What if?
Using counterfactuals to evaluate the effects of structural labour market reforms: evidence from the Italian Jobs Act

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Abstract
The article assesses the impact of the Jobs Act, the structural labour market reform passed in Italy under Matteo Renzi's cabinet in 2014-2015. In doing so, the study has a twofold aim. First, the research contributes to the wider scholarly debate on labour market flexibilization, offering fresh empirical evidence about the debated effects of deregulatory reforms on employment performance. Second, our empirical investigation relies on an innovative approach, namely, the synthetic control method, which allows us to estimate what would have happened if the Jobs Act had not been introduced. After the downturns of the Great Recession, the major goal of this flagship initiative was to boost overall employment performance while reducing labour market segmentation and enhancing more stable job opportunities for labour market outsiders, especially among younger cohorts and women. Comparing real-world observations for a number of key employment indicators with their estimated synthetic counterfactuals, we find that the Jobs Act did not fulfil its expectations. In line with part of the most recent literature addressing the impact of deregulatory reforms on employment performance, our results show that over the past five years no significant effects were driven by the reform, which may even have led to an increase in labour market segmentation.

Keywords: Employment, Labour markets, Evaluation, Segmentation, Unemployment, Youth employment, Female employment

1. Introduction

Over the past two decades, labour deregulation has been a hallmark in most advanced economies when implementing structural labour market reforms (Adascalitei and Pignatti Morano, 2015; Brancaccio et al., 2018). Aimed at simultaneously boosting employment performance and economic growth, this recipe has found wide acceptance across the EU, producing an unprecedented weakening of employment protection legislation (EPL). Initially, most countries commonly pursued a route of *marginal adjustments* (Bentolila et al., 2019; Simoni and Vlandas, 2020), curtailing constraints on temporary employment. However, in the aftermath of the Great Recession, the goal of contrasting labour market dualism generally prevailed (Eichhorst et al., 2017), resulting in an increased number of reforms relaxing the EPL regime for permanent contracts, a tendency of *flexibilization at the core* that has been particularly pronounced in the Eurozone (Brancaccio et al., 2018; Cárdenas and Villanueva, 2021; Ferreiro and Gomez, 2020; Turrini et al., 2015).

The mainstream view that lower employment protection is concomitant with better employment performance has been widely questioned in the (primarily economic) literature. Whereas in the 1990s a number of empirical works supported the idea of a positive correlation between high unemployment and the degree of employment protection, hence calling for structural reforms that reduced labour market rigidities (Blanchard and Wolfers, 2000), more recently, a growing body of comparative research has shown less conclusive results about the convergence between deregulation and labour market performance, and revealed the absence of a clear relation between the two across time and space (Brancaccio et al., 2018). Remarkably, with a focus on EU countries, Ferreiro and Gomez (2020, p. 401) find that 'when a significant impact is obtained, the direction of this impact is contrary to what is argued in mainstream analysis because a higher protection of permanent and temporary workers has a positive impact on the evolution of employment and unemployment'.

Drawing from this stream of research, the purpose of the article is to contribute to the literature from two different angles.

First, the study offers new insights and fresh empirical evidence on the debated relationship between EPL and labour market outcomes, disentangling the impact on employment performance of a deregulatory reform passed in Italy in 2014-2015. Presented as a *big revolution* aimed at combating the country's long-lasting poor employment performance, the Italian Jobs Act (JA) is the landmark reform of the Renzi Government, which can be read as an instance of flexibilization at the core. The approval of the reform, matched with generous hiring incentives, raised high expectations, although not without scepticism. Its most disputed aspect pertained to the introduction of the *contratto a tutele crescenti*, a model of graded security that scrapped some deeply rooted safeguards for all new hires on open-ended contracts. Despite thorough criticism and high contentiousness, the reform proved to be sufficiently resilient not to be radically overhauled during recent years, allowing the preservation of its key elements (Nannicini et al., 2019)[1]. Even though the assessment of its effects has nourished a lively debate, findings are not yet clear cut across studies, depending on the type of data, the specific timespan analysed and the dependent variables chosen (Boeri and Garibaldi, 2018; Cirillo et al., 2017).

Second, from a methodological standpoint, the article applies an innovative approach to the investigation of causal relationships and thus to any impact evaluation study - the synthetic control approach - deemed to be ‘the most important innovation in the policy evaluation literature in the last 15 years’ (Athey and Imbens, 2017: , p. 9). We contend that this method lends itself especially well to the goal of our research, since it allows us to overcome the absence of a counterfactual in assessing the effects of the reform. By comparing real-world observations with their synthetic counterfactuals, we are in fact able to trace what would have happened to a series of key labour market indicators in Italy had the JA not been introduced, deploying a comparative, holistic and outcome focused approach. Overall, in line with some of the comparative literature, our study finds no significant effects driven by the JA; on the contrary, some further segmentation of the labour market may even have occurred.

The article proceeds as follows. Section 2 locates our study within the scholarly debate about the effects of labor market flexibilization on employment. Section 3 provides background information on the Italian case, through a brief overview of labour market policy reforms and employment trends over the past two decades, and the main novelties that occurred with the Jobs Act. Section 4 reviews previous evaluations of the impact of the JA, illustrates our alternative approach, outlines the data used for the empirical test, and discusses our findings. Section 5 concludes.

2. Labour market reform, EPL and employment outcomes

The impact of labour market reforms on employment outcomes has been at the center of an intense scholarly debate over the past decades. Claims in favor of labour market deregulation were initially put forward by mainstream economists on the grounds of reduced economic performance caused by too strict and protective legislation combined with labour market rigidities (Blanchard and Wolfers, 2000). More specifically, legal constraints such as high firing costs and limitation on the use of atypical contracts were expected to alter the functioning of labour markets, leading to negative outcomes, including lower employment, higher unemployment and segmentation.

Although the deterioration of employment protection legislation and the decline of the protective capacity of unemployment benefits can be read as symptoms of a general weakening of the position of labour against capital, and key instances of the ongoing process of liberalization (Streeck, 2011), deregulation has taken different forms across time and space (Adascalitei and Pignatti Morano, 2015; Brancaccio et al., 2018). Initially, most countries commonly pursued a route of marginal adjustments, curtailing constraints on temporary employment (Bentolila et al., 2019; Simoni and Vlandas, 2020). From the 1990s, reforms reducing the stringency of EPL mainly concerned fixed-term contracts, while preserving job protection for core workers, thus leading to a situation of increasing dualization, where job creation took place mostly with temporary contracts, hardly shifting into permanent positions.

Later on, and especially in the post-2008 scenario, high employment protection legislation for core workers on open ended contracts started to be read as a harmful driver of labour market segmentation, translating into shrinking employment opportunities in the core economy and longer unemployment spells, and forcing those at the margins of the labour market – the hard to employ "outsiders" - into unemployment and/or atypical jobs (Bentolila et al., 2019; King and Rueda, 2008). Along these lines, during the Great Recession era, the flexibilization at the core recipe has been pursued and legitimized by major institutions as a way to achieve more dynamic, flexible and inclusive labor markets, through policy prescriptions meant to boost job growth while tackling segmentation (cf. European Commission, 2012; OECD, 2017). In this phase, with a focus on cost-related disincentives for employers to use standard employment instead of atypical contracts, reforms relaxing the EPL regime for permanent contracts generally prevailed, especially in the Eurozone where strategies of flexibilization at the core became predominant (Brancaccio et al., 2018; Turrini et al., 2015).

