Evaluating social investment in disability policy
Impact of measures for activation, support, and facilitation on employment of disabled persons in 22 European countries

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Abstract
Disability policy in European countries is displaying a shift towards social investment: increasing human capital and access to the labour market. The reasoning that underlies this transition is that disabled persons would benefit from mainstream employment, but are impeded in traditional policy by deficiencies in labour supply and demand. However, the shift towards more activating policies in many countries is accompanied by a decline in social protection. It is unclear whether social investment may effectively promote the employment chances of disabled persons within this context. The present research examines this question through a quantitative, cross-sectional, multilevel analysis on micro-data from 22 EU countries. Our findings suggest greater activation to predict lower employment chances, while reducing passive support shows mixed effects. Conversely, measures for facilitation in daily life predict greater employment chances, as do measures for sheltered work. These findings raise questions over the value of social investment for disabled persons—and underline the need to overcome broader barriers in the labour market and in society.

KEYWORDS
activation measures, active labour market policies, disability, employment, social investment, social welfare
INTRODUCTION

By ratifying the United Nations Convention on the Rights of Persons with Disabilities (CRPD; UN General Assembly, 2007), EU States have committed themselves to promoting the inclusion of disabled persons within society. Among its many objectives, increasing the access of disabled persons to regular work is a particular priority. Disabled persons historically display low employment levels and high dependence on supports, and thereby greater risk of poverty and social exclusion (Eichhorst et al., 2010). The CRPD creates a binding commitment on States to safeguard and promote the realization of their right to "work, on an equal basis with others...within a labor market and work environment that is open, inclusive and accessible" (UN General Assembly, 2007). Activation measures form an integral part of this strategy. Indeed, Article 27 proscribes (inter alia) that States take steps to promote (a) access to vocational guidance and training, (b) assistance in finding and retaining work, (c) employment opportunities and career advancement within the labour market, and (d) employment in the public and private sector (a.o. by use of incentives). In this way, the CRPD reflects a logic of social investment, by proscribing a policy that invests in the development of human capital to promote high-quality employment, and thereby greater social inclusion (Morel, Palier, & Palme, 2011).

In line with the principles of the CRPD, disability policy within European countries shows a shift towards greater activation (Böheim & Leoni, 2018). But although social investment in the CRPD is situated in a broader strategy, which proscribes adequate social protection (Article 28) and measures to address discrimination and accessibility (Articles 27 and 9), this shift is accompanied by a reduction in social protection in many countries (see Hvinden, 2016). It is unclear to what extent social investment can effectively promote the access of disabled persons to regular work within this context. Indeed, disabled persons continue to experience barriers in the labour market and in society (Barnes, 2000; Stone & Colella, 1996), despite efforts to strengthen regulation (e.g., antidiscrimination legislation, see Chopin & Germaine, 2016). Indeed, some scholars claim that under these circumstances, social investment may have detrimental effects—by trapping disabled persons between obligations to work, an impregnable labour market, and declining social welfare (Cantillon & Van Lancker, 2013; Hyde, 2000).

Despite the importance of this question, firm evidence on these processes is lacking. Macroeconomic studies of the effects of activation measures do not single out disability (Martin, 2015). Conversely, social scientific analyses of national disability-specific programs (e.g., Hansen, Andreassen, & Meager, 2011; Holland et al., 2011; McAllister et al., 2015) cannot separate their effects from related factors that vary between countries. Therefore, an analysis that bridges these perspectives is urgently needed. To this end, we present a quantitative, multilevel, cross-sectional, comparative analysis across 22 European countries. This analysis directly assesses whether greater reliance on activation measures targeting labour supply and demand (in line with the principles of the CRPD) may effectively be associated with greater employment chances for disabled persons, within the present context of declining social protection. Moreover, we examine how their employment chances may be affected by measures that facilitate them in work or daily life—which address persistent barriers within the labour market and society. The results are used to critically evaluate the strategy of social investment within the present context.

