



Associazione Studi e Ricerche
Interdisciplinari sul Lavoro

Working Paper n° 26/2017

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Anno 2017

ISSN 2280 – 6229 -Working Papers - on line

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esemplare fuori commercio
ai sensi della legge 14 aprile 2004 n.106

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Università degli Studi Roma Tre
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E-mail: astril@uniroma3.it
<http://host.uniroma3.it/associazioni/astril>

DOES RISING UNEMPLOYMENT LEAD TO POLICIES OF LABOUR FLEXIBILITY? THE ITALIAN CASE (1990 – 2013)

Guglielmo Forges Davanzati* and Lucia Mongelli**

This paper deals with the relation between labour market deregulation and the path of employment in Italy. A preliminary reconstruction of the theoretical debate is provided, based on the different views advocated by Neoclassical and post-Keynesian scholars. The second part of this paper focuses on empirical evidence, concluding that the increase in labour flexibility negatively affected the employment rate in the 2000s. Moreover, it is argued that as unemployment increases, workers' bargaining power decreases not only in the labour market but also in the political arena, allowing the Government to implement further policies of labour flexibility. The evidence confirms this conjecture.

Keywords: post-Keynesian theory, labour flexibility, employment
JEL: B5, J2, J5,

1 - Introduction

Policies of labour market deregulation (also called 'labour flexibility') were introduced in Italy starting from the so-called Pacchetto Treu (Law 24 June 1997). These interventions were accentuated by the so-called Legge Biagi (Law 30/2003), the "Riforma Fornero" (Law 27 June 2012) and lastly by the Jobs Act, in 2014. Those reforms significantly reduced the costs of firing on the part of firms, and were presented to the Italian public as part of a wider political programme of 'modernization'. The word 'reform' (which actually means structural reforms and hence labour flexibility), in the Italian political debate, became synonymous with progress which would benefit the entire society, quite independently of its content.

The aim of this article is *i)* to reconstruct the theoretical debate about the impact of labour 'flexibility' policies on employment; *ii)* to provide empirical evidence of the outcome of such policies in Italy. Based on the Marxian theory of the industrial reserve army, and on Kalecki's contribution, a section will be devoted to empirically verifying the idea that policies of labour flexibility are made possible when workers' political power declines, which depends on the decline of their bargaining power in the labour market and, hence, on the reduction of employment.

Italy is a significant case-study for two main reasons. First, policies of labour flexibility were implemented somewhat later than in the main OCSE countries (above all the Anglo-Saxon nations) but compared to those countries, they have been implemented with greater intensity (Tridico, 2014). Second, the beginning of this process of 'modernization' coincides with the beginning of the long recession that the Italian economy experienced starting from the 1990s (cf. Perri and Lampa, 2014), and some scholars have imputed the Italian decline also to the acceleration of policies of labour flexibility (cf. Tridico, 2013).

As regards the academic debate, it has been dominated by the conviction that labour market deregulation is an essential policy instrument in order to increase employment in a context in which firms are facing a more and more volatile demand. It is only in more recent years that the idea has taken hold that measures of labour market deregulation can have a negative effect on employment trends and act as a brake on economic growth. In other words, it was a widespread view that the

* University of Salento – Department of History, Society and Human Studies. Email: guglielmo.forges@unisalento.it

** Istat, National Institute for Statistics - Apulian Territorial Office. Email: lucia-mongelli@libero.it. In this paper we will use "deregulation", "flexibility" and "precariousness" as synonyms. This choice is legitimated by our rejection of the distinction between 'good' and 'bad' labour flexibility, which is the main argument used in order to maintain that precariousness is the bad form of labour flexibility, which, in principle, is assumed as a 'good' instrument for regulating industrial relations. A detailed discussion on this topic is outside the scope of this paper.

Italian economy could benefit from globalization only on the condition that ‘reforms’ were made: above all the reform of the labour market.

The exposition is organised as follows. Section 2 provides a critical reconstruction of the debate, with special reference to the contrast between the neoclassical approach and that of post-Keynesian theory. We will mainly focus on the Post-Keynesian criticisms of the mainstream view, and we will propose further arguments opposing the idea that labour deregulation increases employment in this theoretical framework. Moreover, from the Marxist literature we draw the idea that variations of relative bargaining power between Capital and Labour in the labour market are, so to say, transferred into the political arena (cf. Kalecki, 1943; Korpi, 1989). As a result, we will argue that labour flexibility increases when unemployment increases, due to the reduction of workers’ bargaining power in the political sphere. In section 3 the empirical evidence is examined, correlating the employment protection index most widely used in the literature (*employment protection legislation* - EPL) with employment trends in Italy. The period covered is from 1990 to 2013. This period was chosen both because 2013 is the last year for which OCSE has released the EPL indices, and above all because in the subsequent period the so-called *Jobs Act* came into force, the analysis of which would require a specific study. Close attention is also paid to the correlation of the reverse relationship, empirically verifying whether the rise in the unemployment rate is accompanied by an accentuation of labour market deregulation measures, based on the supposition that a rise in the unemployment rate also reduces workers’ bargaining power in the political sphere. Section 4 offers some concluding remarks.

