

Social Stratification, Social Networks and Job Search Methods

An Empirical Analysis of Italian University Graduates

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TABLE OF CONTENTS

| | |
|--|-----------|
| ABSTRACT..... | 3 |
| 1.1 Chapter 1: Introduction..... | 3 |
| 1.1.1 Limitations of The Human Capital and Signaling Theory..... | 6 |
| 2.1 Chapter 2: Theoretical Background..... | 9 |
| 2.1.1 Credentialist Theory..... | 10 |
| 2.1.2 Social Network Theory..... | 13 |
| 2.2 Trends in The Italian Labour Market..... | 14 |
| 2.3 University Education in Italy..... | 17 |
| 3.1 Chapter 3: Empirical Analysis | |
| 3.1.1 Data..... | 19 |
| 3.1.2 Method..... | 24 |
| 3.1.3 Results..... | 25 |
| 4.1 Chapter 4: Conclusion..... | 27 |
| REFERENCES..... | 29 |

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ABSTRACT

This thesis analyzes job search methods of Italian tertiary graduates with a special focus on the use of social networks. The main purpose in this study is to analyze how the probability of using of social network varies according to ascriptive factors, academic performance and income. For this purpose, I perform a quantitative analysis by using data from a survey of ISTAT (Istituto Nazionale di Statistica) that was carried out among Italian tertiary graduates at the national level in 2015. The result of the analysis demonstrates that graduates with self-employed parents, low academic success and low income are more likely to use social networks to find a job in the labour market.

Keywords: social stratification, social networks, job search methods

Chapter One

1.1 Introduction

It is largely agreed that people get schooling in order to be eligible candidates for jobs which is one of the most important functions of educational institutions. However, there are different opinions about how labour market returns are distributed among graduates in the labour market. Becker (1964) argued that one of the motivations for investment in higher education has to do with the need to increase the probability of employment and get higher labour market rewards. His assumption was that people who invest in higher education increase their productivity through schooling, because it improves abilities of individuals to perform complex tasks at work. Therefore, they are supposed to be rewarded by employers in the labour market as they get higher education and increase productivity which it is appreciated by the market. Contrarily, Spence (1973) claimed that it is not that education alters the productivity levels of graduates and therefore, they are more likely to be employed and get more rewards, but it is that educational credentials provide a signal to employers about graduates' productivity which remains constant

after controlling for educational attainment. In this regard, the assumption is that higher education must result in higher employment probability and higher labour market rewards since educational attainment provides graduates with credentials that signal their productivity that is rewarded by employers. However, on one side, human capital theory does not adequately explain why individuals with the same degree have different labour market outcomes if they are only correlated with investment in education. To put another way, it does not take into account other factors that may play a role in the differentiation of labour market outcomes among graduates such as discrimination, asymmetric information between prospective employers and employees, and compensating factors (Acemoglu & Autor, 2014). On the other side, the signaling model does not fully capture on which basis employers actually evaluate and reward educational credentials since graduates with the same level of educational title may have different labour market returns (Ballarino & Panichella & Barone, 2014). Concerning the relevance of educational credentials in the labour market, Munsech and Capsada (2015) argue that employers may attribute them as indirect indicator of productivity for which social background can provide more precise information. Indeed, they found in their research that labour market mismatch is more common among those with disadvantaged family background. Crawford (2016) has also demonstrated that university graduates with more prestigious family background have higher probability of entering more rewarding jobs. Thus, educational attainment may yield different returns for graduates with the same degree. In this context, I also suggest that we should focus on social ties and job search behaviors too which might also be relevant to explain differences in labour market returns to education. In his seminal work, Granovetter (1973) found that social networks are key factors to find a new employment opportunity. Likewise, Franzen and Hangartner (2006) found a significant positive effect of social network on non-monetary rewards such as better career opportunity, job match but not on monetary rewards. For the same purposes, I make an analysis on job search methods and the use of

social networks by focusing on university graduates but I only answer to the following questions: How university graduates use educational credentials in exchange for labour market rewards and more importantly, to what extent social network is used as a job search method among graduates that come from different social class of origins and different academic backgrounds. My assumption is that the use of social networks in job search process is negatively correlated with the belief among graduates that educational credentials are only definitive factors in the transition from university to work. In this thesis, I focus on the Italian labour market and the university graduates. Because, the participation in tertiary education has been increasing since the early 2000s. According to OECD (Education at a Glance, 2019), the population with tertiary education, aged between 25-34 has increased from 11.75% to 27.73% between 2001 and 2018. However, the expansion in tertiary education has not been accompanied by increasing employment. Especially after the global crisis of 2008, there has been a remarkable increase in the unemployment rates of Italian tertiary graduates (OECD, Unemployment by Education, 2020). As a result of this fact, there has been much research questioning the value of higher educational attainment in the Italian labour market, the efficiency of university education in preparing graduates to occupations, social and economic factors that concern with graduate unemployment. Immarino and Marinelli (2012) claimed that internal migration is positively correlated with job finding probability, Ciriaci and Muscio (2014) argued that the regions where the total unemployment rates are low are more likely to provide Italian tertiary graduates with a better employment opportunity while they have also found a significant relationship between university education quality and the probability of employment. Pastore (2019) also focused on the transition of Italian graduates to the labour market. In his article, he attributed graduate unemployment to slow economic growth and inefficiency of the educational system in providing relevant skills necessary to be able to work at companies. From this point of view, job search methods and the use of social networks can also be relevant to labour market

