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Laws for the Right to Work of Disabled People: The Italian Experience

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In Europe, people with disabilities face very low employment rates and are strongly linked to disability pension, with the overall effect of an increased risk of poverty (European Commission 2007a). Parodi and Sciulli (2008) show, for Italian data, that disability pensions do not compensate the potential incomes of people with disabilities; consequently, the risk of poverty for families with a person with a disability is higher than for families without a family member with a disability. People with disabilities, compared to ones without impairments, incur a higher probability of becoming poor and of encountering social exclusion and this probability increases if they are not employed (Shima et al. 2008). Hence, an important question to address is: how to increase the probability of finding employment for an individual with a disability?

In Italy, Law 68 of March 12, 1999, aims at the regulation and promotion of the employment of persons with disabilities and has contributed significantly to the employment of people with disabilities and hence to their social inclusion (Orlando and Patrizio 2006). Law 68/1999 specifies that regions have the greatest responsibility in its application and, consequently, its successful implementation depends almost exclusively on regions' actions and ability

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to efficiently coordinate the various actors (e.g., people with disabilities, employers, job centres, etc.) involved in the employment of individuals with disabilities in order to reach the matching between demand and supply of jobs for this group (Agovino and Rapposelli 2014). However, even if this law represents an important tool for the employment of people with disabilities, it is not enough. The unemployment problem for some people with disabilities is especially linked to their inability to allay health problems in the workplace.

Italian data highlight the limits of Law 68/99 in guaranteeing jobs for people with disabilities especially in Southern Italy (Agovino and Rapposelli 2012). Therefore, measures are needed to support the economic policy of this law to reach the matching between demand and supply of jobs for those with disabilities. Flexicurity, used to refer to combinations of both labour market flexibility and high levels of social security, could be a valid measure to improve the degree of inclusion of disabled people in the labour market. Flexicurity represents a 'third way' strategy between the flexibility generally attributed to the Anglo-Saxon labour market and the strict job security characterizing Southern European countries, or between the flexibility of liberal market economies and the social safety nets of the traditional Scandinavian welfare states (Madsen 2004, 2007; Organization for Economic Co-operation and Development [OECD] 2004).

It is important to promote a balance between flexibility and social security, because a high level of social security may result in an increased risk for individuals in the disability populations, with partial work capacity to get trapped in the disability pensions system (Eichorst et al. 2010). In addition, it is likely that the current economic crisis and the high unemployment rate will increase the use of disability pensions to control for the labour supply. At European Union (EU) level, flexicurity is integrated in the European Employment Strategy, which is aimed at increasing employment and reducing unemployment in EU countries. In line with Lisbon agenda, flexicurity has been proposed as a promising reform concept for enhancing Europe's economic growth and social cohesion (European Commission 2006a, 2007a, b; Boeri et al. 2007). On the one hand, more flexible labour markets would reduce the costs of firms to adjust to the dynamics of the highly integrated global economy, improving Europe's competitiveness. In contrast, increased labour participation and higher income security would contribute to higher levels of social inclusion. As described in the Disability Action Plan, the EU strategy for promoting flexicurity systems in Member States to achieve the goals of the Lisbon Strategy seems to be valid.

To this purpose, to evaluate the effects that could be achieved if active and passive measures could act in a synergistic way, in this chapter we deal with the construction of three flexicurity indicators for people with disabilities by

means of the weighted arithmetic mean method, where weights associated with the two policies (active measures—Active Labour Market Policies [ALMPs]—and passive measures—Civilian Disability Pensions [CDPs])— are chosen in a subjective way. The possibility of considering different weights associated with each of the measures, used for the construction of the indicators, can help us to understand what kind of combination is useful in order to get a better result in terms of the number of people with disabilities placed in employment. Secondly, to evaluate both the separated effect of active (ALMP) and passive (CDP) measures in influencing the matching process of disabled people, and the ability of the three flexicurity indicators (then the combined effect of ALMP and CDP) to influence the probability of employment for disabled people, we estimate an augmented matching function. The matching function, explicated in the Cobb-Douglas specification, is widespread in studies with macro data (e.g., Fahr and Sunde 2004, 2009; Lottman 2012).

