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The quasi-market of employment services in Italy

Francesco Pastore

Abstract. This paper aims to study the shortcomings and merits of the first experiment of quasi-market in the provision of employment services: the Lombardy DUL (Dote Unica Lavoro). This system, which has inspired the 2015 national reform within the Jobs Act, has reactivated and revitalized the sector by providing important job opportunities to jobless workers. The system has the typical problems of quasi-markets in the provision of public services (lion’s share of private organizations; cherry picking; gaming). However, different expedients are devised in the program to minimize these shortcomings. The empirical analysis suggest that such phenomena if existent are at a physiological level. Analysis of the determinants of completing successfully the program provides non-trivial results as to, among others, the role organizations of different ownership type and of services provided.

JEL Classification: H44; H52; H76; I38; J68; R23.
Keywords: Public employment services; Quasi-markets; Cherry-picking; Gaming; Lombardy region; Jobs Act.

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Introduction

The aim of this essay is to assess the effectiveness of the DUL (Dote Unica Lavoro), a program implemented in Lombardy region, under the aegis of the European Social Fund, to introduce a quasi-market organization of employment services in favour of the NEETs (Not in Employment Education or Training). The DUL program was experimented to overcome the difficulties of the system of public and private employment services in addressing the needs of job seekers in a local market which is still one of the most active and efficient in the country.

A number of previous interventions have aimed without success to increase the effectiveness of employment services in the past. First, it was the end of the monopoly of the state in supplying employment services by the Treu Law of 1997. The Biagi Law of 2003 stated the full equality of opportunities for private (forprofit and nonprofit) and public employment services. Despite a certain tendency of the local population as compared to that of other regions to prefer private agencies, rather than the state owned, still only a small number of NEETs were using placement services and training supplied in the system.

The intuition of the DUL, which has proven to be quite successful, was to introduce a system of vouchers (the dote is a voucher) to jobless workers of different amount according to their actual need, as assessed by a profiling based on objective criteria, such as the education level, the duration of the unemployment spell, gender and so on. The voucher is a tool to introduce a possibility of choice by the users of the best services available by the suppliers on the market. In addition to the vouchers, accredited organizations may claim a special prize for every DUL which is completed, namely that leads to employment for at least six months.

The analysis is essentially descriptive, due to data limitations, and aims to study for the first time by means of administrative data some characteristics of the program as well as the determinants of success in completing the program\(^1\). We hope to provide important insights as to the success of the program in reaching its aims and at the same time in removing some of the most important limitations that economic theory has brought to the fore while studying the way of working of quasi-markets. In fact, the program was run in such a way to device different tools to address the typical limitations of quasi-market organizations.

With the end of the traditional Keynesian approach to economic policy, the goal of (full) employment has been gradually replaced by the goal of employability (Centeno and Stewart, 2013). A radical change followed also for the initial tools and targets of economic policy. Expansionary fiscal and monetary policy have been slowly replaced not only by passive income support schemes, but, even more so, by active guidance, vocational training and self-employment policies. The market changed from a principally macroeconomic perspective to a microeconomic one.

At the center of these policies there is not only the vocational training system, but also the education system: the final goal of employability can be achieved when an efficient system of education and vocational training is created (VET system); hence the ensuing need to improve public education (in particular, the high technical and vocational education), but also vocational training and, importantly from the point of view of this study, public and private employment services.

In recent years, increasing the education level of young people, also the university level, has become a key factor of success of the school to work transition. Nonetheless, education attainment itself, which is in Italy one of the lowest within the EU, is not everything. In fact, in countries such as Italy - where the education system follows a sequential, rather than a dual

\(^1\) Montaletti (2015) provides a causal analysis evaluation of the impact of the policy as based on quasi-experimental methods of randomized comparison between a target and a control group. Here it is not allowed due to the lack of suitable data.
principle - the mission of the education system is simply general education, leaving to the post-school and post-university steps the task of promoting general and specific work experience, without which human resources are incomplete and employability is compromised. In dual education systems (such as, for example, the German one), classroom education and the vocational training received on-the-job happen at the same time: in this case, the education system’s mission is forming all-round human capital.

This means that, in sequential systems, the “problem” of work experience and the generation of work-related competences is left to the market (depending on the flexibility of the labour market) or the VET system (depending on the efficiency of public and private Job centres). In Italy, a system of sequential education – characterized by a low integration with enterprises also for high technical and vocational schools – is accompanied by a labor market that, according to some people, is still insufficiently flexible, and by an unsatisfactory vocational training system. Within this context, efficient employment services are a key issue. Instead, only about 3.5% of new hires happen through public and private employment services, which compares to about 7% of the UK and 13.5% of Germany, countries where also other factors affect employability positively (Pastore, 2013; Cicciomessere, 2014).

From 1970 to 1997, a period characterized by extreme labor rigidity, with high hiring and firing costs, companies were discouraged to hire; in the following years, a series of reforms contributed to increase more and more the labour market flexibility for newly hired workers, making temporary job contracts more convenient.

In its turn, the vocational training system has always been under dimensioned, in terms of human and financial resources, as well as weighed down by bureaucracy which reduced its operational capacity.

In addition, at least from the reform of Title V of the Constitution introduced in 2005, which gave the competence for the provision of vocational training to Regions, there has been a “fragmentation” process of employment services. Some Regions (such as, in particular, Lombardy, Veneto and Emilia Romagna) showed to have a better organizational capacity which led to great innovation, and others (especially the southern Regions) experienced an important increase in the staff hired, but not in the capacity of offering a job to the unemployed and the inactive (Giubileo et al. 2013; Pastore, 2015b).

The Lombardy case is characterized by a vivid and innovative management which deserves close attention not only for the capacity of creating new skills and a growing number of jobs, but also for the capacity of reactivating and revitalizing a system (of public and private) employment services which is highly inefficient in most Italian Regions.

This essay is divided into four main parts. Section 1 discusses the aims of the evaluation of a program like DUL. It is an occasion to explain the shortcomings and merits of the DUL organization. Section 2 describes the way of working of the program. Section 3 proposes a descriptive analysis of several aspects of the program. Section 4 focuses in part one on the methodology adopted for the econometric analysis of the determinants of the probability to successfully complete the program, rather than not. The description of the data set is provided in a specific Annex. Another subsection presents the main results. Some concluding remarks follow the discussion of the main findings

1. The aims of the DUL assessment

2 The Good School reform of 2015 has eventually introduced a short period of compulsory work related learning for high secondary school students. However, it is too early to see the impact of this reform in our data.

3 For a more systematic analysis, see: Pastore (2015). Pastore (2017) studies the Italian school-to-work transition as an example of the Mediterranean regime.
DUL is a complex program of active employment policies which implies, first of all, a transformation of the organization and market structure of the sector of public and private employment services. By introducing a “quasi-market” organization, the program aims to “reactivate”, so to say, not only the NEETs, but also the supply of employment services themselves.

DUL grants to beneficiaries the possibility to choose freely the accredited operator they prefer. One of the main limitations of the public sector monopoly is that users cannot choose and, usually, this tends not only to limit the effectiveness, but also the quality of the public service. The quasi-market organization of the market allows users to express their preferences by empowering them with a voucher with which they can “buy” services from the accredited operators. Following the Biagi Law of 2003, not only public, but also private (for-profit and nonprofit) operators enter the competition to supply the services requested. In this quasi-market organization, when a “users sovereignty” is (almost) restored, it is clear that the same accredited operators will develop all the tools – the human and professional skills – necessary to produce the best employment services they can to satisfy users and at the same time gain the voucher. Quasi-markets enhance competition among the accredited operators to gain the maximum number of users.

