performance of people that insist collective interests come first.

The purpose of the universities to carry out collectivism education for college students is to make them understand that they are individuals in the society and that individual development is inseparable from the society. Once they are separated from the social collective or go against the interests of the collective, the so-called all-round development of individuals will become a castle in the air, and the realization of personal interests will be impossible. If a person leaves the social collective, and just focuses on personal interests and hobbies, they will lose the direction and support, which is called a kind of extreme liberalism, and it is absolutely undesirable. It is believed that personality must be developed under the guidance of collectivism because collectivism is the basis of personality development. The development of personality which is guided by collectivism will be scientific, proper and effective. On the premise of adhering to collectivism, the encouragement of personality should be in line with the characteristics of socialism "people-oriented". Only when personality can be fully developed, the whole nation will have vitality, and national quality will be improved. In a word, under the socialist system, the development of individualism and collectivism are not completely opposite and exclusive, but the unity of the two will make the society more united and full of vitality.

For the connotation of collectivism values of college students, experts and scholars have done a very profound and detailed exposition. collectivism values adhere to the organic combination of freedom and order, the organic unity of rights and obligations, and also the organic unity of personal and social system (Z. L. Chen, 2006). It requires the subordination of the individual to the collective, the partial to the overall situation, and the present interests to

the long-term interests. It is a collectivism that integrates individual interests, creates conditions for the realization of individual interests and develops together with individual interests. This new collectivism respects individual interests, emphasizes individuality and seeks individual independence. Such a social condition in which personal interests are realized in parallel with the interests of others, the collective and the society. It is pointed out that the new value system under the socialist market economy is that collectivist values under the conditions of socialist market economy with individual and collective interests as the axis, reciprocity as the premise, justice or equity as the lever, utilitarian principle as the motive force, dedication as the orientation, and common prosperity as the realistic pursuit (Wang, 2005). The interests of the group take precedence over the interests of the individual. Collective interest is superior to individual interest, and this is the basic principle of value judgment. It is also the requirement of modern society to consciously safeguard this principle and act in accordance with its requirements.

Marx pointed out in the Karl Marx Frederick Engels Collected Works, first of all, we should avoid taking society as an abstract object in opposition to the individual. Individuals are social beings. Everyone lives in the society, and the development of individuals and society is coordinated. Individuals cannot develop independently from the society, but must develop in the society. People exist in society as members, and their social relations can explain what kind of people they are. At the same time, Marx pointed out: Only in the collective, individuals can obtain the means to develop their talents comprehensively, that is to say, only in the collective can there be individual freedom. This indicates that if an individual wants to get the opportunity to develop his or her talents comprehensively, he or she can only invest in team activities, learn, communicate and interact with other team members, and learn from others' strengths to improve his or her overall quality. Team work skills refer to the ability to work with other people from different backgrounds, to work as an individual and part of a team, and to know how to define roles as part of a team (N. Liu & Liu, 2011).

According to Marx's collectivism theory, the collective situation can affect the initiative and creativity of college students and restrict the satisfaction of their personal interests and needs. At the same time, the strength of the collective depends on the unity and cooperation of each element and member of the collective. Therefore, cultivating college students' collectivism is beneficial for the promotion of college students' comprehensive development, which is helpful for college students to form healthy personality, communicate with classmates and teachers, improve college students' team cooperation ability, promote

cooperation between the class, stimulate interest in learning, and eventually achieve all-round development of college students, also conducive to the overall development of the whole generation.

Collectivism is to cultivate each member with the spirit of cooperation, dedication, overall awareness and wholehearted participation. Each member should understand that the collective strength of all team members is greater than the sum of its parts. Thus, as a college student, the power of an individual is limited, and the success created may be short-lived. Only the power of a collective is infinite and sustainable. Only by relying on the help and support of team members and growing together with the team can individuals retain their vitality and form a strong resultant force. Therefore, collectivism education should be introduced on the basis of college intellectual education, so that college students can not only develop collectivism but also be good at using collectivism to help create more value for themselves.

Collectivism originates from the harmony thought of Confucianism in China and has a close origin with Oriental Confucian culture. The thought of harmony is one of the important philosophical thoughts of Confucianism. The great ancient ideologist Confucius proposed that harmony is the most valuable. The virtuous are friendly to each other though they hold different opinions; the mean are hostile to each other when they blindly follow the others. Mencius also said, "The time isn't as important as the terrain; but the terrain isn't as important as unity with the people" (H. F. Li, 2003).

The Confucian idea of harmony does not mean to eliminate individuality, but on the basis of acknowledging the existence of differences and contradictions, it advocates harmonious coexistence and creates the power of harmony. The whole world is regarded as a system, and the whole system is the relationship between elements. Only by complementing and integrating different elements can the harmonious overall system be formed, which is the effect that the sum of elements and elements is greater than the system. This is also the meaning of the unity, cooperation and complementary advantages of collectivism. Confucianism has a profound influence on Chinese culture and is a unique and rich national cultural heritage of the whole country (Feng, 2011). College students are educated to learn from the relevant contents and values of Confucianism to cultivate their collectivism, and it inspires college students to treat cooperation and competition correctly. Universities also delivered the spirit of benevolence of Confucianism to cultivate the dedication consciousness of college students.

3.1.5 Social capital

The concept of social capital was defined and started to be used by sociologists in the 1980s, and then the social capital theory has been widely concerned and made great progress. The concept of social capital was first clearly expressed by Bourdieu. After that, it was Coleman who conducted comprehensive analysis and systematic research on social capital theory. Later, it was Putnam who introduced social capital theory into political science and economics.

Pierre Bourdieu was the first scholar to put forward and use the concept of social capital. In Sociological Studies, he defined social capital as the collection of actual or potential resources connected with social network (Bourdieu, 1986). It can be seen that social capital emphasizes connection, and the social network formed by the interaction between people or groups is the premise of social capital. In addition, Bourdieu also studied the transformation of economic capital, social capital and cultural capital, and he believed that social capital and cultural capital can be transformed into economic capital. Economic capital can be directly connected with money and transformed into the institutional form of property rights. Cultural capital can be transformed into economic capital through investment in education, which is manifested in the institutional form of educational qualifications.

When social capital is transformed into economic capital, it is manifested as a kind of social status, identity and title (Bourdieu, 1986). Social capital and economic capital are both a kind of capital, and there will be returns on investment. However, the difference is that social capital is an intangible asset formed in acquired social communication and activities.

James Coleman's research on social capital theory is more comprehensive, and mainly defined from the function of social capital. He believed that social capital is productive. Social capital can easily achieve certain goals, but goals are difficult to be achieved without social capital. Unlike other kinds of capital, social capital exists in the social relationship between people and can provide convenience for people in the social network (Coleman, 1988). Coleman also put forward three characteristics of social capital. Firstly, it is non-transferable, because it is a network resource of social relations, which is difficult to transfer and will not be transferred from one subject to another. Secondly, social capital has the nature of public goods, because it is shared by members of a social network group, not private goods, and can be enjoyed by everyone in a social network. Thirdly, social capital is productive because it can achieve certain benefits and make it easier for individual who owns it to achieve certain goals (Coleman, 1990).

Putnam believes that social capital is represented by certain characteristics of social

relationship network, such as rules, mutual trust, emotion and relationship network, which can effectively improve social efficiency and achieve the common goals of social organization (Putnam, 1995). In his research, he found that northern Italy was richer and more dynamic, largely because it enjoyed economies of scale because of mutual trust, shared goals and norms. In the south, people are isolated and scattered, distrust each other, such a social structure makes its economic development backward, so the economic difference between the north and the south is caused by the difference in social capital (Putnam, 1995). Putnam introduced social capital into the political and economic fields, and attracted extensive attention in academic circles.

Scholars also studied this concept from the perspective of society and emphasized mutual trust, cooperation and mutual benefit in groups and points out that social capital is an informal norm conducive to social stability and economic prosperity (Fukuyama, 1998). There are some scholars from the individual level to define social capital. Lin nan think social capital embedded in social network, rooted in the structure of social relations, and individual can get certain return through social capital investment(N. Lin, 2001). Ronald Burt pointed out that social capital refers to the resources and information that individuals can get from social networks. Through contacts with friends or colleagues, they can get certain benefits or development opportunities in enterprises. Mark Glenvenot is also a representative to study this concept from the perspective of individual research. In his book The Strength of Weak Ties, he pointed out the importance of weak ties. Weak ties are easier to connect individuals and groups, which is conducive to obtaining more information (Mark, 1973). According to this result, Chinese scholars proposed a strong guanxi theory. Employment opportunities are often obtained through the strength of strong guanxi in the Chinese situations (Bian & Qiu, 2000).

To sum up, although there are some differences in the theory of social capital, consensus has been reached in some aspects. Firstly, social capital is a kind of resource. Secondly, social capital is non-transferable and productive. Thirdly, social capital has norms, trust and network factors. With more scholars' research and attention, social capital theory will be further deepened and systematized, providing a new vision for the development of other disciplines and a theoretical basis for social and economic development.

With the influence of traditional thoughts relationship-based, kinship, and family, the research on relations in China believed that social capital is linked by blood and geography, and the relationship between people is formed by kinship (Bian, 2019).

The concept of social capital was first put forward by L. J. Hanifan in 1916. He believed

that crowd interaction in society, warmth, kindness and mutual assistance group in family interaction became social capital, and most people met their social needs through these relationships (Hanifan, 1920). Later, Bourdieu, a French scholar, further explained this concept in more detail. It was not until 1980 that Bourdieu formally publicized the concept of social capital as "a collection of actual or potential resources linked to a persistent network of mutually familiar and recognized, more or less institutionalized relationships" (Bourdieu, 1986).

Coleman, a scholar, began to elaborate on the concept of social capital. He proposed that social capital is different entities with various styles, rather than a simple entity, and only in this way can micro phenomena be better explained (Coleman, 1988). In addition, he pointed out that social capital itself has two states, that is, social capital may be beneficial to some behaviors in different environments, may have no influence, and sometimes even harmful. Later, scholar Putnam put forward the concept of "citizens must participate" and made it clear that social capital should be based on the society itself, that is, it should be carried out with the society itself as the core (Putnam, 1995) . Then he published an article to elaborate on this view. Since the emergence of the different viewpoints of the above scholars, different scholars have successively defined the concept of social capital from other perspectives. Alejandro Portes proposed that social capital is the ability of an individual to obtain personal benefits through his or her identity in the society, and the acquisition ability of individuals is also different due to different identities (Alejandro, 1988). Francis Fukuyama, a scholar, explains social capital from another perspective. From a cultural perspective, he believes that social capital is jointly established by the rules and personal identity followed by social members, and that people need to trust each other (Fukuyama, 1998).

Lin Nan proposed that social capital is individual-centered and that acquiring social resources through planned actions based on individual needs is social capital (N. Lin, 2001). It is easier to understand that social capital can be divided into two levels, namely cognitive and structural forms of social capital. Cognitive social capital from people and structural social capital can be referred to as people's participation and activity in different social activities. Similarly, social capital has three or more dimensions, including the scale of social members, the ability of social members and the willingness of social members to demand (Völker & Flap, 2001). Other scholars have refined the concept of social capital into family social capital, and Goddard regards family capital as a bridge connecting family members, believing that family capital is conducive to mutual trust among family members (Goddard, 2003). Parcel and Dufur believe that family social capital is the bond connecting parents and children

(Parcel & Dufur, 2001). Family social capital includes both the relationships within the family and between the family and other social members. It is believed that interpersonal relationships are supported by the social capital accumulated by families (Dorsey & Forehand, 2003).

In China, the concept of social capital was first proposed by Zhang Qizai, who believed that social capital should be realized through social relations (Q. Z. Zhang, 2002). On the basis of Zhang's definition, Bian Yanjie explained social capital from three aspects: firstly, social capital is a social network relationship; secondly, social capital is also a social network structure; finally, social capital is a social network resource (Bian, 2004). He believes that the network between individuals in society should be a form of social capital realization. Social capital can be divided into two types, namely, individual social capital and group social capital (Y. D. Zhao & Luo, 2005). With the help of foreign ideas on social capital, Chinese scholars pointed out that domestic social capital has the characteristic of strong association.

As for the social capital of college students, it comes from various ways, including individual, family environment and school factors. Among them, individuals and families mainly include parents' background, work status, family financial resources and interpersonal relationship (Zou, 2005). While school factors mainly include school influence, relevant academic achievements and contribution to society.

With the pace of China's modernization process is accelerating, the society is rapidly changing. Under the popularization of university education, social capital is becoming more and more influential in graduates' job hunting. College students' social capital provides a powerful guarantee for college students in the job market. Under the same conditions, job seekers with a wider network of social connections are significantly more competitive in their job search (Sha, 2019).

College students have limited personal contact with the outside world and relatively narrow access to information, which leads to incomplete and unreliable information receiving by some college students in the process of job hunting. If the teachers or their own relatives and friends and other social relations can provide some channels, it can help college students to obtain more reliable employment information. The utilization of family and friendship can help college students screen and analyze employment information, to a large extent, can even help graduates get their own satisfactory jobs.

Social capital, to some extent, can reduce the risk of unemployment. In today's society, many companies are increasingly giving priority to applicants with good social connections. If the candidate has a good social network, which can bring benefits to the company, then he

will have a strong competitiveness. In today's transition period, more and more college graduates begin to pay attention to their social capital, no longer simply to promote their ability in the talent market, but also tend to use their relationship network to obtain employment opportunities, and maximize their value through the relationship network(Y. Yang et al., 2018). A perfect relationship network can also bring benefits to the enterprise, which is more valued by the enterprise and reduces the risk of unemployment among college students.

In response to the call of the country, more and more college graduates devote themselves to the entrepreneurship. For recent graduates, starting a business is not a shortcut to success. However, under the same conditions, college students with certain social capital can receive the help of experts and professors, who will use their own social resources to ease the difficulties and obstacles on the road to entrepreneurship for college students (Zhao & Wang, 2017). Graduates with strong family financial ability do not have to worry about the operation of start-up capital in the early stage.

The social network constructed by college students in the growth process brings abundant resources, forms the unique social capital of college students, and also influences the employment quality (J. Liu & Huang, 2016).

Social capital stands for the benefits obtained from the social network an individual belongs to. It reflects the social and interpersonal aspects of employability. Social networks provide a way to connect with. The people one knows may contribute to obtaining career-related information (Seibert et al., 2001), thus making it possible to discover and get job opportunities. Individuals who enjoy broader networks are likely to be benefited from access to a wider range of resources, including employment information and career sponsorship, which leads to favorable salaries, promotion opportunities, and career satisfaction. Some relationships which exist in different organizations, places, and timings, social capital can develop individuals' opportunities and capabilities to recognize and achieve career goals across organizations and industries, and even throughout careers (Fugate & Kinicki, 2008). Therefore, it is expected that social capital is closely related to the development of ever-changing and borderless career orientations (S. Lin & Huang, 2005).

Family background and social contacts, which to some extent related to social class, have been suggested to affect graduates when they enter into the job market (Forrier & Sels, 2003). For example, study shows that British middle-class families assemble social capital to make sure that their children can gain competitive edge in the graduate labor market, including entering large companies as interns, while working class families have little inclination to

gather social capital (Bathmaker et al., 2013).

Social capital associated with graduates' employability can be understood as capital originated from the networks between students and their surrounding environment, which boost and increase their employability and chances of finding a favorable job (Tomlinson, 2012).

The network theory of social capital is beneficial for people to understand how can individuals seek assistance from membership or association with a interpersonal group or social circle. With the help of the group or circle, the establishment of direct connections through networks may have an impact on employment opportunities, the later promotion opportunities and even the lifelong career path (McGuinness & Sloane, 2011). Thus, social capital has an immense effect on recognition and realization of employability opportunities (Fugate & Kinicki, 2008).

Social networking is the behaviors to establish and cultivate personal contacts and also social networks (Bridgstock, 2009), which creates various resources, such as close contacts, timely information, and all-round support that may be useful to job hunting or career development (Batistic & Tymon., 2017).

Some people may argue that the effects and benefits of having a social network may fail to materialize (Bridgstock, 2009), a strong social network can further enhance university students' academic credentials since that social capital bring much more resources exceed their own knowledge and skills. Thus, the creation of social capital has a direct impact on perceived and actual employability.

The function of personal connections or social networks has been identified as another side of student employability and career development (Rothwell et al., 2008). To our knowledge, there are few studies have examined the role of social networks (Rothwell et al., 2009).

Social capital presents the interpersonal part of employability regarding formal and informal career-related networks. Empirical studies have shown that interpersonal relationships are critical to form a person's self-perception and get career-related information and resources.

Students at university also meet those likely to be in leading jobs in the future, forming contacts for life. Social networks can also be a source of social support, helping to alleviate the unpleasant condition, such as unemployment (N. Lin, 2001). Social capital, especially social support, is beneficial to individuals to deal with intense and uncertain situations. Individuals with solid social support have a tendency to feel respected and thus have higher

sense of self-esteem (McQuaid, 2005).

Certainly, studies suggest that social capital and job-hunting intensity are positively correlated with re-employment (McQuaid, 2005). social capital. Social capital related to graduates' employability can be regarded as the sum of relationships and networks, which facilitates the mobilization of graduates' existing and available resources, brings them closer to the labor market and offers them accessible opportunities.

Social capital can propel graduates to approach job opportunities and raise awareness of labor market, and then be capable of taking advantage of them. Social capital refers to the useful information and resources that job hunters receive because of their membership or association with a particular group. Their entrance and experience associated with prominent social impacts like family members and community colleagues in higher education offers the foundation for graduates to develop the essential bridging relationships with other pivotal social stakeholder (Putnam, 1995). To some extent, this kind of awareness is originated from the student's experience in the social and cultural environment. What really matters is to find approaches to utilize such resources to seek credible employment.

Putnam (1999) made the concept of "bonding ties" and "bridging bonds" clearly, the former refer to internal communication between group members which smoothly establish and maintain cohesion consolidation and solidarity, the latter one stands for external communication outside the group. Social capital presents the resources available to individuals or groups through networks and their associated norms and trusts which to a large extent facilitates people with insights into what opportunities exist, where they are, who are the main decision-maker and what they need to get employment (Putnam, 1999).

The theory of strong and weak ties was put forward by Granovetter (1995), which is also important for theoretical study, referring to the strength of the relationship bonds formed by individuals. To a crucial degree, this connection can have an impact on the level of information people get, and whether the information is internal knowledge or not (Granovetter, 1995). Establishing strong connections with directly significant others, such as family members may be one way to fostering awareness of employment opportunities.

The main issue to be concerned about is graduates' transition into employment, and their ability to identify and take advantage of opportunities, especially when others in their lives who have (or have not) acted as bridges to help them understand and get relative information.

It has become more and more important for graduates to accumulate bridging experiences and extend weak connections beyond the official boundaries of universities. A particularly prominent aspect of social capital formation involves potential employer engagement,

whether formal or informal, in the form of meaningful and rewarding reciprocity between graduates and employers.

Higher level of employer engagement means that there is a clear bridging activity between potential employer and employee, not only by acquiring rewarding employer knowledge, but also by making graduates more directly visible to employers. There are direct ways to harness social capital through employer participation that can be encouraged. One is to promote some degree of mutual understanding between employers and graduates by direct communication with employers. By directly attracting employers' attention through job fairs and online profiles, graduates can make themselves more noticeable to employers and make connections early.

Employer communication can also be realized through the development of work experience, through internships or other forms of employment, which can create important bridges between formal education and future employment, especially the provision of a wealth of knowledge or job opportunities. These kinds of activities are obviously beneficial to students if they have an expectation to enter relevant fields for work. Research shows that the work experience of school graduates not only provides a direct route to subsequent employment opportunities, but also contributes to the generation of more reliable and first-hand professional knowledge, as well as the measures required for entry and success (A. B. Jones et al., 2017).

There are also some other ways to take advantage of social capital. College career practitioners are a potential source of for graduates. The group of knowledgeable and dedicated practitioners can impart valuable knowledge about how to enter a particular field of employment and build relationships with employers. Under these circumstances, guidance on how to engage with employers and communicate with them can be provided. It is urgent for universities to do a better job of providing social opportunities and social capital to students in the form of extracurricular activities and employer involvement (Koen et al., 2012).

Overall, horizontal collectivism and social capital taken as social assets are important factors contributive to self-efficacy and, thus, we hypothesize that:

H3: Social assets are positively associated with self-efficacy.

3.1.6 Real-world activities

School-enterprise cooperation, as the name implies, is the cooperation between universities and enterprises. It is a university that takes the entrepreneurship education department as a bridge, aiming to cultivate the innovation and entrepreneurship ability and entrepreneurship

spirit of college students, and eventually realizes that the two sides could build entrepreneurship service platform and entrepreneurship practice base (J. Z. Zhang, 2019). Specifically, on the one hand, the entrepreneurial department will enter the base by selecting excellent entrepreneurial teams and innovative and entrepreneurial projects on campus; On the other hand, through enterprise association, college students' science park, provincial and municipal incubation institutions, alumni and other institutions, universities could attract excellent enterprises to enter the base.

By matching students' entrepreneurial projects with the main business of the enterprise, the entrepreneurship education department in colleges and universities can directly connect the two sides in the campus entrepreneurship base to obtain the needs of each other and complement each other's advantages, thus achieving a win-win situation for students, the university and the enterprise, and enabling more students to "start their own businesses, dare to start their own businesses and know how to start their own businesses". Finally, this kind of cooperation will fully cultivate high-quality application-oriented talents with innovative spirit and entrepreneurial consciousness.

Through school-enterprise cooperation platform, universities and enterprises really communicate face to face, avoiding the traditional ways that enterprise expert enters the school to just deliver some knowledge, to provide some advice. Enterprise will select the projects from the early stage of the target, from business strategy execution to the last stage of entrepreneurship results summary for the whole process. Students' entrepreneurial projects will be further optimized by business experts to become more operational and feasible (Geng, 2020). After a period of time to guide and cultivate, if the startup project is mature enough, it will gain in-depth support (including professional consultation, project evaluation, credit guarantee and skills training) and further practice of the ground operation, which improve the possibility of success of the new ventures.