More recently, further studies have been conducted in this field and Agovino and Rapposelli contributions (2012, 2013, 2014) have provided useful information to policymakers for economic policy action to promote the integration of disabled people in the labour market. However, these analyses have been conducted by using a linear programming technique, Data Envelopment Analysis (DEA) and their results show that environmental and social capital variables ought to be included as policy instruments within the context of Law 68/99. Efficient enforcement of Law 68/99 will require more investment in social capital for some regions, whilst it will require attention to the socio-economic environment in others (Agovino and Rapposelli 2012, 2013, 2014). Hence, this analysis allows us to analyse both the impact of individual measures and their joint impact (by distinguishing the three different indicators that assign different weights to the two policies) on the employment process of people with disabilities. Besides, under the hypothesis of synergistic interaction between passive and active measures, this analysis allows us to verify whether flexicurity could produce a positive effect on Italian regions' ability in finding employment for disabled people and, consequently, if it is better for the government to invest more in ALMP or in CDP.

Measuring Flexicurity for Disabled People

There is no agreement in the literature on the definition of flexicurity (Viebrock and Clasen 2009), and Bekker and Wilthagen (2008) suggest that each country has to find its own concept of flexicurity by using a distinct combination of instruments that fit the national, institutional, social and civil

contexts. In the Westernized context, for example, Denmark was highlighted as a best-practice example after its disability scheme reform in 2003, which has led to a fundamental conceptual shift towards focusing on work ability (OECD 2004). In the case of disabled workers, it seems appropriate to consider Bekker and Wilthagen's definition that connects the term flexicurity with a form of public policy aimed at disadvantaged workers groups. We refer to a political strategy that combines both the flexibility of the labour market and workers' well-being, with the emphasis on the most underserved groups inside and outside the labour market (Wilthagen and Rogoswski 2002; Wilthagen and Tros 2004). Both theoretical models (Boone and Van Ours 2004; Coe and Snower 1997) and empirical results (European Commission 2006a) suggest that it is important to consider the interaction between active and passive labour market policies to increase the effectiveness of active policies (European Commission 2006b; Martin and Grubb 2001).

The approaches followed can be divided into two types of measures: the contributory benefits transfer programmes (passive measures, such as Civilian Disability Pensions [CDPs]) and employability and integration of persons with disabilities in the labour market (active measures, such as Active Labour Market Policies). More explicitly, the movement away from passive measures (such as CDPs, that may have disincentive effects on job search) to active measures has been achieved by the implementation of legislative instruments (such as obligatory employment quota schemes, anti-discrimination legislation and job protection rights) and targeted Active Labour Market Policies, which aim to support the participation of people with disabilities. In this case, the flexicurity approach, involving the combination of Active Labour Market Policies and social protection systems, is likely to have the effect of increasing the probability of finding employment for disabled people (European Commission 2007b). More specifically, Active Labour Market Policy (ALMP) represents a core aspect of the European Employment Strategy and its aim is to transfer the use of passive support to active help for the integration of people into the labour market (European Commission 2006b). Looking at equality in society for those with disabilities, the implementation of an effective ALMP for disabled people (*Assunzione agevolata dei disabili—Facilitated employment for people with disabilities*) is thus extremely important, as ALMPs make it easier for disabled people to enter or remain in the labour market, thus help achieve the goals of the European Employment Strategy.

On the other hand, the objective of the European Union is to reduce the impact of contributory benefits transfer programmes (as in EU-15 the expenditure on disability pensions has increased by 18.6 per cent in the past decade) that are part of passive labour market policies, in favour of ALMPs (European

Commission 2007b). The main objective of the benefits system is the protection of people who are sick or injured; however, another aim is to help people who can work and want to stay in the workforce, even if they have lost part of their ability to work. Consequently, the use of disability pensions must allow for the return to work where there are residual abilities to avoid social exclusion. OECD (2004) points out that disability pensions still contain incentives that make the possibility to return to work unattractive, also in the case of people with partial disability. Disability pensions are not a flexible instrument; once granted, they are very rarely withdrawn, even though such withdrawal is technically possible. Consequently, granting a disability pension makes it difficult to reintegrate the recipient in social and working life.

By focusing on Italy, we observed that during the period 2006–2011 the percentage of recipients of CDPs is constantly twice the percentage of disabled people who participate in ALMPs (Agovino and Rapposelli 2014). In addition, we registered the presence of significant differences among Italian regions in terms of distribution of CDPs and ALMPs, observing high participation in active measures by disabled people residents in Northern Italy, while we register the highest percentage of CDPs in Southern Italy.