opportunities in the Italian case. Although Pistaferri (1999) focused on the impact of social network on labour market outcomes in Italy, his analysis was considering the population as a whole. Therefore, he was not considering Italian graduates. However, he found that the use of social network as a job search method is used to a large extent. Above all, it was found in his research that earnings are associated with the use of social networks. To the best of my knowledge, studies focusing on the impact of social network are limited in the Italian case. For this purpose, my aim is to analyze how the use of social networks are correlated with labour market outcomes for the Italian graduates. Such an analysis is important, not only because it enables us to test the perceived robustness of the link between educational credentials and access to labour market opportunities from the point of view of graduates that constitute the supply side, but also helps us see how the probability of using of social networks shows a variation among graduates from different backgrounds which can be relevant for policy implications to make sure access to job opportunities is open to all graduates. Because, the fact that access to job opportunities is unequally distributed can exacerbate social inequalities considering that the labour market is one of the most important factors that play a role in social stratification.

1.1.1 Limitations of The Human Capital and Signaling Theory

The concept of capital refers to investments which individuals seek to exchange for economic and social benefits in the future. In a similar vein, human capital is regarded as another type of investment endowed by human beings with the same goal. According to Becker (1964), there are different types of investment which we can take into account when we define human capital such as education, training on the job, migration, even search for price information in the market. However, in this thesis I focus on education as a type of investment which is made by individuals to enter the labour market and get the highest level of monetary and non-monetary rewards. In this

context, the theory of human capital claims that rational individuals who seek to maximize their well-being in the labour market through monetary and non-monetary rewards decide to invest in education until the benefit of one additional year of educational attainment does not exceed its cost. The main assumption is that education gives individuals the opportunity to improve skills and knowledge that lead to positive results in productivity levels which is appreciated in the labour market. Thus, they are expected to be remunerated by employers in the form of monetary and non-monetary rewards such as job satisfaction, job security, career development, status etc. Indeed, there is evidence showing that lifetime earnings are positively correlated with educational levels (Carnevale, Rose, Cheah, 2011). In line with this finding, Acemoglu (2012) attributes increasing returns to educational attainment to technological change. The idea is that technological advancements push firms to hire the most skilled, and productive workers. Since higher education is supposed to make individuals more productive, such an investment has become more crucial for higher labour market returns. In this sense, the theory assumes a linear relationship between educational attainment and labour market outcomes but does not take into consideration that employers may discriminate some graduates, there can be information asymmetry between prospective employee and employers, prospective employee can have different expectations from jobs. These factors may also play roles in the labour market returns to education apart from the market economy. For this reason, I suggest that we should also discuss the topic of labour market returns to educational attainment by focusing on social relations and their impact on the labour market outcomes. Because, the process within which individuals exchange their educational titles for rewards is different than how the exchange of goods work in economy since in this case the supply side is not a commodity but human being, therefore have different characteristics and there is not a perfectly functioning market in the sense that full information is not available to prospective employees and employers. Another theory that has to do with the relationship between labour market outcomes and

educational attainment is the signaling theory which suggests that educational titles demonstrate ability levels of individuals rather than the impact of education on ability. Thus, it claims that educational attainment may not really advance students' abilities, however it helps job candidates convince their prospective employers about their ability. In this regard, educational titles also work as a screening device for prospective employers. Therefore, the theory assumes that individuals with high ability are more likely to graduate from colleges so that they would be able to convince employers that they are productive and therefore, can get the most desired jobs in society that are mostly characterized as highly remunerated, more secure, more open to career advancement, help to have more prestigious status in society (Spence, 1973). However, it may be difficult to ensure a smooth transition between educational attainment and employment since educational titles itself may not be enough to assume that a graduate is ready for the job especially when educational titles lose its efficiency in reflecting marketable skills due to an expansion of education as it is defined as credential inflation (Collins & Randall, 2002). Maybe, it is easier to make a decision between two graduates with different levels of education as higher education is a sign of higher productivity according to the signaling theory. However, when it comes to deciding about two graduates with the same level of educational level, educational titles itself may not help distinguish. Therefore, employers may refer to other characteristics of graduates which from their point of view, may be more important to make the final decision in hiring process. Other characteristics of graduates can include objective criteria; the quality of education, academic reputation of the university, study subject, grade point of average, relevant job specific skills, language knowledge, and subjective criteria whose value is defined on the basis of what employers think; age, gender, race, social background (Cable, Gilovich 1998). Summarily, in a free market economy where the freedom of contract is guaranteed, it is the employer who evaluates knowledge and skills of prospective employees to hire and defines criteria on which the decision to hire is made. In this sense,

paying a special attention to social networks as a mechanism via which employment relationship is built is relevant to understand whether access to labour market opportunities is available to all graduates solely on the basis of educational attainment which requires effort or whom they know which depends on circumstances which are operationalized as the possession of powerful social networks as Bernardi (2012) argued. Surely, focusing on the use of social networks as a job search method still does not help us understand on what basis employers actually make hiring decisions but to see the extent to which the use of social networks in setting employment relationship is relevant can enable us to examine how labour market opportunities are correlated with educational attainment.