Since the early 2000s, despite the lack of clear-cut findings, empirical evidence has provided little support to mainstream arguments about a positive correlation between unemployment and the degree of employment protection; and, over the past decade, a growing body of comparative research has broadly questioned the convergence between deregulation and labour market performance, revealing the absence of a solid relation between the two (Brancaccio et al., 2018; Ferreiro and Gomez, 2020; Kahn, 2010). Remarkably, the deregulation thesis has been further challenged by evidence about the positive impact exerted by protective labour market institutions on the economy as a whole and inequality, due to their ability of smoothing the effects of economic downturns on employment, playing an anticyclical function (Brancaccio et al., 2018). As regards the effects on labour market segmentation, on the one side the literature suggests that policies making it easier to create temporary positions raise dualism, increasing the likelihood of workers being on temporary jobs (Kahn, 2010). Yet, recent research has shown that also deregulation at the core has so far fall short in reducing labour market segmentation, and may even trigger further dualism and instability (Cárdenas and Villanueva, 2021).

3. Labour market policy and employment performance: the Italian case in perspective

This section offers an overview of the Italian labour market reform trajectory and key employment trends over the past two decades. More precisely, with a focus on the transformations occurred in the field of employment protection legislation, Paragraph 3.1 illustrates the shift from a strategy of ‘partial and targeted deregulation’ (Barbieri and Scherer, 2009: 689) in the early phase, to broader structural interventions, culminating in the approval of the Jobs Act in 2014. Paragraph 3.2 then sets the stage for our empirical puzzle, both discussing relevant employment trends and pointing out the lack of clear-cut findings in the lively scholarly debate prompted by the adoption of the JA.

3.1 From marginal adjustments to structural changes

During the past twenty years, labour legislation in Italy has been affected by an intense reform process, which has deeply transformed its original profile. Notably, on the EPL front, while in the mid-1990s Italy was among the countries in the EU with stricter regulations, the reforms undertaken since then have shaped a new course, significantly altering its relative ranking in terms of the rigidity of both dismissal procedures and hiring norms.

In line with the trajectory followed in most advanced economies (Bentolila et al., 2019; Simoni and Vlandas, 2020), at first, the Italian reform process pursued marginal adjustments, typically through the liberalization of the discipline for fixed-term contracts (FTCs) without affecting the protection granted to open-ended contracts (OECs). Here, the two principal landmarks, which ended the prevailing job protection model consolidated during the postwar era, are the Treu Reform in 1997 (L. 196/1997) and the Biagi Reform in 2003 (L. 30/2003). In particular, the latter, named after the labour law scholar Marco Biagi, who coauthored the plan on which the reform was based (Biagi and Sacconi, 2001), represented a sort of watershed in the landscape of Italian labour market policy. To boost employment chances for new entrants and labour-market outsiders, the reform extended some aspects of the Treu reform regarding the liberalization of FTCs while leaving the regime of permanent contracts unchanged. Constraints for temporary employment were relaxed, and several new atypical, nonstandard types of contracts were introduced.

Not surprisingly, this process of ‘partial and targeted deregulation’ (Barbieri and Scherer, 2009: , p. 689) led to an increase in employment segmentation, whose consequences mainly impacted new entrants to the labour market and specific subgroups of workers, with young people, women and low-skilled workers commonly overrepresented and more exposed to the risk of entrapment.

A few years later, in the wake of the economic downturn driven by the Great Recession, the marginal adjustments strategy was abandoned and replaced by a new approach geared towards more far-reaching structural interventions. The most decisive reforms in this phase were undoubtedly the Fornero reform (L. 92/2012) and, most notably, the Jobs Act (L. 183/2014). Interestingly, both reforms addressed key elements of the national labour market policy, from income support provision in the case of unemployment to active labour market policies and employment regulations. On the EPL side, important novelties occurred in relation to the protection granted to workers in permanent contracts, especially concerning the reach of Article 18 of the 1970 Workers’ Statute, which required firms with more than 15 employees to reinstate those who had been unfairly laid off. On this latter front, the 2012 reform had already partially loosened the enforceability of the reinstatement clause, substituted in selected cases with financial compensation, although it still allowed for broad discretion from the labour courts in deciding whether the reinstatement should be applied regardless. Furthermore, the Fornero reform also partly restricted the use of FTCs in an attempt to contrast labour market segmentation.

More decisive in these respects, however, was the 2014 reform passed under Matteo Renzi's government, emblematically named the Jobs Act. Portrayed as a change aimed at boosting stabler employment for young people and women while easing placement and contrasting labour market segmentation (Galanti and Sacchi, 2019), the reform envisaged a combination of both expansionary measures and cuts (Vesan, 2016).

Approved at the end of 2014 in the form of a delegation law, the reform was quickly substantiated through a series of implementing decrees, marking a neat path shift.[2] On the one hand, it sought to revamp active labour market policies via the establishment of an ad hoc national agency aimed at fostering and guaranteeing the coordinated provision of services. On the other hand, it reformed and made unemployment protection more generous while covering new categories of workers, especially those in less stable jobs (Sacchi, 2018). Parallel to these changes, the most disputed element of the reform was the provision of a model of graded security for all newly established open-ended contracts in firms with more than 15 employees. Overhauling Article 18 of the 1970 Workers' Statute regarding new permanent hires, the JA replaced the reinstatement clause with nondiscretionary monetary compensation, equal to two gross monthly salaries for each year of service, with a minimum of four and a maximum of twenty-four. In doing so, the reform reduced the costs of dismissals for firms, as well as the uncertainty associated with layoff, by drastically abridging the discretion left to labour courts. Remarkably, the public sector was excluded from the application of the new norms, as were ongoing permanent contracts, through a grandfathering clause.

Importantly, the reform was also backed by generous hiring incentives, benefitting new hires on permanent contracts dating from 1 January 2015 for workers who had not held an open-ended position in the previous semester. More precisely, the norm envisaged a three-year 100% exemption from social security contributions, up to a threshold that roughly corresponded to a full rebate for the vast majority of firms (Sestito and Viviano, 2016). The rebate was, however, reduced in a year to just 40%, with a lower threshold, and was eventually dismissed in 2017.

The trajectory of labour market reform reviewed above becomes clear when reviewing EPL changes over time (see Figure 1). Despite a general decrease, FTC and OEC show a fully different timeline: for temporary employment, norms have become less restrictive since the late 1990s, with a neat drop during the phase of partial and targeted deregulation, whereas guarantees associated with permanent employment have long remained unchanged, recording some first slight shifts only in 2012. Along this path, over the long run, Italy has seen a decisive move from a model of high protection for both FTCs and OECs to a situation where EPL overall is less restrictive than in several EU countries, including France and Germany (Pinelli et al., 2017).