Methods

Flexicurity Indices (FIs)

Flexicurity indicators are computed by using the weighted arithmetic mean method that subjectively assigns different weights to its component factors (active and passive measures), according to the following steps (Agovino and Rapposelli 2015).

Normalization

Let $\mathbf{X} = \{x_{ij}\}$ be the matrix with n rows (regions) and 2 columns (indicators, i.e., ALMP and CDP). Thus, the normalized matrix $Z = \{z_{ij}\}$ when the jth indicator is a good ALMP is computed as follows:

$$z_{ij} = \frac{z_{ij} - \min\left(z_j\right)}{\max\left(z_j\right) - \min\left(z_j\right)} \tag{1}$$

Alternatively, if the jth indicator is a bad CDP, we have

$$z_{ij} = \frac{\max(z_j) - z_{ij}}{\max(z_j) - \min(z_j)} \tag{2}$$

The normalized CDP variable provides a measure for the reduction of dependence on disability pensions by working age people. An increase will mean that fewer people aged 15–64 receive Civilian Disability Pensions (CDPs); this indicates, therefore, a reduction in both dependency and welfare degree. Broadly, it is a proxy of both the degree of autonomy of disabled people and their participation in overall society specifically in the labour market. In both cases, the values of the normalized indicators vary between 0 and 1, where 0 corresponds to the worst (cross-section) performance and 1 corresponds to the best performance in the sample in terms of flexicurity.

Aggregation

The FI is given by:

$$A: \quad \frac{1}{2}z_{i1} + \frac{1}{2}z_{i2} \quad \forall i = 1,\ldots,20 \tag{3}$$

$$B: \quad \frac{2}{3}z_{i1} + \frac{1}{3}z_{i2} \quad \forall i = 1,\ldots,20 \tag{4}$$

$$C: \quad \frac{1}{3}z_{i1} + \frac{2}{3}z_{i2} \quad \forall i = 1,\ldots,20 \tag{5}$$

where z_{i1} is normalized ALMP and z_{i2} is normalized CDP. The flexicurity indicators are computed as arithmetic means of the two dimension indices, as follows:

- flexicurity index A assigns equal weight to passive and active measures;
- flexicurity index B assigns greater weight to active measures;
- flexicurity index C assigns greater weight to passive measures.

The Augmented Matching Function

We analyse the separate effect of active and passive measures (respectively, Active Labour Market Policies and Civilian Disability Pensions), as well as their combined effect, on the matching process of disabled people by estimating a matching function first augmented by ALMPs and CDPs (Lehmann 1995; Puhani 1999) and then by the three flexicurity indices (Agovino and Rapposelli 2015). By using a Cobb-Douglas specification we write the augmented matching function as follows:

$$M = A\left(cU\right)^{\beta_1} V^{\beta_2} \qquad (6)$$

where M is the ($NTx1$) vector of the flow of matches and A describes the augmented matching productivity (Fahr and Sunde 2004); changes in the value of A can capture changes in the geographic and skill characteristics of employers and jobs, or other differences between them, as well as differences in the behaviour among job searchers (Broersma and Van Ours 1999). U and V denote the ($NTx1$) vectors of unemployment and vacancies stocks. Generally, c represents a search effectiveness index of the unemployed people in the absence of search enhancing labour market schemes which takes a value between 0 and 1 (Hujer and Zeiss 2003; Lehmann 1995). In the case of people with disabilities, c represents an index that directly (indirectly) measures the ability of regions to implement Law 68/99. Generally, cU defines the search effective stock of unemployed persons. In our case, it represents the proportion of people with disabilities who find a job thanks to the ability of the region in the employment process for disabled people; hence, greater is c, the greater is the number of disabled people who find work through an efficient implementation of Law 68/99. In the case of people with disabilities, we cannot speak of unemployed 'effective' stock who are seeking work, because the unemployed people with disabilities stock only include persons who are seeking employment, therefore they are all effective. Law 68/99 provides that people with disabilities who want to work must enrol in lists maintained by employment centres. Consequently, we will find in these lists only persons who actively seek a job and not all unemployed persons.