The idea to create quasi-market was also at the heart of Decree n. 150 presented by the Government within the so-called Jobs Act, for the redefinition of the institutional and regulatory framework in this field at a national level. Undoubtedly, the DUL program inspired the national government reform of the sector. However, as mentioned in the previous sections, the Governmental decree differs in some aspects from the Lombard DUL, which has generated some debate among experts and policy makers.

The main difference between the DUL and the government organization of quasi-markets is in the role of the public versus private sector. The idea behind the national reform is that the state sector should maintain not only a role of monitoring of the activity of the private sector, but also that of issuing the assegno di ricollocazione, the name given to the voucher in the national system, instead of date. In the national framework, it is provided by the state to jobless people after their profiling in groups of need based on objective indicators, although like the date, also the assegno can be spent with both public and private organizations. The reason why the voucher is issued by the state sector is that this should reduce the conflict of interest that might arise if private companies would profile users. However, since the state sector is often inefficient and could take much time to profile job seekers, also private accredited employment services can make profiling, like in the DUL, after two months have uselessly passed from the first request of the user to a public agency (see, for instance, the rejoinder by Leonardi, 2015, one of the authors of the law, to Bocchieri, 2015, the DUL Director in the Lombardy region).

The fact of having inspired the national reform means that it is certainly interesting to assess the DUL effectiveness in achieving its goals, not only from the point of view of the Lombardy Region, but also from that of the central government.

Moreover, the DUL effectiveness assessment is neither obvious, nor trivial. In fact, if, on one hand, quasi-markets increase the so-called x-efficiency of the operators and of the entire market, on the other hand, however, there are some shortcomings, as clearly appeared since the first quasi-markets were introduced in in the management of several public services in Great Britain in the Eighties. However, these shortcomings have not prevented quasi-markets

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4 Arrow (1963) is among the first to outline the shortcomings of the production of public services when users cannot choose. His analysis refers to the health sector, but can easily be extended to all public services managed similarly. Bartlett and Le Grand (1993) are among the first to show the way of working - advantages and limitations - of quasi-markets in the implementation of social policies in Great Britain in the Eighties.
from spreading in the provision of several public services and notably the health services in all advanced economies thereafter.

For shortness’ sake, only some of these shortcomings will be recalled. First, it should be mentioned that the expected increased efficiency of public services in quasi-markets must be verified taking into account the information actually available in the market, which could prevent users from freely choosing the best operator. Information asymmetry regarding the quality of the services offered should be prevented, for instance, for the mechanism to work properly.

Moreover, while state monopolies prevent the entrance of other operators in the market, constraining competition, on the other hand, an excessive fragmentation of supply among a large number of operators could prevent the exploitation of economies to scale in the supply of employment services.

In the specific case of employment services, Giubileo and Pastore (2013a; and 2013b) and Giubileo, Leonardi and Pastore (2014) outline, for example, the most common and important risks in a quasi-market context, such as creaming, also called cherry picking⁵, and gaming⁶. Table 1 presents a snapshot of the main typical shortcomings of a quasi-market organization of employment services, together with the main organizational solutions which can be adopted, also based on the experience of implementation of DUL, to overcome such shortcomings. The empirical analysis will provide descriptive empirical evidence to verify the presence of such theoretical aspects in the data.

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One of the risks of quasi-markets is that private employment agencies can activate mechanisms of cherry picking or creaming of the easiest to place beneficiaries. This happens sometimes through the so-called “refusal” practice of the most difficult cases to place, pushed to apply to the public or non-profit organizations, according to the cases (people with very low levels of education attainment, such as illiterate or without compulsory education, very long-term unemployed, disabled and so on). This would lead to maximize the gain, with the same effort made in the placement activities, job guidance and vocational training for beneficiaries. The most common creaming cases occur because:

1. Younger beneficiaries tend to accept temporary jobs more easily than adults;
2. Those who have a higher education level can find more easily a good match with the job demand;
3. Private organizations are interested to gain a positive result in the shortest possible time.

Of course, a certain degree of creaming is inherent to the activity considered, because the most employable beneficiaries might themselves prefer private operators, especially if they are considered more effective than public operators. In addition, private operators provide a greater and better supply of services than public operators for their highest qualification levels.

For this reason, it is not always easy to understand whether creaming is a normal matching process between supply and demand or an improper attitude by the private operator, to be censured and discouraged. DUL program tries to discourage a pathological form of creaming with different tools, by:

- assigning a higher voucher to the groups less in need;

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⁵ Term identifying the preference of private organizations for the beneficiaries most easy to place and the rejection of those difficult to place.

⁶ Agreement between operators and beneficiaries, which implies a simulation of the placement of the latter, in order to obtain the benefit/voucher fraudulently.
• assessing not the average placement rate, but the rate by group in need, which allows a fairer rating of operators of different ownership type, taking into account their ability to complete the program not only for the easiest cases to place, but also for the most difficult ones.

Gaming is the tendency of a private operator to agree a policy with the beneficiary and get the benefit even if the terms for its payment are not respected. For example, it is possible to simulate a work contract that is only on paper and can be canceled soon after obtaining the benefit. As for DUL, gaming issues are prevented by a series of expedients.

First of all, it should be clarified, that there are two types of remuneration for accredited organizations. First, part of the remuneration is given as a benefit for the simple supply of series that is the remuneration of “job placement” services provided to users. It is important to keep the operator on the market. Second, some “recruitment incentives” are recognized by the Region only to the employment agencies which successfully concluded a PIP with a labor contract for at least half a year. This will make gaming less convenient, since the cost of the labor contract would be higher than the benefit.

Evaluation studies are an important tool to make quasi-market work efficiently for several reasons. First of all, policy makers (as well as the median voter) may be interested to understand if the program has had an impact on employment and at what cost. An important indicator of effectiveness of the program is the cost for any new operator involved and if the jobs created are additional or a substitute to those that would have been created anyway.

Second, evaluation studies are fundamental for the same efficient working and continuous improvement of the policy. Detailed assessment studies can permit to identify the strengths and weaknesses of the policy, reinforcing the former and reducing the latter. In this sense, the policy effectiveness depends crucially on such studies. Third, giving detailed and rigorous information on different aspects of the program, allows the policy maker reducing the asymmetric information between operators and beneficiaries about the quality of services offered. This is a necessary term so that beneficiaries can choose, among accredited operators, the best ones, not on the basis of alleged subjective assessments, but on the basis of objective criteria and transparent evidence based analysis, validated by a scientific point of view. In a certain sense, evaluation should be conceived as an integral part, together with the accreditation and rating of operators, in order for the program to work effectively. This is an important tool of New Public Management.

Accreditation ensures the respect for users of a minimum quality standard of the services offered, but it neither allows to verify the best and the worst operators, nor to communicate the choices of users. From this point of view, it is important to introduce a rating system of operators. However, to ensure that rating is objective, verifiable and up-to-date, it must be based on rigorous and effective assessment studies, carried out according to protocols agreed with the policy maker and the operators themselves. Only in this way, beneficiaries will be able to make a conscious choice, a necessary condition to increase the allocation efficiency of the sector promoted by the quasi-markets.

The quasi-market pattern created in Lombardy according to the principles here showed allows reaching several desirable outcomes of employment policies, such as:

a) the workers skills;

b) the probability of the unemployed and job seekers to find a job;

c) in particular, as a result of the two previous points, to find it permanently;

d) the efficiency of the public and private employment service system.

