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ABSTRACT

Investing in Human Capital to Boost Growth!

The Italian economy performs well below the EU average. The reason is a dramatic and persistent low rate of investment, always invoked but never supported by national and supra-national institutions. However, investment to increase the quantity and quality of human capital is key to boost economic growth and cannot be achieved without adequate financial resources. At the same time, the educational system needs to relaunch university reforms (including the Gelmini and 3+2 reforms) which have been unsuccessful so far because they were poorly implemented. Last but not least, more and better ties between the educational system and the labor market should be developed as soon as possible.

JEL Classification: E22, E24, H54, I25, I28, J24

Keywords: public investment, aggregate human capital, economic growth, educational reforms, 3+2 University Reform

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Foreword

To comment on labour market developments, the media and politicians often mention unemployment rates. Indeed, simple comparisons between European regions regarding these figures are already pitiless, yet they do not give an exact measure of the “structural” gap that exists between the various countries and between the two parts of our country. The main reason why the unemployment rate cannot be considered an indicator of the structural gap is that, as it is defined and constructed, it is rather a cyclical index of the gap between labour supply and demand.

We would in fact do better to refer to the employment rate. Some figures will help us to understand better. In 2016, approximately 61-62 out of a hundred people aged 15-64 were employed in Italy, compared to a European average of 72 (EU 28). Fig. 1 shows the employment rates of the various countries with female employment rates in descending order. The figure shows how Italy is at the bottom of the ranking and, as far as the female employment rate is concerned, the country even goes so far as to take fourth from last place preceded by Greece, Macedonia and Turkey. As far as the gap between men and women is concerned, our country, with 20.1 percentage points, is just above Malta, Macedonia and Turkey. The problem would not be so dramatic if in any case the trend were to point to a closing of these gaps. In fact, this is not the case since between 2005 and 2016, while the employment rate in Europe (EU 28) increased by 4 percentage points, in Italy it remained almost stable (+0.1%).

[insert Figure 1 here]

As is well known, the Italian economy is characterised above all by differences between the southern and centre-north regions. Employment figures give a fairly clear idea of the size of these gaps. Out of a hundred people, between 20 and 64 years old, 70-71 are employed in northern Italy while only 47 are employed in the South. If we look at the other regions of Europe, this latter figure is quite impressive. In fact, only six European regions have an employment rate below 50% and four of these are Italian. Moreover, the gap between the region with the lowest employment rate (Calabria) and the region with the highest employment rate (Trentino South Tyrol) is about 32 percentage points. Out of a hundred women, 62-63 are employed in the North and 34 in the South. The gap between men and women is about 17 percentage points in the North and 26 in the South. In Sweden, the female employment rate for women aged 20-64 is 78% (Fig. 2).

[insert Figure 2 here]

We can therefore draw a first conclusion: in the South (but also in Italy, when compared to the rest of Europe) too few people have jobs. All official economic planning documents highlight this aspect, which is a trite and well-known fact: to solve the employment problem, it is necessary to promote economic growth and investment.

The government's priority objective - and the fiscal policy outlined in the DEF (Economic Planning Document) - is to raise growth and employment steadily, while respecting the sustainability of public finances..... It is the Government's intention to continue along the lines of economic policies adopted since 2014, aimed at freeing the country's resources from the excessive weight of taxation and at boosting

investment and employment, while respecting the needs of budgetary consolidation.....The Government considers it a priority to continue the action of boosting public investment.....

(Ministry of Economy and Finance, Economic and Financial Document 2017)

1. The recipes: water without thirst

However, when we then move on to the solutions for achieving this goal, the words investment and employment disappear.

Let us look, for example, at what those involved in the labour market mean by employment policies.

At international level, there is a very broad consensus, which has strengthened since the 1980s, regarding a fairly simple solution, valid for all seasons, both in times of employment growth and in times of crisis such as the present, based on the idea that employment problems can be solved by favouring institutional and wage flexibility as much as possible.

The reasoning is more or less this: today's unemployment (notice: not low employment but too much unemployment) is due to the rigidity of the labour market. Rules on minimum wages, dismissals and higher unemployment benefits, basically an overly rigid system of laws governing labour relations, result in wage rigidities and therefore do no more than increase the cost of labour for businesses (in short, there are too many article 18s around).

What is the solution? Flexibility policies must be adopted to safeguard businesses. By making work cheaper, this makes it easier for workers to be hired and, in the end, cannot but benefit employability (another very fashionable keyword in Europe, which –be careful! - does not mean more employment).

Taking a closer look at all those terms that have been minted in recent years by various ministers: 'choosy', 'bamboccioni' (grown-up kids who still live with their parents), 'it is better to marry a rich man than look for a job', 'go and play football', 'whoever goes to work abroad would do better to stay there', etc. are nothing more than the natural way of thinking of those who believe in this kind of reasoning. It is the workers and young people who do not adapt to the need to be flexible and earn less. If they did, companies would be very willing to hire them.

To cite a well-known metaphor: it is as if to make a horse work only requires giving it water to drink. Economists, jurists, organization experts, all compete to suggest the best water: that of a well (temporary contracts), running water (contracts with increasing protection), mineral water (abolition of art. 18), etc.