We assume that c is affected by ALMP and CDP. The basic idea is that ALMP helps regions in the process of finding employment for people with disabilities and allows, therefore, to better implement Law 68/99. On the contrary, we expect a negative effect of CDP on this process. To introduce ALMP and CDP into the matching function we define the parameter c as follows:

$$c = \sigma\left(1+\tau\right) \quad \text{with} \quad \tau = \sum\nolimits_{j=1}^{J} \pi_j p_j \tag{7}$$

The parameter σ denotes the search effectiveness of the region in the absence of ALMP and CDP, and τ is the impact of ALMP and CDP programmes on the search effectiveness. The general effect τ can be decomposed into the several effects π_j of ALMP and CDP measures p_j. τ can be seen as a linear combination of the two measures, under the following assumptions: $0 \leq \pi_j \leq 1$ and $\sum_{j=1}^{J} \pi_j = 1$. For this purpose, in addition to considering a version of Eq. (6) with disjoint effects of the two measures (active and passive), we also consider a version with their combined effect, which includes flexicurity indicators, introduced above, computed from the combination of the two policies. The log-linearized form of Eq. (6)

$$\ln M = \ln A + \ln U \beta_1 + \ln V \beta_2 + \ln\left(\sigma\left(1+\tau\right)\right)\beta_1 \tag{8}$$

can be approximate for small τ as follows:

$$\ln M = A^* + \ln U \beta_1 + \ln V \beta + \sum\nolimits_{j=1}^{J} \pi_j p_j \beta_1 \tag{9}$$

Where

$$A^* = \ln A + \beta_1 \ln \sigma \tag{10}$$

The augmented matching function we estimate is given by

$$\ln M = \ln U \beta_1 + \ln V \beta_2 + \ln ALMP \beta_3 + \ln CDP \beta_4 + \ln NETL \beta_5 + A^*$$
$$A^* = A + \mu_i + v_t + \varepsilon \tag{11}$$

where ALMP is the percentage of disabled people who benefit of active measures at regional level, CDP is the percentage of recipients of Civilian Disability Pensions in working age and NETL denotes the number of employees in temporary layoff hours (NETL) that acts as an indicator of the state of the local labour market (we also remind that Law 68/99 provides that companies

with employees in temporary layoff hours are not enforced to employ disabled people). The variable A^* captures the remaining explanatory variables for M. In particular, A is a constant, μ_i is a regional fixed effect, ν_t is the time fixed effect and ε represents the ($NTx1$) vector of errors which are assumed to be i.i.d. across i and t with zero mean and constant variance σ^2. By considering the flexicurity indices, the matching function we estimate is given by

$$\ln M = \ln U \beta_1 + \ln V \beta_2 + \ln FI \beta_3 + \ln NETL \beta_4 + A^*$$
$$A^* = A + \mu_i + v_t + \varepsilon \tag{12}$$

where FI is the flexicurity indicator. Furthermore, Eqs. (11) and (12) introduce endogeneity problems. The effects of ALMPs may be biased because the resources used to finance active policies are not randomly assigned across regions and for this reason they cannot be considered as an exogenous variable (Boeri 1997; Boeri and Burda 1996). This endogeneity problem can be dealt by using instrumental variables, that is variables correlated with ALMPs measures but not with the error term. In particular, we use the lag of unemployment and vacancy rate of disabled people and GDP per capita. Because the instruments listed are very general, we insert a more specific and highly correlated instrument with the ALMP for disabled people, the regional fund for employment of people with disabilities (RFEPD). This fund, established by article 13, paragraph 4, of Law 68/1999, is an instrument of incentive for employers who hire disabled workers through agreements, as provided by article 11 of Law 68. In this case, we use the amount of the fund allocated to each region.

We have the same endogeneity problem in the passive measures (CDP). In particular, CDPs are not homogeneously distributed in Italy. Agovino and Parodi (2012) show that socio-economic variables, such as poverty and unemployment rate, are significantly correlated with the attribution of Civilian Disability Pensions in Southern Italy. In the case of CDP, we use instruments that allow us to capture the socio-economic aspects, such as the lag of unemployment and vacancy rate of disabled people and GDP per capita. As flexicurity indicators are a combination of ALMP and CDP, we use the same tools. Hence, by considering the endogeneity problem introduced by ALMP and CDP, we run a two-stage least squares regressions (2SLS) of the following form:

$$First\ stage: \quad \ln ALMP_{i,t} = \beta + \sum_{j=1}^{2} \beta_1 \ln X_{i,t-j} + \beta_2 RFEPD_{i,t} + \eta_{i,t}$$

$$\ln CDP_{i,t} = \beta + \sum_{j=1}^{2} \beta_1 \ln X_{i,t-j} + \eta_{i,t}$$

$$\sec ond\ stage: \quad \ln M_{i,t} = \beta_1 \ln U_{i,t} + \beta_2 \ln V_{i,t} + \beta_3 \ln ALMP_{i,t}$$
$$+ \beta_4 \ln CDP_{i,t} + \beta_5 \ln NETL_{i,t} + A + \mu_i + v_i + \varepsilon_{i,t}$$

$$(13)$$

We instrument our ALMP and CDP variable to extract their exogenous component. The instruments are the temporal lag of first and second orders of unemployment and vacancy rate for disabled people and GDP per capita, denoted by X. In addition, we consider an additional instrument for the ALMP, that is the regional fund for employment of people with disabilities, denoted by RFEPD.