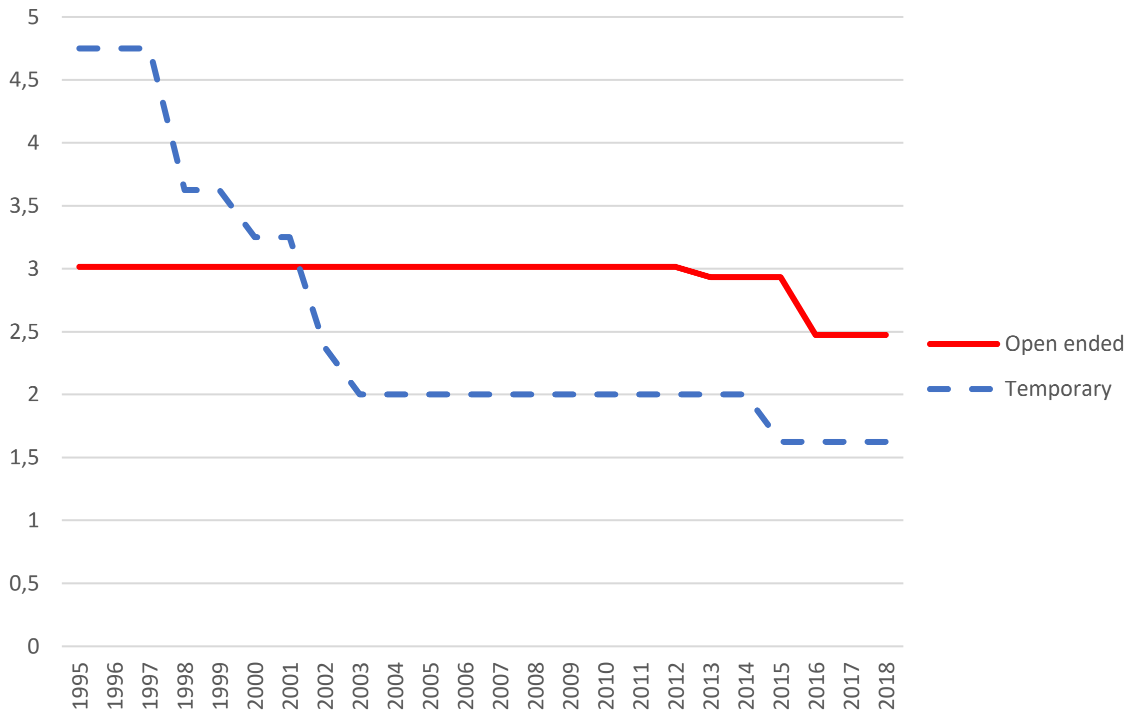

Figure 1. Strictness of employment protection (EPL) in Italy for different types of contract

Source: OECD database.

3.2 Employment outcomes in a changing legislative landscape

The transformations that occurred at the legislative level soon began to produce effects in the labour market, where the expansion of temporary employment has become clearly visible since the early 2000s, driving Italy into the cluster of full-fledged dual labour markets (Bentolila et al., 2019). As has also occurred elsewhere, the share of temporary positions over total employment gained traction at an intense pace, almost doubling from 2000 (7.0%) to 2019 (13.1%), and ranking particularly high in comparative perspective for the younger cohorts and some other categories, such as low-educated and low-skilled workers.

During the same period, labour market performance was rather poor overall. The positive phase recorded in the early 2000s quickly deteriorated with the onset of the Great Recession, the impact of which has been exceptionally striking and persistent in Italy. Remarkably, as Figure 2 illustrates, the employment gap between Italy and the EU average started to widen again from the mid-2000s onwards, especially between 2012 and 2015, when other countries were beginning to recover faster. Parallel to this trend, unemployment rose from the trough of 5.8% in 2007 to double-digit rates from 2012, peaking (12.5%) in 2014. Since then, it has been slowly declining, reaching 9.9% in 2019, but it is still approximately four percentage points higher than the EU average and far from the precrisis scenario.

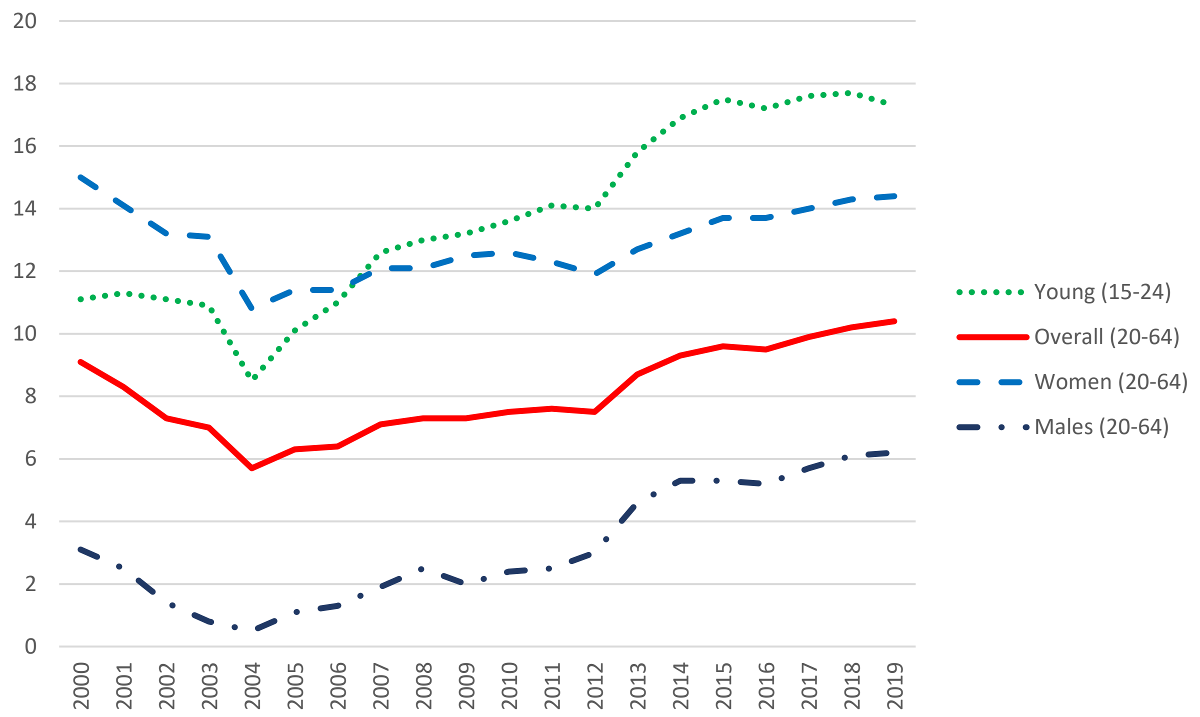

Figure 2. Gap between the average EU-28 and the Italian employment rates for different categories

Source: Eurostat.

Overall, the 2007 crisis further exacerbated some deeply rooted shortcomings of the Italian labour market and, more generally, of its political economy model (Burroni et al., 2019), including its low quality and underemployment. In addition, as Figure 2 clearly shows, the effects of the Great Recession have not been evenly distributed across social groups. Italian youth, as well as workers on temporary contracts or with lower qualifications, were hit particularly hard by the economic downturn in terms of both employment opportunities and unemployment spells. The youth employment rate (15-24), historically lower in Italy than in most of its European peers, has been further declining during the past two decades (18.5% in 2019 versus 35.8% for EU28), while the gap with the EU28 has widened, hovering somewhat above 17 percentage points since 2015. The particularly harsh situation faced by younger cohorts in Italy emerges even more clearly when compared with the share of those who are neither in employment nor in education and training, the so-called NEETs, which grew dramatically. At the onset of the recession, NEETs already comprised 16.1% of the total youth population in Italy compared to 11.0% in the EU28. These numbers increased after the Great Recession, reaching a peak of 22.2% in 2013, then slowly declining in the following years to 18.1% in 2019 – still two percentage points higher compared to the mid-2000s and almost twice the share of the EU28 (10.1%).

Similarly, Figure 2 illuminates the overall poor employment outcomes for women in the Italian labour market. Notwithstanding the advances of recent decades, female employment rates are still considerably below the EU28 average (14.4 percentage points lower in 2019). Conversely, since 2015 across the EU, Italy has recorded the highest proportion of inactive women; in 2019, more than one in three women aged 20-64 were inactive (39.5%, approximately 12 points above the EU28). Additionally, women are overrepresented among young NEETs and are much more likely than men, when working, to hold less-stable forms of employment and work in the lowest-paid sectors, thereby fostering gender disparities in numerous other dimensions, such as remuneration, career advancement, and access to leadership positions.

Although these figures may be revealing about the overall performance of the Italian labour market, they fall short in providing sound evidence on the net impact of reforms, whose assessment becomes even more difficult under conditions of extraordinary ‘bad weather’, such as the historically unique slowdown driven by the Great Recession.