The Italian media bombard us daily with news on employment and unemployment trends, one day underlining the growth in employment, but also in unemployment, another day underlining how the latest statistics show a decrease in unemployment, but also an increase in youth unemployment, or the increase in employment, but also in precarious employment. Faced

with such news, the government always finds reason to exalt the salvation effects of its own laws, while the opposition always finds reason to exalt the disastrous effects.

In short, if one were to read all these news reports in succession, one would certainly feel like being on a roller coaster.

The truth of the matter is that all this water is bad for you: flexibility does not create new jobs, but rather a change in the composition of employment in favour of temporary and precarious forms of employment.

In fact, no labour reform has ever created a single job; it has only redistributed work among different categories of workers, changing the convenience of the type of contract to be used for recruitment.

The issue, in other words, is that those who deal with labour issues generally take a partial economic balance approach and believe in the market's rebalancing capabilities. Consequently, the unemployment problem can be overcome by intervening in the labour market, removing obstacles (bad information, mismatches, bad institutions, etc.) which prevent achieving a balance and therefore full "employment".

And what if the horse were not thirsty? That is to say, could it just be that the demand for jobs is lacking and companies are reluctant to invest? If the various labour ministers were less influenced by labour economists and had an overall economic balance approach, they could acknowledge that unemployment can also affect the goods market (lack of aggregate demand) as well as the labour market.

2. Making the horse thirsty: the role of human capital

We should ask ourselves whether it is possible to take a different approach to the structural problem of employment in Italy. Tackling this problem would probably mean shedding light on the causes of the current crisis. The aspects to be investigated are many: what investments have the greatest effects on growth in the long period¹? What are the causes of low productivity? The problem should also be tackled of the unequal distribution of income which, by eroding rights (to education, health and work culture), destroys social capital and produces inequality, including between regions (Franzini and Pianta, 2016).

To stay in the field of labour economy issues, more in-depth research should be carried out into what kind of investments can be suggested to improve the quality of the labour supply and which have high yields and can be self-financed. Herein below, we concentrate on a very important example, with reference made to the works quoted above for other indications on the fields in which to invest.

To give a simple answer to this question, we can take a look at another figure: out of 100 people aged between 20 and 64 in Italy, the probability of a graduate being employed is almost two and a half times greater than that of a person with at most a secondary school diploma. In

¹ See the works of the Discussion Group "Crescita, Investimenti e Territorio" Cappellin et al. (2014); Cappellin et al. (2015)

the South, the probability of a female graduate being employed is even better - almost six times higher than a woman who only has a secondary school diploma. (Fig 3)

[insert Figure 3 here]

The second conclusion is, therefore, that education pays in terms of greater probability of employment. A very feasible way forward therefore exists to tackle the issue of investment and employment incentives: to invest in human capital.

The Governor of the Bank of Italy, Ignazio Visco (2011), on this point stated:

“Human capital, the investment in knowledge, represents one of the key variables of our economic policy measures. The economic returns, both for individuals and society, cannot be disputed. They are important because of their direct effect on productivity. They are also important for their indirect effects deriving from the interaction between individuals, through a growth in civic sense, respect for rules and the affirmation of law, the fight against corruption and crime – all factors which constitute a brake to sustained and continuous economic growth”.²

As Pastore also remarks (2015; 2017c), Europe 2020, the programme inspired by the European Union’s Lisbon Strategy, is also very much geared towards human capital, calling for a reduction in the drop-out rate from compulsory schooling, still around 18% on average in Italy, and an increase in the share of school and university graduates. All the research undertaken in this field underscores how the yields from investments in education (both secondary and tertiary) are higher than the yields from investments in infrastructures (Ciccone et. al., 2006). Some research works have also shown how these investments can play a key role in regional development (de la Fuente et. al., 2019; de la Croix and Vandenberghe, 2010; CNRS and ZEW, 2005) and in that of the southern regions in particular (Carillo and Zazzaro, 2001; Ciccone et al., 2006). What is more, it has been shown that financial incentives for investment in education and related public expenditure have, in the long run, the capacity to finance themselves (Ciccone, 2009).

Time is also of the essence. If, in fact, the education system is not reformed quickly in order to adapt human capital to new production needs and new technologies, the (already concrete) risk exists of rapidly deteriorating the existing one.

Obviously, this is not just a question of quantitative targets such as increasing the share of education spending in GDP. Even if, in truth, pulling Italy out of penultimate position (before Romania) in the ranking of European countries with the lowest rate of graduates among people aged 30-34 (Fig. 4) or, also, doing something to bridge the gap (17 points) with the European average percentage of people between 24 and 64 years of age who have at least a secondary school diploma, would already be a 'macroeconomic' objective such as to make nervous any government that worthily calls itself reformist (Fig. 5). The problem is also to focus on the qualitative aspects of investment.