Chapter Two

2.1 Theoretical Background

Sociologists that analyze the relationship between social class of origin and educational attainment demonstrate that educational attainment decision is made with a view to having a particular social status. To put another way, individuals who continue to invest in education seek to achieve social status at least as prestigious as their parents. Mostly for this reason, it is assumed that pupils that come from more prestigious social class are more likely to pursue higher education while those pupils that come from inferior social class are expected to achieve social status at least the same as their parents through participation to a relatively low level of education (Breen & Goldthorpe, 1997). Shortly, education is seen as a key tool to promote upward social mobility which is defined as a process in which an individual achieves a more prestigious position than their parents in social stratification (Weber, 1942). Since occupation is an important indicator of social status, sociologists focus on the relationship between social class of origin and occupations in order to see the net effect of education on social mobility. Such a phenomenon is illustrated by “OED Triangle” that characterizes interconnections among

educational attainment, social class of origin and occupational outcomes (Goldthorpe, 2018). Thus, three types of interaction is of interest; the first one is about the association between social class and educational attainment that is defined as equality of opportunity in education, the second one concerns correlations between education and labour market outcomes that is conceptualized as labour market returns to education, the third dimension is finally on the relationship between social class of origin and labour market outcomes which constitutes the purpose of my study. Therefore, I am interested in the role of social networks on labour market outcomes which tests the relevance of educational credentials in access to job opportunities. For this purpose, I dedicate this part to review theories that have to do with interactions among education, social class and labour market outcomes.

2.1.1 Credentialist Theory

The term “credential society” is used by Collins in 1970s. When he was focusing on the role of education on social mobility referring to American society, he argued that educational institutions help individuals socialize by learning middle-class values which is rewarded in the labour market. From this point of view, credentials enable dominant class to regulate access to given occupations, therefore exacerbates legitimated inequality (Wildhagen, 2014). Collins believed that education is not about skill development but provides social status. In this sense, dominant groups in society regulate access to given occupations through credentials. Likewise, educational credentials are characterized by Bourdieu (1968) as a form of human and cultural capital that help individuals occupy given occupational positions. Credentialist theory supports the view that occupational position in modern societies is directly linked with educational achievement rather than ascriptive factors such as family background, gender, race, religion. Credentialism is seen as an important feature of modern societies that are characterized by high bureaucracy, professionalization, and the surge of large companies (Van de Werfhorst & Andersen, 2005). It can also allow

employers to compare individuals' competencies and skills as educational institutions from which graduates obtain a diploma can convey relevant information for them. On the basis of this idea, we assume that labour market transition from education is straightforward, that is to say, in order for individuals to work in more rewarding jobs and realize upward social mobility, higher education is the most essential requirement to be satisfied as educational achievement would give everyone the same chance of entering the labour market. Additionally, Collins (1979) argued that credentials have labour market value which is exchanged for remuneration. This approach treats educational credentials as positional good whose value fluctuates based on market conditions. On the other hand, demand and supply defines its value. It is like how a price of good changes based on supply and demand, an increase in educational credential is expected to lower its value when the demand remains constant while a lower supply of educational credentials depreciates its value. In this context, there are two points of view about the value of educational credentials in modern societies; one is that due to technological developments, employers are incentivized to upgrade educational requirements to enter the labour market which means that demand for higher education should increase and credentials are to be more relevant in access to the labour market. From this point of view, higher educational credential is important to increase labour market returns to education as scholars demonstrate (Golden & Clauida & Lawrence, 1999). Another point of view that has to do with the value of educational credentials focuses on participation in education and market dynamics. Thus, an expansion of education that is not accompanied by occupational upgrading in the market causes lower returns to education that is defined as "inflation of educational credentials" in the literature. Most problems with labour market transition of graduates in the literature are attributed to decreasing value of educational credentials. As it is mentioned previously the value of educational credentials is depended upon demand and supply fluctuation. Depreciation of the value of educational credentials derives from economic structure of economies, that

is to say, while a country's economy does not produce enough jobs that require university degree, some graduates with university degree can be over-educated or unemployed (Morano, 2014). Scholars claim that under the conditions of scarce employment chances people still continue to participate to education given that opportunity cost is lower. Thus, lower employment probability exacerbates expansion of education (Ballarino & Barone & Panichella, 2014). Ultimately, expansion of education without a rise in high skilled jobs is accompanied by decreasing selectivity of educational credentials. Berg (1970) also claimed that inflation of educational credentials is stemmed from educational institutions. Because he was believing that educational credentials do not actually demonstrate true ability of graduates at work. According to his approach, too much reliance on credentials would result in irrational allocation of graduates to jobs. Hence, decreasing value of education in the labour market either because of an excessive supply of education or the number of jobs that require university degree impact negatively on the reliance of credentials due to weaker signals about skills and competencies of graduates as the privilege of graduating from a university is not relevant anymore. This research question is also challenged by scholars who study the association between social class of origin and labour market outcomes (Duta & Ianneli, 2018; Ballarino & Benardi & Panichella, 2014). What is observed in these studies is that educational credentials in times of educational inflation yield different labour market outcomes for graduates with different origins. As argued in Collins's book "The Credential Society" (1979) credential inflation might be an obstacle to upward social mobility for graduates due to excessive supply of educational certificates. Thus, graduates may be pushed to create qualitative and/or quantitative differences in order to find more rewarding jobs under flexible labour market conditions.