2 – The theoretical debate

Labour market deregulation policies have been implemented in two directions: a) the deregulation of the labour market, carried out with measures designed to make wages flexible (and therefore minimise the intervention of institutions outside the labour market: specifically, those by the government and trade unions related to setting minimum wages); b) the deregulation of the employment contract, essentially achieved through laws making it easier to hire (so-called entry flexibility) and cheaper to fire (so-called exit flexibility). As far as the first aspect is concerned, the tool used has been – and still is – incentivisation of second level bargaining. As to the second aspect, legislative interventions have concentrated on the duration of the employment contract, passing from permanent contracts to fixed-term contracts.

Most Italian economists supported these ‘reforms’, particularly in the 1990’s (cf. Blanchard and Giavazzi, 2003). The arguments they propose are basically the following.

1) As regards the deregulation of the labour market, it is believed that it is only free wage fluctuation (which can be attained by shifting bargaining from the centralised level to the decentralised level) that enables employment to grow as a result of an increased demand for labour. It’s argued that decentralized bargaining allows firms and workers to equalize the path of wages to that of labour productivity, thus respecting the so-called ‘Bowley Law’.

This argument has been the object of the following critiques. Second level bargaining, though not yet widely used in Italy, has as its main effect the reduction of trade union bargaining power, and as a result, wage moderation. Furthermore, it tends to generate a double dualism. First of all, there is the dualism related to the different treatment obtained by workers in large firms (where second level bargaining is used and often, due to higher productivity, wages rise) and workers employed in small-size firms. Secondly, there is dualism on a regional scale, since Southern Italy is mainly populated by small firms in which wages are lower and intra-firm bargaining is less common (cfr. D’Amuri & Giorgiantonio, 2014; Fubini, 2009)¹.

¹ In this sense, as, Franzini & Pianta (2016) argue, at least in the Italian context, decentralised bargaining helps to accentuate inequalities, especially those related to working conditions and wage differences.

2) As far as the deregulation of the employment contract is concerned, it was thought (and still is thought) that firms hire only by knowing they can fire; in other words, the existence of rigidities raises the expected costs of dismissal and, as a result, reduces the incentive to hire (cf. Layard, Nickell and Jackman, 1991). Essentially, the reform of the labour market is supposed to have a positive impact on the “climate of confidence” and the state of firms’ expectations, leading to higher investment and employment (cf. Layard, Jackman and Nickell, 1986).

In addition – it is argued – high labour flexibility can have positive effects on profits and as a result on investments and lastly on employment. The rationale can be expressed in this sequence. A greater degree of flexibility in the labour market raises profits, since, by cutting the workers’ bargaining power, it reduces wages and therefore generates higher investment and employment. Such an argument is open to various objections: *i*) there is no logical/theoretical reason to be certain that higher profits lead to higher investment. Precisely because the *possibility* of greater self-financing is a pre-condition for extra investment, there is nothing to say that firms actually *want* to invest more. To be sure of the relationship proposed between higher profits for firms, greater investment and therefore higher employment, it is necessary to make hypotheses about the firms’ *expectations*, assuming specifically that the rise in *current* profits is reflected in an increase in *expected* profits and – moreover – that the expectations are influenced only (or mainly) by the profits actually made. That’s not all. Even if expectations improve following the higher profits achieved, the investment needs to be made *in the same geographical area* where policies of flexibility are in place so there must be no delocalisation and the profits made must not be used for speculative purposes (or for ostentatious consumption); *ii*) There is no logical/theoretical reason to state that increased investment means increased employment, since it may mean (as in the case of *jobless growth*) an increase in the amount of fixed capital. The possible counter-objection lies in the “compensation effect”, in which unemployment (technological in this case) is a short-term phenomenon, destined to be reduced or eliminated by the re-absorption of the (temporarily) unemployed into sectors producing capital goods². As is widely acknowledged in non-neoclassical circles³, however, this mechanism presupposes a perfect reconversion ability on the part of the unemployed, who – without incurring costs – should be ready to assimilate the technical processes used in industrial sectors in which they have never worked.