The direct connection between students' entrepreneurial teams and the enterprise business base in school benefits the universities and students. The colleges and universities can timely know the enterprise's daily operation and the change of position requirement. And then universities can make some changes of the talent training scheme and course design accordingly, which lead to constant optimization of the structure of curriculum system, reform of teaching mode, method and means, and highlight of the practice teaching (Lu et al., 2012). The phenomenon that the goal of talent training in universities deviates from the actual needs of enterprises can be avoided. More advanced and field knowledge can timely be transferred between teachers and students to improve the teaching quality. In addition, the experience

summed up by a large number of entrepreneurial practices will give positive feedback to the entrepreneurial theory in time to promote the timely update of entrepreneurial teaching materials, and make the entrepreneurial teaching materials more down-to-earth.

Students' entrepreneurial teams to enter the school business base, supported by enterprises from the aspects such as funding and technology, will surely inspire student to utilize the knowledge in the creative and innovative ways to solve the problems in practice. Projects on various aspects have significantly improvement, even a short time, can obtain good economic benefit and social benefit. These projects will mature entrepreneurship competition for college students to participate in all levels of all kinds of innovation, which serves as a solid foundation to bring a lot of awards for the school and funding. It is definitely a response to the country's "Shuang Chuang" call, which aims to promote the development of university's entrepreneurship innovation and push the universities entrepreneurship education reform.

School-enterprise cooperation has always been appreciated by vocational education. Industry-school integration aims to give advantages of schools and enterprises, establish a close interactive relationship, link actual projects with teaching topics, and implement practical teaching in terms of methods, sites, and teaching personnel. The teaching under the guidance of the project can enable students to carry out the training of real practices, which can effectively improve students' hands-on ability (X. Zhang et al., 2014). To establish close cooperative relationship with the enterprises and a close off-campus training base means that the cooperation between higher vocational colleges and enterprises gives full play to the advantages of both sides, and complement each other for in-depth cooperation and long-term persistence. School-enterprise cooperation is based on mutual benefit to achieve a win-win situation. The former practice of relying solely on enterprises is reformed to realize the cooperation of learning from each other, exchanging what one has and developing together.

In China, some universities carry out campus studios, attach importance to the connection between enterprise resources and studios, and constantly introduce enterprise projects into the studios. Through the integration of curriculum teaching, the teaching practice is promoted. With the help of project operation, the way of cooperation between schools and enterprises is systematically planned, and the cooperation between teachers and enterprise is also driven. Teachers and front-line staff of enterprises, teachers and students realize the complement and utilization of resource advantages to carry out collaborative teaching and education, so that students can improve their hands-on ability in project practice (Yao, 2011). According to the needs of the project, teachers carry out step-by-step teaching design from simple to difficult, and guide students to actively explore, analyze and summarize the content required by their

own operational projects.

Teachers design the teaching content according to their own expertise and then teach in a cyclic manner. With the specific guidance of typical cases as the starting point, students can strengthen their teamwork ability from the project design, and students can be cooperatively train ed through group discussion, role playing and workplace simulation (Du & Fan, 2017). The form of group teaching or studio intensive teaching can also be adopted according to students' groups and topic selection, and then combine project guidance with collaborative guidance. The teacher-team lead students directly involved in the real production practice of the project, the traditional classroom teaching should be shifted to meet the needs of market development, which is conducive to broaden the student's horizon, inspire the student's creative thinking, and cultivate students' teamwork spirit (C. F. Zhu, 2018).

University-enterprise cooperation is the collaborative education for teachers and students in contact with the actual production operation of the project (C. F. Zhu, 2018). Students needed to carried out the market research, material collection and organization, and enterprises directly involved in the production practice of activities, which can make students learn knowledge and skills in the real world and accumulate valuable experience at school, and further encourage students to have a clear career goals in the future. This process is the process of improving students' ability and forming professional quality. After the implementation of school-enterprise cooperation projects, students' social ability can be obtained. This will shorten the time for students to adapt to the occupation after graduation, quickly integrate into the enterprise, and improve the employment rate of graduates.

The skilled craftsmen, front-line personnel of enterprise and teachers form a collaborative education team to improve teaching efficiency and enhance teaching interaction so that students can learn purposefully and relatively systematic, that is, to reach the effective integration of professional basic knowledge and professional skills knowledge (Du & Fan, 2017). In this way, students' professional theoretical level and hands-on ability can be improved. Teachers also have access to the most cutting-edge consulting and technology, and constantly improve themselves. Their professional comprehensive ability also increases rapidly. School-enterprise cooperation is the bridge between collaborative education and market. On the one hand, the industry-university-research institute creates direct economic benefits for enterprises. On the other hand, it promotes the cooperation between higher education and local economy and it can also bring benefits to students.

Social practice can shorten the socialization process of college students to improve students' ability of organization, the interpersonal communication ability, strain capacity,

ability to deal with contradictory. Some studies have shown that technology-based simulation of real environment or the new socialized virtual social practice based on the network platform can also enable college students to simulate work setting, increase knowledge, expand ability, and transform knowledge into the ability to analyze and solve problems in the real environment.

Empirical researches have been carried to explore the relationship between social practice activities and college students' employability. Some scholars have confirmed that the participation of volunteer service activities plays a positive role in constructing a reasonable professional knowledge structure of college students and improving their psychological quality of employment, and the community service model of college students' association also has a comparative advantage in improving college students' employability (C. F. Zhu, 2018).

Scholars also take the social practice of Nanjing university as a case, through the interview data coding and analysis, it is concluded that social practice played a significant role in cultivating college students' spirit of the bear hardships and stand hard work, the sense of responsibility and interpersonal skills, organization and coordination ability, social adaptability and the team cooperation ability (J. Z. Zhang, 2019).

Research findings have showed that students' exposure to real-world activities exerts a significant influence on students' employability. Real-world activities can include all forms of collaboration with employers, like students' visit to enterprise, and alumni' visit to schools to give lecture or seminar (Eby et al., 2003).

As a matter of fact, research found that employers' involvement in course design and delivery has a definitely positive impact on graduates' ability to obtain employment, which reveals the impact of different types of skills schemes on the labor market performance of graduates (Rae, 2005). Employers can give some comment on the relevance of course and its content to the future career, provide materials and ideas for student learning projects, be members of course panel of consultants, and become guest professors.

A study has conducted in the University of Leeds, United Kingdom, and it is about activities support future development of employability. The respondents are engineering undergraduates who graduated from the above-mentioned university. According to the respondents, the use of on-site visits and the interaction with engineering department staff are the two most effective activities students participated in (Boswell et al., 2012).

It is suggested that students have the relatively higher level of enthusiasm for their study when they are able to participate in activities or situations that they might encounter in the real-work world (Boswell et al., 2012).Their findings further explain that students who

participate in real-world activities are more likely to show their reflection and evaluation, and enhance confidence and transferable skills. Furthermore, given that students may graduate from university with outdated knowledge and skills, scholar argued that it is necessary for universities to be more closely engaged with the business world as they no longer have a monopoly position on education (Kanfer et al., 2001).

A Nigerian researcher show that it is less than satisfactory that the role of employers in curriculum design and graduate recruitment is not clear. The survey shows that most employers built an awareness of the collaboration with universities, particularly through participation in internship. However, most of the employers say their organizations did not cooperate with tertiary education to do the curriculum design or graduate recruitment (Pitan, 2016).

According to the results of the study, we can figure out from the study that real-world activities have a significant positive relationship with graduate employability making the considerable contribution to graduate employability (Pitan & Muller, 2019).

3.1.7 Perceived organizational support

The theoretical basis of Perceived Organizational Support (POS) is social exchange, Norm of Reciprocity and the idea of organization personification. The concept of Social Exchange and the norm of reciprocity constitute an important part of Social Exchange Theory. Both the norms of social exchange and reciprocity assume that individuals will actively reward their benefactors, and that individuals connect with others to gain maximum personal benefits. The idea of organization anthropomorphism was proposed by scholars, and he believed that employees project human characteristics into the organization and then associate with the organization that actually has human characteristics (Mobley & Homer, 1978). Employees often interpret the actions of organizational agents as the intentions of the organization rather than solely attributed to the motives of the agents themselves. Employees will judge whether the organization values their contributions and cares about their well-being on the basis of the organization's supportive or unsupportive actions toward them.

It is believed that the way in which an organization treats its employees, whether it is social support such as praise or appreciation, or other rewards such as salary increase, promotion, and job enrichment awards, will make employees have an expectation that the organization will support them when they need assistance and recognize and praise them when they have excellent performance (Eisenberger et al., 1986). It is also expected that organizations will be willing to pay fair wages and make work meaningful and fun.

Organizational support is a characteristic that employees personify the organization. Based on this idea, it is further pointed out in research that employees have a belief in an organization that values their contributions and cares about their well-being. The perception of organizational support may be affected by how an organization treats its employees and how employees interpret the motivations of the organization, resulting in different attributional processes. Through different treatment methods of organizations, employees will feel whether the organization supports them or not, and then produce a kind of exchange ideology of return.

Its content is the attitude and behavior of employees, completely dependent on the support of the organization, which is a belief in the hearts of employees. Employees perceive how the organization treats them, and make a judgment on the attitude of the organization based on what kind of feeling they get from the organization. When the various requirements of employees are satisfied, employee perceptions and beliefs to the organization will become more positive, and the positive beliefs will make employees to make contribution to the organization. Under this circumstances, organizational support is relatively easy to achieve balance, and satisfied with the variety of policy and system based on mutual benefit. Employees will improve their commitment to the organization, and work harder to give back to the organization (Rhoades et al., 2001).

Chinese scholars proposed the possible reasons for the formation of perceived organizational support by employees under the specific cultural background in China(G. H. Xu & Yang, 2004). In the study, 166 employees from about 75 companies in four regions of China provided 805 key event descriptions that they felt showed that the company truly valued their contributions and cared about their welfare. Through rigorous content analysis, they divided these descriptions into 24 categories, each related to a management practice. These descriptions can be classified into five categories: those related to employee health benefits, those related to employee compensation and fringe benefits, those related to employee family benefits, those related to employee rights and dignity, and those related to employee growth and development opportunities.

Chinese employees' perceived organizational support can be divided into two dimensions: support for employees' life and support for employees' work, which is different from Eisenberger et al. 's result with one dimension (Tan et al., 2007). The research also shows that organizational support for employees' work is related to employees' ideal commitment, while organizational support for employees' life is related to emotional commitment and opportunity commitment.

Based on the previous research, researcher developed the scale of human resource practice in the antecedents of perceived organizational support, and used empirical methods to discuss which specific practices of human resource management can affect perceived organizational support (L. Song et al., 2006). And demographic variables on perceived organizational support are briefly analyzed, and corresponding recommendations are made.

Some scholars systematically introduce the background of theory of organizational support, organizational support experience, the concept of organizational support, the role of the mechanism, the factors affecting employees' production of organizational support experience (X. F. Xu et al., 2005). It also summarizes the research status of organizational support theory in China.

When scholars studied the relationship between supportive human resources and employee emotional commitment, they found that employees' perceived organizational support played a mediating role in "supportive human resources practice and emotional commitment" (G. H. Xu & Yang, 2004). It is also showed that employees' perceived organizational support and organizational commitment had a positive impact, and perceived organizational support was an intermediate variable affecting the human resource effect (L. Song et al., 2006). Perceived organizational support plays a mediating role among value matching, organizational justice, social comparison and organizational commitment (X. P. Liu, 2005). As for the effect of perceived organizational support on organizations and employees, most studies focus on the impact of perceived organizational support on employees' organizational commitment.

According to the principle of reciprocity, the sense of organizational support will make employees have a sense of obligation, belonging and satisfaction of emotional needs to care for the interests of the organization, thus increasing employees' emotional commitment to the organization. Employees generally choose organizational citizenship behavior (such as improving organizational commitment and reducing turnover tendency) as the reward for organizational support, rather than improving efficiency, which is also affected by ability, work schedule and job design.

A university is a place of education and training. As a place to cultivate and produce outstanding talents, universities must change their prejudices on style and learning, respect teachers' development needs, integrate real market development, develop teaching models, and encourage students to actively engage in employment and business development. Universities are viewed as the main body supports the development of the social. In college education, attention should be paid to recruitment and entrepreneurship, trends in new

education and business development, and business and entrepreneurship concepts should be integrated into professional courses so that students can not only learn technical majors, but also master all aspects of employment and business (L. Li, 2018). At the same time, universities should create a high-quality teaching environment according to the age of students, provide specialized education and business education, increase the number of teachers and students in schools to promote career and business opportunities, and it will preferably meet the satisfaction of students.

Universities are suggested to expand its investment in teachers, change existing teaching and education models, develop professional and qualified teachers, and hire senior teachers to join and become the leading team of teachers. At the same time, universities should strengthen teacher management in education management and improve their enrollment rate and business skills (Cui et al., 2019). For example, with the help of university culture, student management has been strengthened, combining campus culture with education and business, while education and management can provide students with insight and vision.

Career planning is very important for students' future development. At present, colleges and universities should do the following for career planning education. Colleges and universities must realize the importance of career planning, and guide students' career planning in the first year of enrollment, and improve the career planning education step by step (He, 2020). For example, first of all, students are encouraged to discover their own advantages and disadvantages, recognize their own position, and promote their professional learning. Secondly, the education of students' professional quality can simulate the workplace environment and strengthen the practicality of the classroom (L. Li, 2018). After the cultivation of students' personal positioning and professional quality is perfected, the formulation of career planning can be carried out to ensure that students can develop career planning in line with the reality strictly in accordance with their own conditions, so that students can build a clear long-term goal and generate greater motivation.

Universities ought to have enough field-related professional knowledge, regularly train its teachers, and guide teachers to observe the current social employment situation to have timely discussion and analysis (W. W. Zhang, 2018). So that teachers can combine the current social environment into guidance and training to ensure the efficiency and quality of the whole education in university.

Universities must adhere to the principle of serving all students. From the perspective of employability, universities can carry out some activities from career education to entry points, including resume filling and interview methods to ensure that students can receive

comprehensive career planning services, and ensure that students can integrate into the society and the workplace more quickly and effectively (Y. Y. Wang, 2018). Schools should also conduct a timely survey of students' employment, help students solve problems in the workplace and find loopholes in its own talent training and education. Only when schools, teachers and students pay enough attention, can students obtain good career planning education, ensure that students have good professional quality and values, improve the employment competitiveness of college students, and provide the greatest help for students to enter the workplace and the society (P. Wang, 2014).

As an old Chinese saying goes, "Sharpening your axe will not delay your job of chopping wood." In the past when college students graduate from the universities, the novice students find it difficult to get a foothold in the fierce competition of the job market. In order to improve the employment rate of college students, the career planning education in universities provides a platform for college students to widely understand the social situation and employment competition. When they do not fully step into the society to face the fierce employment competition, it is necessary to complement the psychological construction of college students in advance.

First of all, some students had developed themselves comprehensively in all aspects and have skills that are good enough to stand on their own feet. For this group pf college students, the support of universities can help them dig deeply into their own advantages and special strengths, understand the realization of their self-value, and fully analyze the current job market and social employment situation, so as to avoid cliff in the employment process. However, the support of universities is of greater significance to ordinary college students whose family situation and comprehensive ability are not that good (Gao et al., 2007).

The support of universities for college students in the in-school education and employment is to help college students clearly understand their own positioning and their need from all aspects to grasp the value and ability to achieve comprehensive quality (Z. Zhang, 2017). The employment of college students is difficult, a large part of the reason is that college students do not have a correct concept of employment. Their goal is not clear, and they cannot accurately grasp their own positioning. College stage is the most important stage in life to establish correct values, economic outlook, world outlook and other life concepts. The support and cares of universities can also help college students to make psychological construction of employment. For example, when graduates are face with severe employment test, some may be easily defeated by the reality. Therefore, the psychological construction is particularly important in today's society. For example, in an interview, an interviewee who is

calm and confident will certainly get more appreciation than one who is timid and backward. When facing the same opportunities, with the same situation and ability, the mentality can determine the fate. Career planning is very helpful to help college students overcome psychological barriers and stay calm under pressure.

During this process, various ideas established will have the greatest impact on their future career path, so the support and cares of universities are of great significance to university students. A correct idea is needed to achieve their future career goals and career path.

Overall, the learning experience that provides real-world activities and the general support given by the university to students' experience taken as organizational assets are important factors contributive to self-efficacy and, thus, we hypothesize that:

H4: Organizational assets are positively associated with self-efficacy.

3.1.8 Indirect effects through self-efficacy

The preceding hypotheses establish a set of associations that depart from the three types of assets (individual, social, and organizational) linking to self-efficacy that, on its turn, links to four subdimensions of perceived employability. These associations intrinsically suggest the mediator status of self-efficacy thus determining the establishment of the following hypotheses:

H5: There is an indirect effect of individual assets on employability through self-efficacy.

H6: There is an indirect effect of social assets on employability through self-efficacy.

H7: There is an indirect effect of organizational assets on employability through self-efficacy.

3.1.9 Moderating effect of entrepreneurial intention

Previous studies on intention mainly focus on the field of psychology, which is used by scholars to reflect individual views or attitudes towards things, mainly used to explain individual tendencies or aspirations. Post-social psychology also introduces the concept of "behavior" in the original interpretation, and on this basis points out that intention is an effective indicator of individual planned behavior. The scholar who put forward entrepreneurial intention earlier is Bird, who believes that entrepreneurial intention is a psychological state that urges individuals to think seriously and make decisions, and is willing to invest emotion and resources into this decision and goal (Bird, 1988). It is believed that

intention is an individual's subjective probability judgment of a specific behavior in the future, reflecting an individual's willingness to perform (Y. H. Lin et al., 2016). With the deepening of entrepreneurship research, scholars began to think about the intersection and integration of different disciplines, and entrepreneurial intention research emerged in different fields and levels.

Similarly, entrepreneurial intention is the internal cognition, preference and behavioral tendency of potential entrepreneurs to establish new businesses (DeNoble et al., 1999). Entrepreneurial intention can be defined as the subjective attitude of whether an individual participates in entrepreneurial activities (Kruegerjr et al., 2000). Entrepreneurial intention can be interpreted as the possibility and interest of starting a business independently (Phan et al., 2002). It is defined entrepreneurial intention as a person's intention to form a company and self-commitment to consciously plan to establish a new business in the future (E. R. Thompson, 2010).

Chinese researchers expressed entrepreneurial intention as entrepreneurial preparation and possibility (J. Chen et al., 2017). Scholars believed that entrepreneurial intention is people's thoughts on entrepreneurial behavior, which belongs to an emotional identification of entrepreneurial activities (Kong & Zhao, 2017). It is believed that entrepreneurial intention is a psychological tendency of the attitude and desire to choose entrepreneurship in the future (Peng et al., 2012). Entrepreneurial intention can be regarded as a subjective psychological manifestation of potential entrepreneurs' entrepreneurial activities(Yuan et al., 2019).

Some scholars believe that entrepreneurial intention refers to the belief that an individual intends to establish a new company and put it into practice at a certain time in the future. To sum up, although different scholars have different interpretations of the concept of entrepreneurial intention, it is generally agreed that entrepreneurial intention is an important indicator to predict entrepreneurial behavior and a psychological tendency of college students and their possibility and willingness to choose to start their own business after graduation.

Through reviewing and sorting out domestic and foreign literature on entrepreneurial intention, it is found that in the study of factors affecting entrepreneurial intention, individual characteristics and environment are regarded as two important factors by domestic and foreign scholars, and they need to be comprehensively considered. Individual characteristic factors mainly refer to personal factors, including personal characteristics, entrepreneurial cognition and individual background. Environmental factors include school entrepreneurship education, policy support, family environment and social entrepreneurship atmosphere.

Entrepreneur personality traits have an important impact on individual entrepreneurial

intentions (Y. J. Jin, 2018). In previous studies on entrepreneurial intentions, several typical personal traits, such as achievement need, innovation, tolerance and risk taking, have been proved to have a positive impact on entrepreneurial intentions, so these personal traits are also known as entrepreneurs' personal traits. Many scholars at home and abroad have also proved the role of personal characteristics in relevant studies on entrepreneurial intentions (Chi, 2010). The existing literature summarizes the factors of personal background as age, gender, educational background, family background and other factors. It is concluded in the empirical study that gender factors significantly affect individual entrepreneurial intentions, and male entrepreneurial intentions are significantly higher than female entrepreneurial intentions (X. Zhang & Zhang, 2018). Some scholars have pointed out in their studies that the entrepreneurial intention of college students with MBA degree is significantly higher than that of undergraduates or other postgraduates (Fan & Wang, 2006), so both the level and type of educational background will affect the entrepreneurial intention of individuals. Meanwhile, college students whose parents had no entrepreneurial experience had significantly lower entrepreneurial intention than those whose parents were entrepreneurs. Domestic and foreign researches on individual cognition mainly focus on entrepreneurial self-efficacy and prove that entrepreneurial self-efficacy has a positive effect on entrepreneurial intention. Entrepreneurial self-efficacy is a person's perception of the ability to successfully implement entrepreneurship and is an important precursor variable of entrepreneurial intention (Sun & Zhang, 2014).

In addition to the internal factors of an individual, many scholars also believe that the external entrepreneurial environment can affect an individual's entrepreneurial intention. The result of study shows that the stronger the entrepreneurial atmosphere, the stronger the entrepreneurial intention of college students (W. J. Chen et al., 2012). In addition, many scholars have confirmed through research that entrepreneurial atmosphere can affect individual entrepreneurial intention (Q. J. Zhao et al., 2018). The entrepreneurship education in colleges and universities not only provides college students with a relatively strong entrepreneurial atmosphere, but also improves their entrepreneurial skills and strengthens their entrepreneurial cognition. Research also emphasized that entrepreneurship education can change college students' entrepreneurial attitude and enhance their entrepreneurial cognition, thus effectively improving the intention of entrepreneurs (Fayolle, 2006).

Entrepreneurship education can affect entrepreneurial intentions by influencing entrepreneurial self-efficacy (Vanevenhoven & Liguori, 2013), and that entrepreneurial self-efficacy can predict entrepreneurial intentions to a certain extent. Therefore,

entrepreneurship education provided by colleges and universities is an environmental factor that has a significant impact on college students' entrepreneurial intentions.

Many scholars have studied the influencing factors of entrepreneurial intention and put forward their own influencing factor models. A concept of "entrepreneurial intention rate" was proposed by conducting a survey on the key entrepreneurial motivations, entrepreneurial barriers and entrepreneurial intentions of middle-aged people (Rebeca, 2001). It is defined as the percentage of the population that is not currently starting a business but expects to do so in the next three years. The survey found that the poor economic environment was the biggest barrier to starting a business, followed by fear of taking risks beyond initial expectations and uncertainty about the future. It refers to the lack of entrepreneurial resources or skills, including information, partners, capital, marketing skills, management or finance, lack of skills, and assets. Barriers to starting a business are also cited as one of the costliest factors. Studies also try to explore the determinants of young people's entrepreneurial intentions. A research model is proposed based on the survey of students' entrepreneurial intentions in Indonesia and Norway (Stein, 2004).