2.1.2 Social Network Theory

Education, skills and competencies are certainly important factors in the labour market transition process of graduates. However, social networks can also be a relevant factor that may alter labour market outcomes considering that employers and employees use their connections to exchange labour market information and employer can have different views about job applicants. Sociological analysis of the labour market gives more emphasis on inter-personal relations. For this reason, it aims to explain different labour market outcomes according to social ties. On the other hand, the impact of social networks is seen as an important variable of labour market outcomes. In this context, Granovetter (1973) used “social network theory” to study the impact of social networks on job search process. He demonstrated that social networks have a significant effect in job finding probability. Some other studies also claim that social networks facilitate access to labour market opportunities (Aguilera, 2002; Lievens, 2009). It is argued in these studies that social interactions among individuals help spread information about labour market opportunities and provide advantages in the labour market. However, findings about labour market outcomes being influenced by the use of social network as access channel to main work activity are controversial (Hangartner & Franzen, 2006). Generally, it is found that the use of social network yield positive results in non-pecuniary labour market rewards while a positive wage effect is not observed. Additionally, Granovetter suggested that exchange of information also depends on the type of social network. For this reason, he analyzed social networks in two categories. One category is defined as “weak ties” that consist of networks in which people do not have so much emotional connection such as colleagues and acquaintances while another category is defined as “strong ties” that consist of family and friendships. According to Granovetter, weak ties help job seekers more compared to strong ties given that weak ties can also connect to other networks which can provide more information about labour market opportunities. Therefore, graduates with powerful social networks that help

them with finding a job can be hired in more rewarding jobs which can make educational credentials less relevant in the labour market and ultimately, weaken the function of education as a source of social mobility.

Summarily, in a context where participation to university education is widespread due to the desire of people to promote social mobility but its relevance for the labour market opportunities is questioned in times of educational inflation, the view of education as a source of social mobility is crucial to analyze. In this sense, social network can be one of the factors that may alter labour market outcomes in favour of those individuals who have strong network while it may disadvantage others that do not have it.

2.2 Trends in The Italian Labour Market

The next two parts of the thesis are dedicated to the analysis of Italian university system and labour market trends in Italy given that these two dimensions are relevant to understand the efficiency of educational credentials in the labour market transition. Therefore, my aim is to see to what extent labour market conditions are favourable to create jobs for Italian graduates. The Italian economy was severely hit by the recession during the global financial crisis of 2008. As illustrated by the GDP growth rate (OECD, GDP Growth Rate), Italy experienced a first economic recession in 2009 and in 2012. Since then, economic outlook has been slowly improving. As the most current data indicates, the Italian economy grew by 0.3% in 2019. Due to slow economic growth of the Italian economy, labour market indicators have also been worsened because of the fact that the economy has been less able to create new jobs. This is an important indicator given that university graduates are more likely to work in highly innovative jobs. Employment rates among Italian tertiary graduates as demonstrated (Fig.1) have decreased 5% between 2010 and 2019.