It is also argued that as labour market deregulation policies are associated with wage moderation, they serve for the growth of employment by means of an increase in exports made possible by cuts in money wages and prices⁴. In other words, the reduction of money wages deriving from a policy of flexibility determines a reduction in the price of export goods, which would be followed by an increase in exports, aggregate demand and employment. The increase in profits, investment and employment sequence is open to the same objections posed in the case discussed above (cf. Blanchard and Giavazzi, 2003). There are two further objections that can be made to the argument underlying this sequence: *i*) *on the theoretical plane*, there is clearly no compelling reason to necessarily consider higher profits the inevitable effect of price cuts, since international competitiveness is also related to the *quality* of the goods exported *ii*) *on the empirical plane*, there is abundant documentation to show that greater flexibility does not necessarily produce more exports⁵. In addition, it is claimed that the reduction of constraints on hiring and firing improves

² Notice that the “compensation effect” also concerns the increase in demand, and therefore in employment, following price cuts caused by the rise in productivity. On this, see Pini (1992).

³ Cfr. Pini (1992).

⁴ For a critique of this position, see Stirati (2006).

⁵ The sequence proposed only holds in a condition of high elasticity of exports to prices. In the case of Italy, the empirical evidence is ambiguous; see the study by De Matteis, Pietrovito, Pozzolo (2016). One can also look at other European countries, especially Germany, where the consolidation of the market share occurs alongside a higher wage dynamics than in the other countries (though wages have also fallen in Germany). This would seem to give credence to the hypothesis, known in the literature as “Kaldor’s paradox”, which states that in international trade, more than the cost

business expectations and therefore generates a growth of investment and employment. It must be taken into account that policies of wage moderation help to generate deflation; that deflation is a major disincentive for firms to invest; that the contraction of investment has a negative effect on aggregate demand and employment.

On the theoretical level, the two arguments proposed here are radically different from those described above and can be summed up as follows. They can be seen as belonging to a post-Keynesian approach, in which the conclusion reached is that the labour market flexibility strategy is either ineffective or even counter-productive for the purpose of lowering unemployment. This is based on the following general assumptions: *a*) bargaining between employer and workers is related to the money wage, not the real wage; *b*) the wage has a dual nature: it is a cost of production, but also, via consumption, an element of the aggregate demand (cf. Lavoie, 2014).

From the second hypothesis it immediately follows that firms' decisions on employment are not made on the basis (or only on the basis) of the operating technique used (as occurs in the neoclassical model), and therefore of costs, but mainly on the basis of the expected demand for the goods they produce. It is thus possible to establish the macroeconomic relation which holds that the employment level is a function of the expected aggregate demand⁶. From a post-Keynesian viewpoint, a possible schematisation of the effects of introducing wage flexibility measures is shown in the following sequence. Wage reduction, deriving from labour market deregulation policies, lowers consumption and, investments being equal, also aggregate demand, with negative effects on employment. In addition, due to Kaldor's so-called second law, the drop in demand resulting from the reduction of wages and consumption has a negative impact on the rate of growth of labour productivity. This is owing to the fact that variations in demand affect worker specialization and economies of scale (Kaldor, 1966) as well as firms' growth in size. In other words, a drop in demand means less profit, therefore less investment (due to the reduction of internal funds), therefore the decrease – or the lack of increase – in average firm size and, ultimately, assuming that productivity falls as size decreases, it means a lower rate of labour productivity growth. This is all in a situation of cumulative causation involving systematic interactions between the dynamics of demand and those of aggregate supply.

Ultimately, in the post-Keynesian model: *i*) the spontaneous operation of market mechanisms does not necessarily guarantee the achievement of full employment⁷; *ii*) wage flexibility does not increase employment and can only lead to a reduction of the part of income allocated to workers (the so-called *labour share*). These effects are amplified by the fact that the workers usually display a higher propensity to consume than their employers: the former consume almost as much as they earn; the latter save in order to invest. Assuming this, it follows that this is one of the reasons that wage compression has significant negative effects on aggregate demand through the reduction of the propensity to consume and therefore of the multiplier (cf. Kaldor, 1966).

These results are generated by the key hypothesis that the employment level is not determined in the labour market (here a "residual market"), but depends on the size of the aggregate demand.

of labour, what counts are non-price competitive factors, such as product composition and quality of goods exported . On these issues, see the works of Graziani (1969, 1988, 2002).

⁶ Where – don't forget – expectations are not formed on a purely rational basis, since it is impossible – from the Keynesian viewpoint – to attribute probability to future events.