Case Study

The present case study focuses on the 20 Italian regions, corresponding to the European NUTS-2 level in the official classification of the European Union (Nomenclature of territorial units for statistics), for the period 2006–2011. The variables observe for the identification of active and passive measures in the case of disabled people are the following ones: the percentage of disabled people who benefit of Active Labour Market Policies (ALMPs) at the regional level. Data on ALMPs for disabled workers were obtained in compliance with article 13 of Law 68/1999 (source ISTAT, https://www.istat.it/).

The percentage of recipients of Civilian Disability Pensions (CDPs) in working age are not connected with national insurance contributions, but they are paid to people with disabilities in working age on the basis of their physical characteristics (e.g., people affected by blindness, deafness or other types of impairments) (Agovino and Parodi 2012). In order to estimate the augmented matching function we introduce the following variables (source Institute for the Development of Vocational Training for Workers [ISFOL], http://www.isfol.it/): (1) the match variable, defined based on job placement as defined by article 7 of Law 68/99 (rules on compulsory recruitment) (n.b. ISFOL does not specify whether the match variable includes also employed disabled people who are looking for a job, in addition to the unemployed disabled people who find a job). The match variable also includes disabled people hired by firms which are not obliged, via the agreement, a tool signed

by the interested parties (employers, provincial offices for the employment of disabled workers and authorities that promote labour integration), that allows to define a personalized programme of interventions in order to overcome barriers related to the inclusion in the workplace (art. 11, paragraphs 1 and 4); (2) the unemployment variable, that is the number of people with disabilities enrolled in employment centres as of December 31; (3) the vacancies variable, defined by article 3 of Law 68/99 (compulsory recruitment, reserve shares) which states that public and private employers are obliged, in proportion to their size, to have disabled people among their employees. The employer is obliged to have a reserve share of one disabled worker if the firm has a number of employees ranging from 15 to 35, two disabled workers if the number of employees ranges from 36 to 50 and 7 per cent of workers if the number of employees is more than 50. The reserve share that is not filled (vacancies) allows to determine the stock of vacancies; (4) the number of employees in temporary layoffs hours.

The three flexicurity indices results show the presence of two clusters. We may note that Northern regions register the highest indices with values well above the average value, showing a high degree of flexicurity, while Southern regions show a very low degree of flexicurity with values well below the average value (Table 5.1).

Table 5.2 shows the estimated results of the matching function augmented with ALMP and CDP (column 1) and with the three FIs (columns 2, 3 and 4). As suggested by the matching theory, the estimated elasticities of both unemployment and vacancies variables are positive. In particular, the elasticity of matches on unemployment (vacancy) is about 0.46 (0.34), and this means that an increase of unemployment (vacancy) stock by 1 per cent results in an increase of matching by 0.46 (0.30). With regard to the specification which includes ALMP and CDP in a disjoint way, we can observe that ALMP shows a negative sign but it is not significant, while CDP have the expected negative sign, with an impact of about 0.58 per cent. Besides the expected sign of the number of persons in temporary layoff hours is negative with an

Table 5.1 Flexicurity indices, annual average values (2006–2011)

Regions	A_FI	B_FI	C_FI
Northern Italy	Range 0.40–0.98	Range 0.31–0.97	Range 0.52–0.98
(*n* = 8)	Mean 0.61	Mean 0.52	Mean 0.71
Central Italy	Range 0.31–0.52	Range 0.24–0.40	Range 0.38–0.63
(*n* = 4)	Mean 0.41	Mean 0.33	Mean 0.50
Southern Italy	Range 0.03–0.38	Range 0.03–0.32	Range 0.03–0.45
(*n* = 8)	Mean 0.14	Mean 0.12	Mean 0.16
Mean (SD)	0.38 (0.25)	0.32 (0.23)	0.45 (0.27)