[insert Figures 4 and 5 here]

Nevertheless, as things stand at the moment, Italian universities are strongly underfunded, as is pointed out, among other things, in the contributions of a monographic issue of Scuola Democratica, with difficulties increasing in particular for universities in southern Italy (Carillo and Pastore, 2017). The Gelmini Reform introduced a large amount of innovation into

² See also Cipollone et. al. (2012); Cipollone and Sestito (2010).

the Italian university system. On the one hand, the endeavours of the legislator are clearly directed towards improving both research and teaching, but on the other hand, it is also evident from the implementation of the new system that little awareness exists of the perverse effects which incentive mechanisms that are too mechanical can generate within the system. On the subject of polarisation of resources in a few already better equipped destinations, with the risk of weakening perhaps the best side of the existing system, namely the territorial and intersectoral homogeneity of research and teaching guaranteed by the public and national organization desired by the fathers of the republican constitution, the feeling is that the reform is still in its infant stage and that its measures need fine tuning on the basis of an unprejudiced assessment of the positive, but also the negative things achieved thus far.

For Banfi and Viesti (2017) the inefficiencies are a consequence of the under-funding of university research and teaching throughout the country, which must be overcome. To sum up, the policy suggestions formulated by Carillo and Pastore (2017) to correct the perverse effects of polarisation of resources are as follows:

- a) evaluation of universities not on the basis of past performance, but on the basis of what has been done in the post-reform period, taking into account the different starting points;
- b) criteria which do not change continuously over time so as to allow planning of activities;
- c) assess universities on the basis of factors that depend on the universities themselves and not on the context in which they operate;
- d) definition of safeguard clauses to prevent excessive fluctuations in the distribution of funds;
- e) use of a larger number of the 22 indicators used by MIUR in the past and no use of indicators such as the VQR which was not conceived to measure quality, but to achieve minimum standards;
- f) taking into account the quality of teaching and research, since the former has an important impact on skills training, which is one of the main aims of universities.

3. Reforming the 3+2 reform

If, for example, we were to discuss investments in university education, two issues could be considered.

The organisation of today's university is the outcome of the so-called Bologna process, (organisation of the university cycle 3+2, etc.). The aim was not only to shorten the time taken to obtain a degree and reduce dropouts, but also to combine methodological and cultural preparation with highly professionalising training in order to give students the opportunity to immediately enter the working world.

15 years have now passed since the reform was implemented, but this goal does not seem to have yet been achieved. Here too, a number of figures can clearly show how incomplete and unrealizable the reform is. For example, according to the Anvur Report 2016 on the state of universities, Italy is still the only OECD country without a professionalizing degree. What is more, student drop-outs total around 42%, 12% more than the EU average. The percentage of school graduates who enrol in university is 42% in Italy, about 21% less than the EU. At the same time, enrolments have plummeted, especially in some faculties, such as Law, and this trend showed only slight signs of reversal in the last academic year.

A series of factors have transformed a major and well-planned reform into a boomerang due to incoherent application: lack of fully professionalizing three-year courses, winding and

repetitive three-year and two-year programmes, lack of three-year course recognition for job access purposes, with consequent obligation for a too high percentage of student to continue with the two-year course - in 2012-13, 51.1% of total three-year graduates and 57.9%, not including the degree in nursing. The last figure was 68.9% in 2003-4, when the three-year title was even less recognized than it is today.

In other words, both the teaching staff and the university system as a whole do not seem to have fully understood how the various cycles (3, 2, master, doctorate, etc.) should be structured in order to achieve, in each, a better link with the labour market. In essence, it is as if university education were still single cycle. The most striking example is the return to the single cycle of the degree course in Law. If, therefore, we were to invest in the university system, it would be a good idea to plan professionalizing study courses, starting from level one; this means courses aimed at providing professional skills that can be immediately spent in the labour market. This way, as it is easy to appreciate, the Bologna Process's objective of shortening graduation time would be achieved with a very definite benefit in terms of economic and social costs.

In the long run, all this affects the number of student drop-outs. If one seriously puts oneself in the position of students, families and enterprises, it is easier to appreciate that the decision to invest in education does not depend on *ex post* yields, i.e., those expected by graduates, who are in any case an élite, but on those *ex ante*, obtained by multiplying the *ex post* by the probability of obtaining a degree. For some students, the gap is significant and the yield tends to reduce itself to zero for the weaker ones (Altonji, 1993; Aina et al., 2017).

4. Ties with the working world

The second issue that should be addressed is the definition of human capital. It is the set of acquired skills, accumulated knowledge and attitudes that make the individual more productive. The close relationship between education and human capital is also quite well known. However, considering only these two variables would mean neglecting other factors that strongly influence the processes of formation and exploitation of an individual's potential, such as the accumulation of work experience - the other side of human capital. The problem of young people dropping out of the school and university system is that they face a typical skill gap problem in the transition process from school to work. In other words, the level of education being equal, they suffer from a lack of generic work experience (working discipline, respect for working hours, team work, etc.) and, above all, from the specific experience relating to a given job (knowledge of the production process and of the technologies used), which schools and universities do not provide. This component of human capital is acquired not in university classrooms, but inside companies, and therefore requires an increasingly stronger link between school and university, on the one hand, and enterprises, on the other (Pastore, 2015; Caroleo and Pastore, 2017).