The DUL seems to possess all the necessary characteristics to effect each of these outcomes. However, also due to the recent program application, there is no systematic impact assessment on each indicators considered yet, although there are already several studies that, in different periods, have assessed particular aspects of the DUL. An exception is the Montaletti’s (2015) seminal study (not only for Lombardy). The study provides a counterfactual
pattern with DUL users considered as “target group” and a “control group” formed by unemployed people, selected from the Compulsory Communication (comunicazioni obbligatorie) database among those who lost their job in the same period in which the policy was implemented. Moreover, the control group was selected according to employment and demographic characteristics similar to those of the target group. The author, in this way, showed that DUL beneficiaries have systematically higher chances to find a job than others who did not participate in the policy.

The right definition of the policy aims is important for a proper assessment of its effectiveness; these aims will be analyzed below.

a) Workers skills

In the German tradition, the first purpose (often forgotten) of pro-active employment policies and, therefore, also the DUL, would not be employment growth, which is rather the final outcome of the policy, but the development of skills, sometimes also called “professional qualification of workers.” In other words, skill development is the immediate goal, even if this development is indirectly aimed also at employment growth.

However, one problem with this approach is that it is hard to find an appropriate tool for measuring the skills before and after the policy. Often there are no ex ante and ex post measurements, that are basic elements for a proper policy assessment. In the future it will be necessary to collect this kind of information, although first of all it is necessary exactly clarify what to measure. It could be job productivity or also something else.

In the German case, the problem is less hard to solve because professional qualifications created with professional training courses can be measured.

One way to measure skills is to state that they count only if they actually create job opportunities. This leads directly to the second policy purpose, that assessment studies consider.

In the Anglo-Saxon tradition, the skills of users is not recognized as important. It is also considered very hard (if not impossible) to measure, to the point that many believe that it is not really a goal distinguishable from that specified in paragraph b (the probability to find a job). Evaluators should follow a black box approach: it is not interesting “how” the accredited operator creates jobs, whether it delivers vocational training or not, whether it creates skills or not; the operator must find employment to beneficiaries: this is the only thing that counts and that should be considered when rewards are defined.

b) & c) Effects on employment.

The key goal of employment policies and evaluation studies is employment. All the observers and, in particular, policy makers are interested to know: How many jobs have been created with this program? Are they additional or outplacement jobs to those that the market would still have created by itself? Are they fixed-term or permanent jobs?

From that, important decision may depend, such as whether or not to continue the program, for how long, whether in its current shape or in a modified shape, with which resources, more, less or equal to those already existing, and so on.

This issue can be approached from different perspectives and with different methodologies. We can start with a microeconomic assessment which applies a randomized study method of the type Montaletti made.

However, the microeconomic assessment may also be subjected to the scrutiny of macroeconomic analysis. If the jobs created are really additional and not substitute of the existing ones, it should be noted a rise in the overall absolute number or share of employment.
The most common approach is the so-called difference-in-difference one: the number of the employed is compared before and after the action has taken place. Then, we can compare if this increase occurred also in other areas not covered by this action in order to measure the gross effect. This gives a measure of the DUL impact compared with other concomitant or disturbing factors, in contiguous Regions or in the rest of the Country.

d) Impact on the efficiency of employment services.

As noted at the beginning, one of the most interesting and innovative aspects of DUL is that it can transform the sector of employment intermediation from passive into dynamic, in which everyone (not only private operators, but also the public ones, in a longer run) have a convenience to participate and to supply services to the public. In this sense, a shift from a bureaucratic management style to a management focused on users and service production should be observed. The pre-reform Italian regulatory framework concerning the intermediation of the available jobs is characterized by different elements that make the sector passive:
   a) rigid attitudes by all operators;
   b) rules that make the services offered by public and private operators unattractive;
   c) little convenience by users, both from the demand (companies) and the supply side (unemployed, NEETs) in employment services;
   d) insufficient freedom to choose among alternative services for beneficiaries.

Yet, as shown by Weishaupt (2011), Larsen and Vesan (2012) and Pastore (2013), job search is plagued by a problem of double information asymmetry: from companies towards worker, of whom a company doesn’t know the skill level, on the one hand; from the worker towards the company, of which he/she doesn’t know the real career opportunities offered, on the other hand. The consequences of the inefficient way of working of public and private operators, in Italy, are well known: high (frictional and mismatch) unemployment rate and mass appeal to the network of relatives and friends to find a job7, not to mention the negative consequences on inequality and social mobility.

The consequence is that in Italy, on average, only 3.5% of young people who find a job within a year they find it with the help of public and private Job centres (Mandrone, 2011). A percentage that is clearly unsatisfactory, if compared to that, for example, of the United Kingdom (about 7%) and Germany (13.5%), just to mention a few countries (for a more systematic analysis, see Giubileo, 2011; and 2012; Pastore, 2013; Cicciomessere, 2014).

The impact evaluation on the regional system of employment intermediation can be made, for instance, with the difference-in-difference method, which involves the comparison between values of key variables related to a pre-reform year (for example, the year 2012) and to a post-reform year (from 2014 onwards). This let us see if the outcome variable of interest was affected by the program and the entity of its influence. The outcome variables used in this case include:
   a) the NEETS (or some subgroups) who use employment services as a job search method;
   b) the percentage of people who find a job with the help of job centres;
   c) the number of guidance, job placement and training services offered by Job centres;
   d) the percentage of beneficiaries placed over the total, and so on;
   e) the quality of services offered and the professional skills of operators involved in the program.

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7 Nearly 45% of young people found a job with this system.
If the values of the outcome variables in the two years under consideration, before and after, are different and, in particular, are statistically higher in the post-action period in the region under consideration (target group), but not in the other regions (control group), it can be assumed that the program has been effective. In the case under consideration, considering that the competition principle applies to entities of different ownership type, the evaluation exercise should include not only to the public but also to the profit or nonprofit private organizations.

The impact assessment of the program on items a) and b) can be carried out by using sample survey data, such as, for example, the survey on work force or the sample survey called ISFOL Plus. Both include, in their questionnaire, questions for both the unemployed job seekers and for those who have found a job on the actual search method used. Items c) and d) require the use of administrative data relating to organizations involved in the program. It would be interesting to make a comparison with the outcome of other regions to determine if the positive change eventually occurred is due to a general policy (and, therefore, it cannot be attributed specifically to the DUL, but to any other policy (such as, for example, the Youth Guarantee)\(^8\).

The DUL is expected to affect also item e), that is the quality of services supplied and the professional level of operators of Job centres. Unfortunately, there are no quantitative measures on operators’ skills before and after the DUL, which prevents us from assessing the effect of DUL on this outcome variable. It is likely that this indicator was, however, also influenced by the severe economic and financial crisis, which did not allow the public and private sector to make significant new hires.

2. The DUL program

Profiling consists of dividing the beneficiaries into needy groups (fasce di bisogno), according to certain criteria that indicate precisely the level of difficulty for beneficiaries to find a job by themselves. Following the DUL management handbook drafted by the Lombardy Region (2015), the statistical criteria used for beneficiary profiling are:

1. the distance from the labour market, measured by the unemployment duration and understood as a measure of the autonomy level in job search;
2. education level;
3. age;
4. gender.

The characteristics from b) to d) are considered as corrections to point a). Each indicator is divided into sub-categories and to each sub-category is assigned a certain score\(^9\).