Table 5.2 Estimates of augmented matching functions

Dependent variable: lnM	Estimate (1) with ALMP and CDP	Estimate (2) with FI_A	Estimate (3) with FI_B	Estimate (4) with FI_C
lnU	0.4612***	0.4584***	0.4113***	0.4861***
	(5.03)	(4.23)	(3.47)	(4.95)
lnV	0.3436***	0.4125***	0.4530***	0.3929***
	(3.44)	(3.18)	(3.25)	(3.34)
lnALMP	−0.2042			
	(−1.29)			
lnCDP	−0.5786***			
	(−3.49)			
lnNETL	−0.2152**	−0.2101**	−0.2101**	−0.2150**
	(−2.62)	(−2.11)	(−2.15)	(−2.14)
lnA_FI		0.3288**		
		(2.19)		
lnB_FI			0.2823	
			(1.67)	
lnC_FI				0.3337**
				(2.65)
Constant	2.1180***	0.6094	0.7769**	0.4552
	(3.49)	(1.67)	(2.18)	(1.18)
Regional fixed effects	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes
# observations	80	80	80	80
First-stage F statistic	24.25***	26.55***	34.67***	21.36***
Hansen J statistic	[0.330]	[0.257]	[0.304]	[0.266]

Notes: Standard errors are corrected for heteroskedasticity; t-statistics are in parentheses; p-values are reported in brackets; ***, ** and * indicate coefficients that are significant at 1 per cent, 5 per cent and 10 per cent, respectively

impact of about 0.21 per cent for both estimates. With regard to the specification which considers the synergistic action of ALMP and CDP by including the three flexicurity indices, we can observe that all of the three indicators show an expected positive sign, but only flexicurity indices A and C (that has a slightly greater impact than A), are significant at the 5 per cent. This means that the synergistic action of both measures has positive effects on the matching process of regions for the employment of disabled people.

Discussion and Conclusions

The key challenges that European Union countries are facing with respect to disabled people are low employment rates and high dependency on entitlements as well as an increased poverty risk. Hence, in the last decade, an

increasing emphasis has been placed to reinforce the social and labour market inclusion of people with disabilities. The flexicurity approach, that involves the combination of Active Labour Market Policies and social protection systems, could be a valid measure to reach this objective (Agovino and Rapposelli 2017). For this purpose, in this chapter we have examined the impact of flexicurity on the employment process of disabled people, by focusing on Italian regional labour market for the period 2006–2011. First of all, by means of three flexicurity indices, computed by using the percentage of recipients of Civilian Disability Pensions in working age (passive measure) and the percentage of disabled people who benefit of ALMP at a regional level (active measure), we have verified that Northern and Central regions show a higher degree of flexicurity than Southern regions. Then, by estimating an augmented matching function we have verified that the disjoint use of active (ALMP) and passive (CDP) measures generates a locking-in effect (Van Ours 2004). More specifically, we show that ALMPs (which show a negative but not significant sign) do not have an effect on the matching process for the employment of disabled people. The failure of active measures is justified by the so-called training trap, that is generated by the growing number of unemployed disabled people involved in long-term training experiences (the maximum duration of internships for disabled people is 24 months) of low quality and not oriented towards employment, as shown in Caroleo and Pastore (2003, 2005), instead of apprenticeships oriented to recruitment.

About the CDP, we observe that it registers a negative and significant sign; hence, an increase of the recipients of Civilian Disability Pensions as well as reducing the matching process also increases the probability of social exclusion. It is well known that the aim of disability pensions is to assure a decent standard of living for people who cannot work. This scheme should be changed to ensure flexibility so that people with a partial incapacity to work are not excluded from the labour market. In fact, it is observed that only 2 per cent of people who receive disability pensions can reintegrate within the labour market; accordingly, pensions become an absorbing state, that is the probability of the individual subsequently exiting that state is close to zero.