But here, too, we must make a distinction. It is the Italian university system which is not equipped to already provide professionalizing experiences to young people during their educational career. There are countries in Europe, such as Germany, which instead adopt dual training systems at all levels of education, i.e., training based on the alternation of classroom teaching and work experience. In other words, this makes the transition between school and work easier as young people can already gain work experience immediately spendable on the labour market during their school years. It is no coincidence in fact that in Germany the employment rate of young people is among the highest in Europe and the unemployment rate

is among the lowest, close to that of adults (Eichhorst et al., 2015; Pastore, 2015; 2017b). If resources were to be 'spent' on investments in human capital, it would be desirable to strengthen the function of universities in job orientation and planning through training apprenticeships, internships, etc. As has already been said, the benefits would be to improve the transition between universities and the working world, but also the incentive to create a network of relationships and exchange of know-how with the business system.

In Italy, in 2015, with the “Good School” law, the principle of alternating school-work was introduced into secondary education (a practically ‘zero’ cost reform), and also a trial period for a 4-year diploma course. The hope is that a new government will not cancel these projects, but rather that they will be adequately funded (Giubileo, 2016; Maisto and Pastore, 2017). What are the consequences for Universities? Unless the university system prepares itself for the introduction of these principles – the development of school-work alternation and shorter degree courses – it runs the risk, in a few years time, of having to once again put students, who during their secondary school cycle have had work experiences and relations with the working world and who have benefitted from innovative forms of teaching, behind a desk³ for five more years.

³ The debate on university reform recently received fresh impetus (see for example Capuano et al., 2017) without however yet being translated into precise policy directives.

References

- Aina, C., E. Baici, G. Casalone e F. Pastore (2017), "Delayed Graduation and Dropout: Two Sides of the Same Coin?", dattiloscritto dell'Università della Campania Luigi Vanvitelli e dell'Università del Piemonte Orientale.
- Altonji, J.G. (1993), "The Demand for and Return to Education When Education Outcomes are Uncertain", *Journal of Labor Economics*, 11(1): 48-83.
- Anvur (2016), *Rapporto biennale sullo stato dell'università e della ricerca*, Roma.
- Banfi, A. e G. Viesti (2017), "Il finanziamento delle università italiane (2008-2015): una politica assai discutibile", *Scuola democratica*, n. 2.
- Cappellin R., Marelli E., Rullani E. e A. Sterlacchini (a cura di) (2014), "Crescita, investimenti e territorio: il ruolo delle politiche industriali e regionali", Website "Scienze Regionali" (www.rivistasr.it), eBook 2014.1
- Cappellin r., Baravelli M., Bellandi M., Camagni R., Ciciotti E. e E. Marelli (2015), "Investimenti, innovazione e città Una nuova politica industriale per la crescita", Egea, Milano.
- Carillo M. R. e F. Pastore (2017), "Innovazione e politiche universitarie in Italia. Un'introduzione", forthcoming in *Scuola Democratica. Learning for Democracy*, 2: 243-251.
- Carillo M. R. e A. Zazzaro (2001, a cura di), *Istituzioni, capitale umano e sviluppo del Mezzogiorno*, ESI.
- Caroleo, F.E. e F. Pastore (2017), "Overeducation at a Glance: Determinants and Wage Effects of the Educational Mismatch, Looking at the AlmaLaurea Data", forthcoming in *Social Indicators Research*.
- Capuano G., Regini M. e M. Turri (2010), *Salvare l'Università italiana*, Il Mulino, Bologna.
- Ciccone A. (2009), "Human Capital as a Factor of Growth and Employment at the Regional level: The Case of Italy", *Report for the European Commission, DG for Employment and Social Affairs*, February, Brussels.
- Ciccone A., Cingano F. e P. Cipollone (2006), "The Private and Social Return to Schooling in Italy", Banca d'Italia, *Temi di discussione del Servizio Studi*, n. 569, gennaio, Roma.
- Cipollone P., Montanaro P. e P. Sestito (2012), "Il capitale umano per la crescita economica: possibili percorsi di miglioramento del sistema d'istruzione in Italia", Banca d'Italia *Questioni di Economia e Finanza (Occasional papers)* Numero 122, Aprile, Roma
- Cipollone P. e P. Sestito (2010), *Il capitale umano*, Il Mulino, Bologna
- CNRS e ZEW (2005) "Human capital as a factor of growth and promotion of employment at the regional level: the case of France and Germany" *CoR Studies* 2, July, Brussels.
- de la Croix D. e V. Vandenberghe(2010), "Human capital as a factor of growth and employment at the regional level. The case of Belgium", *Report for the European Commission, DG for Employment and Social Affairs*, March, Brussels.

de la Fuente A., Doménech R. e J. F. Jimeno (2009) "Human capital as a factor of growth and employment at the regional level. The case of Spain", *Report* for the European Commission, DG for Employment and Social Affairs, February, Brussels.

Franzini M. e M. Pianta (2016), *Disuguaglianze. Quante sono, come combatterle*, La Terza, Roma.

Giubileo, F. (2016), *Alternanza scuola-lavoro: dalla innovazione della 107 alla sperimentazione del sistema duale*, Fondazione EYU, Roma.