⁷ It is also pointed out that wage flexibility can prove to be a *counterproductive* strategy, for the following reason. First of all, to attain maximum profits, a company's management has to give maximum effort and giving effort incurs costs, in terms of the disutility of labour. If – as happens in large companies – ownership is separate from management, with the shareholder-owners having an interest in maximising profits (cfr. Baumol, 1962), it is the increase, not the reduction, of workers' wages that is an incentive to managers' performance. The latter – in order to achieve at least the same amount of profit with growing costs of production – now have to make improvements in organisational and/or production processes so as to raise production and profits. In this case, a wage rise has a positive 'shock' effect on the management's productivity, and wage flexibility is counterproductive in that it lowers the amount of production (cfr. Rees, 1973). See Baumol (1962) and Rees (1973).

In the context of this theoretical schema, it is believed that policies of job contract flexibility are counterproductive for purposes of increasing employment, for the following reasons.

a. The propensity to consume declines as the probability of dismissal grows. This idea is explained by the fact that, logically, the aim of the employed is to maintain their standard of living substantially unchanged. The reduction of the propensity to consume (or the increase in personal savings) is therefore a rational response to the introduction of exit flexibility measures, when faced with greater uncertainty due to the employment contract.

b. The precarization of employment lowers the labour productivity growth rate since it puts firms in a position to compete by cutting costs (wages first of all), which therefore discourages innovations (Deakin, Malmerg and Sakar, 2014; Forges Davanzati and Pacella, 2008; Pini 2014)⁸, reducing the growth rate and employment. This effect is amplified by the fact that flexible contracts undermine economies of teamwork, or the increases in productivity that could derive from cooperative relations among workers in a production unit. This is due to the fact that, by generating uncertainty about the renewal of contracts, flexibility tends to be associated with *competition among workers and cooperation of individual workers with the employer*⁹. Moreover, flexible contracts, combined with low wages, tend to create demotivation and, through this, poor worker performance and low productivity. This effect can also derive from workers' perception of unfairness in industrial relations. As Kim et al (2015) point out: "by establishing minimum labour standards (minimum wages, maximum work hours, minimum safety conditions, restrictions on unreasonable discharge, elimination of child labour, etc.), employees can be assured of having the basis for a decent life and a fair share of the proceeds of their labour (distributive justice). Furthermore, equal opportunity and prohibition of discrimination is part of the equity between different parts of the working population. Although achieving equity is a main concern for workers and labour unions, equity is also, in the long run, a way to augment the organization's efficiency by giving it equal access to the talents of all population groups. Therefore, equity is a matter of interest to management as well". This argument can be extended by considering that precariousness tends to be associated to 'bad labour relations' and to possible reduction of labour productivity, via the reduction of workers' effort. Moreover, as Berglund and Furaker (2016) find, EPL strictness tends to prolong tenure, because rigorous rules imply that remaining with the same employer gives more job security. This conclusion can be expanded since a stable labour relation allows workers to implement their specific skills, thus increasing labour productivity.

3 – The empirical evidence

This section aims at analysing *i*) the effects of labour market deregulation on employment and *ii*) the reverse effect, i.e. the effects of increasing unemployment on policies designed to increase the degree of labour market flexibility. The first issue has been analysed for most OECD countries, but few works have focused on the Italian case (cf. Brancaccio, 2016). Importantly, to our knowledge, the second topic has never been the subject of both a theoretical and an empirical study. The insight behind this link is that – based on the Marxian theory of the industrial reserve army – it is

⁸ In his 1930 article *The Question of High Wages*, Keynes wrote, "If you pay a person better you challenge his employer to become more efficient, forcing him to discard obsolete methods and machinery, thus hastening the departure from the industry of the less efficient entrepreneurs and raising the general standard". In other words, high wage policies combined with more rigid employment contracts may generate a situation where, unable to lower wages or fire without incurring costs and in order not to see their profit margin reduced, firms can only react to the greater labour market regulation by increasing productivity. To do so, they have to introduce innovations (v. Forges Davanzati and Pacella, 2008).

⁹ In view of these arguments, and of the empirical evidence, some economists have blamed the sharp acceleration of the Italian recession in recent years on the measures of labour market deregulation (cfr. Tridico, 2014). It should be pointed out, however, that the so-called Italian economic decline has multiple causes: it originated in the mid-1990s and can basically be imputed to the perverse interaction between the falling aggregate demand and the contraction of the rate of growth of labour productivity (cfr. Perri e Lampa, 2014).

reasonable to assume that as workers' bargaining power declines *in the labour market*, as a consequence of increasing unemployment, it also declines *in the political arena*. This allows the Government to implement further policies of labour flexibility.