The profiling method is objective in the sense that the operator of the accredited organization taking in charge the beneficiary cannot freely decide to which group the beneficiary belongs, but has to apply the above criteria in a quite mechanical way. The group determines the maximum value of the voucher assigned and the (considered) basket of services from which the operator, in agreement with the person, can choose to identify the individual path for outplacement (formalized with the signing of a PIP: Piano di Inserimento Personalizzato; En. Tr.: Personalized Placement Plan).

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\(^8\) The Youth Guarantee (YG), for example, could increase the use of employment services and also the supply of guidance and placement services offered by Job centres all over the Country, regardless of the DUL program.

\(^9\) For a more detailed description of the groups in need within the DUL, see: ARIFL (2013) and, for a critical presentation and summary of various aspects of the program, Cerlini and Giubileo (2015).
One of the purposes of rigid and automatic profiling is to reduce the tendency by the organization to implement a creaming of beneficiaries, even if creaming can still take place through the so-called “refusals”. In other words, the operator may reject beneficiaries deemed too difficult to place, pushing them to apply to another accredited organization, typically in the public sector. The higher voucher for groups more in need remains, however, an important incentive against rejections. Objective profiling is also important to avoid a conflict of interest for the organization who does profiling and could profile a user as more in need than actual to obtain a voucher of higher amount.

The first three groups contain rather homogeneous individuals, although they are characterized by an increasing level of need. The voucher allocated grows depending on the level of need. There are two types of vouchers, depending on whether they follow the employment integration path (in this case the amount of dote is from € 1950 for the first group to € 2950 for the second one, to € 3,850 for the third group) or the self-employment path, so that the dote is slightly higher (from € 3,720 to € 4,900 to € 5,875). The highest voucher for individuals more in need should discourage organizations from creaming beneficiaries who are easier to place.

With this dote, workers can “buy” services at the accredited organizations that have taken them in charge. There is a menu of services with a list of prices that differs according to the service provided.

The fourth group is different, as it includes employed workers who have been recently laid off and are in cassa integrazione, who can get a fixed amount of € 2,000. In this case, workers cannot start a new job until when they end the period for which they are covered by their unemployment benefit. They can only carry out vocational training activities, such as coaching, training, promotion of specific knowledge in the field of business management, tutoring and coaching to training, skills certification. With the dote activated, beneficiaries of group 4 can buy a basket including all or part of these services.

The set of services offered is summarized in Table 2, which also shows the price list associated with each service offered. As anticipated before, users belonging to group 4, i.e. laid off workers, can only access to services of vocational training.

[Table 2 about here]

3. Descriptive analysis

Now we can focus on the empirical analysis\textsuperscript{10}. The first section is descriptive and consists of analyzing the structure of the vouchers assigned by groups in need broken down by some categories, such as individual characteristics, type of organization and so on\textsuperscript{11}.

Figure 1 considers the DULs supplied by group of needs. Moreover, group 2, but above all group 3 are much more numerous than the others. Group 3, alone, includes more than 50% of beneficiaries. Added to group 2, they reach 78%. Considering that group 4 includes a very small number of beneficiaries (8.9%), with particular and different features from those of the unemployed and inactive, it is likely that there is a problem of appropriate profiling.

A more appropriate definition of groups and a detection of intermediate groups may reduce the peaks noted in the groups 2 and 3, therefore making more effective the DUL implementation and, at the same time, reducing some of the possible distortions. We can

\textsuperscript{10} The data set is formed by the census of all the beneficiaries of the measure. For a more detailed description, see the Methodological Appendix.

\textsuperscript{11} Table A2.1 in Annex 2 gives further details on the composition of the sample.
hypothesize the existence of a conflict (trade-off) between the number of groups, freedom of choice by the beneficiaries and possible reduced effectiveness of the policy. The more and the better the groups (and, thus, also the type of actions) are defined at the beginning, the less will be the possibility of personal choice by the operator of the accredited entity (and, therefore, the less will be also the possibility of making mistakes about the more effective type of action for the beneficiary). All that is applied if the paths are sufficiently well defined to have a diversified effectiveness depending on the type of beneficiary. One of aims of the econometric analysis will be exactly to identify the most effective services.

[Figure 1 about here]

Figure 2 shows the overall percentage of DULs activated in the whole period for the beneficiary education level. As expected, the average education level of beneficiaries is lower than the average education level of the considered population. We note, in particular, a distribution characterized by the strong predominance of beneficiaries with low to high secondary education attainment. The percentage of those who have a university education is lower; this confirms that an important return to education is a greater than average opportunity to find a job.

[Figure 2 about here]

As concerns the allocation of DULs for type of accredited entities (Figure 3), as expected also from the theoretical analysis, the private sector has the lion’s share of DULs: private entities, profit (57%) and non-profit (20.6%) represent the most important slice. The DULs spent in public job centres are about 10%, or, if they include the independent agencies of public entities (the so-called special agencies of the legislative decree 267/2000), the public sector gets about a quarter of the DULs allocated.

[Figure 3 about here]

In addition to the voucher, accredited organizations may expect to receive a benefit in case the beneficiary they have in charge completes the program “successfully” with an employment contract of at least six months as shown in the COB. The length of the contract makes it less convenient to make informal agreements between the accredited organization and the beneficiary in order to get the benefit (so-called gaming).

However, also creaming and cherry picking cases will be less worrying, because they are not only interests for the operator, but also for beneficiaries. After all, the core of the DUL program is the possibility of choice granted to the person who needs help and, therefore, it does not need to be a problem if beneficiaries prefer a certain type of operator, provided that this does not lead to the exclusion from the service or the loss of opportunities for the weakest people, but this is not the case.

Figure 4 shows the distribution of beneficiaries by group in need and by legal nature of the accredited organization taking in charge the beneficiary. There is a tendency of the private operator to take in charge a greater number than the average of beneficiaries of groups 1 and 2 and lower than the average of beneficiaries of groups 3 and even 4. In other words, actually, beneficiaries more easily employable tend to apply to private operators. However, in principle, percentages appear to be physiological. Moreover, groups 2 and 3 are not always easily distinguishable one another. A more accurate division in a larger number of groups could shed a new light also on the creaming potential issue of beneficiaries by private operators.
At this point, it should not come as a surprise if all the other types of operators have a preference for the users of group 3, in particular: cooperatives (59%), Job centres (58.4%), special agencies (56.9%) and nonprofit organizations (55.2).

As said, the core of DUL is to give to users the possibility to choose their best accredited operators. Once the sovereignty of users is restored, it is clear that all accredited operators will develop all the tools - human and professional skills – necessary for producing the most efficient DUL services in the long run.

Unfortunately, there are no statistical figures on the operators’ skills before and after the DUL application. This prevents us from assessing the DUL effect on operators’ skills. It is also true that this is a historical period affected by a severe economic and financial crisis that does not allow neither the public nor the private sector to make significant new hires.

Finally, Table A2.1 in the Annex gives a first indication on the type of services supplied and the percentage of beneficiaries who used them. Continuous tutorship is chosen by 40% of beneficiaries. An analysis of the tendencies and attitudes is chosen by little more than 1% of beneficiaries. The skills assessment is chosen by 4.9%, the skills certification only by 1.2% of beneficiaries. Also group coaching (1.3%) and the individual one (3.8%) are chosen by a few beneficiaries\textsuperscript{12}. Only 0.5% use support networks and even less job training. Whilst, Life-long learning is chosen, however, by a more substantial number of beneficiaries, about 24%, whilst LLL specialization is chosen only by 1.9% of the total beneficiaries. 38.3% use guidance in training and active research. 12.9% carry out group guidance and finally a similar percentage, equal to 13.2% choose the option tutoring and apprenticeship support.