The results show that personal background such as age, gender, education and work experience have significant effects on entrepreneurial intention, and can explain entrepreneurial intention more effectively. Of course, entrepreneurial preparation and self-efficacy are also highly correlated with entrepreneurial intention.

Domestic scholars also actively explore the influencing factors of entrepreneurial intention. Researchers take students of Zhejiang university as the research target to discuss the background factors a gender, source, such as professional influence on student's entrepreneurial attitude and entrepreneurial tendencies, suggesting the role of division of labor, life attitude, determination, ability, economic condition, personality trend, access to business resources are the possible factors make a difference (Fan & Wang, 2006). In addition, the formation of entrepreneurial attitudes and tendencies of students is more influenced by the entrepreneurial atmosphere in the region where the university is located than the country of origin.

Entrepreneurship is a process in which new organizations emerge or create value (Stevenson & Jarillo, 1990). Specifically, it is to gain money, personal satisfaction and returns by investing time and energy and undertaking certain financial, psychological pressure and social risks (Hisrich, 1990). Carter et al. (1996) believe that the essence of entrepreneurship is to establish a new enterprise, which is a process of transforming an abstract business plan into a concrete enterprise organization.

The meaning of intention mainly has three levels. Firstly, it is a psychological state, which points to a specific goal or path generated by people in order to obtain something or method, and is mainly used to guide individual attention and even the direction of action (Bird, 1988). Secondly, as a subjective reflection, it includes people's thoughts, concepts, wishes, and attitudes (J. Wang & Li, 2017). Thirdly, the nature of intention is a kind of motivation, prompting individuals to transform their conscious plans or decisions set in their minds into actions (Wang & Wang, 2013).

According to Bird, entrepreneurial intention is a psychological state that focuses one's attention on establishing a new enterprise or creating new value within the original enterprise to obtain corresponding satisfaction, which consists of two aspects. One is rational thinking, including the identification and analysis of business opportunities, the judgment of existing resources and the setting of entrepreneurial goals. The second is perceptual thinking, including recognition of independent successful behavior and preference for entrepreneurial risk (Bird, 1988). It is proposed that entrepreneurial intention refers to a subjective view of individuals who have not yet carried out entrepreneurial activities on whether they should carry out entrepreneurial practice (Kruegerjr et al., 2000). Individuals have the degree of entrepreneur-related traits and their own attitudes toward entrepreneurship.

Entrepreneurial intention first appeared in the field of psychology in China, which can be seen that it is closely related to subjective feelings in the psychological level. As an individual's subjective tendency, entrepreneurial intention is likely to lead to the emergence of entrepreneurial behaviors. Innovative entrepreneurial intention is an important symbol of national innovation capability (Y. L. Zhang et al., 2003). Entrepreneurial intention is a kind of preference for entrepreneurship. The greater the preference, the stronger the entrepreneurial intention (Cai & Li, 2015).

As the future of the country and the hope of the nation, college students' innovation and entrepreneurship ability have a sustainable impact on the overall innovation and entrepreneurship level of the country.

At present, a large number of domestic and foreign scholars have been devoted to the studies on factors affecting the entrepreneurial intention of college students, which can be roughly divided into five categories: demographic characteristics, individual characteristics, family characteristics, school experience and other environmental factors.

Demographic characteristics mainly include age, gender, grade, growth environment and party membership, which usually appear in scholars' research and analysis in the form of control variables, indicating that they have a certain degree of influence on college students'

entrepreneurial intention.

Foreign scholars basically agree on the influence of age on entrepreneurial intention. With the increase of age, entrepreneurial intention gradually increases, and after a certain age, entrepreneurial intention shows a downward trend (Bates, 1995). The follow-up study showed that the influence of age on entrepreneurial intention (Bergmann & Sternberg, 2007). Specifically, the increase of age means that the working ability is further improved and the work experience is accumulated, which stimulates the generation of entrepreneurial intention. At the same time, as we get older, we have more family responsibilities, and the desire to start a business may be reduced due to the conflict between the family burden and the risk of starting a business. Therefore, according to relevant conclusions of foreign scholars, college students are in a period of enhanced entrepreneurial intention, and we should foster a good entrepreneurial environment for them, so that their entrepreneurial intention can be better translated into entrepreneurial practice.

Gender, as another demographic characteristic, also has an impact on entrepreneurial intention that cannot be ignored. As we generally see, male entrepreneurial intention is significantly stronger than female entrepreneurial intention (J. Z. Liu, 2011), which has been recognized by scholars in subsequent studies (Y. X. Liu, 2013). The reason for this may be that boys are more mentally active than girls; In the pursuit of career, male students pursue career success more than female students (H. M. Wang et al., 2016).

In terms of risk and pressure resistance, boys are generally more adventurous and have stronger tolerance for risk and pressure. Boys are more likely to believe that they can change their fate through hard work and succeed in entrepreneurship. Of course, it may also be influenced by the Chinese long-standing traditional idea of "the man goes out to work while the woman looks after the house", which has gradually formed the situation that women tend to pursue job stability and men need to shoulder more family responsibilities (Y. X. Liu, 2013). Therefore, most scholars believe that women are less likely to start businesses than men (Bergmann & Sternberg, 2007). However, it is worth noting that the analysis based on the entrepreneurial behavior of Japanese entrepreneurs that women have stronger entrepreneurial intention and higher entrepreneurial probability than men(Masuda, 2006). This may be related to the specific national conditions and social and cultural background of Japan at that time.

According to the existing research, grade may be one of the factors affecting the entrepreneurial intention of college students. However, according to the current research, the corresponding level of entrepreneurial intention of students in different grades has not been unified yet. Chinese scholars believed that the entrepreneurial intention of college students

decreases gradually from freshman year to junior year, and then increases in senior year (Y. C. Zhang et al., 2011).

However, scholar also put forward a different point of view. It is proposed that currently, among Chinese college students, senior students have the weakest entrepreneurial intention, while junior students have significantly stronger entrepreneurial intention than other grades (Y. X. Liu, 2013). The reasons may be that a junior was motivated by successful cases of entrepreneurship education, and they have entrepreneurial impulse and entrepreneurial intention. While the senior students had experienced many pressures, like postgraduate entrance examination, job hunting and graduation thesis, they become more realistic in thinking, and their negative emotions lead to a sudden decrease in entrepreneurial enthusiasm and a significant decrease in entrepreneurial intention.

Some scholars have found in their studies that a conducive the cultural environment and favorable local economic environment are beneficial to entrepreneurship, and college students will tend to have a strong entrepreneurial intention (Bin, 2016). The factors of student origin have a positive impact on rural entrepreneurial intention (H. M. Wang et al., 2016). Compared with urban students, rural students are more familiar with rural market and production management practices, and more familiar with social network and capital. Therefore, rural students are more inclined to start businesses in rural areas.

Personality traits are long-term psychological elements formed by individuals in the social life, which are relatively stable, and not easily affected by the external environment (Zhao & Zhou, 2014). In the academic world, scholars put forward the entrepreneur trait theory, which holds that some unique psychological characteristics of entrepreneurs will affect their entrepreneurial tendency (Low & Macmillan, 1988). As for the influence of personality traits on entrepreneurial intention, current scholars are either based on a specific model - Big Five Personality, or from the perspective of entrepreneurial traits (forward-looking personality). Extroversion, conscientiousness and openness have significant positive influence on entrepreneurial intention (Bin, 2016).

In terms of entrepreneur characteristics, innovation and adventure (Y. N. Liu et al., 2014) and initiative (D. Liu et al., 2016) have a direct and significant positive impact on entrepreneurial intention (J. Chen et al., 2017). The stronger the belief of internal control, achievement motivation (Sun et al., 2011), sense of self-honor and risk taking tendency (Q. Y. Wu et al., 2008), the more obvious the entrepreneurial characteristics, the stronger the entrepreneurial intention, and the greater the possibility of entrepreneurship (Bin, 2016). The need for self-realization is also a significant factor affecting entrepreneurial intention (Y. N.

Liu et al., 2014).

The influencing factors of family characteristics can be roughly divided into three categories, namely, family philosophy, family experience and family support. As a subjective understanding of consciousness (including family culture), family philosophy plays an important role in the formation of thinking characteristics of family members, especially the younger generation, to a large extent (F. Zhu & Dong, 2013). The formation of family philosophy is mainly influenced by factors such as parents' education level and values (Bin, 2016) and whether parents have entrepreneurial experience (F. Zhu & Dong, 2013).

Family experience mainly refers to the guidance of specific behavior, including the entrepreneurial experience of parents and relatives. The entrepreneurial experience of parents and relatives refers to the demonstration effect and the accumulation of experience. Individuals whose parents or relatives have entrepreneurial experience are more familiar with the operation of enterprises, and their entrepreneurial intention will be enhanced (Y. X. Liu, 2013). The influence of family support factors on entrepreneurial intention mainly includes three aspects: capital, social network and emotional support. The source of capital is the most important issue for entrepreneurs to consider, while family is the priority for entrepreneurs to consider (F. Zhu & Dong, 2013).

Contacts is important to entrepreneurship (Y. X. Liu, 2013), therefore, whether the family can provide individuals with the corresponding network resources to a large extent will affect the individual's entrepreneurial intentions. Rich network resources can provide individuals with more direct and effective social resources (F. Zhu & Dong, 2013), reduce business barriers, and stimulate entrepreneurial intention. In addition to tangible family support, there is also intangible and psychological support, especially in the entrepreneurial intention of rural areas. Compared with employment, entrepreneurial activities mean greater uncertainty. Family support provides a greater degree of psychological security for entrepreneurs and effectively solves the loneliness of entrepreneurs. Therefore, students whose families support entrepreneurship spiritually and psychologically have stronger entrepreneurial intention in rural areas (H. M. Wang et al., 2016).

The influence of school experience on individual entrepreneurial intention is mainly reflected in three aspects. The first is students' academic background. Secondly, the practical background in school. Finally, the school provides students with entrepreneurship education.

In terms of academic background, with the development of society, academic background has a more and more subtle influence on entrepreneurial intention. Academic background has a considerable effect on individual entrepreneurial experience and coping strategies. Such

supply mainly affects college students' entrepreneurial intention through the inculcation of relevant knowledge and the influence of local education mode (Dohse & Walter, 2012). Academic background mainly includes academic performance and subject background. Among them, those with excellent academic performance are more likely to be involved in academic research or get more job opportunities, so they are less willing to be creative.

Academic background has a positive impact on entrepreneurial intention, and students with an interdisciplinary background have a wider range of knowledge and vision, which can stimulate their entrepreneurial intention (Bing et al., 2015). Academic background is sometimes used to judge an individual's knowledge level (J. P. Yang et al., 2017). Knowledge level plays an important role in entrepreneurial motivation, thus affecting entrepreneurial intention.

In terms of entrepreneurship education, numerous scholars have proved that entrepreneurship education in colleges and universities has a significant impact on students' entrepreneurial intentions (F. Zhu & Dong, 2013). Researchers discussed the influence of entrepreneurship education in colleges on students from four perspectives, namely, entrepreneurship courses, entrepreneurship seminar, entrepreneurship training, entrepreneurship competition (H. F. Wang et al., 2010).

The study found that a good entrepreneurship education can deepen students' understanding of entrepreneurship, inspiring the interest of setting up business to bring students closer to business, thus improving their business possibilities. A series of entrepreneurship education had a significant positive impact on college students' entrepreneurial intention (Cai & Li, 2015). Entrepreneurship education is also an important factor influencing college students' entrepreneurial intention in rural areas (H. M. Wang et al., 2016) .

In recent years, researchers show us a strong interest in entrepreneurship studies, and entrepreneurship has been found to make important contribution to economic development, productivity and social development, particularly in middle and low income countries (Campos et al., 2017).

Similarly, in this circumstance, the research field also demonstrates ever-growing interest to discuss and study college students' entrepreneurial intentions. Entrepreneurial intention is clarified as the intention of individuals to build up their own business (Yildrim et al., 2016).

Recent study found a significant contribution of entrepreneurial intention by evaluating determining factor of entrepreneurial intention of Ghanaian polytechnic tertiary students (Denanyoh et al., 2015) .

Job hunters expressed motivation to be entrepreneurs in Togo, but they generally prefer to find a paid work. Their entrepreneurial motivation is likely to be hindered by restrictive environmental factors, such as difficulty in obtaining loans and lack of preferential policies conducive to entrepreneurship (Pari, 2014).

Studies show that personal resources such as general self-efficacy and career adaptability make a positive impact on entrepreneurial intention (Tolentino et al., 2014). However, we cannot find out a larger quantity of researches investigated this relationship in developing and emerging countries.

In most studies, a concept similar to self-efficacy has been studied to associate with entrepreneurial intention, which is called entrepreneurial perceived behavioral control. In the theory of planned behavior, perceived behavioral control was understood as whether it is easy for people to perform the behavior of interest, that is to say, it is about people's self-perception (Ajzen, 1991) . Therefore, scholars were inclined to treat entrepreneurial perceived behavior control as the perceived feasibility of performing entrepreneurial behavior (Berntson & Marklund, 2007) .

3.2 Theoretical framework

3.2.1 Conceptual model

Based on the above literature review, we can summarize the factors that contribute to the employability as follows. The first is aggregated at the individual level and was named "individual assets" comprising "adaptability" and "proactive personality". The second is aggregated at the social context level and was named "social assets", comprising "horizontal collectivism" and "social capital". Lastly, the third, is aggregated at the organizational level (the university) and is named "organizational assets", comprising "real-world activities" and "perceived organizational support".

It is recognized that success outcomes of a system always depend simultaneously of the individual profile (the cognitive and attitudinal / personality), his or her social context (the social group where the individual belongs) and how organizations (universities) can deploy learning strategies to facilitate the maximum use of these resources so that the student can learn skills and be employable.

The key psychological variable is "self-efficacy" which is a great facilitator to self-motivate. This research is also tended to test how "entrepreneurial intention" can change

this process. This is the innovation of this thesis when compared to existing literature. So, the conceptual model brings also "entrepreneurial intention" as a moderator, that is, a variable that can leverage (or harm) the process that puts together the individual, social, and organizational assets to build stronger self-efficacy and stronger employability.

3.2.2 Hypotheses

For clarity's sake, we list the set of hypotheses established in this study:

H1: Self-efficacy is positively associated with employability.

H2: Individual assets are positively associated with self-efficacy.

H3: Social assets are positively associated with self-efficacy.

H4: Organizational assets are positively associated with self-efficacy.

H5: There is an indirect effect of individual assets on employability through self-efficacy.

H6: There is an indirect effect of social assets on employability through self-efficacy.

H7: There is an indirect effect of organizational assets on employability through self-efficacy.

H8: Entrepreneurial intention moderates the indirect effect of individual assets on employability through self-efficacy in such a manner that when entrepreneurial intention increases, the indirect effect increases.

H9: Entrepreneurial intention moderates the indirect effect of social assets on employability through self-efficacy in such a manner that when entrepreneurial intention increases, the indirect effect increases.

H10: Entrepreneurial intention moderates the indirect effect of organizational assets on employability through self-efficacy in such a manner that when entrepreneurial intention increases, the indirect effect increases.

To empirically test these hypotheses, we took a set of steps to design a method conducive to the adoption of suitable measures, data collection, definition of the sample, and data analysis strategy. Its detailed description is explained in the next section.

3.3 Methods

3.3.1 Procedure

Data were gathered from a university located in Zhongshan, Guangdong Province. We got in touch with the graduates with the help of the alumni association. We targeted graduates who

finish their study within the last three years, namely, 2018, 2019, and 2020. After we got the graduates' contact information, we sent the link of the questionnaire to them and asked them to fill in the questionnaire according to their actual situation.

3.3.2 Sample

The sample comprises 366 individuals, mostly female (79.8%), all graduated within the last three years (2018=32.5%, 2019=31.7%, and 2020=35.8%) from an array of courses ranging from Philosophy to Engineering. These can be grouped into two categories, mostly aggregated around a background on arts and humanities (71.9%) or science, technology, engineering, and mathematics plus management (STEM, 28.1%), mostly defined by the centrality of numeric ability requirements. These individuals have on average 24.3 years old (*SD*=1.9) with the youngest having 20 years-old and the oldest 40.

3.3.3 Analytic strategy

The strategy to conduct the data analysis started by evaluating the psychometric quality of the measures used in the study. The psychometric quality is a critical issue in quantitative studies that cannot be overlooked. Psychometric quality involves two main dimensions: validity and reliability (Cook & Beckman, 2006). The first, validity, concerns the need to know that a given quantitative measure is measuring exactly what one wants to measure (Hughes, 2018). The second, reliability, concerns the requirement that the scale is internally consistent, i.e., that the items show consistent values among themselves and across time.

There are many types of validity and, as a consequence, there are many techniques to measure validity. The ones that are usually reported concern the construct validity and convergent validity. In the cases of constructs involving multiple latent variables (unobservable variables), discriminant validity should also be reported. Construct validity expresses the extent that the composing items share variance based on the latent construct they are intended to measure. This is testable via factor analysis (Price, 2016) which is a fundamental technique to identify latent constructs. If the measure is new and its theoretical structure is still uncertain, then, exploratory factor analysis (or principal component analysis) should be conducted. Exploratory factor analysis is a data analysis technique that allows the identification of factors, i.e. hidden causes of the individuals pattern of responses to the items (latent constructs) that are made visible by means of identifying the differential patterns of shared variance within the scale (Yong & Pearce, 2013).

The exploratory factor analysis must be judged on some indicators namely the Kaiser-Meyer-Olkin measure (KMO) and the Bartlett's Chi-square test of sphericity. KMO should attain at least a value of .500 to indicate enough shared variance suggesting at least a latent factor, and Bartlett's chi-square must be significant ($p<.001$) to indicate differential relations within the scale items (Yong & Pearce, 2013). Additionally, items must have a communality of at least .500. The extraction of factors may follow an expected number or obey to the principle that each extracted factor must account for at least the average variance accounted per item (which is visible in the eigenvalue being of at least 1.0). A reasonable factor solution should explain at least 60% / 70% of variance after rotation. Rotation is a mathematical procedure that changes the position of the axes so to increase the readability of the factors. If such factors are expected to be independent among themselves, the rotation should be orthogonal (e.g. varimax), otherwise it will allow factors to correlate (e.g. oblimin). Rotations should be applied with a rationale supporting it (Osborne, 2015).

Conversely, when the scale already exists and has a known theoretic structure, then the construct validity should be tested with a confirmatory factor analysis (Brown & Moore, 2012). Confirmatory factor analysis' equation ($\chi = \lambda_x\xi + \delta + \varphi$) shows that a model has p observed variables (scale items) that are aggregated around factors (whose vector is represented by the ξ for each factor). So λx stands for the matrix of p times r on the x of the factor's ξ, δ is the vector of the measurement errors (all the variance that is not accounted by the factor's ξ), and χ stands for the vector of the p measured variables. Additionally, φ is the covariances among the factors' ξ (Iacobucci, 2009). This kind of analysis allows the identification of the degree of fit between the expected structure of the scale (based on the specific items that are thought of as composing each latent construct) and the true pattern of association in the database. Confirmatory factor analysis will be judged on some fit indices that allow to decide whether the measure has or not construct validity in its current form.

Technically one can accept the structure (i.e. that the measure has construct validity) if the following criteria concerning fit indices are met: a non-significant chi-square and normed chi-square (ratio of chi-square to degrees of freedom) below 3. Comparative Fit Index (CFI) (Bentler, 1990) of at least .90, Tucker-Lewis Index (TLI) (Tucker & Lewis, 1973)of at least .90, and both Root Mean Square Error of Approximation (RMSEA) (Bollen & Long, 1993) and Standardized Root Mean Residual (SRMR) (Joreskog & Sorbom, 1981) to a maximum of .08. Due to the importance given to RMSEA, confidence intervals should also be computed and shown (Maydeu-Olivares et al., 2018). The cutoffs vary according to the author of reference. An often-cited reference is L. Hu and Bentler (1999) that set these cutoffs for .90,

and .08 respectively, as mentioned(L. Hu & Bentler, 1999) . A more sophisticated approach, from Hair et al. (2019) establishes contingencies, depending on the complexity (number of estimated parameters) and sample size (number of observations) of the model. Hair et al. (2019) uses the groups of up to 12 observed variables, 12 to 30 and 30 or more observed variables crossed with lower or bigger than 250 observations. For complex models (30 or more observed variables) tested with a larger sample (250 or more) the cutoffs are CFI >.92, TLI>.92; RMSEA<.07, and SRMR<.08. In this case significant p-values for chi-square will be expectable even in highly fitted models and so, it should not be used as a trustable index to reject the model fit. Still, chi-square statistic as an expression of absolute fit is usually reported.

In case the designed model fails to meet criteria, it is possible to follow two approaches: using Lagrange multipliers to identify the variables or specifications than are harmful to the model and conducting an exploratory factor analysis followed by a confirmatory factor analysis of the emerging structure. It is important to underline that this technique should always be conducted with a theory as a background rationale so to sustain the proposed solution.

In addition to construct validity, a high-quality measure must also show good convergent validity. This is the expression of a logical requirement that the items that are expected to express a given latent construct have at least half their variance explained by the proposed latent construct while the other half is complementarily explained by the error. Because the total variance equals the one accounted by the factor plus the error (all other possible explanations of the patterns observable in the item responses), the higher the explained variance the lower the error. If indeed, items averagely have the errors explaining more variance than the proposed factor, then, either the factor does not exist, or its expression is secondary to some other possible latent variable included in the error. To measure this, scholars usually report the Average Extracted Variance (AVE) as proposed by Fornell and Larcker (1981). This indicator is simply the linear average of the sum of squared factor loadings of all the items that measure the same latent construct. As inferred by the previous explanation, the cutoff for this measure is .500, meaning that at least 50% variance is explained by the latent factor. In cases where the overall construct incorporates more than one latent factor there is also the requirement of showing discriminant validity. This type of validity considers within factor variance and between factor variance. It basically expresses the fact that latent factors should have stronger correlations with their composing items (higher within variance) than among each other (between variance). Technically it can be

measured following Fornell and Larcker (1981) indication that between factor correlations must fall below any given paired correlation between them (Fornell & Larcker, 1981). As an alternative, Heterotrait-Homotrait approach (HTMT) (Henseler et al., 2015) is reported with the usual cutoff set at either .90 or the most demanding .85 (strict discriminant validity).