3.1 – Labour flexibility reduces employment

In order to test the correlation between work protection and employment trends, the instrument to be used here is the *Employment Protection Legislation Index (EPL)*, elaborated by OCSE. This indicator, designed to measure the level of labour “protection” based on the legislation in force in European Community member states, is today the most widely used indicator, considered adequate for the measurement of the degree of employment protection (cfr. Romano, 2014).

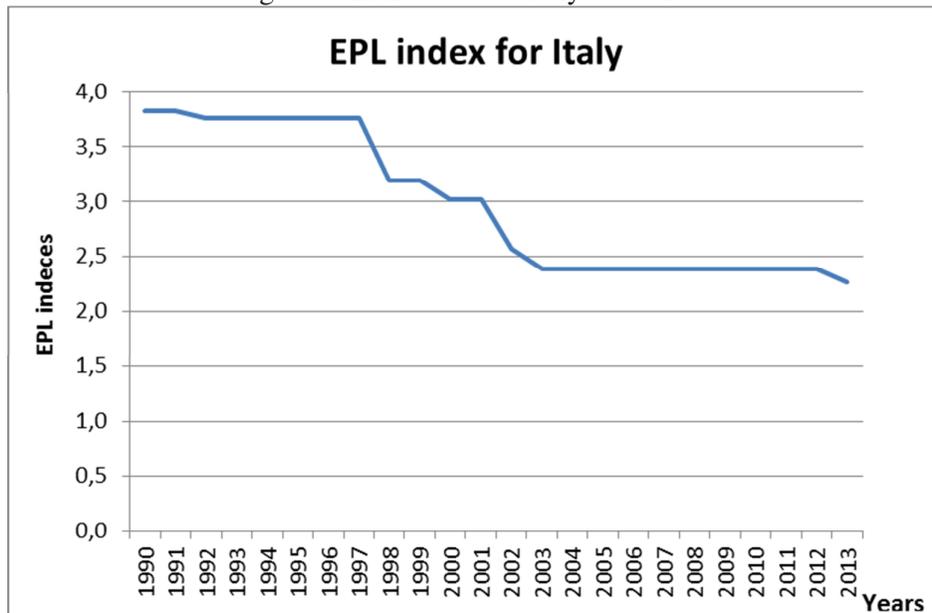
It consists of 21 synthetic indicators which enable the two sub-indicators that go to make up the ELP to be estimated: the indicator of *permanent work contract protection (EPRC)* and the indicator of *protection for temporary contracts (EPT)*.

A mark is given to countries' legislation based on certain parameters, such as the procedures required to give notice of an individual dismissal (with a scale ranging from 0, if verbal notice is enough, to 3 if written notice validated by a third party is needed).

Overall, the more the legislation stresses labour market flexibility, without envisaging protections, constraints and costs for firms and interfering with the requirements for permanent and fixed-term contracts, the smaller the EPL indicator. Greater flexibility therefore corresponds to a lower EPL index.

This analysis considers the trend in the EPL index for Italy (Cfr. Figure 1).