1.1 Social investment: Activation to promote regular work

In the CRPD’s guidelines on employment, a central role is devoted to “enabling” policies, which aim to promote the human capital of disabled persons—to thereby improve their chances of obtaining high-quality, regular employment (UN General Assembly, 2007). They constitute measures that provide those capable of work with the assistance and encouragement to move into rewarding and productive jobs. Additionally, they comprise measures to expand such employment opportunities within the labour market. In sum, this strategy entails activation measures targeting labour supply and demand.
Activation measures targeting disability may involve both universal, mainstream programs and dedicated, disability-specific programs. These arrangements differ strongly between countries (Beyer & Beyer, 2016; Thornton & Lunt, 1997), as does countries’ reliance on particular instruments (e.g., measures targeting labour supply or demand; the design of these measures; Böheim & Leoni, 2018). However, their functions are similar: increasing jobseekers’ labour supply, or promoting demand for it in the labour market.

Measures targeting labour supply constitute the principal category. In typologies of labour market policy (Eurostat, 2013), they are represented by the categories of training and labour market services. Training reflects measures to improve knowledge, skills, and experience, through (workplace or classroom) training. Labour market services reflect measures to facilitate job search, including information services (e.g., on job opportunities or training), individualized assistance (e.g., intensive guidance and assistance with job search and application), and intermediary activities (e.g., connecting jobseekers with employers). By doing so, these measures aim to address deficiencies in human capital (e.g., education and experience, Loprest & Maag, 2007) and connections to the labour market (Van Lin, Prins, & De Kok, 2002), which historically constrain the access of disabled persons to regular work.

Measures targeting labour demand aim to expand employment opportunities for disabled persons within the labour market. They are chiefly represented by the category of employment incentives (Eurostat, 2013). Employment incentives typically reflect targeted, temporary, and conditional payments or reductions of tax/social security contributions, which make labour cheaper for employers (Katz, 1998). Such measures therefore address employers’ reservations against employing disabled persons, by compensating their (real or imagined) deficiencies relative to nondisabled staff (productivity and cost; Stone & Colella, 1996). By doing so, employment incentives are assumed to promote demand, and thereby the access of disabled persons to regular work.

1.2 Declining social protection: Constraining passive support

Although the CRPD proscribes the need for sufficient social protection (UN General Assembly, 2007), there in fact are indications that social protection is declining in many European countries (see Hvinden, 2016). Fuelled by mounting expenditure and pressures due to globalization and economic developments, most states have reformed their welfare systems. Traditional passive benefit systems, characterized by high generosity and low conditionality, are considered a disincentive for those capable of (some level of) work (Mead, 1986). Consequently, they are increasingly replaced by systems involving greater conditionality (stricter criteria), reduced permanence (time limits and periodic controls), and means testing (Organisation for Economic Co-operation and Development [OECD], 2010). For many disabled persons, this entails reduced eligibility for (full) disability benefits, periodic monitoring of their work capacity, and greater obligations to utilize their remaining work potential—preferably by obtaining regular work (e.g., Patrick, 2011).

1.3 Effectiveness of activation measures and constraining passive support

In sum, disability policy in many European countries is showing a transition towards greater activation, in line with the principles of social investment (Böheim & Leoni, 2018). Simultaneously, retrenchment of welfare systems is constraining passive support. How may these developments impact the employment chances of disabled persons? To what extent may social investment promote their integration within the current context of declining social protection? No firm evidence exists on this question. Unlike their effects for regular jobseekers, quantitative analyses have not examined the impact of activation and passive support on disabled persons. Moreover, comparative analyses of national programs report contrasting conclusions (Bergeskog, 2001; Van Lin et al., 2002). However, analyses of national programs, and comparisons between similar (or different) arrangements, may provide an indication.
Although some descriptive studies conclude that countries with greater activation spending achieve greater employment of disabled persons (Holland et al., 2011), most research suggests this relationship to be more complex—particularly when considering more countries and differences between their institutions. For example, a comparative analysis of Danish, Dutch, Swedish, and British policy suggested low or even decreasing employment levels for disabled persons, despite considerable investment in activation measures (McAllister et al., 2015). Such findings underline the need to look beyond absolute activation spending—as different countries may rely on different instruments.