In addition to the psychometric requirements of construct, convergent, plus discriminant validity, there is always the possibility, when putting together several latent constructs, that the overall set shows issues related to error covariances or the fact that a given observed item can correlate with other latent constructs outside its own expected factor. To caution against this possibility, scholars report the measurement model fit. The fit indices are exactly those (as well as cutoffs) reported for the confirmatory factor analysis. Another potential problem arising from joining into the same measurement model latent factors that measure different constructs is the possibility that their shared variance can be so strong that they might be fused into a single construct, i.e. the expectation that there are two measures expressing two different constructs can be wrong because they can be just slightly different expression of the a single constructs. For example, when measuring job satisfaction and organizational commitment (two very researched constructs in organizational management studies expressing two attitudes) we expect job satisfaction to increase the commitment towards the organization. So, both from the perspective of the conceptual difference as well as the theory behind their relation, it is likely these constructs relate like this.

However, a careful analysis must always consider the possibility that the closely similar nature of these constructs may make them too similar with each other to the point of being fused into a larger construct. So, job satisfaction expresses an attitude that conveys the overall affective evaluation of the subjective experience the individual has with the job, and organizational commitment (that also has an affective dimension) expresses an overall attitude concerning the individual willingness to put effort into working to the goodness of the organization, to give priority to the protection of the organizational best interests. So, both constructs (job satisfaction and affective organizational commitment) have in common being attitudes and being a way the individual experiences a positive valence attached to the job and the organization. Likewise, it is not so easy to distinguish between both constructs because the job experience is indissociable from its organizational context. If the measurement model that considers these two separated constructs has better fit indices than the measurement model that fuses them into a single construct, then we can state their existence is supported by the empirical data, and that they are related but not the same (Hair et al., 2019). If conversely, the fused single factor has better fit indices than the separated factors, then this means we cannot

reasonably separate them because their items correlate in too similar ways and they can be consider to be expressing the same larger construct. This means, a careful analysis should not only report the measurement model (what is usually called the conceptual model or the baseline model measurement) as it should additionally report the fit indices of alternative models that can reasonably be inferred by the conceptual similitude between constructs, or the fact that they are directly linked in the theory. The indicator that usually allows a decision on this is the chi-square difference between the baseline model and any of the alternative models tested. A significant p-value means that the baseline model has better fit to data as compared to the alternative model (Bryant & Satorra, 2012). Because of doubts pertaining to how trustable chi-square measures are in certain conditions (e.g. large samples), scholars also tend to report the CFI difference between models. According to G. W. Cheung and Rensvold (2002) a difference of .01 or above expresses sufficient distance to accept the models' goodness of fit differ (G. W. Cheung & Rensvold, 2002). So, a good measurement model is the one that has higher CFI of at least .01 as compared to all its alternative models that fuse similar or related constructs.

In addition to validity requirements, a psychometrically sound measure must have good reliability. Each latent factor should include items that are consistent among themselves or across time in repeated measures in the same circumstances. The most frequent indicator of reliability is Cronbach's alpha. This indicator shows the averaged bipartite correlations within the scale and should be of at least .70 for known scales. As an alternative, when conducting confirmatory factor analysis scholars report Composite Reliability which has the same cutoff of alpha although .60 can also be acceptable (Bagozzi & Yi, 2012).

Once the psychometric quality of measures is evidenced, the data analysis can proceed to hypotheses testing. Due to the nature of the conceptual model implied in this research and the hypothesized mediation and interaction effects, two approaches to hypotheses testing are suitable: structural equations modelling (SEM) and process conditional analysis.

Structural equations modelling follows the exact same technical procedures of confirmatory factor analysis with the addition of regression coefficients estimation between latent constructs. So, SEM combines factor analysis with path analysis (Iacobucci, 2009) where variables are named according to its status in the conceptual model. An endogenous variable is the one that is conceived as a dependent variable, i.e. a variable whose behavior is expected to be explained by at least another variable in the model. An exogenous variable is equivalent to a predictor, which is not expected to be explained by any variable in the model. So, the fundamental minimal representation of SEM is composed of an exogenous variable,

and endogenous variable and the respective error. SEM is based on path analysis where the representative equation states that $\eta = B\eta + \Gamma\xi + \zeta$. The η stands for the vector of the endogenous variable (latent factor), which is the sum of $B\eta$ (the matrix of coefficients of η on the other η in the model) with $\Gamma\xi$ (the matrix of coefficient of the ξ on the η in the model), ξ is the vector of the exogenous variables, and ζ is the vector of the errors, the residuals of the endogenous variables.

The conceptual model includes a moderation, whose term of interaction in a SEM analysis is not straightforward. On the one hand it can be represented as the composite average of the items (an observed variable) multiplied by the predictor variable. However, this approach raises doubts as SEM is designed to work with latent variables. Thus, some authors (e.g. Kenny & Judd, 1984; Maslowsky et al., 2015) advocate the calculation of the interaction term as a latent construct where the composing items are the product of all possible paired items per construct (one item from the predictor times one from the moderator). This approach has been questioned due to the probable low reliability of the interaction terms which increase error of estimates, and likely violates normal distribution (G. W. Cheung et al., 2021). The latent moderation structural equations approach (LMS, Klein & Moosbrugger, 2000) is apparently the most valid but it also has a drawback of requiring too many resources to compute and being overcomplex. It is proposed that the reliability-corrected single-indicator LMS which is a reasonable approach in balance between unreasonable complexity and unreasonable simplicity. Still, one should care about the sample to estimated number of parameters ratio.

Due to the relatively modest ratio of sample size versus estimated parameters in the full moderated mediation model (not shown here but indicated by a mediocre Holter statistic), hypotheses testing is more reliably conducted with Hayes (2018) PROCESS Macro. This technique is also able to simultaneously estimate paths as well as interaction effects resourcing to bootstrapping. As recommended by Hayes (2018) the number of extractions is set to 5000 and the interval confidence set to 95%. The specific model under analysis is identified by Hayes (2018) as number 4 to test simple mediations and number 58 to test interactions in the mediated paths, thus, a moderated mediation model. Measurement models' comparison is judged upon p-values from ΔX^2 (Bollen & Long, 1993) and 0.1 threshold from ΔCFI (G. W. Cheung et al., 2021).

3.3.4 Measures

Adaptability was measured with Martin et al. (2012) nine item scale comprehending two

factors: cognitive adaptability (6 items, "1. I am able to think through a number of possible options to assist me in a new situation.", "2. I am able to revise the way I think about a new situation to help me through it.", "3. I am able to adjust my thinking or expectations to assist me in a new situation if necessary.", "4. I am able to seek out new information, helpful people, or useful resources to effectively deal with new situations.", "5. In uncertain situations, I am able to develop new ways of going about things (e.g., a different way of asking questions or finding information) to help me through.", and "6. To assist me in a new situation, I am able to change the way I do things if necessary.") and affective adaptability (3 items, "7. I am able to reduce negative emotions (e.g., fear) to help me deal with uncertain situations.", "8. When uncertainty arises, I am able to minimize frustration or irritation so I can deal with it best.", and "9. To help me through new situations, I am able to draw on positive feelings and emotions (e.g., enjoyment, satisfaction)") (Martin et al., 2012).

The confirmatory factor analysis of this two-factor solution showed acceptable fit indices ($X^2(25)=80.594$, $p<.001$; $X^2/df=3.224$; CFI=.975; TLI=.964; RMSEA=.078 CI90 [.059; .097], PCLOSE=.008, SRMR=.0296). The model is depicted in figure 3.1.

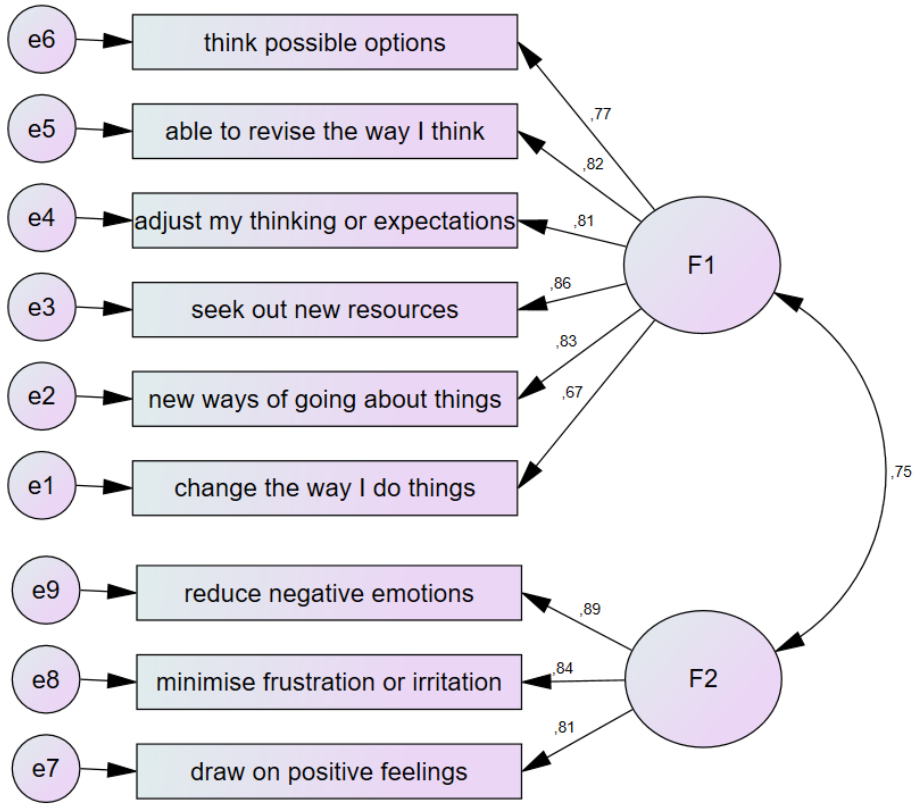

Figure 3.1 CFA for adaptability scale

The first factor then remains cognitive adaptability with the six original items which has good reliability (CR=.910) as well as convergent validity (AVE=.629). The second factor is affective adaptability with three items, which also has good reliability (CR=.885) and

convergent validity (AVE=.719). The bifactorial solution also has good discriminant validity (HTMT=.758).

Horizontal collectivism was measured with Triandis and Gelfand (1998) four item scale comprehending a single factor ("1. If a colleague gets a prize, I would feel proud", "2. The well-being of my colleagues is important to me", "3. To me, pleasure is spending time with others", and "4. I feel good when I cooperate with others")(Triandis & Gelfand, 1998) . The confirmatory factor analysis of this structure showed unacceptable fit indices (X2(2)=35.143, p<.001; X2/df=17.571; CFI=.952; TLI=.856; RMSEA=.213 CI90 [.155; .278], PCLOSE=.000, SRMR=.0396) which could be solved with a covariance between the errors of the first two items as indicated by the Lagrange Multipliers. By previewing this covariance the model fit falls within acceptability levels ($X^2(1)=2.467$, p=.116; $X^2/df=2.467$; CFI=.998; TLI=.987; RMSEA=.063 CI90 [.000; .168], PCLOSE=.275, SRMR=.0088). The model is depicted in figure 3.2.

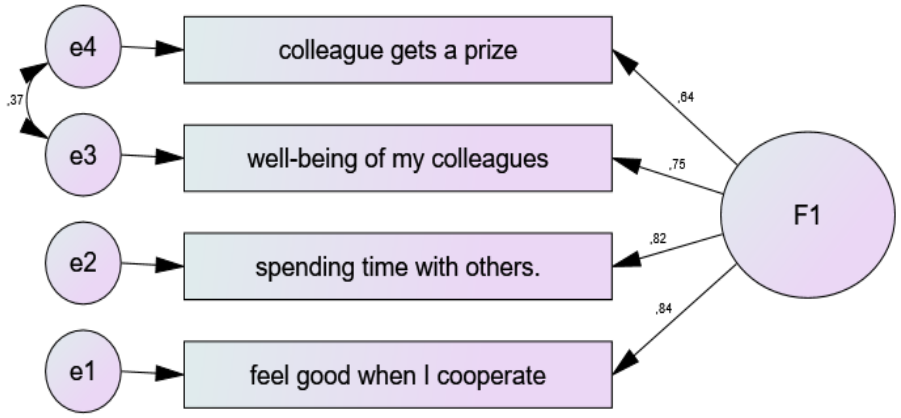

Figure 3.2 CFA for horizontal collectivism

The valid solution matches the original (with the covariance added) and was found to have both good reliability (CR=.849) as well as convergent validity (AVE=.586).

Student self-perceived employability was measured with Rothwell et al. (2008) scale comprehending 16 items that cover the eight cells organized in four factors (Rothwell et al., 2008): university + subject reputation + market demand (i.e. cells 3+4+5 corresponding to six items, e.g. "My chosen subject(s) rank(s) highly in terms of social status), outward face – strength of university brand + state of external labor market (i.e. cells 2+6 corresponding to four items e.g. "My University has an outstanding reputation in my field(s) of study"), individual attributes – self-confidence + awareness of opportunities in market (i.e. cells 7+8 corresponding to four items e.g. "The skills and abilities that I possess are what employers are looking for"), and individual engagement (i.e. cell 1 corresponding to two items, e.g. "1. I

achieve high grades in relation to my studies").

A confirmatory factor analysis conducted on this structure showed poor fit indices ($X^2(98)=533.137$, $p<.001$; $X^2/df=5.440$; CFI=.876; TLI=.848; RMSEA=.110 CI90 [.101; .120], PCLOSE=.000, SRMR=.0712). The exploratory principal component analysis showed a four-component solution with a substantially different nature (Table 3.1). This is a valid exploratory analysis (KMO=.930, Bartlett $X^2(120)=3561.344$, $p<.001$) and accounts for 71.9% of variance.

Table 3.1 Rotated component matrix for self-perceived employability

	Component			
	1	2	3	4
16、I feel I could get any job so long as my skills and experience are reasonably relevant	**.815**	.210	.078	.161
15、I am generally confident of success in job Interviews and selection events	**.795**	.229	.147	.184
13、I can easily find out about opportunities in my chosen field	**.794**	.186	.278	.045
14、The skills and abilities that I possess are what employers are looking for	**.762**	.210	.270	.111
12、 There are plenty of job vacancies in the geographical area where I am looking	**.636**	.241	.456	.071
11、There is generally a strong demand for graduates at the present time	**.504**	.335	.312	-.018
5、Employers specifically target this University in order to recruit individuals from my subject area(s)	.192	**.832**	.232	.179
4、The status of this University is a significant asset to me in job seeking	.266	**.778**	.100	.200
6、My University has an outstanding reputation in my field(s) of study	.282	**.763**	.264	.157
3、Employers are eager to employ graduates from my University	.338	**.754**	.166	.178
7、 A lot more people apply for my degree than there are places available	.086	**.579**	.520	.178
8、My chosen subject(s) rank(s) highly in terms of social status	.203	.288	**.774**	.187
10、My degree is seen as leading to a specific career that is generally perceived as highly desirable	.285	.210	**.751**	.118
9、People in the career I am aiming for are in high demand in the external labour market	.433	.131	**.719**	.169
2、I regard my academic work as top priority	.071	.264	.118	**.841**
1、I achieve high grades in relation to my studies	.214	.201	.228	**.785**

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 6 iterations.

A confirmatory factor analysis conducted on this matrix solution showed good fit indices ($X^2(98)=236.834$, $p<.001$; $X^2/df=2.417$; CFI=.960; TLI=.951; RMSEA=.062 CI90 [.052; .072], PCLOSE=.023, SRMR=.0445). Thus, the factors that comprise this construct are: 1) job market demand (6 items, e.g. "The skills and abilities that I possess are what employers are looking for") which has good convergent validity (AVE=.579) and good reliability (CR=.891), 2) university status (4 items, e.g. "The status of this University is a significant asset to me in job seeking") which has good convergent validity (AVE=.641) and good reliability (CR=.899), 3) subject prestige (3 items, e.g. "My chosen subject(s) rank(s) highly in terms of social status", which has good convergent validity (AVE=.838) and good

reliability (CR=.633) and 4) student engagement (2 items, i.e. "I regard my academic work as top priority" and "I achieve high grades in relation to my studies") with a good convergent validity (AVE=.715) and good reliability (CR=.715). The model is depicted in figure 3.3.

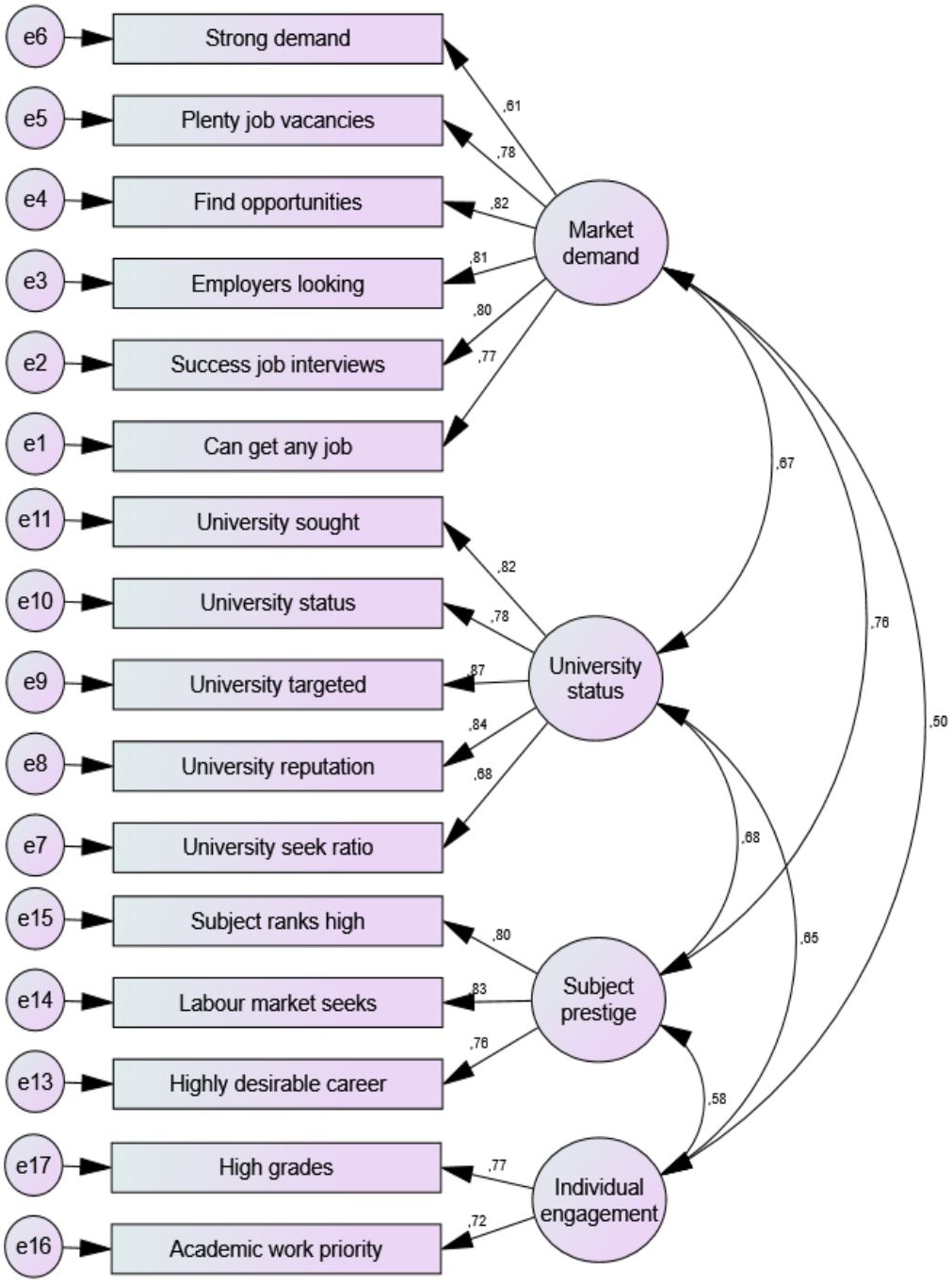

Figure 3.3 CFA for self-perceived employability

The HTMT analysis showed the solution has good discriminant validity with the highest value reaching only .763 well below the critical threshold of .85 for strict discriminant validity (Table 3.2).

Table 3.2 Discriminant analysis for self-perceived employability

	F1	F2	F3	F4
F1				
F2	0.695			
F3	0.763	0.705		
F4	0.497	0.663	0.573	

Entrepreneurial intention was measured with Liñan and Chen (2009) scale comprising six items organized in a single factor (e.g. "1. I am ready to do anything to be an entrepreneur", "2. My professional goal is to become an entrepreneur", "3. I will make every effort to start and run my own firm", "4. I am determined to create a firm in the future", "5. I have very seriously thought of starting a firm", and "6. I have the firm intention to start a firm some day") (Liñan & Chen, 2009).

A confirmatory factor analysis conducted on this structure showed poor fit indices ($X^2(9)=117.674$, $p<.001$; $X^2/df=13.075$; CFI=.950; TLI=.917; RMSEA=.182 CI90 [.153; .212], PCLOSE=.000, SRMR=.0376). The exploratory principal component analysis showed a single-component solution. A closer look with Lagrange Multipliers indicated covariance issues involving two items. After removal of those items (i.e. "2. My professional goal is to become an entrepreneur" closely related to the first item, and "6. I have the firm intention to start a firm some day" closely related to the fifth item) the model showed acceptable fit ($X^2(2)=4.866$, $p=.088$; $X^2/df=2.433$; CFI=.997; TLI=.991; RMSEA=.063 CI90 [.000; .136], PCLOSE=.292, SRMR=.0143). The model is depicted in figure 3.4.