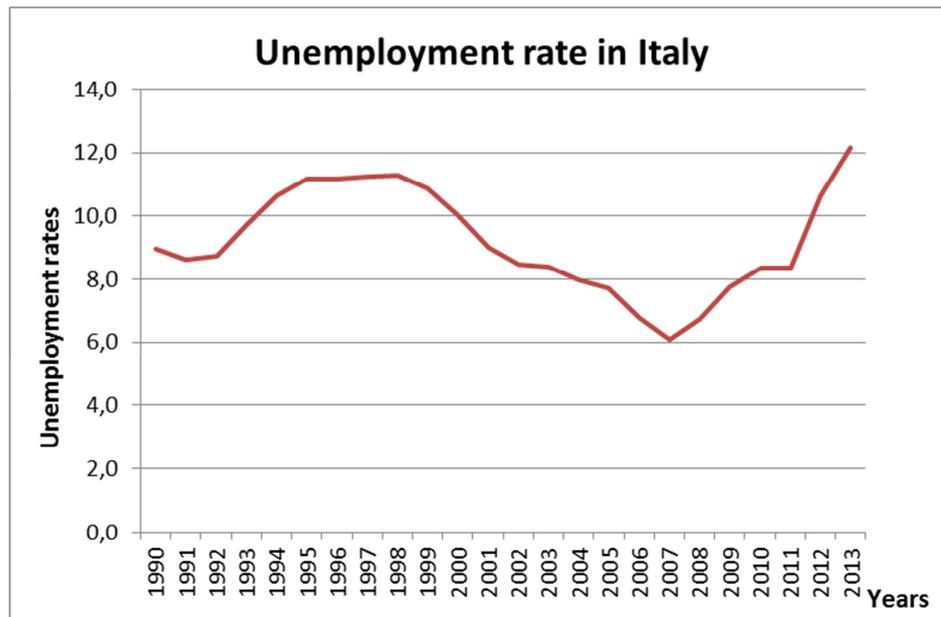
Figure 1. EPL index for Italy 1990-2013



Source: Our elaboration from OCSE data

The EPL index has declined considerably over the years, by 40.1% to be exact, going from 3.82 in 1990 to 2.26 in 2013, so it would seem easier to dismiss somebody today than in 1990. A sudden drastic drop occurred from 1997 to 1998, passing from 3.76 to 3.19, with a fall of over half a point, and from 2001 to 2003 when it went from 3.01 to 2.38 (passing in 2002 with a 2.57) for a reduction of 26.5%.

Figure 2. Unemployment rate in Italy 1990-2013



Source: Our elaboration from Istat data

Although the EPL index has almost halved since 25 years ago, in 2013 the unemployment rate was over three points higher (3.17) than it was then (Cfr. Table 1 and Figure 2).

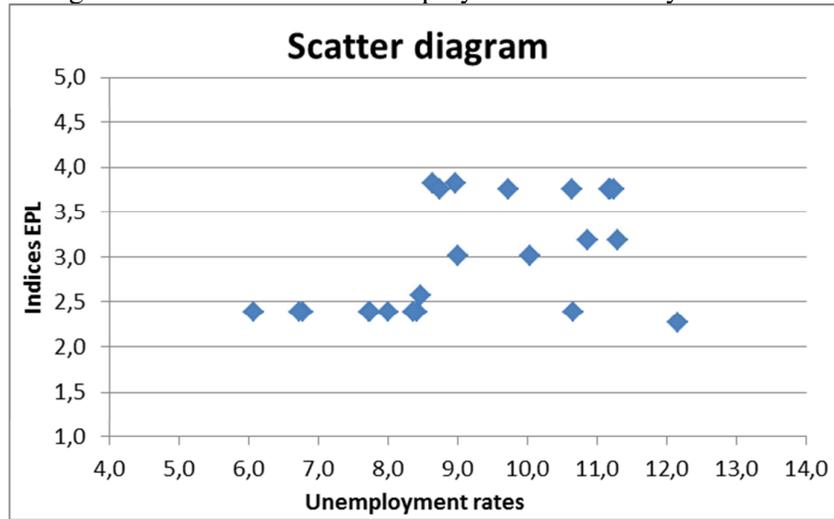
Table 1. EPL index, employment and unemployment rates in Italy. 1990-2013

Year	EPL*	Employment rate	Unemployment rate
1990	3.82	54.76	8.98
1991	3.82	54.87	8.65
1992	3.76	54.42	8.74
1993	3.76	53.71	9.73
1994	3.76	52.81	10.65
1995	3.76	52.54	11.19
1996	3.76	52.86	11.17
1997	3.76	53.01	11.24
1998	3.19	53.71	11.30
1999	3.19	54.50	10.87
2000	3.01	55.53	10.03
2001	3.01	56.62	9.00
2002	2.57	57.43	8.47
2003	2.38	57.53	8.41
2004	2.38	57.56	8.00
2005	2.38	57.49	7.73
2006	2.38	58.34	6.78
2007	2.38	58.56	6.08
2008	2.38	58.63	6.72
2009	2.38	57.37	7.75
2010	2.38	56.76	8.36
2011	2.38	56.79	8.36
2012	2.38	56.64	10.65
2013	2.26	55.54	12.15

Note: * first version. The last version, no.3, does not allow a satisfactory analysis because the data available are limited to the 2008-2013 period.

Source: OCSE, Istat

Figure 3. Scatter diagram of EPL index and unemployment rate in Italy 1990-2013



Source: Our elaboration from OCSE data, Istat

Analysing the relation between the EPL index trends and the movement of the unemployment rate¹⁰ for 1990-2013, we can see that there is a positive correlation, with the unemployment rate tending to rise as flexibility increases. This correlation is very clear because the correlation coefficient¹¹ is +0.49 (remember that the correlation coefficient varies from -1, perfect discordance between the pairs of variables, to +1, perfect concordance between the two variables) (Cfr. Figure 3).

Even by limiting the field of analysis to the 1990-2007 period (that is, excluding the distortion of the big recession), the results do not change: the correlation coefficient is positive at +0.69, and the concordance is even more evident.

Interesting results emerge if we examine the ten-year period from 1998 to 2007. The correlation coefficient is very high, at +0.90, indicating a strong positive correlation between labour flexibility and unemployment.