More informative, therefore, are studies that evaluate the effectiveness of activation measures within particular countries. Such contributions firstly suggest that activation measures may be less effective for disabled persons than for nondisabled persons (Beyer & Beyer, 2016). Whether their impact nevertheless is positive is difficult to evaluate. Rather, studies suggest their effects to vary according to the type of measure (Beyer & Beyer, 2016; Høgelund & Pedersen, 2002; Thornton & Corden, 2002). Moreover, favourable effects may be offset by undesirable side effects, such as displacement and stigmatization (Benda, 2019).

Such conclusions contrast with more favourable evaluations of specific activation programs. For measures targeting labour supply, program evaluations show labour market services, and especially intensive guidance, to considerably increase transitions into employment (UK: Bewley, Dorsett, & Haile, 2007; Hungary: Adamecz-Völgyi, Lévay, Bördös, & Scharle, 2018). Similarly, positive effects are reported for training programs (Spain: Descy & Tessaring, 2007; UK: Meager & Hill, 2006). For measures targeting labour demand, a review of Canadian, Danish, Norwegian, Scandinavian, and British policies reports that employment incentives can (occasionally) be effective (Clayton et al., 2011). However, such favourable conclusions contrast with other evaluations. These suggest that guidance alone may not be very effective, and report mixed effects of training (Denmark: Høgelund & Pedersen, 2002; Norway: Aakvik, 2003). Similarly, these conclude that employment incentives are insufficiently generous for employers or should target jobseekers instead (Clayton et al., 2011). Beside limitations to available data, selection may explain such discrepancies, such that particular programs may favour more job-ready cases (“creaming”). This may promote transition rates, but not employment, as beneficiaries could also find work without participating.

For measures to constrain passive support, there also are indications that promoting employment may indeed be one of the consequences of reducing benefits. A Norwegian quasi-experimental study found that reducing temporary disability benefits on the one hand increased returns to work, but on the other hand also increased inactivity and dependence on permanent disability benefits (Fevang, Hardoy, & Røed, 2013). As such, constraining passive support may concomitantly promote work and labour market exit (see also Holland et al., 2011).

### 1.4 Unresolved barriers to employment

In sum, extant evidence on the effects of activation measures on disabled persons is mixed, as is that on the impact of constraining passive support. In part, such discrepancies may reflect differences between programs or between countries themselves. Also, methodological issues may contribute, such as differences in available data or measurement (e.g., employment levels vs. program transition rates). However, there are no clear indications that expanding activation measures within the present context will consistently promote the access of disabled persons to regular employment.

This conclusion mirrors critiques from researchers from a sociological and social policy perspective. Relying on policy analysis and historical evidence, these authors argue that activation measures focusing (primarily) on barriers in human capital will fail to promote the integration of disabled persons—by failing to recognize that their exclusion is a social process, resulting from environmental and cultural factors (Barnes, 2000; Parker Harris, Owen, & Gould, 2012). According to this reasoning, the labour market and society, in general, confront disabled persons with circumstances that are fundamentally oriented on able-bodied individuals: selection methods, job structures, working methods, objectives, and physical and social environments. These barriers persistently disadvantage disabled persons and undermine their chances of (and prospects in) regular work (Barnes, 2000). By leaving such barriers in place, activation measures will fail to promote their access to regular work—indeed, in context of restrictive social welfare, such
measures will place disabled persons at increased risk of poverty and marginalization (Hyde, 2000). To achieve access
to regular work on an equal basis with nondisabled others, policies are needed that not only address individual defi-
ciences, but also reduce such structural barriers (Parker Harris et al., 2012). This includes far-reaching goals such as
reformulating the meaning and organization of work (Barnes, 2000), but also measures to facilitate disabled persons
in daily life, society, or at work (Hyde, 2000; Van Oorschot & Hvinden, 2000).