Not surprisingly, due to both its path-breaking scope and its inherent degree of political contentiousness, the approval of the Jobs Act has prompted a lively debate in the ensuing years resting on a number of insightful, albeit far from undisputed, findings. However, besides the superficial appraisals of the consequences of the Jobs Act offered by newspapers and weekly journals (which were mostly based on the direct comparison of monthly unemployment rates or absolute numbers of employees) and descriptive statistics produced by major national and international institutions in their comments and reports[3], only a few analyses tried to provide a reliable evaluation of the policy, reaching diverse and partly-contrasting results.

Most prominently, Sestito and Viviano (2016), two economists from the Italian central bank, analyse the impact on the job market in one Italian region, finding that the *contratto a tutele crescenti*, combined with hiring incentives, produced a positive, albeit small, effect on labour market performance, fostering net job creation at the firm level and increasing the probability that workers would obtain a permanent job position. Conversely, Croce (2017), on the basis of aggregated data, suggests that the positive effects during the first two years had to be primarily attributed to the temporary rebates of non-wage labour costs, while the new regulatory regime of graded security was largely irrelevant. More recently, and applying a different approach relying on individual work trajectories, Ardito et al. (2019) find that large firms have been less responsive to subsidies *per se* compared to small firms; even though the reduction of hiring incentives halved the impact on the probability that the unemployed could obtain an OEC, these effects disappeared when the subsidies ended, despite persisting lower firing costs. Finally, Boeri and Garibaldi (2019), implementing a large-scale assessment using firms as units of analysis, observe that the effect of the hiring subsidy is highly significant and positive, while the introduction of the graded security contract is always significant and negative.

4. Counterfactual approaches and empirical findings

To evaluate the effect of any policy, it is not sufficient to see what happens after its implementation. It is necessary to compare it against some (observational or artificial) most similar world in which the policy was not present. The identification of that counterfactual represents the major challenge for evaluation studies, and it is also the stage of the research design in which we mostly diverge from the previous analyses.

4.1 Within-country identification strategies

From a methodological standpoint, the four studies identified above all opt for a difference-in-difference approach to the evaluation of the JA, which is meant to overcome the typical lack of causal attribution of the direct comments to the fluctuations of labour market indices in various moments in time. More precisely, these studies share in common the identification of some temporal or dimensional discontinuity within the Italian labour market, such that it should be possible to attribute any differential performance to the introduction of the JA. In addition to this methodological choice, they also share a second element, namely, the fact that they all investigate the first phases after the introduction of the reform, sometimes even before the approval of the whole set of government decrees envisaged by the original delegated law. On the one hand, interest in a swift evaluation of that signature policy is evident, but on the other hand, a thoughtful evaluation of its consequences should require a longer period, especially given the necessary adaptation of economic actors to the mutable system of fiscal incentives that completed the policy.

More specifically, Sestito and Viviano (2016) use administrative microdata connected with mandatory communication to the relevant regional and national agency concerning any job occurrences. They focus on the labour market in the Veneto region between January 2013 and June 2015, exploiting the different timing and targeted firms of the introduction of the hiring incentives and new permanent contract. ‘Broadly speaking, a possible measure of the counterfactual business cycle evolution unrelated to the two policies may be obtained by focusing on those labour market flows unaffected by the two policies, permanent hires of non-eligible workers from January to February 2015 and permanent hires of noneligible workers in small firms from March 2015 onwards'(Sestito and Viviano, 2016: 17).

The results of their models, testing the conversion from temporary contracts to open-ended contracts, as well as the overall probability of permanent hiring, confirmed that the two measures of the Jobs Act 'were effective in both shifting employment towards permanent contract and raising overall employment levels'. Confirming previous empirical evidence (Ciani and de Blasio, 2015), most effects are yet to be attributed to fiscal incentives, although the potential longer-term effects of the new graded security contracts were not excluded.

Additionally, Croce (2017) exploits the different timings in the introduction of the multiple instruments that comprised the policy as a sort of 'natural experiment', but he examines the aggregate labour flows among different job positions instead of relying on microdata. He thus identifies four labour market regimes – the traditional regime until the end of 2014, the generous system of fiscal deductions introduced in January 2015, subsequently coupled with the new open-ended contract in March 2015, and eventually reduced in magnitude from January 2016 – and then follows the monthly net and cumulative hiring, re-employments and separations, tracking the diverse growth dynamics in those three years.

The discontinuities allow him to attribute the miscellaneous effects to the incentives or to the reduced firing costs and to conclude that the employment boom in 2015 must be attributed largely to the former, while the new graded security contract, by itself, was unable to consolidate the flow from temporary to permanent jobs and thus reduce the dualism in the labour market.

The same longitudinal approach was applied by Ardito et al. (2019) in another Italian region, Piedmont, this time using the mandatory notices concerning any job position change sent electronically to the Regional agencies and to the Italian social security institute (INPS), the so-called '*Comunicazioni obbligatorie*'. They use multinomial logistic models to compute, first, the probability for each individual to move from a condition of unemployment to permanent/flexible employment in a large/small firm, and then to examine the same for people holding a temporary contract. Policy regime dummies are used to ascertain the effects of interest and, in addition to the four periods already considered by Croce (2017), include the post-2017 regime in which the hiring incentives were completely cancelled.

This work confirms the importance of hiring incentives but can also differentiate the impact on small and large firms. The former reacted more swiftly, substituting temporary employment with open-ended contracts. The latter waited until they were coupled with lower firing costs, using temporary appointments as probatory periods even in the first period after the complete abolishment of the subsidies (25-26).

The effects of the JA have been analysed by Boeri and Garibaldi (2018, 2019) with a large dataset composed of the universe of firms that employed, in the two years preceding the reform approval, between 10 and 20 workers, hence immediately below and above the threshold for the introduction of the new graded security contract. Using a series of models with time dummies interacted with the size category of the firm, the authors were able to quantify the monthly impact of the reform on the hiring and firing propensity of companies, as well as on the transformation of fixed term into open-ended contracts.

Their theoretical model with fixed wages predicted an increase in the number of hiring and contract conversions on the behalf of both small and large firms, with the latter also expected to increase firings and the former experiencing a stronger reduction in fixed-term contracts. The model was largely confirmed by the empirical analysis, which further specifies that the positive impact on hiring was mostly limited to the period in which firms were highly subsidized, 'while the dummy capturing the introduction of the graded security contract (was) always significant and negative' (Boeri and Garibaldi, 2019: 45). The authors suspect this last counterintuitive result was triggered by the disproportionate anticipations of open-ended hires in the first three months of 2015, with subsidies dominating other aspects of the policy.[4]

4.2 An alternative cross-country comparative approach

The previous analyses shared a similar research design. Following the prevailing identification strategy amongst economists in recent decades (Bentolila et al., 2019), they preferred within-country to cross-country comparisons. They tested the two central instruments of the policy, fiscal exemptions and the new graded security contracts, rather than evaluating the policy in its entire complexity. They focused on specific direct outcomes, e.g., hiring and firing propensities and transformations of fixed terms into open-ended contracts, instead of the overall impact on the labour market, probably because they aimed to test the empirical plausibility of the theoretical expectations of a stylized model instead of verifying the fulfilment of the political and economic expectations of the reform. Finally, most of them analysed the immediate aftermath of the introduction of the policy, with only one model covering a few months after the end of the subsidies, while a more robust evaluation of a policy typically requires a much longer period to allow the consolidation of the expectations and behaviours of the involved actors (Sabatier, 1991).