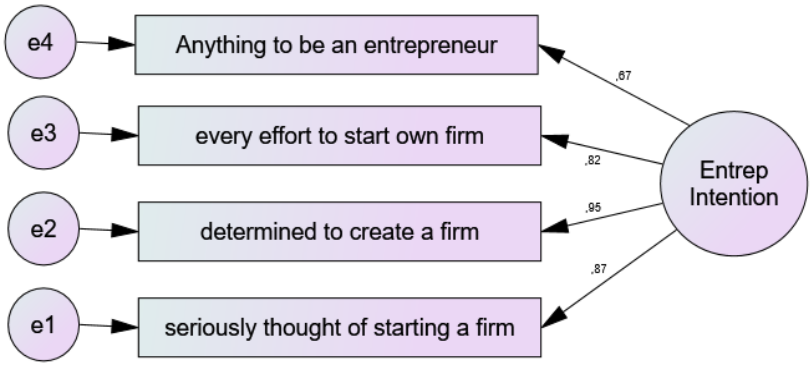

Figure 3.4 CFA for entrepreneurial intention

The 4-item solution was found to have both good reliability (CR=.901) as well as convergent validity (AVE=.697).

Social capital was measured with and adjusted version of Forrier et al. (2015) scale

comprising three items ("1.I know people who can help me with my future career", "2.I can build and maintain contacts with people who can help me with my future career", and "3.I am able to use my contacts when it can help me in my future career".) (Forrier et al., 2015) . The adjustment concerned a focus on the future career rather than the current career experience due to being students, and thus instead of using "career" only we added "future career". A confirmatory factor analysis conducted on this structure showed a case of just identification. According to Brown (2015) fit indices are not suitable and the only requirement is that all lambdas are statistically significant (Brown, 2015). Such is the case, as lambdas vary between .855 and .938 being all significant for $p<.001$. The model is depicted in figure 3.5.

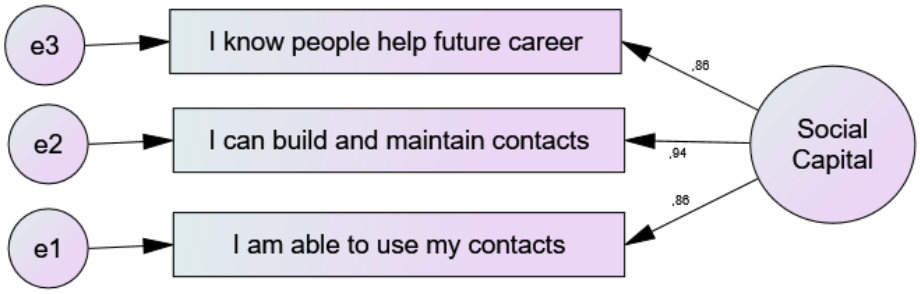

Figure 3.5 CFA for social capital

The valid solution matches the original and was found to have both good reliability (CR=.915) as well as convergent validity (AVE=.782).

Real-world activities were measured with Pitan (2016) scale comprehending five items (i.e. "1.I have witnessed alumni visit to talk about their career paths and opportunities in their company", "2.I have experienced employers' participation in programme delivery", "3.I have listened to employers via seminars about employment opportunities and skill requirements for these opportunities", "4.I have had the opportunity to visit local employers", and "5.I have been encouraged to seek new skills to increase my employability") (Pitan, 2016). A confirmatory factor analysis conducted on this structure showed good fit indices ($X^2(5)=13.855$, $p=.017$; $X^2/df=2.771$; CFI=.990; TLI=.980; RMSEA=.070 CI90 [.027; .115], PCLOSE=.190, SRMR=.0204). The model is depicted in figure 3.6.

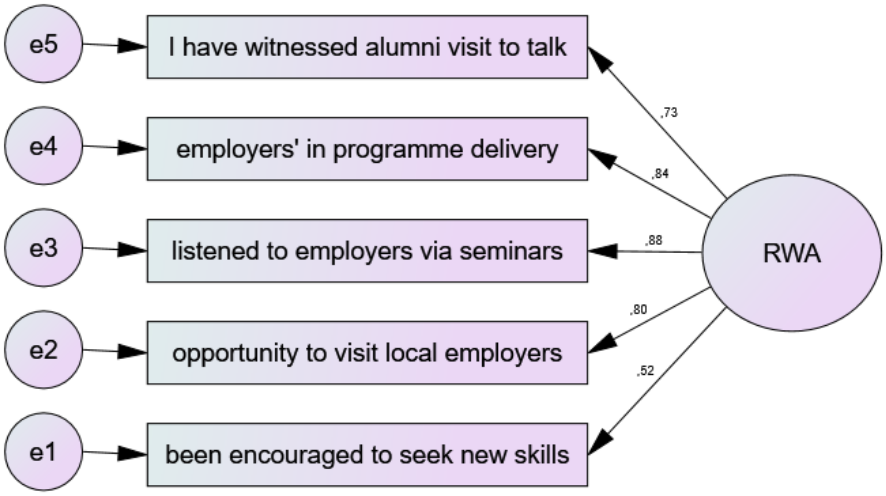

Figure 3.6 CFA for real-world activities

The valid solution matches the original and was found to have both good reliability (CR=.871) as well as convergent validity (AVE=.582).

Self-Efficacy Scale was measured with G. Chen et al. (2001) scale comprising eight items aggregated in a single factor (i.e. "1. I will be able to achieve most of the goals that I have set for myself", "2. When facing difficult tasks, I am certain that I will accomplish them", "3. In general, I think that I can obtain outcomes that are important to me", "4. I believe I can succeed at most any endeavor to which I set my mind", "5. I will be able to successfully overcome many challenges", "6. I am confident that I can perform effectively on many different tasks", "7. Compared to other people, I can do most tasks very well", and "8. Even when things are tough, I can perform quite well") (G. Chen et al., 2001). A confirmatory factor analysis conducted on this structure showed below acceptance fit indices ($X^2(20)=86.257$, $p<.001$; $X^2/df=4.313$; CFI=.975; TLI=.966; RMSEA=.095 CI90 [.075; .116], PCLOSE<.001, SRMR=.0218). Lagrange multipliers indicated two covariance between errors involving items 1 and 3 as well as 2 and 3 should be previewed. By including them, fir indices achieved the thresholds ($X^2(18)=49.029$, $p<.001$; $X^2/df=2.724$; CFI=.989; TLI=.982; RMSEA=.069 CI90 [.046; .092], PCLOSE=.084, SRMR=.0163). The model is depicted in figure 3.7.

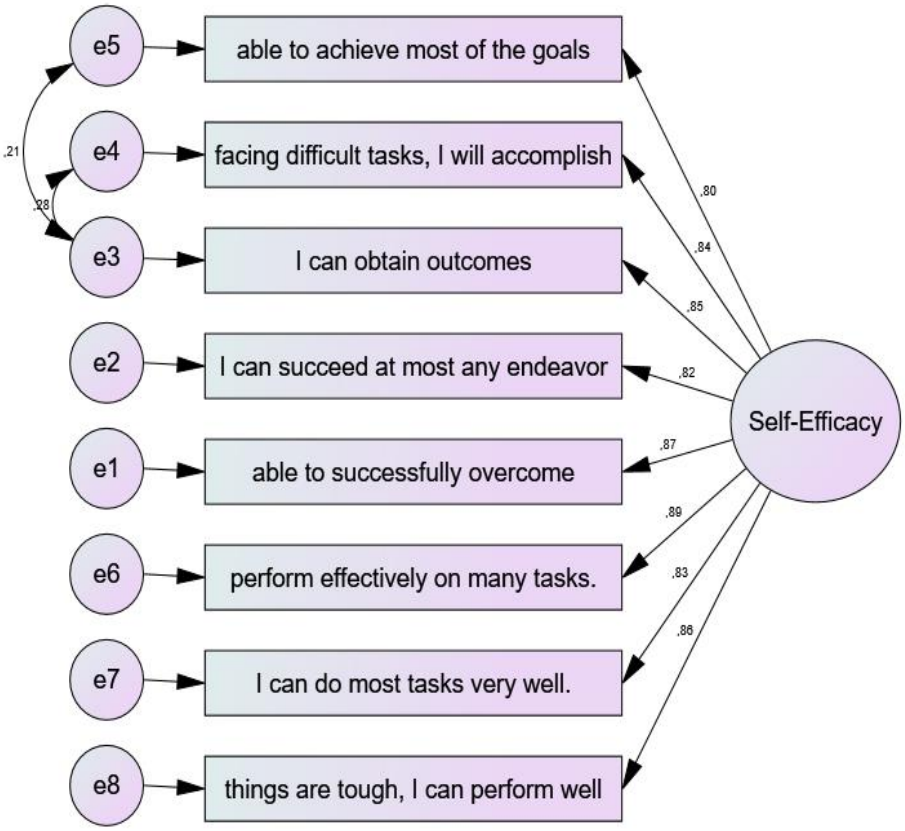

Figure 3.7 CFA for self-efficacy

The valid solution closely matches the original and was found to have both good reliability (CR=.953) as well as convergent validity (AVE=.717).

Proactive personality was measured with three items taken from Seibert et al. (2001) scale to reflect the most closely related attitudes to a student's daily life, namely: 4. If I see something I don't like, I fix it", "8. I am always looking for better ways to do things.", "9. If I believe in an idea, no obstacle will prevent me from making it happen."(Seibert et al., 2001) . A confirmatory factor analysis conducted on this structure showed another case of just identification. Following Brown (2015) procedures the lambdas vary between .829 and .866, all significant for $p<.001$. The model is depicted in figure 3.8.

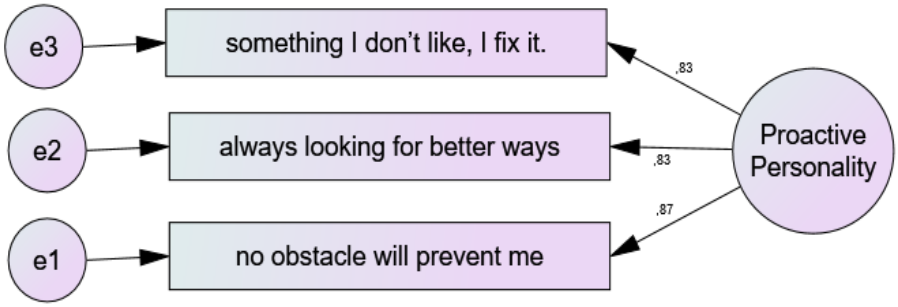

Figure 3.8 CFA for proactive personality

The valid solution matches the original and was found to have both good reliability

(CR=.879) as well as convergent validity (AVE=.709).

Perceived organizational support was measured with four items from Shen and Benson (2016) organized in a single factor (i.e. "1. My university cares about my opinions", "2. My university cares about my well-being", "3. Even if I did the best job possible, my university would fail to notice (reverse)", and "4. My university cares about my general satisfaction at studying")(Shen & Benson, 2016). A confirmatory factor analysis conducted on this structure showed marginally poor fit indices ($X^2(2)=10.072$, $p=.006$; $X^2/df=5.036$; CFI=.991; TLI=.972; RMSEA=.105 CI90 [.047; .174], PCLOSE=.057, SRMR=.0284) with a weak lambda of -.15 (item 3 reversed). Lagrange multipliers showed the reversed item was harming the model fit and after its removal the model became just identified. The resulting lambdas from the three remaining items range from .763 to .968, all significant for $p<.001$. The model is depicted in figure 3.9.

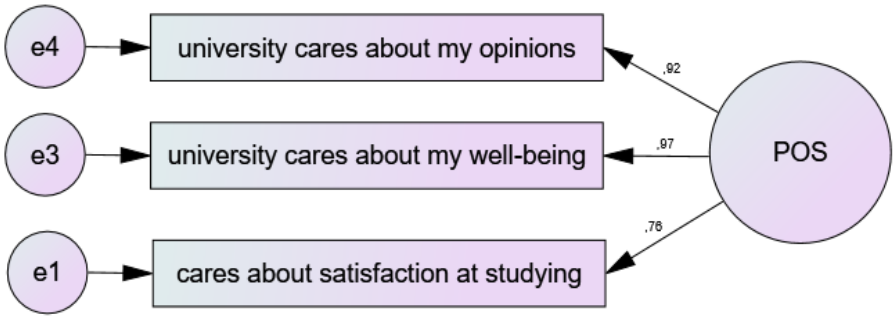

Figure 3.9 CFA for perceived organizational support

This solution was found to have both good reliability (CR=.916) as well as convergent validity (AVE=.786).

3.3.5 Measurement model

Because running factor analyses of each construct isolated, we cannot exclude an eventual problem with construct overlap. This issue can be identified by means of conducting a conjoint confirmatory factor analysis that comprehends all latent variables and their respective items into a single model. Likewise, it is important to have evidence that this arrangement of latent variables is the most suited. This which means it must be compared with reasonable alternative model that fuse the most conceptually similar constructs, or that fuses those constructs that have a direct expected relation in the conceptual model. To be accepted, our model should have better fit indices than the alternatives.

Because the dependent variable (perceived employability) can be analyzed at the first order factor level (the four factors) and at a second order factor (the overall perceived

employability) it is advisable to consider both models as plausible baseline models. Therefore, we will compare both with all alternatives. Table 3.3 shows the comparison fit indices for both baseline models (the conceptual model as 1st and 2nd order factor) versus the alternative models.

Table 3.3 Measurement model comparison

Model	χ^2	*df*	χ^2/df	CFI	TLI	RMSEA	CI90	PCLose	SRMR	AIC	Holter .05/.01	$\Delta\chi^2(\Delta df)$ Baseline1	ΔCFI	$\Delta\chi^2(\Delta df)$ Baseline2	ΔCFI
A Baseline (1st order factors)	2467.088	1349	1.829	.931	.924	.048	[.045; .051]	.903	.0520	2849.088	213/218	-	-	-	-
A Baseline (2nd order factor)	2576.948	1378	1.870	.926	.920	.049	[.046; .052]	.744	.0581	2900.948	208/203	-	-	-	-
B emp+self-efic.	2845.600	1386	2.053	.910	.902	.054	[.051;.057]	.015	.0693	3153.600	190/194	378.512(37)***	.021	268.652(8)***	.016
C Model B + entrep+adapt	2933.461	1398	2.098	.905	.899	.055	[.052;.058]	.002	.0744	3217.461	185/190	466.373(49)***	.026	356.513(20)***	.021
D Model C + soccap+horcollect	3273.956	1404	2.332	.884	.878	.060	[.058;.063]	.000	.0799	3545.956	167/171	806.868(55)***	.047	697.008(26)***	.042
E Model D + rwa+pos	3952.676	1410	2.803	.843	.835	.070	[.068;.073]	.000	.1094	4121.676	139/142	1485.588(61)***	.088	1375.728(32)***	.083
F Model E + entrp+adapt+proact	3966.767	1413	2.807	.842	.834	.070	[.068;.073]	.000	.1083	4220.767	139/142	1499.679(64)***	.089	1389.819(35)***	.084
G ModelF First line predictors fused	4002.690	1416	2.827	.840	.832	.071	[.068;.073]	.000	.1097	4250.690	138/141	1535.602(67)***	.091	1425.742(38)***	.086
H Single 2nd order factor	4122.766	1418	2.907	.833	.825	.072	[.070;.075]	.000	.1366	4366.766	134/137	1655.678(69)***	.098	1545.818(40)***	.094
I Single 1st order factor (Harman)	7764.877	1426	5.445	.608	.592	.110	[.108;.113]	.000	.0915	7992.877	72/74	5297.789(77)***	.323	5187.929(48)***	.318
J Common latent factor	7983.007	1479	5.398	.598	.597	.110	[.107;.112]	.000	.1012	8105.007	72/74	5514.919(130)***	.333	5406.059(101)***	.326

*** p<.001, B model (employability and self-efficacy fused), C model (model B plus entrepreneurial intention and proactivity fused), D model (model C plus social capital and horizontal collectivism fused), E model (model D plus RWA and POS fused), F model (model E plus entrepreneurial intention and adaptability and proactivity fused), G model (all first order factor predictors fused), H model (all predictors fused with 2nd order factor for employability), I model (single 1st order factor), J model (common latent factor).

The baseline models are all showing better fit than all alternatives as visible in the significant chi-square differences as well as the ΔCFI. A significant and positive chi-square difference indicates the alternative model has worst fit than the baseline. Likewise, a ΔCFI higher than 0.1 indicates there is a meaningful loss of fit as judged by this fit index.

In all circumstances, both baseline models have acceptable fit and because of the ratio between the number of estimated parameters and the sample size it is advisable to compute Holter statistic. In the case of the baseline, it is over 200 which is not observed in the alternative models. Lastly, the Akaike's Information Criterion (AIC) is lower in the baseline models than the alternative models. Therefore, we can trust the baseline models are better than its alternatives.

Another analysis that can result from this procedure allows answering the question about which of both baseline models is preferable? As theory cannot ascertain if we should operate with a 1st or 2nd order factorial structure, the fit indices may be a reasonable criterion to decide. The most suited for such purpose is AIC. Because AIC of the baseline 1 (1st order) is lower than that of baseline 2 (2nd order), findings suggest we should use the 1st order factorial structure.

3.4 Results

This section will start with the exhibition of the descriptive statistics, namely by highlighting the most relevant figures pertaining to the means and dispersion. Then it will proceed with the bivariate statistics, highlighting firstly the correlations found for sociodemographic variables crossed with those from the conceptual model, and then the within-model patterns of correlations. In this way it is possible to gain a comprehensive view of the overall magnitude and patterns of associations of the variables.

3.4.1 Descriptive and bivariate statistics

The sample is mostly feminine and young, as stated, which may help explaining the means and correlations found when crossed with the sociodemographic variables. Table 3.4 demonstrates the descriptive and bivariate statistics.

Table 3.4 Descriptive and bivariate statistics

	Range	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
1. Gender	1F-2M	79.8% F	-	1																
2. Age	20-40	24.38	1.90	.060	1															
3. Year_grad	2018-20	-	-	.029	-.310**	1														
4. Domain	1-2	-	-	.385**	-.123*	.076	1													
5. Cog_adap	1-5	3.92	.59	.028	.014	-.094	-.065	1												
6. Aff_adap	1-5	3.75	.76	.072	.039	-.037	.050	.682**	1											
7. HorColl	1-5	3.85	.69	.042	.082	-.128*	-.005	.601**	.580**	1										
8. SocCap	1-5	3.61	.82	.078	.078	-.075	.014	.568**	.536**	.526**	1									
9. RWA	1-5	3.17	.93	.105*	.085	-.040	.044	.468**	.413**	.412**	.532**	1								
10. EntrepInt	1-5	3.01	1.07	.127*	.072	-.041	.067	.403**	.430**	.397**	.527**	.523**	1							
11. SelfEff	1-5	3.78	.71	.014	.072	-.094	-.012	.721**	.639**	.511**	.596**	.454**	.463**	1						
12. EmpMD	1-5	3.43	.79	.111*	.025	-.070	.018	.610**	.543**	.477**	.537**	.502**	.432**	.636**	1					
13. EmpUS	1-5	3.09	.83	.171**	.045	-.042	.068	.452**	.420**	.432**	.399**	.558**	.437**	.452**	.621**	1				
14. EmpSP	1-5	3.34	.84	.050	.051	-.010	-.008	.493**	.470**	.447**	.485**	.459**	.413**	.507**	.660**	.609**	1			
15. EmpIE	1-5	3.63	.86	-.040	.063	-.058	-.022	.431**	.383**	.368**	.371**	.354**	.252**	.456**	.394**	.529**	.440**	1		
16. Employab	1-5	3.37	.67	.089	.090	-.055	.017	.611**	.558**	.531**	.551**	.577**	.472**	.631**	.818**	.851**	.836**	.736**	1	
17. POS	1-5	3.26	.99	.020	.045	-.044	-.031	.419**	.477**	.420**	.448**	.601**	.510**	.538**	.553**	.652**	.526**	462**	.676**	1
18. Proactiv.	1-5	3.80	.73	-.034	.116*	-.106*	-.036	.682**	.570**	.532**	.586**	.416**	.464**	.857**	.574**	.403**	.440**	.391**	.391**	.491**

*p<.05; **p<.01

Adaptability is quite strong with a mean for cognitive domain (M=3.92, SD=.59) nearing the second highest level in the scale and the affective domain slightly lower (3.75, SD=.76). These values are closely shared in the whole sample, as indicated by the small standard deviations. There is also a relatively high mean for horizontal collectivism, which is in line with the Chinese cultural background.

Social capital, as an expression of instrumental acquaintances for future employment opportunities, is moderately reported, with most participants stating it clearly (46% signaled 4 or 5 out of the 5-point scale) with an overall mean of 3.61 (SD=.82). The three composing items show a homogenous positioning with slightly more than half respondents (ranging 54% to 59%) signaling 4 or 5. The mean is significantly detached from the scale midpoint (t(365)=14.107, p<.001 CI95 [.525; .695]).

Respondents have a moderately positive to very positive perception concerning their self-efficacy with 82% choosing above the scale's midpoint, 20% above the second highest point of the scale, and 10% on the highest point. In detail, respondents feel self-confident as regards being able to succeed at any endeavor (72% signaled 4 or 5 out of the 5-point scale), doing most tasks very well compared to other people (71%), and obtaining important outcomes (70%). Only a minor percentage of respondents have a general self-perception of low efficacy (2% signaled 1 or 2 out of the 5-point scale). The mean for this variable is thus relatively high (M=3.78, SD=.71).

Respondents convey an opinion that in their university programs they have had a moderate exposure to real-world activities with 35.5% falling on the negative side of the scale. Interestingly, the ranked order of RWA that was reported place it as a most commonly experience activity that is encouraged to seek new skills so to increase employability (68% signaled 4 or 5 out of the 5-point scale). This is a broader description of the RWA. At a more concrete level, the first one ranked is "listening to employers' seminars about job opportunities and skill requirement for these jobs" (44%), followed by "alumni talks about their career and opportunities in their company" (42%), "visiting local employers" (34.7%), and having had "employers' participation in program delivery" (34.7%). Still, the overall mean is 3.17 (SD=.93) which is statistically above the scale midpoint (t(365)=3.694, p<.001 CI95 [.084; .275]).

Perceived organizational support is moderately perceived with only 51% signaling above the scale midpoint point, averaging 3.26 (SD=.99), which is already significantly above it (t(365)=5.077, p<.001 CI95 [.161; .365]).

Entrepreneurial intention has the lowest mean (M=3.01) but it also shows the largest

dispersion (SD=1.07) meaning the sample comprises a distinct array of individuals as regards this feature. In the overall mean for the variable, 24% of respondents clearly reject this intention (by having an average up to 2) and 14% report clearly having the intention to become entrepreneurs (average 4 and up). At a finer detail, the composing items show that 44% of respondents state they "intend to do every effort to start and run their own firm" (signaled 4 or 5 out of the 5-point scale), 33.4% "would do anything to become an entrepreneur", 34.4% gave it a "seriously thought of creating a firm" but only 32.5% state they "are determined". It is most informative that the item excluded from the factor analysis ("My professional goal is to become an entrepreneur") was only answered in the top position by 10.7% of respondents. Still, because it hampers the psychometric quality of the measure, we cannot include it.