Facilitation measures in daily life and in society include provisions for appropriate housing, assistance with daily tasks
(excluding medical care), discounts for travel and leisure, and rehabilitation. In policy indicators, they are typically arranged
under social policy, in the category of benefits in kind (Eurostat, 2011). Such measures do not directly pursue or demand
integration in work; hence, they are rarely articulated in the discussion on activating disabled workers. Nevertheless,
because barriers in society and daily life have been singled out as important obstacles (Barnes, 2000), it seems plausible that
these measures may contribute indirectly to their inclusion, by creating the conditions that enable a transition to work.

Facilitation measures in work concern services that aim to increase the ability of disabled persons to function in
regular employment. They are captured in indicators of labour market policy by the category of supported employ-
ment (Eurostat, 2013). These measures constitute individualized services that seek to place, train, and maintain dis-
abled persons in regular work (European Union of Supported Employment, 2010). They utilize individualized
guidance and brokering to connect disabled persons with regular jobs, and in-work training and job support to
enhance their fit in employment (e.g., work experience, job-specific skills, adjusted procedures, and assistance from
co-workers). By doing so, they address barriers in access to employment and in the organization of work (Barnes,
2000; Parker Harris et al., 2012). Indeed, evaluations of some national programs suggest that such measures thereby
can promote workplace (re)integration, even for intellectual and mental disabilities (Burns et al., 2007; Cimera, 2007).

1.5 The present research

The present research aims to examine whether the logic of social investment through activation measures, as
envisioned by the CRPD, may predict greater employment chances for disabled persons in the present context of
more restrictive social welfare. Moreover, we assess how measures that target broader barriers within society and
the labour market (namely facilitation measures in daily life and in work) may impact this outcome. To this end, we
conduct a quantitative, cross-sectional, comparative multilevel analysis across 22 European countries. For this analy-
sis, we rely on micro (individual) level employment data derived from the EU Labour Force Survey (2011 wave, using
the ad hoc module to identify respondents with disabilities), combined with macro (country) level indicators of acti-
vation and support measures derived from Eurostat (2011, 2013) and the OECD (2010). Our analysis examines how
national measures for activation, support, and facilitation may impact the employment chances of individual disabled
persons, nested within countries. Furthermore, we explore the effects of their subdimensions (i.e., activation
targeting supply or demand; facilitation in daily life or in work). Thus, our interest is in testing the logic of expanding
activation within the present context, rather than in identifying countries with similar policies.

Based on our theoretical framework, we advanced the following predictions:

1. From the logic that social investment will increase their access to work, more extensive activation measures are
expected to predict greater employment chances for disabled persons (Hypothesis 1).
2. Accordingly, more extensive supply-side (Hypothesis 2a) and demand-side (Hypothesis 2b) activation measures
are expected to promote employment chances for disabled persons.
3. From the logic that more restrictive social welfare will increase incentives to work, less extensive passive support
measures are expected predict greater employment chances for disabled persons (Hypothesis 3).
4. Conversely, from the assumption that barriers in work and society explain their exclusion from work, more exten-
sive facilitation measures in daily life (Hypothesis 4a) and in work (Hypothesis 4b) are expected to predict greater
employment chances for disabled persons.
Our analysis consists of two separate steps. In Step 1, we test these processes using general indicators of labour market policy (Eurostat, 2013) and social protection (Eurostat, 2011). These reflect measures targeted at general unemployment, which resolves the complication that some countries employ dedicated programs for disability, whereas others rely on mainstream programs (as both are included under general policy). Although broader, these indicators are likely to echo disability-specific policy, in that (a) disability-specific measures are contained within them, (b) disabled persons increasingly rely on mainstream services (Van Lin et al., 2002), and (c) developments in specific programs tend to follow general labour market policy (Greve, 2009). In Step 2, we examine these questions using indicators of specific disability policy (OECD, 2010). These indicators capture different facets of national disability-specific policy; however, they are less precise or recent (aggregated over 1990–2007) and less focused on integration in regular employment. Our analysis therefore examines these processes using both general and specific indicators, and integrates their conclusions, to offset their individual limitations.