Maisto, C. e F. Pastore (2017), "Alternanza scuola-lavoro: Un bilancio ad un anno dall'attuazione", *Economia & Lavoro*, LI(1): 133-145 ([downloadable from research gate](#)).

Ministero dell'Economia (2017), *Documento di Economia e Finanza*, Governo Italiano, Roma.

Pastore, F. (2015), [*The Youth Experience Gap. Explaining National Differences in the School-to-Work Transition*](#) (2015), *Springer Briefs in Economics*, Physica Verlag, Heidelberg.

Pastore, F. (2017a), "Why So Slow? The School-to-Work Transition in Italy" (2017), [IZA dp n. 10767](#), May.

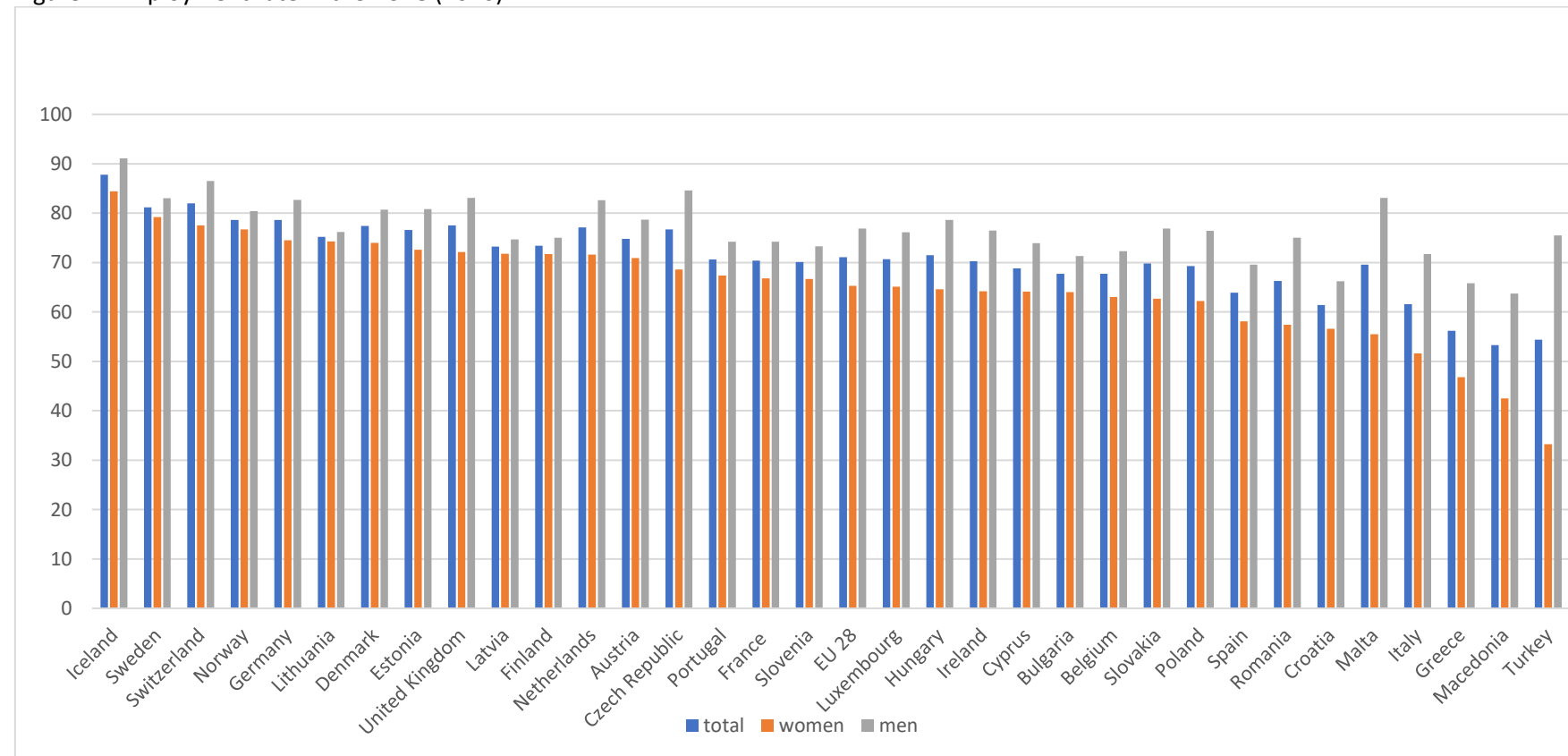
Pastore, F. (2017b), "Why are young people so much at disadvantage in the labor market as compared to adults?", forthcoming in *IZA World of Labor*.

Pastore, F. (2017c), ["Getting it right. Youth Employment Policy within the EU"](#) (2017), *Cesifo Forum*, 18(2): 19-25 (also available as [IZA Policy paper, n. 127](#)) (Non-technical summary featured in the [IZA Newsroom](#)).

Visco I. (2011), "Investire in Conoscenza: giovani e cittadini, formazione e lavoro", Intervento al *XXX Congresso nazionale dell'AIMMF*, Catania, novembre.