Employability as a general construct shows a moderate mean (M=3.37, SD=.67) but that is significantly above the scale midpoint (t(365)=10.668, p<.001 CI95 [.307; .446]) with values varying according to each dimensions, ranging from 3.09 (university status) to 3.63 (student engagement). As a rule, those dimensions that are within the control of the respondent show higher means than the ones that fall out of the direct control of the respondent (t(365)=11.610, *p*<.001 CI95 [.261; .368])

The bivariate analyses show males tend to prevail within the sample of STEMM graduates which are comparatively younger than graduates from arts and humanities. Curiously, males tended to report stronger RWA experienced during the program which could relate to the scientific domain. Likewise, the same can help understand the positive, although modest, positive correlations found for gender and two dimensions of employability: market demand (r=.111, p<.05) and university status (r=.171, p<.01). Males also tended to report higher entrepreneurial intention than females, which is visible both in the correlation coefficient (r=.127, *p*<.05) and mean comparison (males=3.29, SD=1.13, females=2.95, SD=1.05; Levene statistic (1;364)=1.145, *p*=.285, t(364)=-2.452, *p*<.05 CI95 [-.613; -.067]). Age has no correlation with any variable in the conceptual model and the year of graduation only shows lower means in horizontal collectivism for the most recent cohort (2020) which suggests a decreasing trend (2018=3.97, SD=.73; 2019=3.83, SD=.67; 2020=3.76, SD=.65; F(2, 363)=3.152, *p*<.05) with the *post hoc* tests indicating the significant paired differences occurring only when contrasting 2018 with 2020. No other significant correlation was found for this variable with any variable in the conceptual model.

Bivariate analyses for the first block of predictors (adaptability, horizontal collectivism, and social capital) firstly show many positive strong correlations within this group of variables. Most noticeable, both dimensions of adaptability show correlations ranging

from .536 (p<.01) to .601 (p<.01). These adaptability dimensions are also positively correlated to entrepreneurial intention, although comparatively with a lesser magnitude ranging from .403 (p<.01) to .430 (p<.01) and curiously with RWA and POS. Stronger positive correlations can be found between adaptability cognitive and affective dimensions and self-efficacy (r=.721, p<.01, and r=.639, p<.01, respectively). Lastly, these adaptability dimensions are also strongly correlated with overall employability (r=.611, p<.01, and r=.558, p<.01, respectively) with the strongest correlation found for employability market demand (r=.610, p<.01; r=.543, p<.01, respectively).

Horizontal collectivism also shows a pattern of positive correlations with all the conceptual model variables mostly with social capital (r=.526, p<.01) and the lowest with entrepreneurial intention (r=.397, p<.01). Social capital strongest correlation is found with self-efficacy (r=.596, p<.01) also with a general pattern of positive correlations with all variables in the conceptual model.

Perceiving RWA in the education experience during the graduate program is positively correlated with self-efficacy, entrepreneurial intentions and employability with the strongest correlation visible with POS (r=.601, p<.01). Besides the reported correlations, entrepreneurial activity is mostly associated to perceived organizational support (r=.510, p<.01), employability (r=.472, p<.01) and self-efficacy (r=.463, p<.01) and the least with employability student engagement (r=.252, p<.01). The strongest correlation for self-efficacy, as reported, occurs with adaptability but this is closely followed by employability (r=.631, p<.01) most noticeably, with employability market demand (r=.636, p<.01).

3.4.2 Hypotheses testing

The professional assets (employability) are hypothesized to originate as the result of bringing together individual assets (adaptability, proactivity), social assets (horizontal collectivism, social capital), and organizational assets (real-world activities, perceived organizational support), leveraged by the student's entrepreneurial intention.

As the conceptual model figure 3.10 posits that entrepreneurial intention tend to operate as a facilitator of the relationships, we will start by testing the paths linking both the individual, social and organizational assets to self-perceived employability through self-efficacy controlling for entrepreneurial intention. This simpler model will be conducted in isolation for each of the four components of self-perceived employability. Then, we will test the moderation effects of each of entrepreneurial intention.

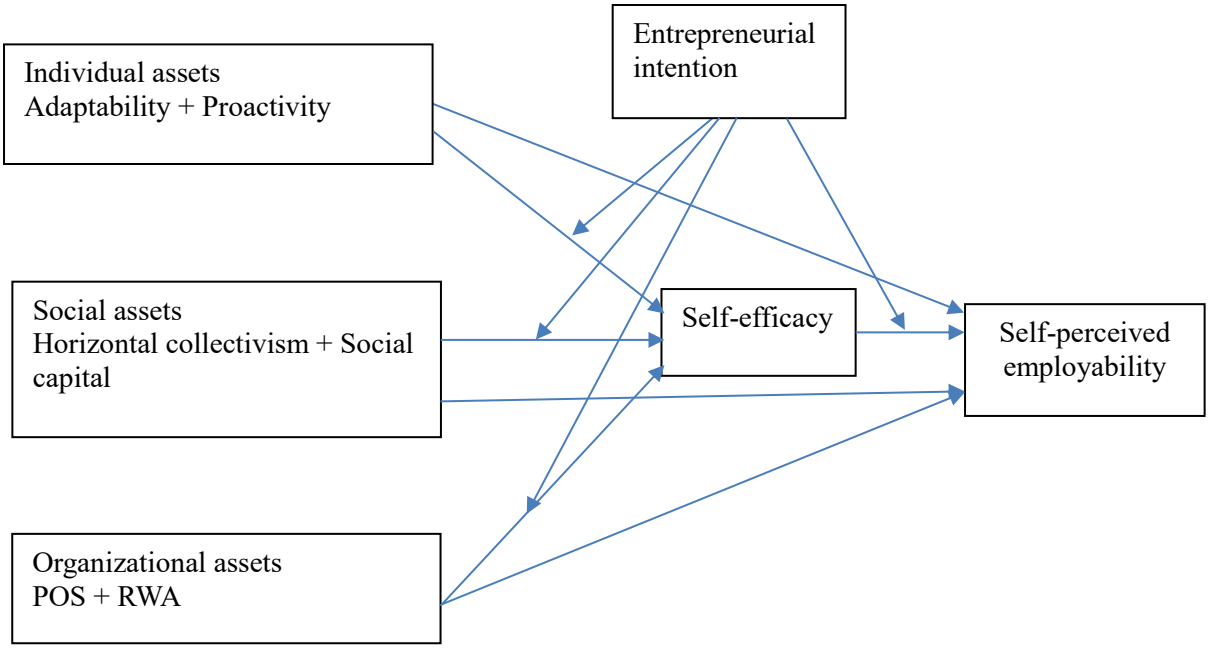

Figure 3.10 Conceptual model

3.4.2.1 Testing the direct and indirect effects for individual assets

The first model test focused on the mediated model "Individuals assets -> self-efficacy -> market-demand employability" at a 2nd order factor level i.e. how respondents' individual assets are linked to how easy they believe they can find a job due to a strong demand and plenty offers for their profile. Controlling for age, gender and entrepreneurial intention, findings show individuals assets are strongly and positively associated to self-efficacy (B=.81, p<.001 CI95 [.888; 1.037]), and self-efficacy is also positively associated to market-demand employability (B=.27, p<.001 CI95 [.143; .460]) and a direct effect is observable between individual assets and market-demand employability (B=.48, p<001 CI95 [.295; .676]). This renders support to H1 and H2. The hypothesized indirect effect is also observable (B=.20, BootSE=.0811, CI95 [.0469; .3620]), thus supporting H5.

The second model test focused on the mediated model "Individuals assets -> self-efficacy -> university-status employability" at a 2nd order factor level i.e. how respondents' individual assets are linked to how easy they believe they can find a job due to their university social status and reputation. Controlling for age, gender and entrepreneurial intention, findings for the previous model pertaining to individual assets association to self-efficacy are kept the same (B=.81, p<.001 CI95 [.888; 1.037]), but self-efficacy is not significantly associated to university-status employability (B=.11, p=.163 CI95 [-.055; .327]) and a direct effect is observable between individual assets and university-status employability (B=.36, p<.01 CI95 [.598; .439]). This renders support to H2 but rejects H1. The indirect effect is not significant (B=.13, BootSE=.1003, CI95 [-.072; .326]), thus rejecting H5.

The third model test focused on the mediated model "Individuals assets -> self-efficacy -> subject-prestige employability" at a 2nd order factor level i.e. how respondents' individual assets are linked to how easy they believe they can find a job due to their subject of education (scientific domain) prestige in society. Controlling for age, gender and entrepreneurial intention, findings for the previous model pertaining to individual assets association to self-efficacy are kept the same (B=.81, p<.001 CI95 [.888; 1.037]), and self-efficacy is significantly associated to subject-prestige employability (B=.16, p=.04 CI95 [.006; .389]) and a direct effect is observable between individual assets and subject-prestige employability (B=.42, p<.001 CI95 [.196; .657]). This renders support to H1 and H2. The indirect effect is not significant (B=.19, BootSE=.0984, CI95 [-.002; .387]), thus rejecting H5.

The fourth model test focused on the mediated model "Individuals assets -> Self-efficacy -> student-engagement employability" at a 2nd order factor level i.e. how respondents' individual assets are linked to how easy they believe they can find a job due to their academic performance and having given it top priority. Controlling for age, gender and entrepreneurial intention, findings for the previous model pertaining to individual assets association to self-efficacy are kept the same B=.81, p<.001 CI95 [.888; 1.037]), and self-efficacy is significantly associated to student-engagement employability (B=.23, p<.01 CI95 [.072; .487]) and a direct effect is observable between individual assets and student-engagement employability (B=.34, p<.01 CI95 [.093; .593]). This renders support to H1 and H2. The indirect effect is significant (B=.26, BootSE=.1273, CI95 [.016; .516]), thus supporting H5. Figure 3.11 depicts the joint findings for models having individual assets as a predictor.

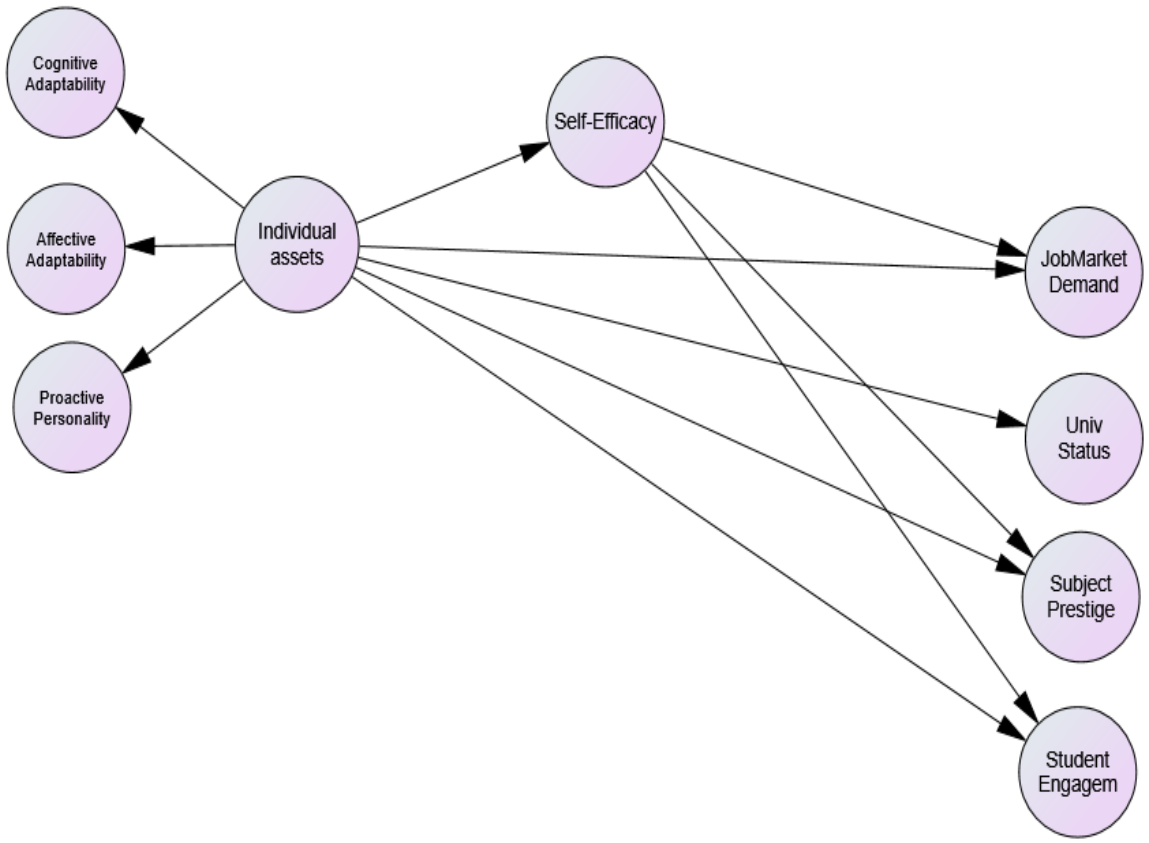

Figure 3.11 Model for individual assets -> employability

3.4.2.2 Testing the direct and indirect effects for social assets

As regards social assets, a mirror set of tests was ran. Thus, the first model test focused on the mediated model "social assets -> self-efficacy -> market-demand employability" at a 2nd order factor level. Controlling for age, gender and entrepreneurial intention, findings show social assets are positively associated to self-efficacy (B=.54, p<.001 CI95 [.483; .684]), and self-efficacy is also positively associated to market-demand employability (B=.43, p<.001 CI95 [.370; .592]) and a direct effect is observable between social assets and market-demand employability (B=.31, p<.001 CI95 [.189; .440]). This renders support to H1 and H3. A significant indirect effect is also observable (B=.28 BootSE=.0522, CI95 [.181; .388]), thus supporting H6.

The second model test focused on the mediated model "social assets -> self-efficacy -> university-status employability" at a 2nd order factor level controlling for the same variables. Findings for the previous model pertaining to social assets association to self-efficacy are kept the same (B=.54, p<.001 CI95 [.483; .684]), and self-efficacy is significantly associated to university-status employability (B=.21, p<.001 CI95 [.121; .389]) and the direct effect between social assets and university-status employability is also significant (B=.27, p<.001

CI95 [.124; .426]). This renders support to H1 and H3. The indirect effect is also significant (B=.14, BootSE=.0479, CI95 [.060; .248]), thus supporting H6.

The third model test focused on the mediated model "social assets -> self-efficacy -> subject-prestige employability" at a 2nd order factor level controlling for the same variables. Findings for the previous model pertaining to social assets association to self-efficacy are kept the same (B=.54, *p*<.001 CI95 [.483; .684]), and self-efficacy is positive and significantly associated to subject-prestige employability (B=.25, *p*<.001 CI95 [.170; .434]) and a direct effect is observable between social assets and subject-prestige employability (B=.39, *p*<.001 CI95 [.243; .541]). This renders support to H1 and H3. The indirect effect is significant (B=.13, BootSE=.0413, CI95 [.061; .222]), thus supporting H6.

The fourth model test focused on the mediated model "social assets -> self-efficacy -> student-engagement employability" at a 2nd order factor level controlling for the same variables. Findings for the previous model pertaining to social assets association self-efficacy are kept the same (B=.54, p<.001 CI95 [.483; .684]), and self-efficacy is positive and significantly associated to student-engagement employability (B=.31, p<.001 CI95 [.231; .519]) and a direct effect is observable between social assets and student-engagement employability (B=.29, p<.001 CI95 [.128; .454]). This renders support to H1 and H3. The indirect effect is significant (B=.21, BootSE=.0568, CI95 [.111; .337]), thus supporting H6. Figure 3.12 depicts the joint findings for models using social assets as a predictor.

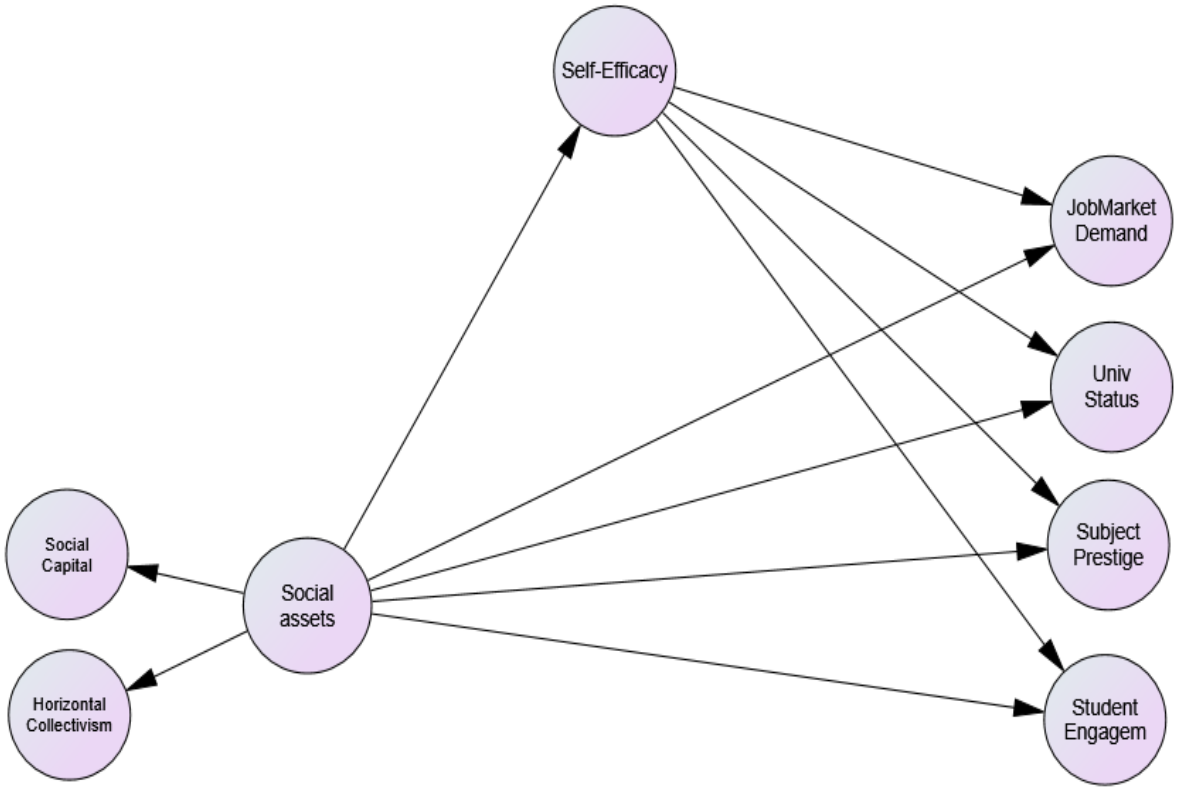

Figure 3.12 Model for social assets -> employability

3.4.2.3 Testing the indirect effects for organizational assets

As regards organizational assets, a mirror set of tests was ran again. Thus, the first model test focused on the mediated model "organizational assets -> self-efficacy -> market-demand employability" at a 2nd order factor level. Controlling for age, gender and entrepreneurial intention, findings show organizational assets are positively associated to self-efficacy (B=.42, *p*<.001 CI95 [.271; .442]), and self-efficacy is also positively associated to market-demand employability (B=.44, *p*<.001 CI95 [.393; .596]) and a direct effect is observable between organizational assets and market-demand employability (B=.29, *p*<.001 CI95 [.204; .386]). This renders support to H1 and H4. A significant indirect effect is also observable (B=.17 BootSE=.0353, CI95 [.112; .250]), thus supporting H7.

The second model test focused on the mediated model "organizational assets -> self-efficacy -> university-status employability" at a 2nd order factor level controlling for the same variables. Findings for the previous model pertaining to organizational assets association to self-efficacy are kept the same (B=.42, p<.001 CI95 [.271; .442]), and self-efficacy is significantly associated to university-status employability (B=.10, *p*<.05 CI95 [.018; .234]) and the direct effect between organizational assets and university-status employability is also significant (B=.57, p<.001 CI95 [.478; .672]). This renders support to H1 and H4. The indirect effect is of modest magnitude but significant (B=.04, BootSE=.0234,

CI95 [.004; .096]), thus supporting H7.

The third model test focused on the mediated model "organizational assets -> self-efficacy -> subject-prestige employability" at a 2nd order factor level controlling for the same variables. Findings for the previous model pertaining to organizational assets association to self-efficacy are kept the same (B=.42, p<.001 CI95 [.271; .442]), and self-efficacy is positive and significantly associated to subject-prestige employability (B=.27, p<.001 CI95 [.207; .450]) and a direct effect is observable between organizational assets and subject-prestige employability (B=.34, p<.001 CI95 [.237; .455]). This renders support to H1 and H4. The indirect effect is significant (B=.11, BootSE=.0315, CI95 [.062; .184]), thus supporting H7.

The fourth model test focused on the mediated model "organizational assets -> self-efficacy -> student-engagement employability" at a 2nd order factor level controlling for the same variables. Findings for the previous model pertaining to organizational assets association self-efficacy are kept the same (B=.42, p<.001 CI95 [.271; .442]), and self-efficacy is positive and significantly associated to student-engagement employability (B=.29, p<.001 CI95 [.229; .491]) and a direct effect is observable between organizational assets and student-engagement employability (B=.33, p<.001 CI95 [.217; .453]). This renders support to H1 and H4. The indirect effect is significant (B=.12, BootSE=.0348, CI95 [.065; .202]), thus supporting H7. Figure 3.13 depicts the join findings for organizational assets as a predictor.