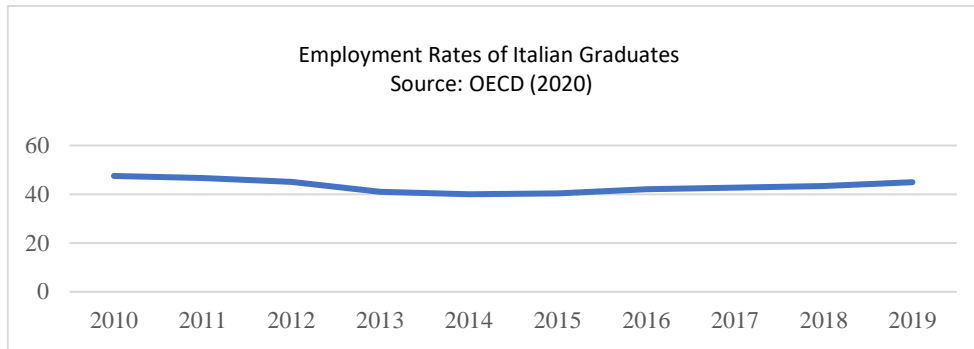


Figure 1

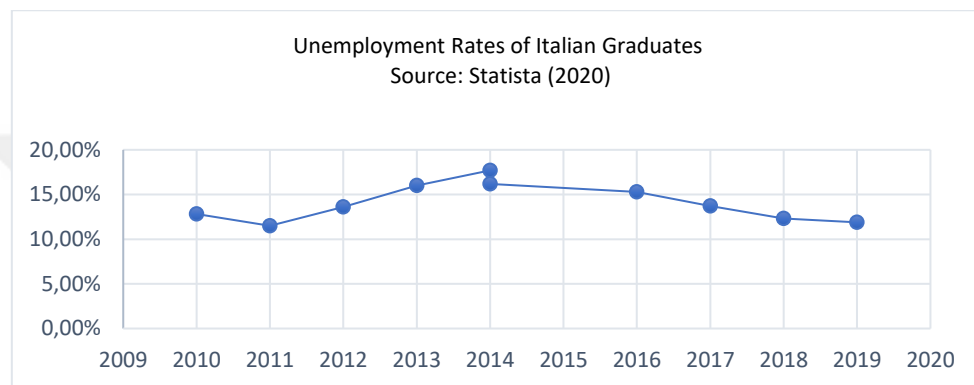


Figure 2

When it comes to the unemployment rate among Italian graduates, there has been some improvement between 2016 and 2019 as it is shown in Figure 2 but it is around 10%. Due to high rates of youth unemployment, both scholars and policy makers focus on the labour market conditions for graduates. Especially after the economic crisis of 2008, one of the most important labour market reforms that aim at fostering employment in Italy was “Jobs Act” that was enacted in 2014. After the implementation of “Jobs Act” by Matteo Renzi’s government, the labour market of Italy has become more flexible as firing restrictions have been relaxed and temporary contracts have been encouraged by the state incentives and enforcement of the labour law. More specifically, the reform brought about three important provisions; the abolition of prohibitions to track employees work by employers and the reduction of threshold which restricts the stipulation of temporary employment contract, the removal of reinstatement in case of unfair

dismissal. Thus, the ongoing process of flexibilization in the Italian labour market since the 1990s have been reinforced by this reform. Indeed, The Treu Package in 1997 and the Biagi Law in 2003 already introduced and promoted atypical employment forms which are defined as temporary and less secure jobs. As argued by the majority of Italian scholars, Italian labour market has become more segmented due to these reforms which increased labour market inequalities (Cappelari & Aringa & Leonardi, 2012). Indeed, temporary and part time employment forms have been increasing since the global financial crisis of 2008 in Italy remarkably. Temporary contract as a percentage of total employment has increased from 13% to 17,02% between 2008 and 2018 while part time employment similarly increased from 15,96% to 17,96% in the same period (OECD, 2020). In addition to this novelty in the Italian labour market, Employment Protection Legislation (EPL) rate has decreased significantly (Pinelli & Torre & Pace & Cassio & Arpaia, 2017). From this point of view, the use of temporary contracts might be reasonable in order to create a long lasting employment relationship between prospective employers and employees which in turn, can make social networks less relevant in the Italian labour market due to the fact that employers have more opportunities to test employee performance and it is less costly to fire in case employee is found to be unproductive. Although employment data does not take into account specifically Italian university graduates, they already give us a general idea of how Italian labour market is evolving which is also relevant for graduates too. As they generally have less work experience they are more likely to be occupied under temporary employment contracts. In this regard, Barbieri and Scherer (2009) argued that precarious situation of young graduates in the beginning of their careers may be long lasting. Despite the fact that the number of tertiary graduates are low, labour market returns to higher education in forms of monetary rewards are not significantly higher compared to graduates with lower educational achievement (Strauss and de la Maisonnette 2007). For this reason, it may be the case that graduates need social network to get hired under more rewarding employment conditions.

However, there are also arguments about the fact that labour market outcomes vary based on the study field (Ballarino and Bratti 2009). From this point of view, it is also important to take into consideration graduates' study field characteristics. Additionally, the economic structure of the country is worth mentioning in this context. In Italy, micro and SMEs make up a big proportion of the economic activity. Indeed, companies with less than 10 employees make up a large share of the total business (ISTAT, 2017). As mentioned in the theoretical context, the use of social networks might be more widespread as there is a shortage of large enterprises which would make inter-personal relations less relevant in the labour market.

2.3 University Education in Italy

One of the main problems in Italian universities have been access to university education, the efficiency and stability of educational activities and finally labour market transition of graduates after achievement of the degree. My focus will be on access to university education given that I am interested in the value of educational credentials which has to do with the supply side of the labour market. In previous research, it is demonstrated that there are significant inequalities in access to university education and continuity of educational career according to social class of origin (Schizzerotto 214; Cappellari & Lucifora 2009). However, enrolment rates together with the number of university graduates in Italy have continuously increased during the 1990s and 2000 thanks to educational reforms. Importantly, the duration of study was shortened with a view to facilitating the entry to the labour market for graduates. At the end of the 1990s "Bologna Process" brought about important changes in the higher education system of Italy. With this reform, track choices in university education have been divided into three levels such as Laurea Triennale (3 year of Bachelor), Laurea Magistrale (2 years of Master's), and Dottorato di Ricerca (3 years of PhD). Apart from that, there have been new changes in curricula. Particularly, short courses