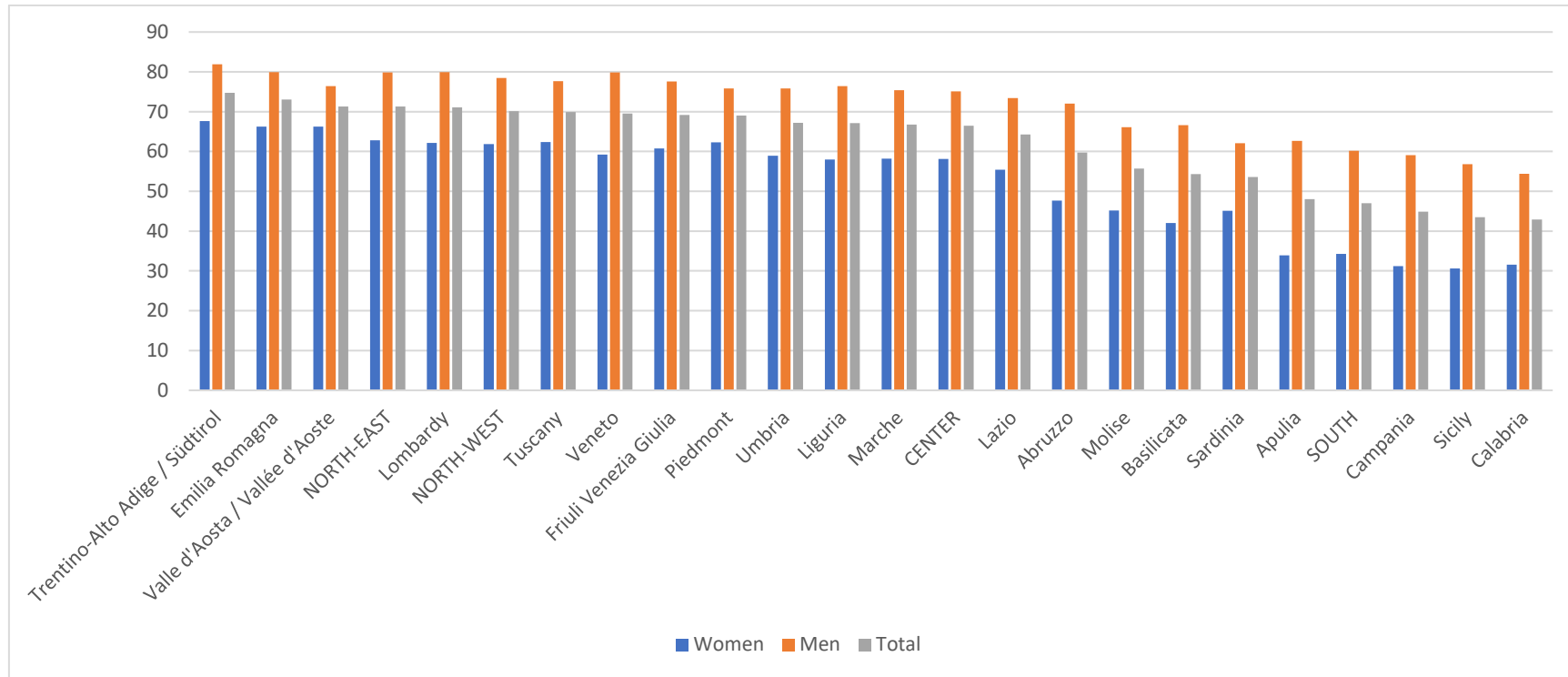
Appendix of Figures

Figure 1. Employment rate in the EU28 (2016)