Our approach is instead intrinsically comparative, holistic, outcome focused, and covers a longer time frame. It is comparative because it systematically adopts the synthetic control method to identify the appropriate weighted counterfactual from a pool of donor countries composed of all EU member states (Abadie et al., 2010, 2015). It is holistic because it takes the policy as a whole, as a problem-solving activity that receives fundamental inputs from multiple authoritative acts such as those composing the JA (Page, 2006). It focuses on the overall outcome by investigating the evolution of the employment rate, which is *per se* a relevant political and economic quantity explicitly advocated by Renzi and policy-makers during the approval of the JA, as well as distributional dynamics such as those concerning temporary contracts, youth and women's employment. Finally, it updates the period of observation through the end of 2019. It is not the decade-long analysis encouraged by some analysts, but further updates would have been confounded by the consequences on the labour market of the spread of the coronavirus emergency in early 2020.

'The synthetic control approach (…) is arguably the most important innovation in the policy evaluation literature in the last 15 years' (Athey and Imbens, 2017: , p. 9). The method chooses 'a set of weights which, when applied to a group of corresponding units, produce an optimally estimated counterfactual to the unit that received the treatment. This counterfactual, called the "synthetic unit", serves to outline what would have happened to the aggregate treated unit had the treatment never occurred' (Cunningham, 2021: , p. 285). Instead of identifying *ex-ante* a supposedly similar unit for a paired comparison, the method helps building bottom-up that counterfactual through a combination of the most similar cases before the treatment – in our case the labour market reform – happened. Eventually, that synthetic case is much more similar to the unit of interest of any other real units.

One of the advantages of this comparative strategy is that it avoids the confounding effects of ongoing independent trends of the economy. In 2015, Italy was finally starting to recover from the long wave of the Great Recession, and the risk of mistaking those independent gains for the outcomes of the JA is evident.[5] 'Synthetic Italy' is thus a linear combination of the other 27 EU countries, followed in the pre-treatment phase before the reform for the period 2003 to 2014. Each of their contributions depends on a set of weights that are chosen to minimize the root mean squared prediction error of the pre-treatment trajectory of the synthetic counterfactual compared to the unit of interest. The variables used for the match are well-known factors affecting labour market dynamics – growth, productivity, compensations, tertiary education – and influencing the margins for state interventions – deficit, debt, and the size of the economy measured in terms of gross domestic product. The methodological literature further suggests controlling for pre-treatment outcomes to absorb any remaining heterogeneity, and we do so by introducing lagged dependent variables averaging the period before and after the Great Recession.[6]

4.3 Comparing the real case with its synthetic counterfactual: results and discussion

The most awaited and debated outcome of the JA, at least from the perspective of policy-makers, media and public opinion, was employment. As attested by Figure 3, our 'synthetic Italy' was effective in emulating the actual trajectory of the Italian employment rate before 2015. The counterfactual was composed of only three countries, as further detailed in the online appendix: Greece, Malta and Spain. The transparency of the generation of the counterfactual can sometimes produce unexpected results and attract scepticism. However, the procedure only makes explicit what is usually implicit in most regression models (Cunningham, 2021: , p. 287) and serves to discover the weighted pool that best replicates the pre-treatment trajectory of the treated unit.

In our case, the composition of the counterfactual was not particularly surprising, including two Southern European countries that have often been compared to Italy: Spain and Greece (Bulfone and Tassinari, 2021; Donatiello and Ramella, 2017; Moreira et al., 2015; Pavolini et al., 2014; Verney and Bosco, 2013). As shown in the graph in Figure 3, we found that the employment rate in Italy increased in the aftermath of the reform, with the recovery beginning before 2015 but clearly accelerating in coincidence with the JA, but that the upturn cannot be attributed to the new policy. On the contrary, the trajectory of the counterfactual displayed even stronger progress, so the JA seems rather to have exerted a depressing effect on the labour market.

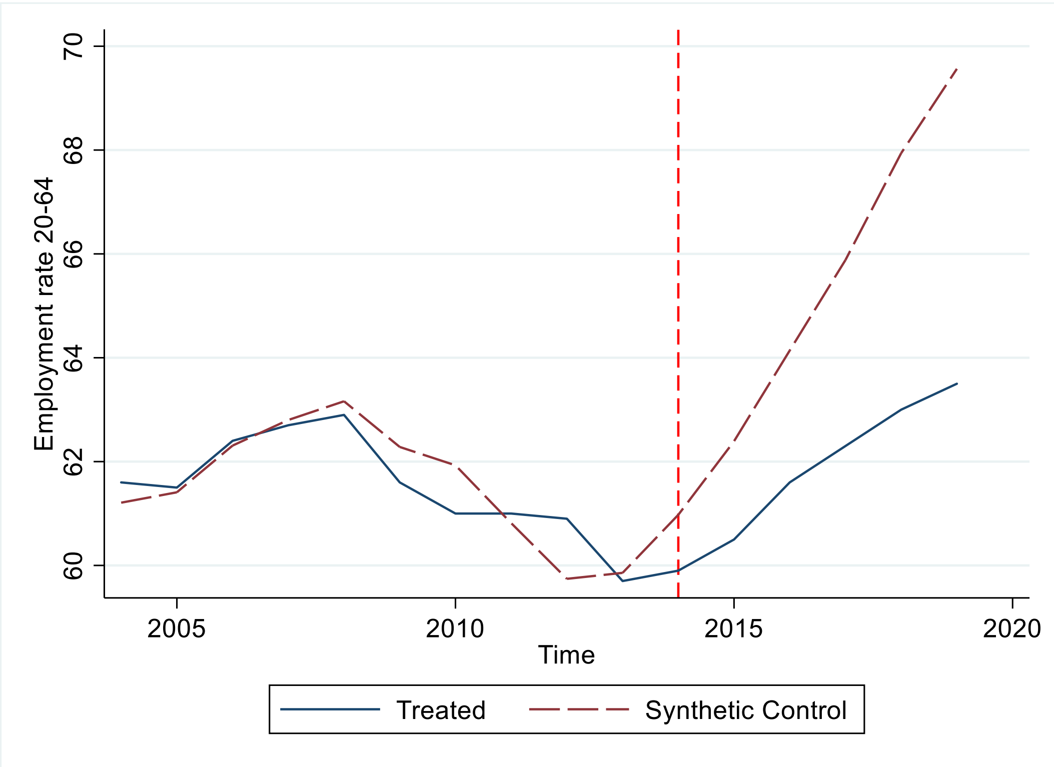

Figure 3. The trajectory of the Italian employment rate and of its synthetic counterfactual

Given the small N, it is not feasible to estimate the statistical significance of the gap between the two trajectories using the normal tools of inferential statistics. However, it is still possible to emulate that kind of test through a series of in-space placebo tests simulating fictional reforms in each of the other 27 member states. In other words, we iteratively replicated the same procedure for each of the countries included in the donor pool to see if the post-2015 trend was artificially generated by the statistical procedure or not. It is thus possible to infer quantitatively if the post-treatment dynamic was randomly produced or if it is sufficiently large compared to the respective trends of those fictional permutations (Abadie, 2021; Abadie et al., 2010). In the online appendix, we report the graphs related to these placebo estimates, which eventually confirm the systematic character of the post-treatment performance of the Italian real and counterfactual labour markets. More specifically, the probability that the negative gap was not just a random effect of the procedure started to become weakly significant in the fourth year of implementation of the JA ($p \approx 0.074$) and significant at the traditional level in 2019 ($p \approx 0.034$).[7]

One of the advantages of the synthetic research method is the possibility of further scrutinizing the statistical evidence by incorporating qualitative knowledge regarding the trajectories of the countries contributing to the counterfactual in the post-reform period. What we know from the literature is that at least one of those contributors, Spain, reacted more vigorously to the Great Recession. Despite deeply rooted similarities, Italy and Spain outlined two different labour market restructuring paths (Burroni et al., 2019; Picot and Tassinari, 2017), with Spain implementing a peculiar and far-reaching “deregulation *with* dualization” reform trajectory, which resulted in a sensibly lower protection for core standard workers combined with increased labour segmentation (Cárdenas and Villanueva, 2021: 232).