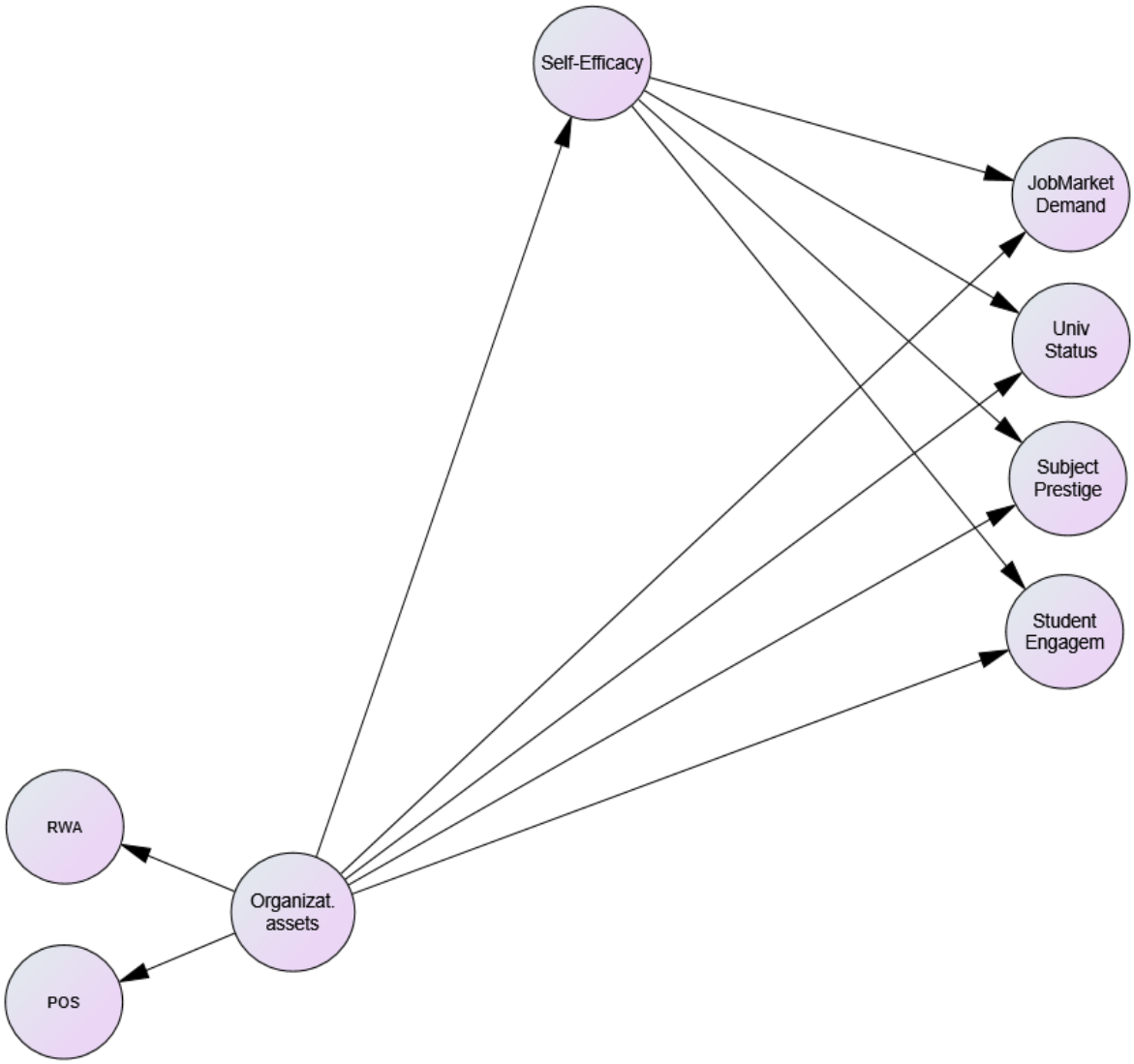

Figure 3.13 Model for organizational assets -> employability

By putting all findings together of models departing from individual, social and organizational assets, we can highlight in Figure 3.14 the indirect effects found. The orange arrows depict the mediated paths from individual assets while the red and blue arrows stand for the first path of the mediation which was observed in predicting all the four employability dimensions.

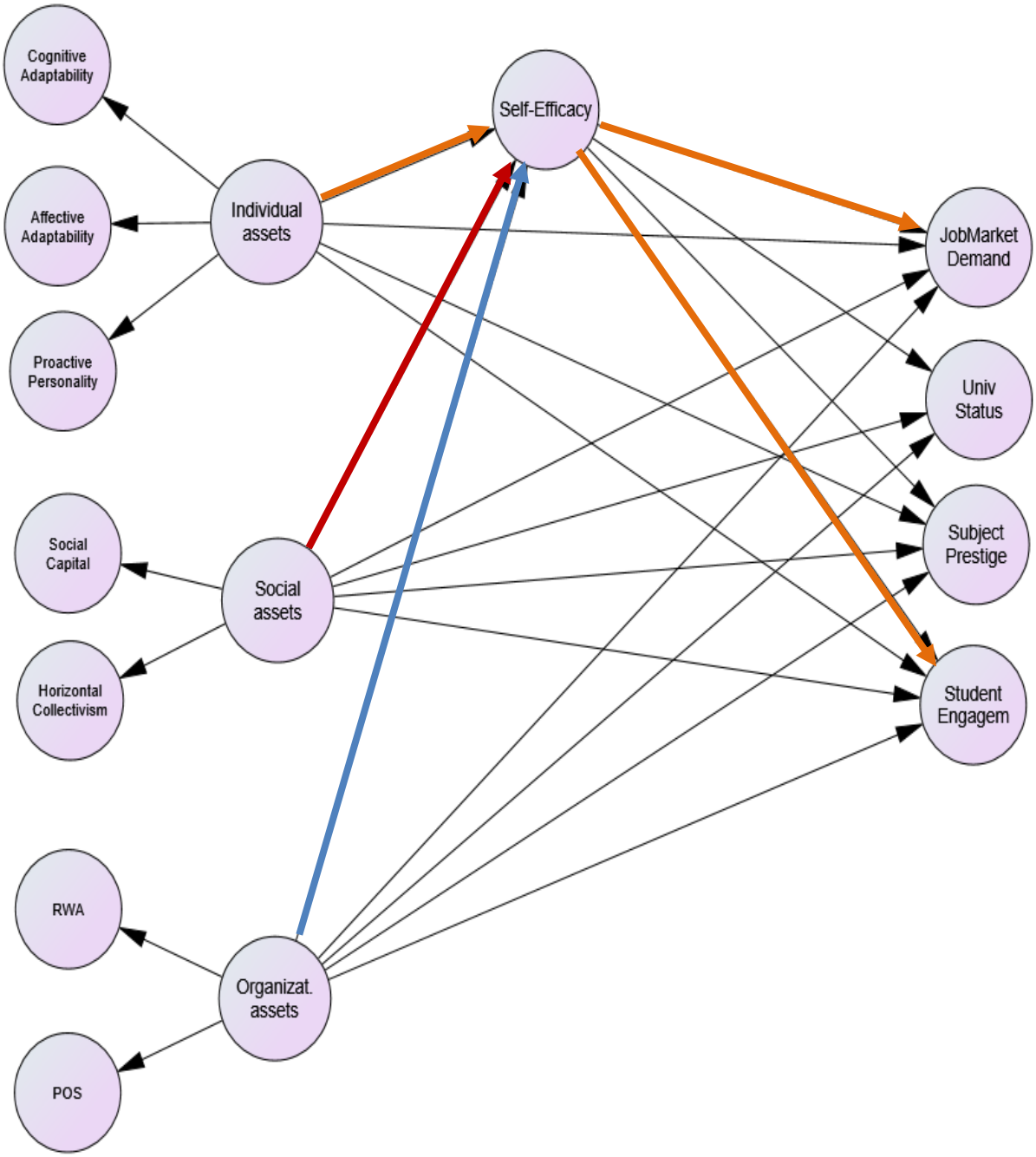

Figure 3.14 Joint mediations representation

All paths leading from the assets to the dimensions of employability convey a significant indirect effect to the exception of the two paths that miss the colorful arrow between individual assets with both university-status based employability and subject's prestige-based employability.

Overall, the partial tests on the criterion variable (the four dimensions of employability) support H2, H3, and H4 (individual, social and organizational assets are always positively associated to self-efficacy), and offer partial support to H1 (self-efficacy is always positively associated to market-demands employability but not to university-status employability and

subject-prestige employability when the effect departs from individuals' assets. In all other cases, the indirect effects operate, meaning there is partial support for H5 (individual assets) and full support for H6 (social assets) and H7 (organizational assets).

3.4.2.4 Testing the interaction effects for individual assets

As to the hypotheses that preview interaction effects from the organizational instruments intended to improve the learning experience and, therefore, student employability, they comprehend three overall effects pertaining to the expected leveraging power on the indirect effects of assets on employability through self-efficacy. As the interactions are expected to occur only in the mediational path, Model 8 from Process was adopted.

Hypothesis 8 focuses on the interaction of entrepreneurial intention with individual assets to modulate the mediation effect. Four analyses were conducted, one per each employability dimensions. Findings showed no interaction effects for market demand employability, and subject prestige employability, and student engagement. However, findings showed a significant interaction effect between self-efficacy and university status employability (B=.15, p<.05, CI95 [.072; .236]) with Johnson-Neyman significance cutoff at .0549 (mean-0.0549) meaning the direct positive effect of self-efficacy on university status employability is significant when the entrepreneurial intention reaches 2.96 (approximately the neutral point in the scale). Figure 3.15 depicts the interaction.

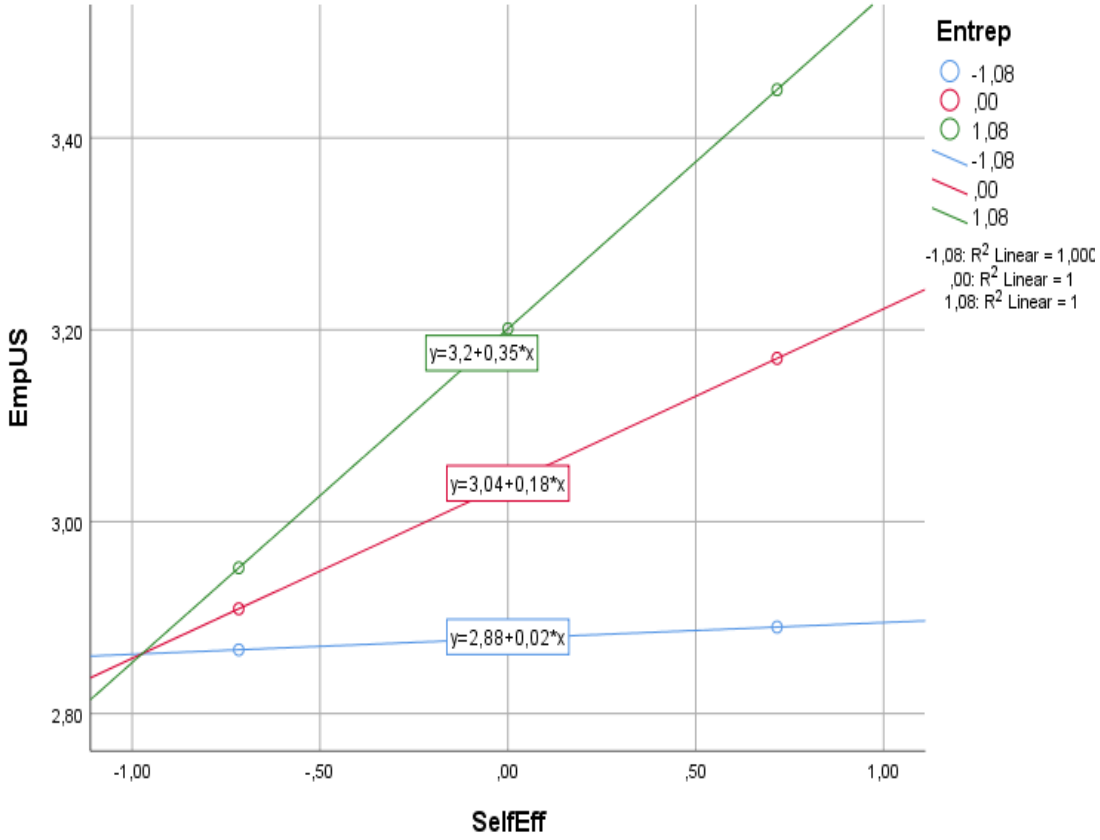

Figure 3.15 Interaction for the 2nd path of individual assets, market demand employability mediation

H8 is only partially supported as the interaction effect was observed only in a single case (market demand employability) where the indirect positive effect observed between individual assets and university status through self-efficacy is only effective when students have at least a moderate entrepreneurial intention.

3.4.2.5 Testing the interaction effects for social assets

Hypothesis 9 focuses on the interaction of entrepreneurial intention with social assets to modulate the mediation effect. The same four analyses were conducted for each employability dimension taken separately. Findings showed that in the first path of all models predicting the four employability dimensions, there were significant interaction effects. These effects are identical for all models predicting each employability dimension (B=.075, p<.05 CI95 [.009; .141]) but Johnson-Neyman test is unable to detect the threshold, suggesting the lack of direct effect only occurs at minimum levels of the moderator variable. Although this finding is hardly interpretable, its representation by Figure 3.16 reinforces its nature.

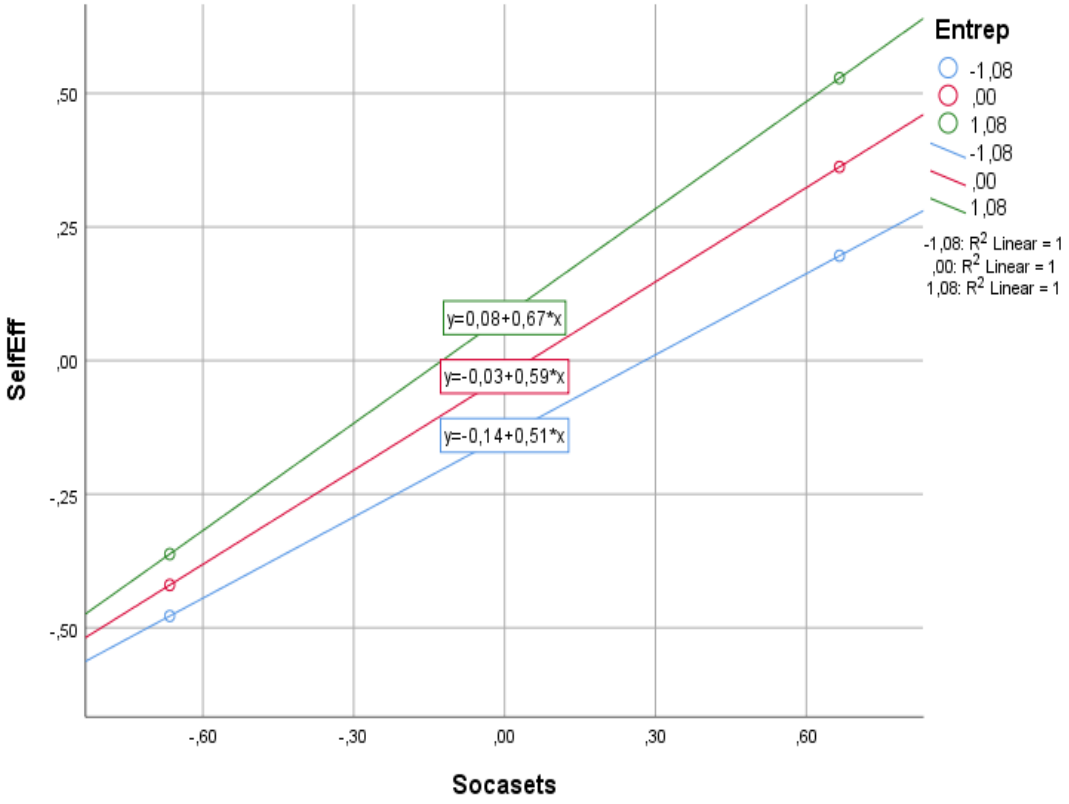

Figure 3.16 Interaction for the 1st path of social assets, market demand employability mediation

No interaction effects were found for the 2nd path between self-efficacy and employability when explaining market demand employability (B=.026, p=.45 CI95 [-.043; .095]), subject prestige employability (B=.03, p=.39 CI95 [-.046; .119]) and student engagement employability (B=.04, *p*=.34 CI95 [-.047; .133]). However, when explaining university status employability there was a significant interaction effect (B=.14, p<.001 CI95 [.063; .228]). The positive effect from self-efficacy is only observable when the moderator reaches 1.80, as shown by the Johnson-Neyman significance regions test. Figure 3.17 depicts the interaction.

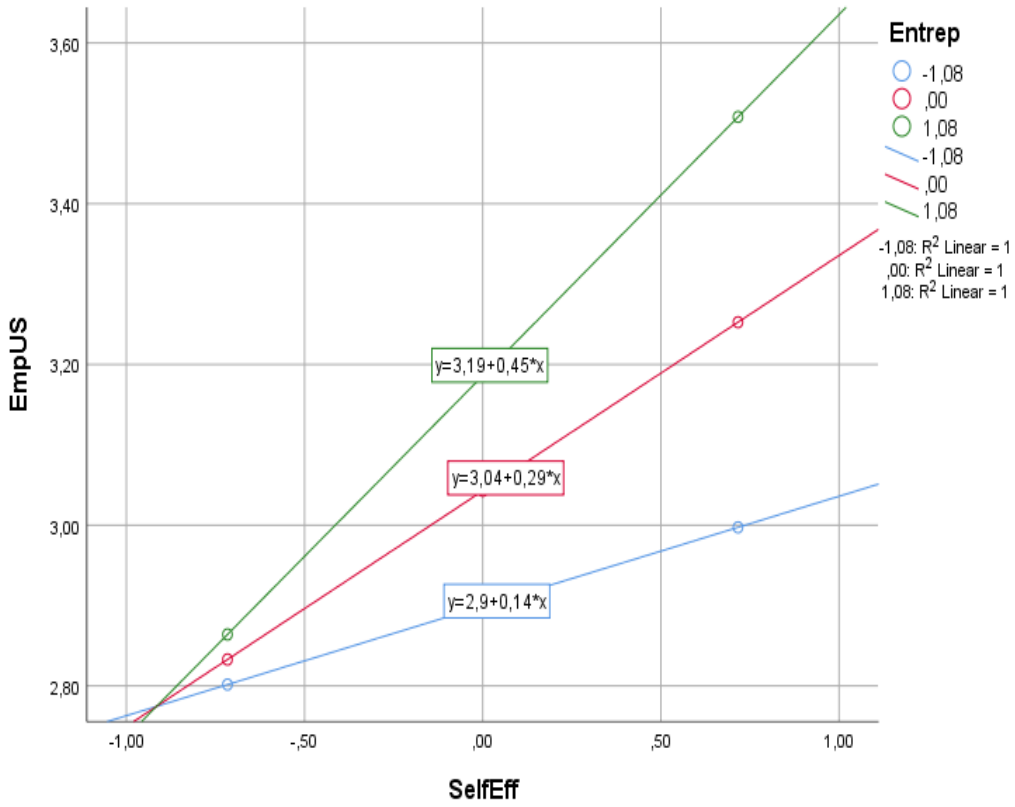

Figure 3.17 Interaction for the 2nd path of social assets, university-status employability mediation

H9 is only partially supported as the mediation is sensible to the level of entrepreneurial intention at marginal levels in the first step for all dimensions of employability and, in the case of university status the interaction effect occurs in both paths and is quite visible in the 2nd path.

3.4.2.6 Testing the interaction effects for organizational assets

Hypothesis 10 focuses on the interaction of entrepreneurial intention with organizational assets to modulate the mediation effect. As both preceding analyses, the same four analyses were conducted for each employability dimension taken separately. Findings resemble those found for social assets as the first path for all models predicting each employability dimension showed significant (B=.077, p<.05 CI95 [.021; .135]). The same lack of significant region threshold was found which indicates similar phenomena. The lack of significant effect is only expected at very low levels of the moderator.

No interaction effects were found for the 2nd path between self-efficacy and employability when explaining market demand employability (B=.009, *p*=.78 CI95 [-.059; .078]), subject prestige employability (B=.01, *p*=.65 CI95 [-.063; .100]) and student engagement employability (B=.01, *p*=.67 CI95 [-.070; .107]). However, there was a significant interaction effect (B=.08, *p*<.05 CI95 [.013; .159]) when explaining university status employability. The

positive effect from self-efficacy is only observable when the moderator reaches 2.56 as shown by the Johnson-Neyman significance regions test. Figure 3.18 depicts the interaction.

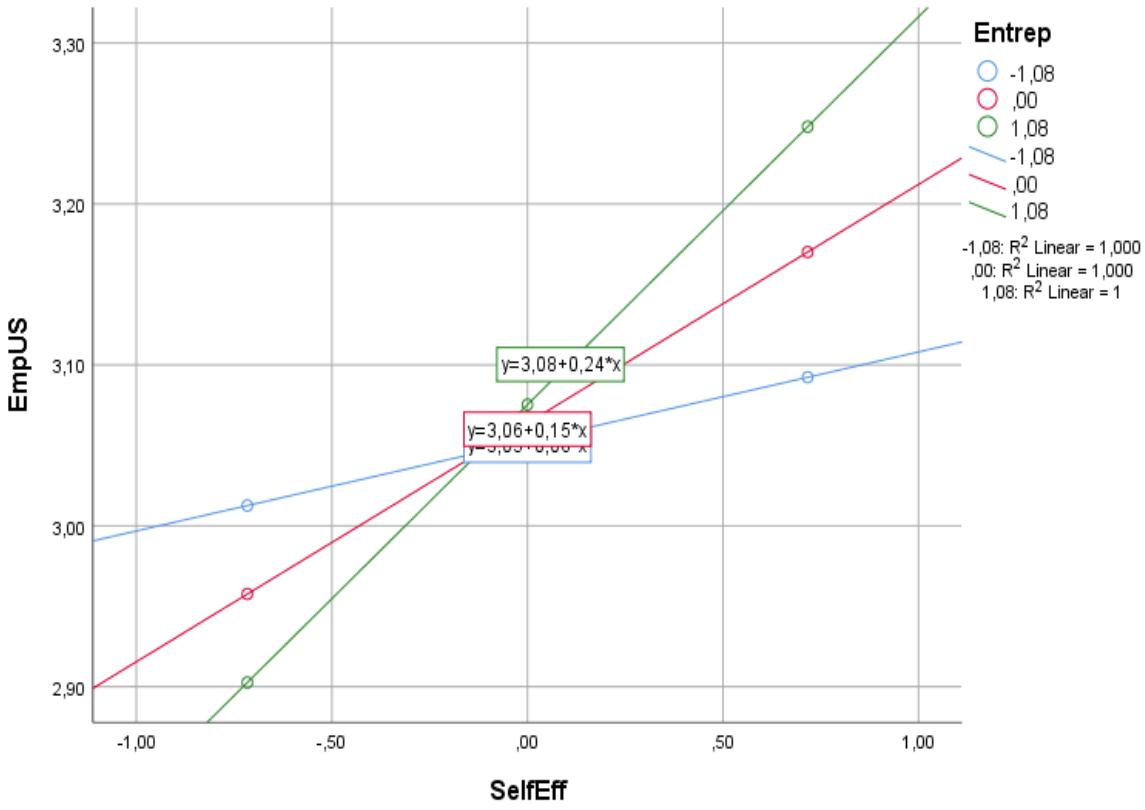

Figure 3.18 Interaction for the 2nd path of organizational assets, university-status employability mediation

H10 is partially supported because the mediation effect is always depending on the level of entrepreneurial intention in the first path for all dimensions of employability and, in the case of university status the interaction effect occurs in both paths being conspicuous in the 2nd path.