4. Determinants of success

4.1 Methodology

This section will carry out an evaluation of the so-called gross impact of the program on the probability of successfully complete the DUL. The expression “successful completed” DUL has a specific meaning within the program: it happens when the beneficiary, using part or all the voucher assigned, gains an employment contract (as permanent worker, also in apprenticeship, fixed-term or temporary work) for at least six months\textsuperscript{13} or, alternatively, becomes self-employed\textsuperscript{14}. The statistical sample available is formed by beneficiaries belonging

\textsuperscript{12} A possible explanation for the limited diffusion of individual and group coaching services can be sought in the terms of their provision. Remember that the coaching service (which is one of the services of “consolidation of skills”) can be activated without constraints only for group 3. The service is delivered individually or in groups of a maximum of three beneficiaries. Within the program, for people belonging to group 1 and 2, the coaching service of an extracurricular training is subject to the signature of a job contract or the possess of VAT (in case of a self-employment path) necessary to the recognition of the result (this possibility for group 1 and 2 was introduced about a year after the beginning of DUL, as earlier it was not possible).

\textsuperscript{13} Initially, the Regional authority wanted to consider a period of one year, but this was impossible due to the expiry date of the European Social Fund with which the program was financed.

\textsuperscript{14} In fact, owing to the limited number of self-employment cases within the program, this second option is negligible in the data available. The main cause for not taking into account self-employment is the economic crisis. The Region is considering various strategies to revive this alternative.
to the first three groups\(^{15}\) that in June 2015 concluded “administratively” the DUL\(^{16}\) and, therefore, the estimates should be read as a comparison between the characteristics of those who concluded the DUL with an employment contract (apprenticeship, homeworking, fixed-term job, fixed-term job for outplacement, permanent job, domestic work) whose total duration was at least 180 days, calculated on the whole period of participation in the program, even in more contracts, and those who have had one or more employment contracts, but of the total duration of less than six months or a job as non-wage employees (i.e.: participating in partnership, working on a project, intermittent work, socially useful work, occasional work, training), regardless of its duration. The self-employed workers are excluded because they were a very small number.

The dote may also be concluded without having expired all the budget planned in the PIP. If the dote is concluded and the desired employment outcome is not reached, the beneficiary can activate a new dote by using the resources eventually not spent for the services admitted as “repeatable” (see the regional Framework of minimum standards of employment services).

A note of caution concerns those who have not completed the dote with a work contract of at least 180 days. Saying that they have not had “success” has sense only in relation to the administrative purpose that requires granting a work contract. In fact, a work contract for a period less than six months is still considered an important step forward in the process of reactivating beneficiaries who belong to the Neet group which, in most cases, sooner or later, might still lead to a permanent job.

It should now be clear that the analysis compares the impact of the DUL on the probability of successfully completing the program in an empirical ultra-simplified and multivariate setting, principally aiming at comparing the different types of services used by the dote, after profiling and taking in charge, controlling for some individual variables (gender, age, educational level), variables related to the organization that has taken in charge the beneficiary, and variables related to the type of service activated while participating in the program.

More analytically, the estimated pattern takes the following form:

\[
Pr \left( DUL = 1 \mid \sum_{i=1}^{n} S_i, \sum_{j=1}^{m} X_j \right) = \frac{\exp \left( \alpha + \sum_{i=1}^{n} \beta_i S_i + \sum_{j=1}^{m} \gamma_j X_j \right)}{1 + \exp \left( \alpha + \sum_{i=1}^{n} \beta_i S_i + \sum_{j=1}^{m} \gamma_j X_j \right)}
\]  

[1]

where \( DUL \) is a dummy equal to 1 for the beneficiary who completes the DUL; \( S_i \) are the different types of services supplied; whilst \( X_i \) are the control variables. Briefly, the analysis compares elements of both the demand for DUL services, expressed by beneficiaries, and the supply of DUL services, expressed by the accredited organizations.

### 4.2. Results

As the dependent variable is discrete, the model is estimated by Logit. The outcomes are presented in Table 3 in terms of relative risk ratios, instead of estimated coefficients. The latter are difficult to interpret because of their highly non-linear pattern\(^ {17}\). Relative risk ratios instead are very easy to interpret. They measure the impact of the dichotomous variable considered, relative to the baseline, on the likelihood that the program is completed. As they are ratios,

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\(^{15}\) As already noted, beneficiaries belonging to group 4, cannot subscribe employment contracts since they are still formally employed, although being laid off.

\(^{16}\) Note that the information necessary to define the dependent variable and several independent variables requires the presence of information from mandatory communications (COB) which, for several reasons are not available for all the beneficiaries. This leads to a loss of observations on the DUL concluded from 39588 to 29185 units.

\(^{17}\) Relative risk ratios are obtained by taking the exponential of coefficients of Logit model.
the values can only be positive. In particular, if they are smaller than one, they indicate that
the baseline variable is more likely than the one considered; if they are greater than one, the
variable considered is more likely than the baseline.

[Table 3 about here]

Approximately 71.7% of those who complete the DUL, get an employment contract of at
least six months, with a slight predominance of men (73.1%) over women (70%). This figure
which is relatively high confirms the impression of Montaletti’s study that the program was
quite successful.

[Table 3 about here]

Women have a lower probability by about 15% to complete the DUL than men who
participated in the program\(^{18}\). This gender gap is hard to explain in terms of education, as
women in the sample are much more educated than men (Table 4) and depends probably on a
greater commitment of women in unpaid work within the family, and, indirectly, on a limited
availability of reconciling tools between the two activities – production and reproductive -
performed by women.

[Table 4 about here]

Omitted results of an estimate similar to that in Table 3, provide the coefficients of the
age and of the age square variable. By increasing the beneficiary age, the likelihood to
complete the DUL slightly reduces, by about 3.5 percentage points per year of age (coefficient
equal to 0.9638), although according to a slightly concave function, as shown by the positive
sign of the second derivative, i.e. the coefficient of the age square variable (coefficient equal to
1.0002).

Table 3 reports instead the risk rations relative to a battery of dummy variables, one for
every five years of age: the probability of completing the DUL follows a non-linear growing
trend for young adults and then it decreases as age increases. Teenagers have a greater
opportunity to complete the DUL than the fifties and over. The mode of the distribution is
achieved by young adults (20-29 and 30-34 years old). Age differences are more marked for
women than for men.

The “negative” effect of age indicates the greater difficulty of placing older adults ceteris
paribus. This depends on the fact that generally speaking older workers have specific
knowledge in a certain job, perhaps outdated, but a few general skills. The sample of DUL
beneficiaries includes a relatively large number of people with low educational level and,
therefore, simple job specific skills, difficult to export.

As for education, there is little difference between beneficiaries who have compulsory
education (lower secondary education), that represent the baseline, and beneficiaries with
lower than the compulsory education attainment: the corresponding coefficients are not
statistically significant. Generally, companies require more than compulsory education. The
same goes for those who have professional school diploma (vocational education of 2-3 years).

Those who do not declare their education level have on average a probability to close
successfully the DUL approximately 17% less than those with compulsory education. The effect
is due mainly to men, who have a probability of 33% less than those who have a compulsory
education. Generally, people with a low education level are not used to declare their own
education level.