2 | METHOD

The EU Labour Force Survey is the premier source for labour market statistics in the EU. It constitutes a representative household survey covering the years from 1983 onwards, conducted by the national statistical institutes across Europe, and processed by Eurostat. Since 1999, each wave features a single-instance, dedicated ad hoc module on an associated topic— in 2011, disability. Our analysis therefore relies on microdata from the 2011 wave (November 2016 version), using the ad hoc module to identify respondents with disabilities.

Our sample consists of respondents from the 22 countries for which policy indicators were available (Austria, Belgium, Switzerland, Czech Republic, Germany, Denmark, Estonia, Spain, Finland, France, Hungary, Ireland, Italy, Luxembourg, Latvia, Netherlands, Poland, Portugal, Sweden, Slovenia, Slovak Republic, and United Kingdom). We selected working age individuals (15–64 years) who reported a basic activity difficulty (seeing, hearing, and other physical or cognitive difficulties) and who indicated their employment status. This left a sample of 97,892 disabled individuals, nested within 22 countries. Analyses involving indicators of specific disability policy are estimated on the basis of 93,152 observations nested in 19 countries, as no indicators were available for Estonia, Latvia, and Slovenia.

2.1 | General labour market policy indicators

2.1.1 | Activation measures

Indicators of general activation policy were derived from the Labour Market Policy database (Eurostat, 2013). First, we derived an aggregated indicator of national expenditure (% GDP) on activation measures, which combined spending on all available categories (labour market services, training, employment incentives, direct job creation, and incentives for self-employment). Second, we computed indices for supply-side measures (training and labour market services) and demand-side measures (employment incentives).

2.1.2 | Passive support measures

For passive support, the indicator of national expenditure (% GDP) on disability benefits (in cash) was derived from the integrated social protection statistics database (ESSPROS, Eurostat, 2011).
2.1.3 | Facilitation measures

For facilitation measures in daily life, the index of national expenditure (% GDP) on benefits in kind for disability was derived from the ESSPROS database. For facilitation measures in work, we extracted the indicator of national expenditure (% GDP) on supported/sheltered employment and vocational rehabilitation from the Labour Market Policy database. To reflect total national expenditure on facilitation measures, both indices were aggregated.

Correlations between the indicators of general labour market policy are shown in Table 1.

2.2 | Specific disability policy indicators

Indicators of specific disability policy were derived from the OECD disability policy typology (OECD, 2010). In order to capture the same dimensions, they were categorized by function, into the following categories: (a) activation measures (supply-side and demand-side), (b) passive support measures, and (c) facilitation measures (in daily life and in work). Indicators of measures targeting sickness (rather than disability) were not included. The OECD typology captures additional facets that are not reflected in general expenditure (e.g., permanence and eligibility of passive support; facilitation through segregated work). To further enrich our analysis, we also created subindicators for these categories.

For activation measures, we selected access to employment programs, agency responsibility structure, vocational rehabilitation program, vocational rehabilitation timing, benefit suspension rules, work incentives rules, and subsidized employment program. This category therefore contains measures that overlap with employment services, training, work incentives targeted at individual jobseekers, and incentives targeting employers. Subindicators were created for supply-side measures (Items 1–6) and demand-side measures (Item 7).

For support measures, we selected maximum benefit payment level, permanence of benefit payments, minimum required disability level, level for full benefit, medical assessment criteria, and vocational assessment criteria. Subindicators were created for generosity (Item 1), permanence (Item 2), and restrictiveness (Items 3–6).