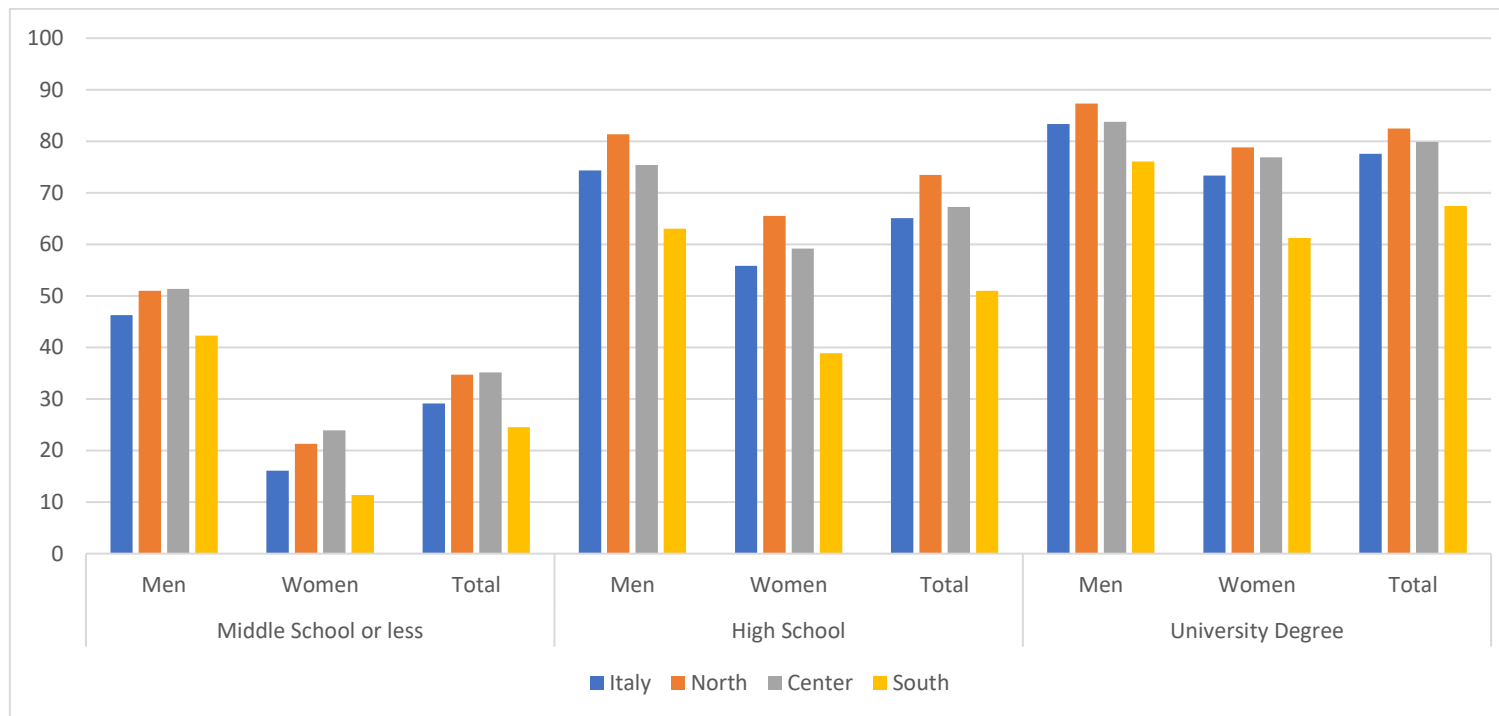
Source: Eurostat

Figure 2. Employment rate by gender and region in Italy (2016)