\(^{18}\) The relative risk coefficient is less than one and is equal, in particular, to 0.8498, for women. This
means that a woman has about 85% of the probability of a man to complete the DUL.
Higher secondary education (4-5 years) is associated with a greater probability of completing the DUL than compulsory education by about 41%. The effect is stronger for women than for men. It is likely that this effect is different from one type of diploma to another. However, the data contains no information on the kind of secondary high school diploma possessed by the DUL beneficiaries.

Bachelor’s degree and Master’s degree ensure more opportunities to complete the DUL, confirming that finding a job more easily is a return to tertiary education. The university degree ensures a greater impact than a secondary high school diploma: 60% against about 40%.

Postgraduate qualifications, such as I or II level Masters or PhD, do not give a statistically significant impact on job opportunities, although coefficients are all greater than one, probably for the strong heterogeneity within this group: there are also cases in which opportunities are lesser. In addition, also this outcome probably depends on the particular type of sample which: DUL beneficiary are people having difficulties in finding work or in keeping it. In both cases, the type of advanced degree possessed is probably less required by the labour market. Further information on qualification actually possessed could be important to explain this outcome.

In fact, in the highly qualified labour market of Italy two related situations are happening: on one hand, huge staff shortages for degrees in certain fields of study and with vocational qualifications and, on the other hand, the increasing unemployment rates or overeducation for those who possess tertiary or also higher degrees, including Ph.D., in other fields of study, such as arts degrees and the like (Caroleo and Pastore, 2017; Gaeta et al., 2017).

One of the DUL aims is increasing competition among accredited organizations of different ownership structure (or company name) - as expected by the Biagi Law of 2003, but never implemented without a quasi-market setting of employment services. Contrary to the theoretical expectations of those who believe that the private sector has a competitive advantage in the activities of job placement and vocational training, the estimates suggest that the DULs activated in public Job centres have a greater probability by about 30% of being completed. Note that here the group used as a term of comparison is the private operator of small size. There are six private operators that appear regularly among the ten accredited organizations with the greatest number of activated vouchers (names omitted for obvious reasons). They are separated from the rest of private operators, given their larger than average size. Interestingly enough, not all of them have a relative risk ratio higher than the baseline. It marks the need to monitor the performance of individual companies in search for the most efficient and the importance, in turn, of monitoring and an external rating of the effectiveness of companies in doing their placement work. Cooperatives seem to do better even than private organizations, with a probability of concluding the activated DULs of about 20% higher than small private companies.

The case of private non-profit organizations is also interesting, since they seem to have a performance only slightly lower than the public Job centres. In fact, the effect is mainly due to female beneficiaries that have a probability to complete successfully the DUL by 40% greater than that of small private centres. Whoever applies to a non-profit organization has a higher probability, of about 20%, to complete the program than the baseline, a percentage similar to that of cooperatives. This is probably also due to favorable conditions that nonprofit private organizations reserve to particular categories of workers, such as the disabled and disadvantaged workers (alcoholics, drug addicts, convicts admitted to alternative measures, etc.).

Those who address to consortia have a greater probability to complete the program than the baseline, but the coefficient is not statistically highly significant.

Also among the AFOLs (names omitted for obvious reasons), there are important differences. Generally speaking customers seem to be aware of this performance, since the most successful are those with the highest number of vouchers activated.
However, an interesting finding is that it is not always true that the organizations which have the greatest number of vouchers are also those that complete them more frequently. This suggests to give to beneficiaries more information about the actual performance of accredited organizations to increase competition and increase the overall quality of services. This information is an important tool to stimulate continuous improvement in the quality of services provided by all organizations in the long run.

As for the type of services provided, the analysis suggests that some services are more efficient than others in terms of completed DULs. However, before presenting the results it is important to point out some notes of caveat. First, some types of services have been excluded because they are applied to all (welcoming and access to services, that is taking in charge, which is necessary to access to the service) or almost all beneficiaries (specialist interview, path definition). Other services (self-employment, promoting specific knowledge in business management) have been excluded because no one has completed the program at the time when data were collected. In addition, it is difficult to say which is the baseline, as the beneficiaries could also indicate different services they benefited.

The following analysis can be very useful to better understand which services are associated with the greatest probability of completing the program. This type of information may be useful during the reorganization and refinancing of the program. Of course, to this end, the statistical information should be integrated with other types of information, related to the direct experience of program implementation. Such information may help understanding why, for example, in some cases a certain type of service was effective in lieu of another. Basket of services should be also considered instead of individual services.

Hereafter the single actions will be analyzed. Figure 6 reports the relative risk ratios found in Table 3 by type of service provided. Three types of services stand out for being associated to a higher chance of successfully completing the DUL: a) skill certification; b) group coaching; c) skill assessment. Creating a support network is not statistically significant.

Continuous tutoring, which is very common, has a rather low impact on the opportunity of completing the DUL, by about 40%. Also the analysis of individual tendencies and attitudes seems to be associated with a low risk ratio. Interestingly, while, on the one hand, skills assessment is more effective than the average by only 10%, on the other hand, skills certification is very effective (+ 260%), especially for men (+ 6 times). This outcome should not be surprising: skills certification is used for better understanding the strengths, the skills, beneficiaries’ work capacities, the type of action they need. Especially young people are indistinguishable from each other by employers, without a certification of skills. It could be supplied also by educational institutions in the future.

In a similar way, coaching, that is provided only for beneficiaries belonging to group 3, may have very different effects depending on whether it is carried out individually (lower than baseline probability of completing the program) or in group (higher than the baseline). Group coaching, however, is statistically significant only for men. Different from individual coaching, group coaching allows the opportunity to exchange experiences of job search among beneficiaries with similar characteristics, which explains why it is more effective. In a way, group coaching increases the network of contacts and knowledge of the person, which cannot occur in individual coaching.

The other services included in the estimates, all related to vocational training, are associated to a negative performance. This may depend on the specific characteristics of those who use it, characteristics that would be associated with a lower probability of successfully completing the DUL, or with the low quality of the training itself. In principle, both the explanations are plausible. This is a recurring doubt in all policy analysis and can only be adequately faced with appropriate econometric methods (for example, randomized experiments with target or monitor groups).
Concluding remarks

This study has provided an in-depth analysis of the way of working of a recent experiment conducted in Lombardy of transforming the sector of employment services into a quasi-market. The aim was to revitalise a moribund sector, which proves however important in other countries. Quasi-markets are already common in the health and education sector in several countries. Thy implies the possibility to give to users a market power by empowering them with a voucher which allow them to decide to which accredited organization to require a given service. This freedom of choice is important to generate competition among accredited organizations, including forprofit and nonprofit private organizations.

Quasi-market in the provision of employment services present shortcomings similar to those happening in other sectors, such as: the tendency of the private sector to have a lion’s share of the market; increasing costs and tendency of the private sector to implement a creaming or cherry picking strategy of the easiest to place users and gaming with users to obtain the voucher and the reward for successfully completing the DUL without actually completing it.

A number of tools have been devised in Lombardy to prevent such distortions, based on the Anglo-Saxon experience. Quasi-market in the sector of employment services were implemented successfully in Australia and the UK previously. Cherry picking is prevented by providing vouchers of different value for individuals of different needs: higher for the most in need and hardest to place. Gaming is prevented by providing a reward for successfully completing the program only when the labor contract has been obtained for at least 6 months.

The empirical analysis shows some interesting characteristics of the program, such as the phenomenon of cherry picking, although it is hard to understand whether it was due to a demand pull or a supply push, since private companies do tend to provide more efficient services and it may be that the easiest to place individuals prefer to apply to private, rather than to state organizations.

The analysis of the determinants of the probability to complete the DUL suggest the existence of a gender gap and a position favourable to individuals with a higher level of education attainment, although less than the average population.