Lastly, for facilitation measures, we selected supported employment, antidiscrimination measures, and sheltered employment. Subindicators were created for facilitation in regular work (Items 1–2) and facilitation through segregated work (Item 3). None of the indicators captured facilitation measures in daily life; hence, this indicator again was derived from the ESSPROS database.

Correlations between the indicators of specific labour market policy are shown in Table 2.

2.3 | Control variables

We controlled for several economic and demographic factors to increase the robustness of the estimates. First, national wealth may influence both policy and employment rates; therefore, our analyses controlled for GDP (per capita). Second, national demographic factors may affect both policy and opportunities in employment; hence, we controlled for old-age dependency ratio and ratio of female/male labour force participation (World Bank, 2011). Lastly, individuals’ age and gender may influence their employment chances; thus, our analyses also controlled for this.

3 | RESULTS

We conduct multilevel analysis by estimating a mixed-effects logistic model using the lme4 package (Bates, Mächler, Bolker, & Walker, 2015, version 1.1–17) in R (R Core Team, 2013). Our model utilizes indicators of general labour market policy (Step 1) and specific disability policy (Step 2) to predict the probability of employment (0 = not
|                  | Activation measure | Support measure | Facilitation measure | Control |
|------------------|--------------------|-----------------|----------------------|---------|
|                  | Total   | Supply-side    | Demand-side  | Disability benefits | Total   | Daily life | In work | GDP/capita | Old-age ratio | F/M ratio |
| Activation measure | Total   | —               | —             | —                   | —       | —          | —       | —           | —            | —         |
|                  | Supply-side | .87**           | —             | —                   | —       | —          | —       | —           | —            | —         |
|                  | Demand-side | .56** .16      | —             | —                   | —       | —          | —       | —           | —            | —         |
| Support measure  | Disability benefits | .53* .59** .34 | —             | —                   | —       | —          | —       | —           | —            | —         |
| Facilitation measure | Total   | .69** .50* .75** .57** | —             | —                   | —       | —          | —       | —           | —            | —         |
|                  | Daily life | .64** .42* .75** .43* | .97** | —                   | —       | —          | —       | —           | —            | —         |
|                  | In work   | .53* .52* .42  | .75**        | .66** .46* | —       | —          | —       | —           | —            | —         |
| Control          | GDP/capita | .43* .29 .43* .29 | .57** .58** .29 | —       | —       | —          | —       | —           | —            | —         |
|                  | Old-age ratio | .13 .24 .07 .22 | .11 .14 .05  | .09 | —       | —          | —       | —           | —            | —         |
|                  | F/M ratio | .53* .55** .25 .51* | .66** .65** .43* | .24 | .16 | —          | —       | —           | —            | —         |