It could also be that people who receive a disability pension are not able to participate in the labour market. However, it appears that many of those who benefit from disability pensions could have a part-time job. Nevertheless, due to the inflexibility of the benefits system many people remain trapped in the entanglement of disability pensions and do not ever enter the labour market. Another important problem associated with the lack of flexibility of the

benefits system, as well as the social exclusion of people with a partial incapacity, is the increasing public spending weight, that is unsustainable in a period of economic crisis. On the contrary, by estimating an augmented matching function which includes the three flexicurity indices, we have verified that the synergistic action of active (ALMP) and passive (CDP) measures has positive effects on the matching process of regions for the employment of disabled people. More specifically, we observe that all the three indicators register an expected positive sign, but only flexicurity indices A and C (that has a slightly greater impact than A) are significant at the 5 per cent. The indicator that gives greater weight to the development of the economic independence of people with disabilities is one that most favours the probability of finding employment for the disabled. Hence, in terms of policy it seems appropriate to reduce the use of CDP for disabled people, as it represents an income support instrument not very flexible. One way to reduce CDP is represented by public social expenditure, which is characterized by less distortion and greater flexibility.

These results provide two important economic policy suggestions in order to improve the effects of Law 68/99 and thus make more effective the action of the regions in the employment process we suggest:

1. A synergistic action characterized by an equal combination (i.e., equal weight) of passive (CDPs) and active (ALMPs) measures. In summary, an increase in ALMP for disabled people must match an equal reduction of CDP that ensures increased independence to people with disabilities from the welfare state.
2. A synergistic action characterized by a combination of the two measures which gives greater weight to the formation of autonomy, thereby reducing the degree of dependency and welfare of the disabled. But how to increase the autonomy of disabled people from the welfare state? One way would be to use an alternative tool of income support not characterized by being an absorbing state that is public social expenditures (different from pension expenditure) in favour of disadvantaged groups, that has the characteristic of temporariness. The public social expenditure is still a burden to the government but, unlike CDP, appears to be a more flexible instrument (the allocation is reviewed from time to time). The flexibility of this tool would ensure the reduction of the degree of dependence of disabled people, thus reducing the risk of poverty and encouraging the process of social and economic integration of the disabled people.

References

Agovino, M., & Parodi, G. (2012). Civilian disability pensions as an antipoverty policy instrument? A spatial analysis of Italian provinces, 2003–2005. In G. Parodi & D. Sciulli (Eds.), *Social exclusion, AIEL series in labour economics* (pp. 149–167). Berlin and Heidelberg: Springer.

Agovino, M., & Rapposelli, A. (2012). Employment of disabled people according to law 68/99. A multidimensional analysis at regional level. *Rivista Internazionale di Scienze Sociali, 1*, 3–23.

Agovino, M., & Rapposelli, A. (2013). Inclusion of disabled people in the Italian labour market: An efficiency analysis of law 68/99 at regional level. *Quality & Quantity, 47*(3), 1577–1588.

Agovino, M., & Rapposelli, A. (2014). Employment of disabled people in the private sector. An analysis at the level of Italian provinces according to article 13 of law 68/99. *Quality & Quantity, 8*(3), 1537–1522.

Agovino, M., & Rapposelli, A. (2015). Macroeconometric evaluation of flexicurity in the case of disabled workers. A panel approach using Italian regional data. *Rivista Internazionale di Scienze Sociali, 3*, 261–284.

Agovino, M., & Rapposelli, A. (2017). Regional performance trends in providing employment for persons with disabilities: Evidence from Italy. *Social Indicators Research, 130*, 593–615.

Bekker, S., & Wilthagen, T. (2008, March/April). Europe's pathways to flexicurity: lessons presented from and to the Netherlands. *Intereconomics*, 68–73.

Boeri, T. (1997). Learning from transition economies: Assessing labor market policies across central and Eastern Europe. *Journal of Comparative Economics, 25*(3), 366–384.

Boeri, T., & Burda, M. C. (1996). Active labor market policies, job matching and the Czech miracle. *European Economic Review, 40*, 805–817.

Boeri, T., Cahuc, P., Crnkovic, S., Kollonay-Lehoczky, C., & Wilthagen, T. (2007). *Flexicurity pathways, turning hurdles into stepping stones*. Report by the European Expert group on Flexicurity, Brussels.

Boone, J., & Van Ours, J. (2004). *Effective active labour market policies*. Discussion Paper Series CEPR, No. 4707.

Broersma, L., & Van Ours, J. (1999). Job searchers, job matches and the elasticity of matching. *Labour Economics, 6*(1), 77–93.

Caroleo, F. E., & Pastore, F. (2003). Youth participation in the labour market in Germany, Spain and Sweden. In H. Torild (Ed.), *Youth unemployment and social exclusion in Europe. A comparative study* (pp. 115–141). Bristol: Policy Press.