To moderate the severe judgement on the JA, and following the good practices suggested for the qualitative assessment of the synthetic unit, it could be argued that the inclusion of Spain - which recorded a more intense employment recovery from 2014 to 2019 - probably overestimated the positive trajectory of the counterfactual, and thus that the Italian reform had not truly produced the negative systematic effects outlined by our placebo estimates. In the online appendix we provide a robustness test of our results by excluding Spain from the pool of donor country. Even in that event, the synthetic Italy without the reform shows a steeper increase of the share of the active employed population compared to the actual results. The gap between the two trajectories becomes again statistically significant in 2019, though this time with a slightly larger p-value ($p \approx 0.077$). This further demonstrates that even a conservative interpretation of our results, excluding Spain and with a more demanding level of statistical significance, confirms that no possible gain in employment resulted from the JA reform.

As pointed out in the first part of the article, another key expectation connected to JA was the reduction in the dualism of the labour market. With the diminution of the firing costs for open-ended contracts, coupled with hiring incentives, new active labour policies and the restructuring of some of the options for other nonstandard contractual forms, the reforms were aimed at reducing the gap between temporary and permanent employment (Leonardi and Nannicini, 2018). By applying the same research methodology used for testing the impact on employment rates, we compared actual and counterfactual trajectories of the share of temporary contracts.

The results are disappointing and even clearer than those for the overall employment rate. In the aftermath of the introduction of the JA, the share of temporary contracts increased from approximately 10% to 13%, while the counterfactual exhibits an essentially stable trend. As we further detail in the online appendix, the gap between the two lines became statistically significant in 2018. Furthermore, the qualitative inspections of the weighted composition of our synthetic Italy do not suggest any specific reason not to accept the systematic character of those diverging trajectories.

We also investigated other distributional effects of the reform, such as the impact on youth and women's employment, which were variously considered amongst the political and economic target of the new comprehensive policy (Ardito et al., 2019). The graphs summarizing the results of our comparative counterfactual analyses are reported in Figure 4, while further investigations and placebo estimates are reported in the online appendix.

Youth employment, in the 15-24 age bracket, has been neither favoured nor damaged by the reform, as proven by the parallel trends of actual and synthetic Italy. [8] Both slightly increased after the reform, substantiating the idea of wider dynamics unconnected with the JA, something that was further corroborated by our placebo estimates. It is, however, interesting to note that the temporary jobs held by this age segment increased at a much higher rate than the average dynamics reported above. While the overall share of temporary contracts increased by three percentage points between 2014 and 2019, the increase was three times higher for young workers. Again, by conducting a counterfactual analysis focused on this segment, in the supplementary online material, we confirmed that JA contributed systematically to that increase.

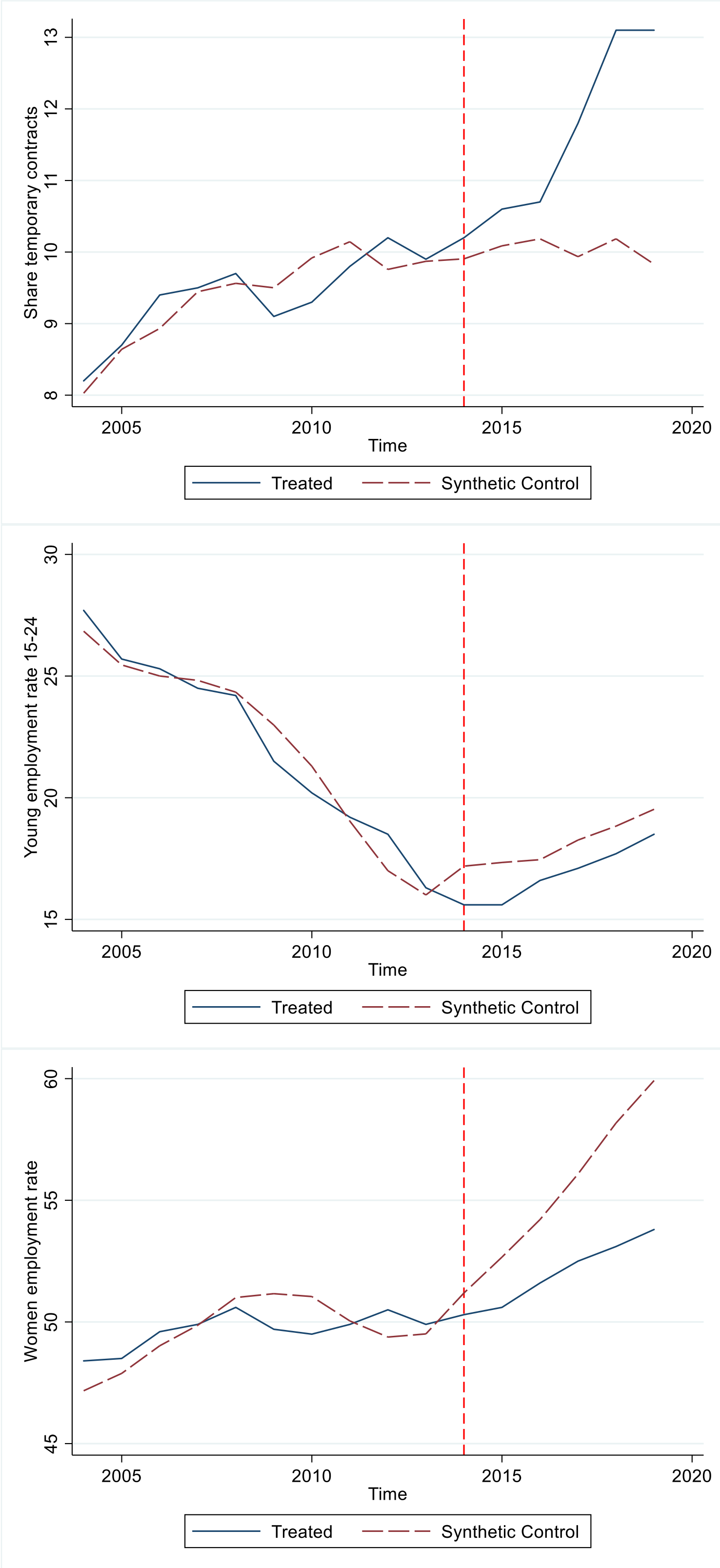

Figure 4. The trajectory of the Italian share of temporary contracts, and of youth and women employment rates, together with their counterfactuals

Reducing gender gaps was probably not amongst the explicit aims of the reform, and yet such differences were widely recognized as one of the several shortcomings and delays of the Italian labour market, and their lessening was considered an implicit component of the communication strategy about the ‘Italian revitalization’ connected with the new government policy (Elia and Pugliese, 2017). If this interpretation is correct, the JA missed the target. The actual, slightly increasing trend had a lower slope compared with its counterfactual in the absence of any reform, although the placebo estimates failed to reach standard levels of statistical significance, and thus, the null hypothesis of no-effects cannot be refuted.