Differences among organizations of different ownership type are far from trivial. The relative risk ratio is not the highest among all private employment agencies. The biggest ones tend to have a better than average performance, although not all of them. In addition, some state or nonprofit organizations seem to do better than small private agencies. The fact that the best performing companies are not always the most frequently used ones suggest that it is important to give more information about performance to users, in order to allow them making better choices. In turn, this is important for the long run effectiveness of the program.

Three types of services are associated with a better performance: a) skill certification; b) group coaching; c) skill assessment. This is important information for policy makers, practitioners and users of the program.
References

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Lombardy Region (2015), Manuale di gestione della Dote Unica, Milano.


List of abbreviations

ARIFL = Agenzia Regionale per la Istruzione, Formazione e Lavoro (Regional Agency for Education, Training and Employment); COB= Comunicazioni obbligatorie (En.Tr.: compulsory registrations to employment offices); DUL = Dote Unica Lavoro (En.Tr.: single working voucher); EYG= European Youth Guarantee; NEETs = Not in Employment Education or Training; PES= Public Employment Services; PIP = Piano d’Intervento Personalizzato (En. Tr.: personalized action plan); VET = Vocational and Training System.
## Appendix of Tables and Figures

### Table 1. Shortcomings and advantages of DUL

<table>
<thead>
<tr>
<th>Shortcomings</th>
<th>Solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Loss of economies to scale due to increasing fragmentation of supply and increase of costs;</td>
<td>A) Increase in the productivity of operators and the quality of the services supplied to compensate for higher costs;</td>
</tr>
<tr>
<td>b) The private sector might take the lion’s share of the market</td>
<td>B) In the long run, also the public sector will improve its skills and gain market shares;</td>
</tr>
<tr>
<td>c) Private employment services might have opportunistic behavior:</td>
<td></td>
</tr>
<tr>
<td>ca) cherry picking or creaming of the easiest-to-place users and parking of the least easy to place</td>
<td>CA1) Users are divided in groups according to needs; CA2) and receive vouchers of increasing amount according to the need; CA3) rating of operators is made by group of needs (internal rating);</td>
</tr>
<tr>
<td>cb) Gaming with users in favor of rent seeking behavior;</td>
<td>CB) Bonuses are supplied only to organization which are able to place workers for a long period of time (6 months-1 year) so to have a cost higher than the benefit of gaming;</td>
</tr>
<tr>
<td>d) Asymmetric information about the quality of the services provided might prevent users from choosing the best supplier.</td>
<td>D1) accreditation of the operators which reach a given standard; D2) continuous monitoring of all service providers; D3) internal rating of operators based on evaluation of their performance with users belonging to different groups of need; D4) rating by an independent third agency.</td>
</tr>
<tr>
<td>e) Private employment agencies might have a conflict of interest in profiling</td>
<td>e1) profiling is made by PES with a role of monitoring and evaluation of the services provided; e2) profiling on objective, transparent and verifiable criteria.</td>
</tr>
<tr>
<td>Area of services</td>
<td>Services</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>A) Basic services</td>
<td>Welcoming and access to services; Specialist interview; Path definition.</td>
</tr>
<tr>
<td>B) Welcoming and guidance</td>
<td>Skill assessment; Self-employment tendencies and attitudes; Creating a support network; Guidance and training for an active job research; Continuous tutoring.</td>
</tr>
<tr>
<td>C) Capacity building</td>
<td>Training – Promoting specific skills within business management - Tutoring and coaching – Skills certification</td>
</tr>
<tr>
<td>D) Job placement and other actions</td>
<td>Placement</td>
</tr>
<tr>
<td></td>
<td>Self-employment (alternative to placement)</td>
</tr>
<tr>
<td>Total</td>
<td>For job placement paths</td>
</tr>
<tr>
<td></td>
<td>For self-employment</td>
</tr>
</tbody>
</table>

Source: Our translation of the DUL Notice.
Tabella 3. Determinants of the probability of completing the DUL program

<table>
<thead>
<tr>
<th>Variable</th>
<th>All</th>
<th>Women</th>
<th>Men</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Women (baseline: 50 years or more)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age (baseline: 50 years or more)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16-19 years</td>
<td>1.0391</td>
<td>0.8674</td>
<td>1.1473</td>
</tr>
<tr>
<td>20-24 years</td>
<td>1.0513</td>
<td>0.9593</td>
<td>1.1097</td>
</tr>
<tr>
<td>25-29 years</td>
<td>1.0822</td>
<td>1.0221</td>
<td>1.1057</td>
</tr>
<tr>
<td>30-34 years</td>
<td>1.005</td>
<td>0.9072</td>
<td>1.0737</td>
</tr>
<tr>
<td>35-39 years</td>
<td>0.9307</td>
<td>0.8291**</td>
<td>1.0174</td>
</tr>
<tr>
<td>40-44 years</td>
<td>0.9676</td>
<td>0.895</td>
<td>1.0207</td>
</tr>
<tr>
<td>45-49 years</td>
<td>0.9946</td>
<td>0.9647</td>
<td>1.0093</td>
</tr>
<tr>
<td><strong>Educational qualification (baseline: compulsory school, namely low secondary education), of which:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Title not available</td>
<td>0.8392**</td>
<td>1.1843</td>
<td>0.6733***</td>
</tr>
<tr>
<td>No title</td>
<td>1.3719*</td>
<td>1.2445</td>
<td>1.3163</td>
</tr>
<tr>
<td>Primary education or no title</td>
<td>0.9194</td>
<td>1.7618*</td>
<td>0.7576*</td>
</tr>
<tr>
<td>Vocational education (2-3 years)</td>
<td>1.0735</td>
<td>1.0521</td>
<td>1.1013</td>
</tr>
<tr>
<td>High secondary school</td>
<td>1.4099***</td>
<td>1.4717***</td>
<td>1.3804***</td>
</tr>
<tr>
<td>Bachelor degree (3-years)</td>
<td>1.6002***</td>
<td>1.7115***</td>
<td>1.5228***</td>
</tr>
<tr>
<td>Specialised university degree (5 years)</td>
<td>1.7766***</td>
<td>1.9162***</td>
<td>1.6658***</td>
</tr>
<tr>
<td>I level Master degree</td>
<td>1.4724</td>
<td>1.7839*</td>
<td>0.9284</td>
</tr>
<tr>
<td>II level Master degree or Ph.D.</td>
<td>1.4653*</td>
<td>1.6992*</td>
<td>1.2401</td>
</tr>
<tr>
<td><strong>Ownership type (baseline: private), of which:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PES</td>
<td>1.2922***</td>
<td>1.2836***</td>
<td>1.3346***</td>
</tr>
<tr>
<td>Nonprofit organization</td>
<td>1.2074***</td>
<td>1.3940***</td>
<td>1.0678</td>
</tr>
<tr>
<td>Consortium of private organizations</td>
<td>1.2262*</td>
<td>1.1762</td>
<td>1.3408*</td>
</tr>
<tr>
<td>Cooperative organizations</td>
<td>1.2078***</td>
<td>1.2160***</td>
<td>1.2059**</td>
</tr>
<tr>
<td>Other state organization</td>
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<td>1.1777</td>
<td>1.5093*</td>
</tr>
<tr>
<td>AFOL 1</td>
<td>0.8167*</td>
<td>0.8999</td>
<td>0.7652*</td>
</tr>
<tr>
<td>AFOL 2</td>
<td>1.3620***</td>
<td>1.3469**</td>
<td>1.4107**</td>
</tr>
<tr>
<td>AFOL 3</td>
<td>0.5069***</td>
<td>0.5471***</td>
<td>0.4656***</td>
</tr>
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<td>AFOL 4</td>
<td>1.0244</td>
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<td>Afol 5</td>
<td>1.5355</td>
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<td>0.5816**</td>
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<tr>
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<td>1.0347</td>
<td>0.8274**</td>
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<td>Firm 4</td>
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<td>1.0326</td>
<td>1.0769</td>
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<td>Firm 5</td>
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<td>1.3089**</td>
<td>1.4529***</td>
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<tr>
<td>Firm 6</td>
<td>1.1566*</td>
<td>1.1535</td>
<td>1.1613</td>
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<td><strong>Type of services received, of which:</strong></td>
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<td></td>
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<td>0.8573***</td>
<td>0.7578***</td>
</tr>
<tr>
<td>Analysis of attitude to entrepreneurship</td>
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<td>0.2224***</td>
<td>0.3816***</td>
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<tr>
<td>Skill assessment</td>
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<td>1.5089**</td>
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<td>0.6050***</td>
<td>0.7423***</td>
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<td>1.0588</td>
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<td>-----------------------------------------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>Work related learning and training</td>
<td>0.4869***</td>
<td>0.5602</td>
<td>0.4239***</td>
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<td>LLL – Permanent training</td>
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<td>0.4567***</td>
</tr>
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<td>LLL – Specialization</td>
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<td>0.4977***</td>
<td>0.6414***</td>
</tr>
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<td>Guidance to job search</td>
<td>0.7062***</td>
<td>0.7467***</td>
<td>0.6761***</td>
</tr>
<tr>
<td>Group guidance to job search</td>
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<td>0.6312***</td>
<td>0.5835***</td>
</tr>
<tr>
<td>Tutoring and support to training</td>
<td>0.4945***</td>
<td>0.4883***</td>
<td>0.5018***</td>
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<td>Constant</td>
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<td>2.7150***</td>
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<tr>
<td>Number of observations</td>
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<td>13056</td>
<td>16009</td>
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<tr>
<td>DUL completed (Number)</td>
<td>21386</td>
<td>9326</td>
<td>12060</td>
</tr>
<tr>
<td>DUL completed (Percentage)</td>
<td>71.73%</td>
<td>70.01%</td>
<td>73.13%</td>
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</table>