The situation appears to be totally different if we look at the relation between the EPL index figures and the unemployment rates in more recent years, 2004-2013 and 2008-2013.

For the 2004-2013 period, the correlation between EPL index and unemployment rate is negative with a correlation coefficient of -0.74, showing considerable discordance between the two variables; equally clear is the discordance between the EPL indices and unemployment rates for 2008-2013, with a correlation coefficient of -0.77 (Cfr. Table 2).

Table 2. Correlation coefficient between the EPL index and unemployment rate for some time periods.

Time period	Correlation coefficient r
1990-2013	+0.49
1990-2007	+0.69
1998-2007	+0.90
2004-2013	-0.74
2008-2013	-0.77

¹⁰ Unemployment rate: ratio of unemployed to workforce. Istat. www.dati.istat.it

¹¹ The correlation coefficient is calculated as follows:
$$r = \frac{\sum(x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum(x_i - \bar{x})^2 \sum(y_i - \bar{y})^2}}$$

The interpretation proposed here refers to the fact, as argued in the post-Keynesian literature, that the firms' demand for labour basically depends on the expected aggregate demand. In this sense, it is reasonable to believe that the positive effect of the deregulation of the pre-crisis labour market essentially depends on the fact that they were years of relatively high growth compared to the following period. What seems evident is that the measures of labour flexibility put in place in conditions of falling demand have significantly negative effects on employment. It must also be remembered that the '90s, as pointed out above, were marked by a much less incisive deregulation than the period that followed. This gave credit to the idea that employment dynamics are not significantly affected by the degree of labour protection and that in situations of reduced demand, the deregulation of the labour market can, if anything, contribute to raising the unemployment rate. In other words, *evidence seems to show that excluding the changes in aggregate demand, the less flexible the labour market is, the more the unemployment rate tends to fall.*

3.2 – The reduction of employment fosters further policies of labour flexibility

The relation between EPL variations and the trend of the unemployment rate can also be read in the opposite direction. This is because in situations of high unemployment, workers have low bargaining power not only in the labour market but also in the political sphere. As a result, a high unemployment rate tends to be associated with a redistributive labour policy, to the detriment of workers (cfr. Colacchio, 2014, pp.142 ss.)¹², since, as shown in the previous section, labour flexibility negatively affects employment. This argument is consistent with Kalecki's view that unemployment is a *discipline device* that capitalists use in order to impede workers (and unions) from controlling economic policy. As Kalecki (1943, p.326) wrote:

“... under the pressure of the masses the maintenance of full employment would cause social and political changes which would give a new impetus to the opposition of the business leaders. Indeed, under a regime of permanent full employment, " the sack " would cease to play its role as a disciplinary measure. The social position of the boss would be undermined and the self assurance and class consciousness of the working class would grow. Strikes for wage increases and improvements in conditions of work would create political tension, It is true that profits would be higher under a regime of full employment than they are on the average under *laissez-faire* ; and even the rise in wage rates resulting from the stronger bargaining power of the workers is less likely to reduce profits than to increase prices, and thus affects adversely only the *rentier interests*. But 'discipline in the factories' and 'political stability' are more appreciated by the business leaders than profits. Their class instinct tells them that lasting full employment is unsound from their point of view and that unemployment is an integral part of the 'normal' capitalist system”.

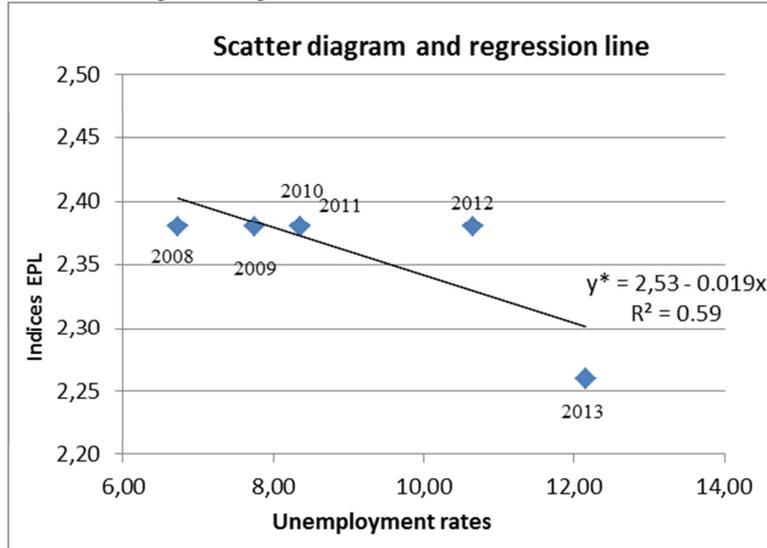
While Kalecki referred to the possibility, on the part of capitalists, to fully manage economic policy by disciplining workers with unemployment, an extension of this argument is proposed here: i.e. capitalists – via their influence on policy-makers – can use labour precariousness to generate further labour precariousness¹³.