Chapter 4: Discussion of Results

4.1 Theoretical contributions

Although foreign studies are more in-depth, the research results may not be suitable to applied in China, considering the differences in social, economic and cultural backgrounds. At present, Chinese scholars have begun to study different issues from the perspective of employability, like college students' career choice, college students' career path, and college students' study reform (Tian & Tian, 2013).

In recent years, Chinese scholars have conducted in-depth research on how to improve college students' employability skills (Song & Xie, 2008). However, most domestic research are based on foreign employability models and lack of analysis and discussion under the domestic actual circumstance. Domestic research on the development of employability skills mainly focus on the introduction of foreign advanced theories and experience (J. H. Sun & Wang, 2010). Although some scholars put forward many opinions and suggestions on the development of employability skills, most of them are theoretical, macroscopic and instructive, lacking practical and operational significance.

In practice, employability provides the basis and premise for the transition from the role of students to workers. The competence of students not only affects the employability of students, but also affects the success of students' employment (H. Q. Zeng & Xiao, 2013). The research and application of employability have become more and more mature in foreign countries, especially in Europe and America, but it has not attracted enough attention in China. As the external and internal environment of an organization is constantly changing, it is difficult for an enterprise to provide lifetime employment. How to use employability to reduce and ease the pressure and insecurity caused by such change and improve the employment rate of graduates has become a major challenge for human resource management practice. Therefore, it is necessary to study and explore the employability of Chinese university graduates based on empirical analysis.

This study firstly conducts interviews to identify key factors which influence the employability of graduates, and then test the hypothesized model of graduate employability and competencies. The results indicate the hypothesized model is mostly supported by empirical analysis. Firstly, not only the constructs chosen are theoretically grounded as the measures adopted were able to validly represent them, having good validity and reliability

properties. Secondly, the models rightfully placed self-efficacy at the core of the process leading from academic assets that gather individual, social and organizational variables taken as assets that offer a return from investing in education to perceived employability. The model brings also entrepreneurial intention as a moderator, that is, a variable that can leverage the process that puts together the individual, social, and organizational assets to build stronger self-efficacy and stronger employability.

Overall, the partial tests on the criterion variable support that individual, social and organizational assets are always positively associated to self-efficacy, and partially support that self-efficacy is always positively associated to market-demands employability but not to university-status employability and subject-prestige employability when the effect departs from individuals' assets. In all other cases, the indirect effects operate, meaning that the argument there is an indirect effect of individual assets on employability through self-efficacy is partially supported, while the arguments there is an indirect effect of social or organizational assets on employability through self-efficacy is fully supported.

4.2 Practical implications

The study has several important implications for investment in university students' employability.

It is of great significance for college students, schools, enterprises and government to understand the connotation of employability of college graduates. University students can make up for their inadequate abilities according to the composition of employable skills. According to the employability connotation of college graduates, schools can take systematic measures to develop employability development activities to improve students in a targeted way. For enterprises, enterprises can select and cultivate talents according to the connotation of employability. The learning process of Chinese university students are still dominated by teacher-delivered class, and students seldom acquire knowledge through their own thinking and time. This static and passive way of learning is not conducive to the development of students' basic abilities and interpersonal skills. Therefore, it is very necessary for schools to reform their teaching methods and cultivate employability of their graduates.

First, the study shows that individual assets comprising adaptability and proactive personality exhibited a positive effect on self-efficacy, and there is an indirect effect of individual assets on employability through self-efficacy.

In terms of personal development, college graduates should establish career planning as

early as possible and enhance their awareness of employability. As for the employability development of university students, college graduates should take the initiative to participate in the all kind of activities to improve their adaptability. After entering the workplace, college graduates need to further enhance their learning awareness and learning ability.

According to the personal career development plan and the needs of the enterprise, university student should make long-term and short-term learning plans, cherish the training activities of the enterprise, strive to seize every opportunity to improve employability, and constantly insist on life-long learning to improve themselves. For college graduates, only by constantly improving their personal ability can they meet the needs of labor market, and increase their initiative in employment relations. College students should keep up with the development trend of their own professional field and participate in competitions related to their own professional activities. During the academic year, college graduates ought to consciously cultivate their positive and healthy employment mentality in study and life practice, and enhance their psychological enduring capacity, social adaptability and information processing ability so as to improve their comprehensive quality.

Second, the study shows that social assets comprising horizontal collectivism and social capital exerted a positive influence on self-efficacy, and there is an indirect effect of individual assets on employability through self-efficacy.

University educator can organize some recreational activities in various forms, and cultivate harmonious interpersonal relationships in the activities in order to strengthen the awareness of participation and guide students to truly identify and deeply practice collectivism. College students should also first accumulate the consciousness of social capital. Social capital refers to the norms and trust of reciprocity between individuals or groups, as well as the resources and values that a person's position in the society brings to him. Social capital can make a difficult matter easier and also bring convenience to people in the social network. Therefore, college students should establish the consciousness of accumulating social capital as soon as possible, and make reasonable use of the convenience brought by social capital on the premise of not violating relevant regulations.

College students should pay attention to maintaining social capital stock. College is an important stage of life, and maintaining the stock of social capital is about maintaining relationships with friends and relatives. Communicating with friends helps build relationships and maintain your stock of social capital.

College students should develop the increment of social capital as much as possible. In the maintenance of good social capital at the same time, college students should constantly

expand their relationships, and participate in the activities organized by the school. Friends can help them in the process of looking for a job, and experienced students can provide relevant learning materials. University students can also take advantage of vacations to do internships in related fields and accumulate contacts in related fields. In the recruitment of enterprises, they can know the recruitment information as soon as possible, which is also conducive to college students to obtain employment opportunities.

The utilization of social capital is also important for university graduates. Not every college student is born with abundant social capital and can use it reasonably and effectively. For most graduates, they come from ordinary families, and no abundant family social capital can directly help them achieve high-quality employment. Therefore, college students should actively participate in social activities, associations and practical activities, constantly broaden their social relationship network, and pay attention to the formation of high-quality social capital while accumulating their own social capital. It is also necessary for college students to have a more positive personality when they accumulate personal social capital, make friends with their own circle, and make their social relationship network more solid and reliable.

Third, the study shows that organizational assets comprising real-world activities and perceived organizational support exhibited positively affect self-efficacy, and there is an indirect effect of individual assets on employability through self-efficacy.

College graduates should take advantage of their spare time to seek internship and part-time jobs to understand their shortcomings and explore their interests in career development. University students should participate in vocational qualification examination, and take the initiative to consult with experienced seniors, to make full preparation for future career development. The impact of internship experience on employability development and employment performance has been proven. Internship experience will affect the basic skills of employability of students, thus improving their employment performance. Students' internship experience can transfer employability skills to the actual work, which provides the premise and foundation for obtaining better jobs. Therefore, internship experience or other practical experience is very necessary for employability development.

In terms of organizational support, universities should adhere to the principle of combining "going out" with "bringing in" and constantly expand the ways of cooperation with enterprises, which is called school-enterprise cooperation. In terms of "going out", universities should set up corresponding off-campus activities for graduates of different grades, such as leading students to visit enterprises in the early stage of enrollment, and preliminarily understanding the working process of enterprises. In the third year, college

students can be provided with internship opportunities to enterprises. And as for the "bring in", universities should invite experts enter into the schools to understand students' talent training programs, and carry out the cooperative teaching with enterprises so as to reduce the gap between talent supply and enterprises demand.

As for the support of university, the reform of existing curriculum system is also of significance. The employment quality of college graduates directly affects the future development of colleges and universities. Colleges and universities should actively promote the change of curriculum structure and content and teaching methods to strengthen the employability of students. More employers should be invited to get involved in the curriculum design process and actively revise the curriculum to meet the needs of employers and society.

Universities can also set up a series of employment guidance courses such as career design and interpersonal communication to effectively improve the employability of students. Universities can also provide employment services for graduates through multi-channel employment information resources such as employment fairs or online publication of employment information. Personalized employment guidance can be also provided for college students to foster their strengths and circumvent their weaknesses, strengthen vocational skills guidance, master job interview skills, and improve vocational ability.

In the proposed model, there is a key psychological variable self-efficacy which is a great facilitator to self-motivate. In this aspect, universities should actively strengthen the psychological guidance of students, enhance the general sense of self-efficacy of college students. First of all, colleges and universities should have a comprehensive and accurate understanding of college students' employment psychology before graduation. To be specific, the employment guidance institutions of colleges and universities should form a temporary research team to fully understand the employment psychology of college students and the problems encountered in the process of job hunting through questionnaires, interviews and other forms. When the employment departments fully understand the psychology of college students, they can hold targeted lectures and training or provide practical solutions to the problems students encountered in employment to improve their self-efficacy, so that they can maintain a positive attitude for employment, thus increasing the success possibility of job hunting.

Universities should provide a platform for college students to practice through university-enterprise cooperation. Many college students hope to have internship opportunities in related majors during their school years. Colleges and universities should carry out targeted career courses to improve college students' general sense of self-efficacy. In

addition, college students themselves should improve their self-awareness, have a clear position on themselves, and improve their general sense of self-efficacy.

College students should have a clear understanding of themselves when choosing a career, correctly understand their interests, hobbies, abilities, qualities, and temperament and develop appropriate career goals on this basis. Too high or too low career goals are not conducive to the career development of college students. The pursuit of too high career goals will make them frustrated in job hunting, and become sensitive, lose confidence, and even give up the behavior of job hunting. The pursuit of low career goals is not only a waste of college students' human capital, but also will reduce the job satisfaction of college students after employment, which is not conducive to the stability of their career development.

The conceptual model brings entrepreneurial intention as a moderator which is a variable that can leverage the process that puts together the individual, social, and organizational assets to build stronger self-efficacy and stronger employability.

In practice, colleges and universities should develop flexible and diverse practical activities, and encourage college students to combine theory with practice to improve their practical ability and work ability. Universities should continue to strengthen scientific and technological innovation activities, and encourage graduates to start their own business. It is a signal that university respond to the national policy of "mass entrepreneurship and innovation initiative" for innovation entrepreneurship education courses and activities, improve the ability of college graduates from school to social transition.

Just as president Xi Jinping said "China gives high priority to employment. We have worked to ensure that economic development is pursued in a way that supports job creation, encouraged business start-ups as a means to create more jobs, and paid particular attention to the employment of college graduates and other key groups. We have also provided the labor force with better education and training to tackle structural unemployment."

In employment guidance, universities should be committed to the construction of employment information platform, the organization of job fairs and the provision of employment guidance courses. The employment guidance center of colleges and universities should give full play to the function of employment psychological counseling and consultation, set up vocational counseling Open Day to improve the employability of college graduates.

College students should take the initiative to learn knowledge related to entrepreneurship and often pay attention to the policies on entrepreneurship issued by the government. Through the interpretation of the latest national entrepreneurship policy, they can find valuable

entrepreneurial information and identify entrepreneurial opportunities, make plans conducive to their own entrepreneurship, improve their shortcomings, and test whether they are suitable for entrepreneurship through practical activities. Cognitive learning requires college students to observe and learn the behaviors of outstanding entrepreneurs and learn more entrepreneurial skills in the process of communicating and discussing with entrepreneurs, so as to improve their own cognition of entrepreneurship. Practical learning requires college students to participate in certain practical activities, learn more knowledge and experience lessons from practice, so as to increase the intention and possibility of starting a business. College students can choose suitable learning methods according to their own characteristics to improve their knowledge reserve, cultivate entrepreneurial thinking, and strengthen entrepreneurial intention.

Family should actively support college students to start their own business. Family should change the traditional concept, cultivate children's independent consciousness, innovative thinking and entrepreneurship, help students establish a sense of cooperation and enhance their motivation to start a business. In addition, if family members have entrepreneurial experience, they can provide financial and resource support for college students, increase entrepreneurial knowledge reserve and broaden entrepreneurial information channels, so as to reduce risks in entrepreneurship, improve psychological tolerance and promote college students to carry out entrepreneurial activities.

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Chapter 5: Conclusion

5.1 Research summary

The purpose of this study is to conduct a closer examination of graduates' employability by differentiating influences of individual, social and organizational assets. We tested these influences by considering self-efficacy as a psychological facilitator and entrepreneurial intention as a moderator. The results of our empirical research suggest the distinction influence on employability.

In China, it is universally accepted that talent cultivation is not definitely equal to classroom teaching. A benign campus atmosphere is conducive to the cultivation of students' comprehensive abilities in communication, cooperation, organization and management (Q. H. Shi & Wang, 2018). Diversified campus life is the embodiment of the flexibility and pertinence of education. To carry out a wide range of active campus activities can not only enable college students to integrate into real life, but also enable them to consolidate knowledge, train their own ability, exercise their interpersonal skills, and eventually effectively realize the comprehensive accomplishment of college students (Xie, 2004).

The employability of college graduates has great influence on graduates, universities and employers. College graduates with good comprehensive quality, professional psychology and excellent job-hunting skills can increase employment opportunities. The employability of college graduates is closely related to their own development. From the perspective of universities, graduates are their products. Whether they can get job opportunities smoothly is related to the reputation, survival and development of universities. Improving the employability of college students, promoting the smooth employment of college students and realizing the optimal allocation of human resources is one of the primary tasks faced by colleges and universities. The employability of graduates not only determines the survival and development of individuals, but also determines the survival and development of universities. And the employer does not hesitate to employ college students. The essence is to use the knowledge of college students, ability, and quality. Rational selection, optimal utilization and full utilization of talents will also greatly restrict the final performance and sustainable development of the organization. Therefore, it is very important to improve the employability of college graduates.

In general, universities should clarify the goal of talent cultivation, carry out career

planning guidance and set up employability development courses from the beginning of college students' enrollment. In terms of course teaching and subject setting, we should carry out timely reform and adjustment according to social and economic development status and industry requirements, and integrate employability development into professional teaching. According to the different requirements of students, the training of different vocational qualifications should be carried out in a variety of ways to lay a solid foundation for the development of employability of college graduates.

According to the findings and results of the empirical analysis, this thesis puts forward the corresponding countermeasures and suggestions in the implication part, mainly from the perspective of college students themselves, universities, and the government. College students should pay attention to the accumulation of individual, social and organizational assets. For students, it is also very important to understand and acquire employment-related knowledge, skills and abilities in line with modern social expectations in addition to necessary academic knowledge, and to attach importance to all-round development. College graduates need to further enhance their learning awareness and ability after entering the work place. Students should make long-term and short-term learning plans, cherish the training activities of the enterprise, and strive to seize every opportunity to improve employability, and constantly enrich and improve themselves. For college graduates, only by constantly improving their personal ability can they meet the needs of enterprises, choose satisfactory jobs and increase their initiative in employment relations. At the same time, universities should guide students to establish a correct view of employment according to the needs of the market and improve their talent training model. And they should closely link their curriculum design with the real world, and improve the employment rate on the basis of employability.

At the same time, in addition to the education of graduates, external training of higher education institutions is also necessary. For enterprises and other organizations, it is necessary to cooperate with higher education institutions to promote the recognition, attention and development of employability of graduates aiming to provide practical soil for higher education institutions and graduates to understand the importance of employability construction. The government should create a fair employment environment and encourage entrepreneurship to boost employment. Through the above countermeasures and suggestions, a more fair and favorable employment environment for graduates can be created so as to improve the employment rate of university students.

5.2 Limitations and future research

This study has several limitations and the findings should be interpreted cautiously. Although this research has obtained some valuable conclusions and practical suggestions on the employability of university graduates, there are still some limitations due to the restrictions of research ability and research conditions, which need to be further improved. The study of employability of university graduates is of great significance to boost national economic development and solve the structural unemployment problem of college graduates. The employability of college graduates is dynamic and constantly developing, so it can be further deepened and developed in the future.

There are limitations to the size of the sample. The research samples in this paper are mainly from universities in Guangdong Province. The small number of samples may lead to some limitations and deviations in the research results. In the next step, the source and quantity of samples should be enriched to make the research results more representative and persuasive. The research target also has limitations. The sample is university students who are granted with bachelor degree, but higher vocational students are not included into the sample group. Chinese undergraduates mainly study theoretical courses, while vocational college students tend to practice more and pay more attention to the cultivation of operational skills. The difference between the two group may lead to the deviation of research results, and a more comprehensive sample expansion is needed for the investigation of college students' employability. In the future research, we can increase the sample size and send questionnaires to colleges and universities in different provinces and different types as far as possible, which can make the research conclusions more objective, real, representative and scientific, and enhance the universality of the research conclusions. Therefore, in future studies, the scope of the investigation group can be further expanded, more systematic sampling methods can be adopted, and the relationship between variables can be further investigated through the follow-up studies, so as to verify the universal applicability of the research results and discover deeper mechanisms.

The questionnaire of this study was issued to the college students at some point, which means that the variables are measured by cross-section design, this kind of data was collected without considering the time span of the problem (Lepine et al., 2005). It can only reflect the surveyed situation, and cannot reflect respondents' changes at different time points, making the conclusion of this study one-sided to some extent. Future research could also utilize longitudinal data to capture the dynamic influencing mechanism on the employability of

students. This study discusses the influence of individual, social and organizational variables on college students' employability, which is only a small part of the factors, and there are many factors that have not been considered in this study. Therefore, in the future employability research, Chinese scholars can combine China's national conditions and cultural background to deeply explore variables of employability, build a more comprehensive and complete research model, and enhance the explanatory power of the research model.

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Annex A: Questionnaire

Dear respondent,

Hello! This questionnaire is designed to understand your in-school learning and the present employment situation. The information from the survey is used to provide reasonable accordance for improvement in talent cultivation policy and corresponding measures. This questionnaire is anonymous, and the data obtained will be used for research only and be kept confidential. Please rest assured for the cooperation. Thank you for your support!

Section one

The following statements are about some experiences and descriptions of college students. Please choose the most suitable number according to your actual feelings and experiences. (1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree)

1.I achieve high grades in relation to my studies.

2.I regard my academic work as top priority.

3.Employers are eager to employ graduates from my university.

4.The status of this University is a significant asset to me in job seeking.

5.Employers specifically target this University in order to recruit individuals from my subject area(s).

6.My University has an outstanding reputation in my field(s) of study.

7.A lot more people apply for my degree than there are places available.

8.My chosen subject(s) rank(s) highly in terms of social status.

9.People in the career I am aiming for are in high demand in the external labour market.

10.My degree is seen as leading to a specific career that is generally perceived as highly desirable.

11.There is generally a strong demand for graduates at the present time.

12.There are plenty of job vacancies in the geographical area where I am looking.

13.I can easily find out about opportunities in my chosen field.

14.The skills and abilities that I possess are what employers are looking for.

15.I am generally confident of success in job interviews and selection events.

16.I feel I could get any job so long as my skills and experience are reasonably relevant.

Section two

The following statements are about some experiences and descriptions of college students. Please choose the most suitable number according to your actual feelings and experiences. (1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree)

1.I am able to think through a number of possible options to assist me in a new situation.

2.I am able to revise the way I think about a new situation to help me through it.

3.I am able to adjust my thinking or expectations to assist me in a new situation if necessary.

4.I am able to seek out new information, helpful people, or useful resources to effectively deal with new situations.

5.In uncertain situations, I am able to develop new ways of going about things (e.g., a different way of asking questions or finding information) to help me through.

6.To assist me in a new situation, I am able to change the way I do things if necessary.

7.I am able to reduce negative emotions (e.g., fear) to help me deal with uncertain situations.

8.When uncertainty arises, I am able to minimise frustration or irritation so I can deal with it best.

9.To help me through new situations, I am able to draw on positive feelings and emotions (e.g., enjoyment, satisfaction).

10.If a colleague gets a prize, I would feel proud.

11.The well-being of my colleagues is important to me.

12.To me, pleasure is spending time with others.

13.I feel good when I cooperate with others.

14.I am ready to do anything to be an entrepreneur.

15.My professional goal is to become an entrepreneur.

16.I will make every effort to start and run my own firm.

17.I am determined to create a firm in the future.

18.I have very seriously thought of starting a firm.

19.I have the firm intention to start a firm some day.

20.I know people who can help me with my future career.

21.I can build and maintain contacts with people who can help me with my future career.

22.I am able to use my contacts when it can help me in my future career.

23.I have witnessed alumni visit to talk about their career paths and opportunities in their company.

24.I have experienced employers' participation in programme delivery.

25.I have listened to employers via seminars about employment opportunities and skill requirements for these opportunities.

26.I have had the opportunity to visit local employers.

27.I have been encouraged to seek new skills to increase my employability.

Section three

The following statements are about some experiences and descriptions of college students. Please choose the most suitable number according to your actual feelings and experiences. (1=strongly disagree, 2=disagree, 3=undecided, 4=agree, 5=strongly agree)

1.I will be able to achieve most of the goals that I have set for myself.

2.When facing difficult tasks, I am certain that I will accomplish them.

3.In general, I think that I can obtain outcomes that are important to me.

4.I believe I can succeed at most any endeavor to which I set my mind.

5.I will be able to successfully overcome many challenges.

6.I am confident that I can perform effectively on many different tasks.

7.Compared to other people, I can do most tasks very well.

8.Even when things are tough, I can perform quite well.

9.If I see something I don't like, I fix it.

10.I am always looking for better ways to do things.

11.If I believe in an idea, no obstacle will prevent me from making it happen.

12.My university cares about my opinions.

13.My university cares about my well-being.

14.Even if I did the best job possible, my university would fail to notice.

15.My university cares about my general satisfaction at studying.

Section four Basic information

1.Your gender a.male b.female

2.Your age _____years old

3.Domain of studies a.philosophy b.economics c.law d.education
e.arts & humanities f.history g.science
h.management i.engineering

4.Year of graduation a.2018 b.2019 c.2020