5. Conclusions

The article has provided an original assessment of the effects of the Italian Jobs Act with a twofold scope. First, the research aimed at contributing to the wider scholarly debate about labour market flexibilization, offering fresh empirical evidence about the effects of deregulatory reforms on employment performance. Second, from a methodological standpoint, the study applied an innovative technique - the synthetic control method -, which by comparing real-world observations with their synthetic counterfactuals allows overcoming one of the key constraints of policy evaluation studies, namely the “what if” issue. The synthetic research method is certainly not the only method that can be applied to assess the effects of policies, but its use is certainly worth spreading, especially because it incorporates the advantages of a careful identification strategy within a comparative approach that consents robust causal inferences. We believe that the method gives its best in the assessment of innovative reforms in a single context, as the case under investigation in this article, to be compared against a pool of non-treated units (countries, states in federal systems, regions, etc.) with medium N. It is yet possible to use this technique also for similar reforms introduced simultaneously, or even with different timings, in multiple contexts (Cavallo et al., 2013), although the larger the N, the more other methods may come in handy (Damonte and Negri, 2022)..

With no attempt to generalize the evidence grasped from the Italian case, it can be nonetheless argued that our study adds further evidence to the growing body of comparative research questioning mainstream arguments about the convergence between deregulation and labour market performance, and suggesting that EPL reforms do not foster employment growth (Brancaccio et al., 2018). In line with part of the literature addressing the debated relationship between EPL and labour market outcomes from an empirical perspective, in fact, we find no significant effects driven by the JA. Tracing what would have happened to a series of key labour market indicators in Italy had the Jobs Act not been introduced, our findings show that, at best, the JA had no impact on the job market, although employment rates increased less than in the identified counterfactual. Some empirical evidence indicates that it may even have exerted a damaging effect on temporary jobs, increasing rather than decreasing the dual character of the labour market, especially for younger generations. Overall, our findings seems therefore to feed the recent conclusions by Ferreiro and Gomez (2020, p. 446), who argue that ‘mainstream prescriptions in favour of labour market reforms enhancing labour flexibility, in this case, reducing employment protection of permanent and temporary workers, lack empirical underpinnings’.

Although answering the “why did that happen” question falls beyond the scope of this article, beside a pure “*the fault was in the theory”* explanation, we think that the poor performance recorded in the Italian case deserves to be further contextualized, allowing for a number of possible additional factors that, in conjunction, may help explain why the reform failed to meet its expectations in this specific case. To this end, as notes of caution, we put forward a number of elements that are commonly soft-pedalled in this kind of analyses, but that in our view are worth-considering when engaging with an explanatory account of policies, concerning the implementation, its timing and the overall institutional setting. Also, this kind of factors may aid to make sense of the lack of conclusive findings recorded across existing empirical studies, which seem to depend dramatically on the sample of countries and years analysed (Ferreiro and Gomez, 2020). We list three of them, summed up through straightforward catchphrases.

Too slow, too late and not enough. The reform was passed in 2014-2015, after years of severe economic downturn. The reach of the new *Contratto a tutele crescenti*, moreover, was restrained to new job contracts, in the private sector only, as civil servants and existing contracts were excluded. This choice may have watered down the potential impact of the reform, especially considering that hiring incentives had been halved after one year and cancelled after two; and that a ruling of the Constitutional Court hampered the certainty of the amount of monetary compensation for economic unfair dismissal (Nannicini et al., 2019).

Not in the right phase of the economic cycle. The reform was not truly expected to boost jobs since ‘EPL reductions *per se* increase workers’ turnover without necessarily implying higher employment levels’ (Ardito et al., 2019: , p. 2). However, it could have had that effect if coupled with a much stronger expansive phase of the economy, something that should have been obtained by various macroeconomic instruments (Croce, 2017).

Missing key flanking. Active labour market policies and work-family reconciliation are two of the most well-known Achilles’ heels of the Italian labour market policy regime and have seen so far only scant public investment (Kazepov and Ranci, 2017). Although the modernization of employment services and activation measures was meant to be one of the key pillars of the JA’s new deal, the rejection of Renzi’s constitutional revision in the December 2016 referendum halted the scope of the reform on this front, as competences for those measures remained with the regions, reducing the manoeuvring room of the newly established national agency for active labour policies and thereby crippling a strategic element of the JA (Vesan and Pavolini, 2018).

Either as a corollary or a mitigation to the *the fault was in the theory* arguments, we think there may be some truth in each of these additional elements, or in their combination, though policy-makers are never in the condition to choose the best settings and the optimal amount of resources for their problem-solving activities. However, all these conjectures would all require their own counterfactual analyses.

References

Abadie, A. (2021) 'Using Synthetic Controls: Feasibility, Data Requirements, and Methodological Aspects', *Journal of Economic Literature* 59(2): 391-425.

Abadie, A., Diamond, A. and Hainmueller, J. (2010) 'Synthetic Control Methods for Comparative Case Studies: Estimating the Effect of California's Tobacco Control Program', *Journal of the American Statistical Association* 105(490): 493-505.

Abadie, A., Diamond, A. and Hainmueller, J. (2015) 'Comparative Politics and the Synthetic Control Method', *American Journal of Political Science* 59(2): 495-510.

Adascalitei, D. and Pignatti Morano, C. (2015) 'Labour market reforms since the crisis: Drivers and consequences'. Geneve: International Labour Office.

Ardito, C., Berton, F. and Pacelli, L. (2019) 'Combined and Distributional Effects of EPL Reduction and Hiring Incentives: An Assessment Using Non-Linear DiD', *Discussion Paper Series.* Bonn: IZA Institution for Labor Economics.

Athey, S. and Imbens, G.W. (2017) 'The State of Applied Econometrics: Causality and Policy Evaluation', *Journal of Economic Perspectives* 31(2): 3-32.

Barbieri, P. and Scherer, S. (2009) 'Labour Market Flexibilization and its Consequences in Italy', *European Sociological Review* 25(6): 677-692.

Bentolila, S., Dolado, J.J. and Jimeno, J.F. (2019) 'Dual Labour Markets Revisited', *Discussion Paper Series.* Bonn: IZA Institution for Labor Economics.

Biagi, M. and Sacconi, M. (2001) 'Libro Bianco sul Mercato Del Lavoro In Italia. Proposte Per una Società Attiva e per un Lavoro di Qualità'. Rome: Ministero del Lavoro e delle politiche sociali.

Blanchard, O. and Wolfers, J. (2000) 'The Role of Shocks and Institutions in the Rise of European Unemployment the Aggregate Evidence', *The Economic Journal* 110(462): 1-33.

Boeri, T. and Garibaldi, P. (2018) 'Graded Security and Labor Market Mobility. Clean Evidence from the Italian Jobs Act', *WorkINPS Papers.* Rome: INPS.

Boeri, T. and Garibaldi, P. (2019) 'A tale of comprehensive labor market reforms: Evidence from the Italian jobs act', *Labour Economics* 59: 33-48.

Brancaccio, E., Garbellini, N. and Giammetti, R. (2018) 'Structural labour market reforms, GDP growth and the functional distribution of income', *Structural Change and Economic Dynamics* 44: 34-45.

Bulfone, F. and Tassinari, A. (2021) 'Under pressure. Economic constraints, electoral politics and labour market reforms in Southern Europe in the decade of the Great Recession', *European Journal of Political Research* 60(3): 509–538.

Burroni, L., Gherardini, A. and Scalise, G. (2019) 'Policy Failure in the Triangle of Growth: Labour Market, Human Capital, and Innovation in Spain and Italy', *South European Society and Politics* 24(1): 29-52.

Cárdenas, L. and Villanueva, P. (2021) 'Flexibilization at the Core to Reduce Labour Market Dualism: Evidence from the Spanish Case', *British Journal of Industrial Relations* 59(1): 214-235.

Cavallo, E., Galiani, S., Noy, I., et al. (2013) 'Catastrophic Natural Disasters and Economic Growth', *Review of Economics and Statistics* 95(5): 1549-1561.