¹² Of course, this presupposes the very reasonable assumption that workers prefer stable contracts to temporary contracts, not only because of the greater security associated to the latter, but also because, as a norm, stable contracts are also associated with better labour conditions and higher wages (cf. International Labour Organization, 2016). Workers' bargaining power is also reduced as a result of the decline of union membership, which, in turn, basically depends on the lack of cohesion among workers deriving from labour flexibility and on the higher risk of firing that the individual worker is likely to face in the event of joining a trade-union.

¹³ The influence of capitalists and big corporations on policymakers has been widely discussed and this paper does not deal with the issue. In any case, the threat of delocalization seems to be the most powerful device in steering domestic economic policy – the so-called capital strike. Cf. DiMaggio and Powell (1983).

On the empirical level, this hypothesis can be tested by computing the dependence relation (bivariate regression¹⁴) existing between unemployment rates and the EPL index in the 2008-2013 period.

Figura 4. Scatter diagram, regression line and index of determination 2008-2013



Source: Our elaboration from OCSE data, Istat

The regression line calculated ($y^*=2.53-0.019x$)¹⁵ shows a falling trend; this indicates that unemployment rates have a negative influence on EPL indices and that as the unemployment rate rises, the EPL index falls steadily by about 0.019 points.

The index of determination¹⁶ R^2 gives a measure of good fit of the regression line to the data, in our case of 0.59, and the model therefore shows good fit to the data.

Table 3 gives figures for the unemployment rate, the EPL index, the estimates and residuals between the EPL index and its estimate.

Table 3. Unemployment rate, EPL index and calculation of the EPL index estimate and residual 2008-2013.

Year	Unemployment rate x_i	EPL y_i	EPL estimate y_i^*	Residual ε $y_i - y_i^*$
2008	6.72	2.38	2.40	-0.02
2009	7.75	2.38	2.38	0.00
2010	8.36	2.38	2.37	0.01
2011	8.36	2.38	2.37	0.01
2012	10.65	2.38	2.33	0.05

¹⁴ Econometric method of testing the casual relation between two phenomena by observing their trend with reference to only two variables.

¹⁵ The parameters of line $y^*= a + bx$ were calculated as follows:

$$b = \frac{\sum(x_i - \bar{x})(y_i - \bar{y})}{\sum(x_i - \bar{x})^2} \quad \text{and} \quad a = \bar{y} - b\bar{x}$$

¹⁶ The index R^2 was calculated as follows:

$$R^2 = \frac{[\sum(x_i - \bar{x})(y_i - \bar{y})]^2}{\sum(x_i - \bar{x})^2 \cdot \sum(y_i - \bar{y})^2}$$

and indicate how much of the total variability of y is explained by the estimate (y^*) of y (obtained by minimizing the square of the regression residuals).The indicator varies from 0 to 1, being 0 when the regression deviance is null, that is, when there is independence on average between the variables, and 1 when the residual deviance is null, that is, when all the points of the two variables are aligned and lie on the regression line, which expresses the functional tie between the two.

2013	12.15	2.26	2.30	-0.04
Media	9.00	2.36	2.36	0.00

Source: Our elaboration from OCSE data, Istat

Subsequent research will attempt to provide empirical documentation of the relation existing between specific levels of unemployment (youth, gender-based, etc.) and the EPL index.

4 – Concluding remarks

This article looked closely at the effects of labour market deregulation on unemployment trends in Italy. Firstly, a critical reconstruction was made of the theoretical debate amongst neoclassical and post-Keynesian economists. The empirical evidence was then examined, correlating the employment protection index elaborated by OCSE (EPL) with the progress of the unemployment rate. The main conclusion concerns the fact that labour market deregulation seems to have had a positive effect on employment in the 1990s and a negative effect from the early 2000s on. The idea proposed is based on the belief that the '90s were marked by a far less drastic deregulation than that implemented in the following period. In this sense, it seems reasonable to conclude that employment dynamics are not significantly influenced by the degree of employment protection and that in contexts of reduced demand, labour market deregulation can if anything contribute to the growth of the unemployment rate. The next hypothesis, that as the unemployment rate rises, with the weakening of workers' bargaining power, the employment protection index is reduced, was tested empirically and revealed a significant correlation.

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