have been introduced that are designed for specific occupations. As a result of these facts, this reform has made the course structures vertically differentiated. When it comes to participation to university education after “Bologna Process” there was a discussion among scholars how this reform would have an impact on enrolment rates and empower the link between firms and universities which is seen weaker than in other advanced European countries such as Germany, Netherlands, Belgium. Reasonably, one argument was that new system would give more opportunities to enrol in university education considering that duration of study has been reduced. This is an important novelty also because the decision of students with poor family background to continue to education would be changed positively by this reform. Indeed, scholars found a positive effect on the enrolment rates among this group of students (Cappellari & Lucifora, 2009). However, it is also argued that academically oriented programmes still continue to be over represented by students with more prestigious family background (Capsada, 2014). In addition to this, Ballarino (2011) argue that the expansion of university education in Italy is motivated by other factors than the demand for it such as improving living conditions, the will of social classes to maintain status, and the approach of state on university enrolment. This is an important finding for our research given that the value of educational credentials is dependent upon the demand for human capital in economy. As mentioned before, the population with tertiary education, aged between has increased from 11.75% to 27.73% between 2001 and 2018. Although the difference in labour market returns between tertiary and upper secondary graduates remains higher, it is still much below OECD average (OECD, 2019). Therefore, inflation of educational credentials argument is relevant in the Italian case. Finally, the poor capacity of economy to absorb educational credential in the labour market accompanied by the expansion of education and weak connections between firms and universities can make the use of social networks in job finding process more important as educational credentials lose its function in the labour market.

Chapter Three

3.1 Empirical Analysis

3.1.1 Data

In this analysis I am interested in how social background and academic career of graduates are correlated with the use of social networks for finding a job and how the use of social network is correlated with salary, and employment contract. For this purpose, I utilize data from a questionnaire of ISTAT (Istituto Nazionale di Statistica) that was conducted with a view to analyzing the transition of graduates from university to work in 2015. The samples in the data set were designed by using Incomplete Stratification technique (Righi and Falorsi, 2015) in which is a method of stratification of units where all graduates that are considered as sample units have the same probability of inclusion in the layer but the number of units in different degree programmes is a random variable. The data provides a wide range of information on the conditions of graduates about four years after graduation and proposes the study of the transition from university. Additionally, it allows to study the impact of social background, both on the process of school and university selection, and on the process of transition to work. Importantly, it was taken into account also the changes in the didactic organization of the university system in 2000s. Thus, it takes the form of a three-year cycle that consists of first level degree courses, followed by a second two-year cycle, represented by second-level degree courses that are known as master's degree. In addition to these courses, there is also a limited number of single-cycle degree courses that issue the qualification, equivalent to the second level specialist / master's degree, only upon completion of the cycle. These programmes consist of five-year courses in Architecture-Building Engineering, Pharmacy, Dentistry, Veterinary and, from 2006/2007, also Law, in addition to the six-year course in Medicine field of study. The reference population in the dataset is represented by 58.400 university graduates (58.9% women, 41.1% men) belonging to 90 universities from which graduates obtained their diploma in

2011. As it can be seen from the table below graduates from bachelor's degree (Triennale) make up the largest percentage of the total number of graduates while the number of graduates from Specialist degrees is also close to that of Bachelor graduates. The questionnaire consists of four parts: (1) curriculum of graduates (2) labour market conditions which include also unemployed graduates, (3) mobility of graduates (4) family structure. In the first part, graduates have been mainly asked their initial study track and performance during this period. The second part in which I am interested in involves employment characteristics of graduates that have found a job within 4 years from graduation. Especially the answers about the access method to main work activity is the most important question for the purpose of this study. In addition to this, I also use data for occupational status of parents and region of residence before enrolling in university from the third part and fourth part respectively.

Field of Study and Degree Type

The Tab.1 below shows the distribution of graduates according to field of study and type of degree that they obtained in 2011. As it can be seen from the table, graduates from bachelor and master's degrees make up relatively large percent of the total graduates respectively compared to single cycle degrees. When it comes to field of study, what is striking is that the number of students from Economics and Political Sciences as well as Engineering fields make up the largest percent. For the purpose of analysis, I distinguish field of study into five parts; 1) Natural Sciences; Science, Geo-biology, Chemistry; 2) Medicine, 3) Technical Sciences; Engineering, Architecture, Agriculture, 4) Humanities; Linguistic, Literature and 5) Social Sciences; Economics, Political Science, Law, Psychology.

| Field of Study | Single Cycle | Bachelor | Master & PhD |
|----------------------|--------------|----------|--------------|
| Scientific | 4,0% | 46,4% | 49,5% |
| Chemistry | 42,9% | 22,5% | 34,5% |
| Geo-Biology | 4,8% | 45,9% | 49,3% |
| Medicine | 26,1% | 7,6% | 66,4% |
| Engineering | 6,7% | 55,7% | 37,6% |
| Architecture | 26,5% | 34,3% | 39,2% |
| Agriculture | 23,5% | 35,5% | 41,0% |
| Economics-Statistics | 6,5% | 46,4% | 47,1% |
| Political Sciences | 6,1% | 49,4% | 44,5% |
| Law | 54,9% | 16,9% | 28,3% |
| Literature | 11,2% | 47,7% | 41,1% |
| Linguistic | 7,5% | 45,5% | 47,0% |