**Note:** the table reports relative risk ratios.
*Source: Own processing on DUL data.*

### Table 3. Education levels of men and women

<table>
<thead>
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<th></th>
<th>Uomini</th>
<th>Donne</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nessun titolo</td>
<td>74.93</td>
<td>25.07</td>
<td>714</td>
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<tr>
<td>Elementare</td>
<td>66.67</td>
<td>33.33</td>
<td>480</td>
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<tr>
<td>Media inferiore</td>
<td>64.28</td>
<td>35.72</td>
<td>10,207</td>
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<td>Superiore (2-3 anni)</td>
<td>53.71</td>
<td>46.29</td>
<td>5,654</td>
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<tr>
<td>Superiore (4-5 anni)</td>
<td>50.94</td>
<td>49.06</td>
<td>15,500</td>
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<tr>
<td>Laurea triennale (no)</td>
<td>37.61</td>
<td>62.39</td>
<td>1,997</td>
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<td>Laurea</td>
<td>36.41</td>
<td>63.59</td>
<td>3,150</td>
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<tr>
<td>Master I livello</td>
<td>29</td>
<td>71</td>
<td>100</td>
</tr>
<tr>
<td>Master II livello</td>
<td>33.6</td>
<td>66.4</td>
<td>125</td>
</tr>
<tr>
<td>Dottorato di ricerca</td>
<td>16</td>
<td>84</td>
<td>25</td>
</tr>
</tbody>
</table>

*Fonte: Own elaboration on DUL data.*
Figure 1. Classification of beneficiaries in groups (fasce di bisogno)

Figure 2. Percentage of DULs activated by the beneficiary education level
Figure 3. Percentage of DUL activated by type of operator

Figure 4. Distribution of recipients by ownership type of the organization
Figure 5. Relative risk ratios by ownership type

Note: The bar at around 1 suggests the baseline value.
Source: own elaboration on Table 3.

Figure 6. Relative risk ratios by type of service provided

Note: The bar at around 1 suggests the baseline value.
Source: own elaboration on Table 3.
Annex I. Data

The empirical analysis and, in particular, the analysis of the determinants of the probability of completing the DUL program, is based on people who benefited of the DUL from 23 October 2013 to 9 June 2015, a period of about a year and a half, which allows us going beyond the length of rotation sample data of 2x2x2 type, typical of labour force surveys. The latter gives us the opportunity to follow people for up to a quarter or up to one year, but not for longer period of time, as it might be useful for studying better the effect of DUL.

The data set, formed by those who during the above mentioned period complete the DUL either successfully or not, gives important information on the demographic characteristics of beneficiaries (gender, age, education level, pre-dote employment status, needy group), but also on organizations accredited in the DUL (in particular, the legal nature and corporate name of the entity, which are, however, omitted for obvious reasons), the type of activity carried out by the DUL beneficiary within the program (the date of beginning of the first and last contracts, the date of signing and the contract length, the contract type, sector, successful completion or not of the program) and, last, but not least, the characteristics of the services offered and effectively activated one by one (Reception and access to services, continuous tutoring, analysis of self-employment attitudes and tendencies, skills assessment, skills certification, group coaching, individual coaching, specialist interview, support network creation, path definition, LLL – lifelong learning, LLL – specialization, guidance and training for active job search, promotion of specific knowledge in business management; service of job integration; tutoring and training support).

A key point is the definition of the outcome variable in the econometric analysis, for which the necessary information is obtained from the COBs (Compulsory communications to employment services by employers regarding any new employment contract signed). The DUL is considered as successfully concluded - allowing the accredited organization to monetize not only the voucher associated to the beneficiary of the program according to the PIP, but also an additional benefit, only if the user belongs to the first three groups in need and found (temporary or permanent employment, including apprenticeship) employment for at least six months or self-employment.

The completion is considered successful also by adding the length of contracts signed during two consecutive vouchers. To this purpose, the voucher must have been activated with the same operator and the contracts tracked by the system inserting the COBs identification code.

As noted in the main text, the length of the employment spells is a crucial condition also in other similar programs, in the Anglo-Saxon and in the Central or North European tradition, to discourage gaming between the program beneficiary and the accredited organization for acquiring the voucher. If the voucher is granted only after a long time, there is little incentive to falsify the program: the cost of hiring a person for so long is certainly higher than the value of the voucher.
## Annex 2. Descriptive statistics of the sample

### Table A2.1 Descriptive statistics of participants in the program

<table>
<thead>
<tr>
<th>Variable</th>
<th>Tutti</th>
<th>Donne</th>
<th>Uomini</th>
</tr>
</thead>
<tbody>
<tr>
<td>DUL Completate</td>
<td>0.4310</td>
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<tr>
<td>Età</td>
<td>34.9</td>
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<td>34.5</td>
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<tr>
<td>Età²</td>
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<td>1340.4</td>
</tr>
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<td>Titolo di studio non disponibile</td>
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<td>0.0463</td>
</tr>
<tr>
<td>Senza titolo di studio</td>
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<td>0.0251</td>
</tr>
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<td>Scuola elementare</td>
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<td>0.0185</td>
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</tr>
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<td>Organizzazioni non profit</td>
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