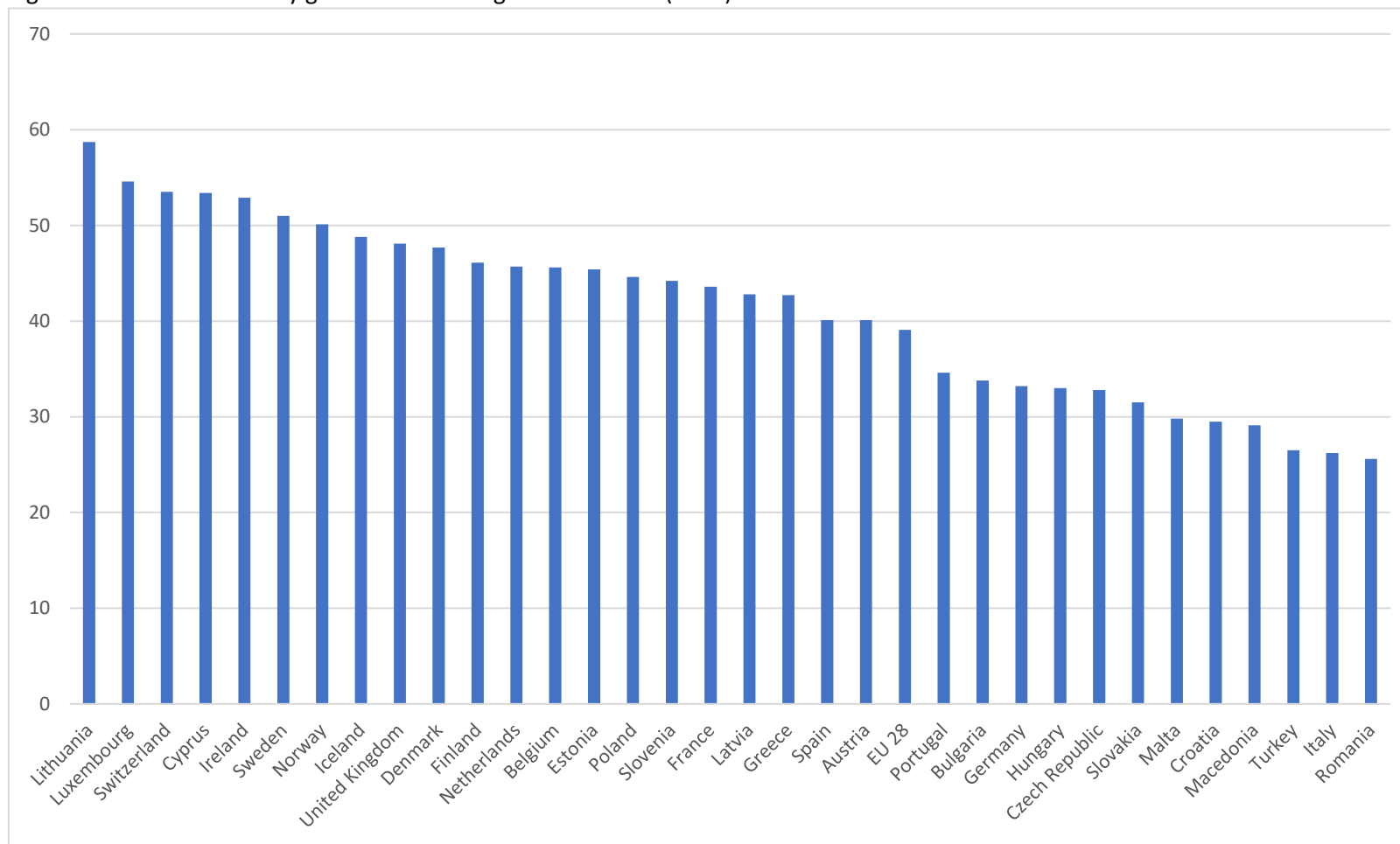
Source: Istat

Figure 3. Employment rate by gender, educational qualification and macro-regions (2016)



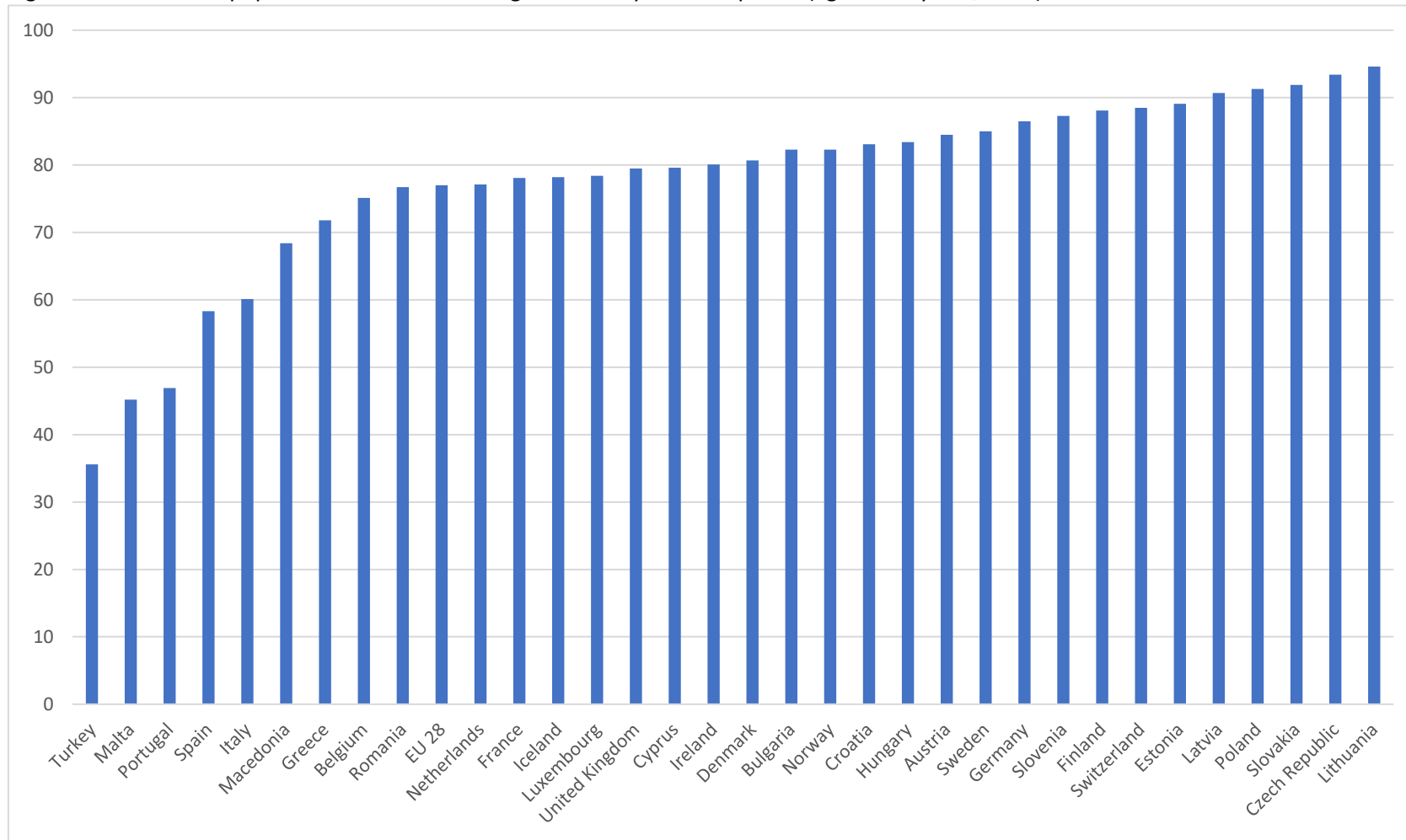
Source: Istat.

Figure 4. Share of university graduates in the age cohort 30-34 (2016)



Source: OECD

Figure 5. Share of the population with at least a high secondary school diploma (age 24-64 years; 2016)



Source: OECD.