Tab.1 Distribution of Fields of Study According to Degree Type

Job Search Methods

The table below (Tab.2) shows the main channels of access to main work activity which helped graduates find a job. Since I am interested in the use of social network, direct contact with the employer and reference by friends, parents acquaintances are of interest. In terms of percentage, the use of social network makes up 15,2% of total job the search methods. What is remarkable is the use of public and private employment services has the lowest percentage with 0,8%. In order to avoid wrong estimation risk, I exclude those

who started self-employed activity because of the fact that I am interested in graduates that started to work as a dependent contractor.

| Channel of Access to Work Activity | Percent |
|--|---------|
| Public selection | 14,6 |
| Direct contact with the employer | 8,0 |
| Reference by friends, parents, acquaintances | 7,2 |
| Reference from the University/Career Center | 3,9 |
| Following an internship | 9,8 |
| Direct call from the company | 5,1 |
| Internet or newspaper | 7,5 |
| Send curriculum to the employer | 20,0 |
| Public employment services | 0,8 |
| Started self-employed activity | 10,9 |
| Private employment agency | 3,3 |
| Other Channels | 9,0 |
| TOTAL | 100,0 |

Tab.2 Distribution of Fields of Study According to Graduation Degree

Graduation Time and Grade Point Average

The Table.3 shows mean differences in GPA according to graduation time. As it is shown from the table, graduates that graduated in time have a higher GPA than those who postponed their graduation and the difference is statistically significant as the confidence interval does not include zero and p value is lower than 0,5. The result of this bivariate analysis is important to see as I am also interested in the association between use of social network and academic performance.

| Graduation Time | Number of Cases | GPA Mean | Std. Error Mean | 95% Confidence Interval of the Difference | |
|-------------------|-----------------|----------|-----------------|---|-------|
| | | | | Lower | Upper |
| In Track | 31868 | 105,24 | 0,037 | | |
| Out of the Course | 26532 | 100,37 | 0,052 | 4,751 | 4,98 |

Tab.3 GPA Mean According to Graduation Time

Descriptive Statistics

| Variables | N | Minimum | Maximum | Mean | Std. Deviation |
|-------------------------------|-------|---------|---------|--------|----------------|
| Job Search Methods | 36958 | 1 | 2 | 1,55 | 0,497 |
| Gender | 58400 | 1 | 2 | 1,55 | 0,497 |
| Citizenship | 58400 | 0 | 1 | 0,99 | 0,113 |
| Occupational Status of Mother | 36352 | 1 | 3 | 1,16 | 0,387 |
| Occupational Status of Father | 56123 | 1 | 3 | 1,31 | 0,487 |
| Region Of Residence | 58400 | 1 | 99 | 11,23 | 10,741 |
| Graduation Time | 58400 | 1 | 2 | 1,45 | 0,498 |
| Grade Point Average | 58400 | 66 | 111 | 103,03 | 7,894 |
| Income | 42614 | 1 | 3 | 1,4418 | 0,61519 |

Tab.4 Descriptive Statistics for Dependent and Independent Variables

In this analysis the dependent variable is the probability of using social network. Graduates that have found a job within 4 years from graduation have been asked the way they found a job. Therefore, job search methods that include the help of social networks will be used as a dependent variable in the analysis. Gender, citizenship, occupational status of parents, region of residence, graduation time, grade point average, field of study, income bracket, constitute the independent variables of the analysis.

Hypothesis

1. The probability of using social network should be higher among those graduates whose parents are self-employed than those with working class parents.
2. Students from Southern regions can be more likely to use social networks when finding a job.
3. The probability of using of social network can be higher among students whose field of study does not lead to specific occupations.

4. The probability of using of social network should be higher among students with lower GPA as well as students who delayed graduation.
5. Graduates that are employed in high income bracket are more likely to use social networks.

3.1.2 Method

I use Ordinary Least Squares Model in order to test my hypothesis. For this purpose, I create a dummy variable which tests absence and presence of the use of social network when finding a job. Therefore, the presence of social networks takes the value of one while the absence of social networks is given zero. Accordingly, it is tested how ascriptive characteristics; gender, citizenship, occupational status of parents which is whether self-employed or dependent worker, region of residence before university education, academic performance; grade point average, field of study, graduation time, and income from the main work activity are correlated with the probability of using social networks when finding a job after graduation. Accordingly, I performed a multivariate analysis for which I use linear regression model. In every model I define reference categories in order to better understand the change in the probability of using social networks. Model 1 concerns ascriptive characteristics of graduates while Model 2 and Model 3 takes into consideration academic performance that is operationalized by using grade point average, graduation time and labour market outcome which is operationalized by income from main work activity that was found after graduation. Finally, the assumption is that the more the value of independent variables gets closer to one, the more likely that the use of social network takes place.