Ciani, E. and de Blasio, G. (2015) 'Getting stable: an evaluation of the incentives for permanent contracts in Italy', *IZA Journal of European Labor Studies* 4(1).

Cirillo, V., Fana, M. and Guarascio, D. (2017) 'Labour market reforms in Italy: evaluating the effects of the Jobs Act', *Economia Politica* 34(2): 211-232.

Croce, G. (2017) 'Il Jobs Act due anni dopo: obiettivi, fatti, prospettive', *Economia & lavoro*. DOI: 10.7384/89256.(2): 23-36.

Cunningham, S. (2021) *Causal Inference. The mixtape.* New Haven: Yale University Press.

Damonte, A. and Negri, F. (2022) Causality in Policy Studies. A Pluralist Toolbox. Cham: Springer Nature.

Donatiello, D. and Ramella, F. (2017) 'The Innovation Paradox in Southern Europe. Unexpected Performance During the Economic Crisis', *South European Society and Politics* 22(2): 157-177.
Eichhorst, W., Marx, P. and Wehner, C. (2017) 'Labor market reforms in Europe: towards more flexicure labor markets?', *Journal for Labour Market Research* 51(1).
Elia, M. and Pugliese, E. (2017) 'Sociologia del Jobs Act', *Economia & lavoro*. DOI: 10.7384/87126.(1): 99-131.
European Commission (2012) 'Labour market developments in Europe 2012', *European Economy* Luxembourg.
Ferreiro, J. and Gomez, C. (2020) 'Employment protection and labor market results in Europe', *Journal of Evolutionary Economics* 30(2): 401-449.
Galanti, T.M. and Sacchi, S. (2019) 'When words matter: narratives and strategies in the Italian Jobs Act (2014–2016)', *Policy and Society* 38(3): 485-501.
Galiani, S. and Quistorff, B. (2017) 'The synth_runner package: Utilities to automate synthetic control estimation using synth', *The Stata Journal* (4): 834–849.
Kahn, L.M. (2010) 'Employment protection reforms, employment and the incidence of temporary jobs in Europe: 1996–2001', *Labour Economics* 17(1): 1-15.
Kazepov, Y. and Ranci, C. (2017) 'Is every country fit for social investment? Italy as an adverse case', *Journal of European Social Policy* 27(1): 90-104.
King, D. and Rueda, D. (2008) 'Cheap Labor: The New Politics of “Bread and Roses” in Industrial Democracies', *Perspectives on Politics* 6(2): 279-297.
Leonardi, M. and Nannicini, T. (2018) 'I principi del Jobs Act e una breve valutazione', *Economia italiana* (2-3): 109-120.
Moreira, A., Dominguez, A.A., Antunes, C., et al. (2015) 'Austerity-Driven Labour Market Reforms in Southern Europe: Eroding the Security of Labour Market Insiders', *European Journal of Social Security* 17(2): 202-225.
Nannicini, T., Sacchi, S. and Taddei, F. (2019) 'The trajectory of the Jobs Act and the politics of structural reforms between counter-reforms and ambiguity', *Contemporary Italian Politics* 11(3): 310-323.
OECD (2017) 'Employment Outlook 2017'. Paris: OECD.
Page, E.C. (2006) The origins of policy. In: Moran M, Rein M and Goodin RE (eds) *The Oxford Handbook of Public Policy*. Oxford: Oxford University Press, pp.207-227.
Pavolini, E., León, M., Guillén, A.M., et al. (2014) 'From austerity to permanent strain? The EU and welfare state reform in Italy and Spain', *Comparative European Politics* 13(1): 56-76.
Picot, G. and Tassinari, A. (2017) 'All of one kind? Labour market reforms under austerity in Italy and Spain', *Socio-Economic Review* 15(2): 461-482.
Pinelli, D., Torre, R., Pace, L., et al. (2017) 'The Recent Reform of the Labour Market in Italy: A Review', *European Economy Discussion paper.* European Commission.
Sabatier, P.A. (1991) 'Toward Better Theories of the Policy Process', *PS: Political Science and Politics,* 24(2): 147-156.
Sacchi, S. (2018) 'The Italian Welfare State in the Crisis: Learning to Adjust?', *South European Society and Politics* 23(1): 29-46.
Sestito, P. and Viviano, E. (2016) 'Hiring incentives and/or firing cost reduction? Evaluating the impact of the 2015 policies on the Italian labour market', *Questioni di Economia e Finanza (Occasional Papers).* Rome: Banca d'Italia.
Simoni, M. and Vlandas, T. (2020) 'Labour market liberalization and the rise of dualism in Europe as the interplay between governments, trade unions and the economy', *Social Policy & Administration*. DOI: 10.1111/spol.12648.
Streeck, W. (2011) 'The Crises of Democratic Capitalism', *New Left Review* 71: 5-39.
Turrini, A., Koltay, G., Pierini, F., et al. (2015) 'A decade of labour market reforms in the EU: insights from the LABREF database', *IZA Journal of Labor Policy* 4(12).

Verney, S. and Bosco, A. (2013) 'Living Parallel Lives: Italy and Greece in an Age of Austerity', *South European Society and Politics* 18(4): 397-426.
Vesan, P. (2016) 'Il lavoro, dopo il jobs act', *Il Mulino*. DOI: 10.1402/83429.(3): 468-476.
Vesan, P. and Pavolini, E. (2018) The Italian labour market policy reforms and the economic crisis: Coming towards the end of Italian exceptionalism? In: Theodoropoulou S (ed) *Labour market policies in the era of pervasive austerity: A European perspective*. Bristol: Bristol University Press, pp.69-90.

Endnotes

[1] Concerning the *contratto a tutele crescenti*, the main revisions to date are the increase of the economic compensation in the case of unfair dismissals introduced by the so-called *Decreto Dignità* in 2018 (Decree Law 87/2018, converted into Law 96/2018), scaled up from a minimum of six to a maximum of thirtysix monthly wages, and the effects of two recent Constitutional rulings (n. 194/2018 and n. 150/2020), which declared unconstitutional the predetermined compensation linked to seniority only, hence partly restoring the role of Labour Courts.

[2] See the Appendix for a detailed overview of the novelties occurred with the JA.

[3] See, for instance, the OECD Economic Survey: Italy; IMF Country report: Italy; Banca d'Italia, Relazione annuale; Pinelli et al. (2017).

[4] Incidentally, it should be noted that the authors, in a previous work, using a different identification strategy and definition of the control group, had higher expectations and identified more positive results for the graded security contract (Boeri and Garibaldi, 2018).

[5] Additionally, internal counterfactuals, such as small firms unaffected by the reduction of firing costs, could not be the ideal 'most similar world' if the timings and dynamics of the recovery were correlated to the firm's dimension.

[6] For homogeneity, all the data used in the analysis are the annual series extracted from Eurostat. The exact measurements are provided in the online appendix.

[7] We have used the synth command and synth_runner package in Stata15 to conduct our analyses and placebo estimates, as detailed in Cavallo et al. (2013) and in Galiani and Quistorff (2017). The reported statistics are referred to the most exigent studentized *p*-values, weighted for the corresponding pre-treatment match quality of the units.

[8] If we extended the age period to also include the first years of working life after tertiary studies, e.g., after a master's period, including people in the 15-39 age segment, the trajectories diverge even more, indirectly confirming what Ardito et al. (2019, p. 23) say about 'University degree holders (and…) more skilled individuals not (being) favoured or even penalised by the reforms under scrutiny'. However, the placebo estimates do not further confirm the statistical significance of those gaps, probably because of the exceedingly long and undifferentiated composition of the segment definition, which depended on the original aggregation of the source of our data.