Caroleo, F. E., & Pastore, F. (2005). La disoccupazione giovanile in Italia. La riforma della formazione come alternativa alla flessibilità. *Economia e Lavoro, 39*(2), 49–66.

Coe, D., & Snower, D. (1997). Policy complementarities: The case for fundamental labour market reform. *IMF Staff Papers, 44*(1), 1–35.

Eichorst, W., Kendzia, M. J., Knudsen, J. B., Hanse, M. O., Vandeweghe, B., Vanhoren, I., Ruckert, E., & Schulte, B. (2010). The mobility and integration of people with disabilities into the labour market. *IZA, Research Report no., 29*.

European Commission. (2006a). *Employment in Europe 2006*. Brussels: European Commission.

European Commission (2006b), Effective European active labour market policies*, in* European Commission (eds.), Employment in Europe, European Commission: Brussels, pp. 119–172.

European Commission. (2007a). *Towards common principles of flexicurity: More and better jobs through flexibility and security*. Brussels: European Commission.

European Commission. (2007b). *Employment in Europe 2007*. Brussels: European Commission.

Fahr, R., & Sunde, U. (2004). Occupational job creation: Patterns and implications. *Oxford Economic Papers, 56*, 407–435.

Fahr, R., & Sunde, U. (2009). Did the Hartz reforms speed-up the matching process? A macro-evaluation using empirical matching functions. *German Economic Review, 10*(3), 284–316.

Hujer, R., & Zeiss, C. (2003). *Macroeconomic impacts of ALMP on the matching process in West Germany*. IZA, DP No. 915.

Law n. 68. (1999, March 12). *Norme per il diritto al lavoro dei disabili, Italian Republic*. GU Serie Generale n.68, 23-03-1999—Suppl. Ordinario n. 57). Retrieved from http://www.gazzettaufficiale.it/eli/id/1999/03/23/099G0123/sg.

Lehmann, H. (1995). *Active labour market policies in the OECD and in selected transition economies*. Working paper No. 539–96, World Bank Policy Research.

Lottman, F. (2012). Spatial dependencies in German matching functions. *Regional Science and Urban Economics, 42*, 27–41.

Madsen, P. K. (2004). The Danish model of "flexicurity": Experiences and lessons. *Transfer, 10*, 187–207.

Madsen, P. K. (2007). *Distribution of responsibility for social security and labour market policy. Country report: Denmark*. AIAS Working Paper 07/51, Amsterdam, Amsterdam Institute for Advanced Labour Studies.

Martin, J., & Grubb, D. (2001). What works and for whom: A review of OECD countries' experiences with active labour market policies. *Swedish Economic Review, 8*, 9–56.

Organisation for Economic Co-operation and Development. (2004). Employment protection regulation and labour market performance. In OECD (Ed.), *OECD employment outlook* (pp. 61–101). Paris: OECD.

Orlando, N., & Patrizio, M. (2006). Il collocamento mirato dei disabili: l'applicazione della legge 68/1999 nella Provincia di Bolzano. In G. Parodi (Ed.), *Aspetti socioeconomici della disabilità* (pp. 179–216). Roma: ARACNE editrice.

Parodi, G., & Sciulli, D. (2008). Disability in Italian households: Income, poverty and labour market participation. *Applied Economics, 40*, 2615–2630.

Puhani, P. (1999). Evaluating active labour market policies—empirical evidence for Poland during transition. In *ZEW Economic Studies* (Vol. 5). Heidelberg, New York: Physica-Verlag.

Shima, I., Zólyomi, E., & Zaidi, A. (2008). *The labour market situation of people with disabilities in EU25*. European Centre for Social Welfare Policy and Research, Policy Brief February (I), Vienna.

Van Ours, J. C. (2004). The locking-in of subsidized jobs. *Journal of Comparative Economics, 32*(1), 37–48.

Viebrock, E., & Clasen, J. (2009). *Flexicurity a state of the art review*. REC-WP 01/2009, Working Papers on the Reconciliation of Work and Welfare in Europe RECWOWE Publication, Dissemination and Dialogue Centre, Edinburgh.

Wilthagen, T., & Rogoswski, R. (2002). The legal regulation of transitional labour markets. In G. Schmid & B. Gazier (Eds.), *The dynamics of full employment* (pp. 233–273). Cheltenham: Edward Elgar.

Wilthagen, T., & Tros, F. (2004). The concept of flexicurity: A new approach to regulating employment and labour markets. *European Review of Labour and Research, 10*(2), 166–186.