3.1.3 Results

Tab.5 Ordinary Least Squares Analysis Dependent Variable: Use of Social Network

| | (1) | (2) | (3) |
|---|---------------------|---------------------|---------------------|
| Gender (Ref.Male) | 0,003 (0,006) | 0,009 (0,006) | -0,013 (0,006) |
| Citizenship (Ref.Italians) | 0,006 (0,026) | 0,005 (0,026) | 0,004 (0,026) |
| Working-Class Mother (Ref.Self Employed) | -0,019** (0,009) | -0,016** (0,009) | -0,018** (0,009) |
| Working-Class Father (Ref.Self Employed) | -0,045** (0,007) | -0,045** (0,007) | -0,047** (0,007) |
| Residence in North | 0,018 (0,032) | 0,030 (0,032) | 0,016 (0,032) |
| Residence in Center | 0,012 (0,033) | 0,024 (0,033) | 0,008 (0,032) |
| Residence in South | 0,017 (0,033) | 0,023 (0,033) | 0,003 (0,032) |
| Scientific Field | | -0,026** (0,013) | -0,006** (0,013) |
| Technical Field | | -0,066** (0,012) | 0,048** (0,006) |
| Humanistic Field | | -0,004 (0,014) | -0,006** (0,013) |
| Social Science Field | | -0,039** (0,011) | -0,051** (0,013) |
| Medicine Field | | -0,084** (0,013) | -0,028** (0,012) |
| GPA > 100 (Ref. GPA < 100) | | -0,039** (0,006) | -0,034** (0,011) |
| Late Graduation (Ref. Graduation in Time) | | 0,057** (0,006) | 0,048** (0,006) |
| Low Income Bracket (<1500) | | | 0,132** (0,011) |
| Middle Income Bracket (1500-2000) | | | -0,012 (0,012) |
| High Income Bracket (>2000) | | | -0,016 (0,016) |
| Constant | 0,194 | 0,206 | 0,176 |
| Observations | 17339 | 17339 | 17339 |
| R-Squared | 0,003 | 0,015 | 0,035 |

**p < 0,05 Standard errors are shown in parenthesis and the presence of social network takes value of one otherwise zero.

Model 1 estimates the probability of using social networks by taking into consideration ascriptive factors. As it can be seen from the Tab.7, there are no significant differences in the probability of using social network between male and female graduates as well as Italian and foreign graduates. When it comes to occupational status of parents, there are significant differences. The probability of using social networks is higher among graduates whose mothers and fathers work as self-employed. Especially, those graduates whose fathers work as dependent worker are 4 percent less likely to use social networks to find a job. In addition to this, there is no significant effect found according to regions of residence before university education. Then, first hypothesis is confirmed which is that graduates whose parents are self-employed are more likely to use social networks while the second hypothesis which is about regional differences is not supported by this evidence. Model 2 takes into consideration also academic performance among Italian graduates. In this regard, field of study is the first measure to be analyzed. Graduates from humanistic and social science fields are more likely to use social networks compared to graduates from technical, scientific and medicine fields of study while the results are statistically significant except in the case of graduates from humanistic field of study. Accordingly, the third hypothesis is confirmed which is that graduates from study fields which do not lead directly to specific occupations are more likely to use social networks. For the same purposes, I analyze grade point average and graduation time as indicators of academic performance. As it can be seen from the model, graduates whose graduation mark is above 100 are 3% less likely to use social networks in order to find a job while graduates who postponed graduation are 5% more likely to refer to social networks. Therefore, the fourth hypothesis is confirmed that graduates with low grade point average and longer duration of study are more likely to use social networks. Finally, Model 3 includes mean income of graduates from the main work activity which is found after graduation. The reason behind adding this

variable is to observe whether high income is associated with the use of social networks for finding a job. For this purpose, income scales have been assigned according to the answers from graduates. As it can be seen from the table, graduates who are assigned in low income bracket are 13% more likely to use social networks and the result is statistically significant while the probability of using social network is decreasing with higher income scale. Thus, we can refuse the last hypothesis that graduates who earn high income are more likely to use social networks when finding a job.

Chapter 4

4.1 Conclusion

Labour market returns to education is a constantly debated topic in economics and sociology literatures which analyze it from different perspectives. Economists usually rely on human capital and signaling theories to analyze labour market returns to education. However, the main approach of these theories may be inadequate to capture differences in labour market returns to education considering that these theories take into consideration only the relationship between educational achievement and labour market outcomes with a focus on demand and supply mechanism. Because, it might be the case that graduates with the same level of education can have different labour market outcomes which can not be detected by referring to these theories. From this perspective, sociologists have different approach to the topic which pays particular attention to socio-demographic factors. In this regard, Granovetter's work that has to do with interactions between the use of social networks and labour market outcomes is really important in order to understand the relevance of interpersonal relations on the labour market. With the same purpose, I analyzed the use of social networks and graduates labour market in Italy. However, my aim was to analyze graduates' probability of using social networks in order to find a job. Because, due to inflation of educational credentials and high unemployment among graduates, the use of

social networks to find a job can be more common in order to achieve more desired labour market outcomes which can weaken the role of education in social mobility given that those who do not have strong social networks can be prevented from upward social mobility even if they get the same level of education. Although I do not attempt to test causal effects of the use of social network in labour market outcomes which was impossible to observe from my data, the probability of using social networks can also be relevant to understand to what extent the use of social network is correlated with social background, academic performance and labour market outcome which is operationalized as main income from work activity. In this regard, it can be argued in the Italian case that the probability of using social network is higher among graduates with low academic performance and low income while it is lower among graduates with working-class parents compared to those of self-employed parents.

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