*p < .05; **p < .01.
|                      | Activation measure | Support measure | Facilitation measure | Control |
|----------------------|--------------------|-----------------|----------------------|---------|
|                      | Total              | Supply-side     | Demand-side          | Total   | Gener. | Perm. | Restr. | Total | Daily life | Shelt. | GDP/capita | Old-age ratio | F/M ratio |
| Activation measure   | Total              | —               | —                    | —       | —      | —     | —      | —     | —         | —      | —          | —            | —         |
|                      | Supply-side        | .96** —         | —                    | —       | —      | —     | —      | —     | —         | —      | —          | —            | —         |
|                      | Demand-side        | .35 .09 —       | —                    | —       | —      | —     | —      | —     | —         | —      | —          | —            | —         |
| Support measure      | Total              | .12 .06 .25 —   | —                    | —       | —      | —     | —      | —     | —         | —      | —          | —            | —         |
|                      | Generosity         | —.12 —.13 —.00  | .45 —               | —       | —      | —     | —      | —     | —         | —      | —          | —            | —         |
|                      | Permanence         | .01 —.01 .08    | .52* .10 —          | —       | —      | —     | —      | —     | —         | —      | —          | —            | —         |
|                      | Restrictiveness    | .22 .16 .27     | .65** —.09 —.12 —   | —       | —      | —     | —      | —     | —         | —      | —          | —            | —         |
| Facilitation measure | Total              | .56* .48* .41   | .14 .14 —.28 .31 —  | —       | —      | —     | —      | —     | —         | —      | —          | —            | —         |
|                      | Daily life         | .59** .49* .49* | .48* .32 .26 .24 .56* — | —       | —      | —     | —      | —     | —         | —      | —          | —            | —         |
|                      | In work            | .57* .50* .41   | —.03 —.27 —.24 .30 .66** .35 — | —       | —      | —     | —      | —     | —         | —      | —          | —            | —         |
|                      | Sheltered          | .04 .04 .02     | .04 .34 —.31 .08 .63** .09 —.10 — | —       | —      | —     | —      | —     | —         | —      | —          | —            | —         |
| Control              | GDP/capita         | .35 .30 .26     | .15 .15 .28 —.11 .27 .60** .14 .03 — | —       | —      | —     | —      | —     | —         | —      | —          | —            | —         |
|                      | Old-age ratio      | .24 .25 .02     | .13 .14 —.15 .20 .15 .19 .35 —.21 —.09 — | —       | —      | —     | —      | —     | —         | —      | —          | —            | —         |
|                      | F/M ratio          | .70** .62** .44 | .50* .12 .31 .35 .53* .61** .40 .13 .24 .16 — | —       | —      | —     | —      | —     | —         | —      | —          | —            | —         |

*p < .05; **p < .01.
employed, 1 = employed) of individual disabled persons, nested within countries. Country-level variables were converted to z-scores to counter possible convergence issues resulting from differing measurement levels.

3.1 | Step 1: General labour market policy indicators

Step 1 examines how general measures for activation, support, and facilitation relate to the employment chances of individual disabled persons. In light of their interrelations, we first tested these associations in separate multilevel models, focusing each on a single predictor (Table 3).

3.1.1 | Activation measures

Total expenditure on activation measures displayed a significant negative association to the probability of employment of disabled persons, contrary to the logic of social investment (Hypothesis 1). We next estimated two separate models focusing on either supply-side or demand-side measures. Expenditure on supply-side measures showed a significant negative association to probability of employment (contrary to Hypothesis 2a); conversely, no significant relationship was observed for demand-side measures (contrary to Hypothesis 2b). In sum, the results provided no support for the assumption that more active measures will promote the employment of disabled persons. However, these findings are in line with theorizing that activation measures will be ineffective, due to persistent barriers to work (Barnes, 2000; Parker Harris et al., 2012).

3.1.2 | Passive support measures

Expenditure on passive support measures displayed a significant negative association with probability of employment. This result supports the assumption that more restrictive benefits promote work (Hypothesis 3).

3.1.3 | Facilitation measures

Total expenditure on facilitation measures showed a positive, nonsignificant association with probability of employment. We next estimated two separate models focusing on facilitation in daily life or in work. Facilitation in daily life showed a positive, marginally significant association with chances of work (in line with Hypothesis 4a). Conversely, facilitation in work showed no significant association with employment (contrary to Hypothesis 4b).

3.1.4 | Comparing effects of activation, support, and facilitation measures

To examine their relative contribution to employment, we lastly estimated a multivariate multilevel model that simultaneously included all significant predictors (Table 4). Supply-side activation measures displayed a significant negative effect on probability of employment, whereas facilitation in daily life showed a significant positive association. No significant association was observed for passive support measures, which suggests that the support for Hypothesis 3 concerning the assumption that more restrictive benefits promote work we reported above is spurious.4
TABLE 3  Separate multilevel logistic regressions (panelled) of general activation, support, and facilitation measures (and subdimensions) on probability of employment

| 1. Activation measures                      |               |               |
|---------------------------------------------|---------------|---------------|
| (intercept)                                 | 1.45***       | (0.06)        |
| Total activation                            | −0.14*        | (0.06)        |
| GDP/capita                                  | 0.28***       | (0.05)        |
| F/M ratio                                   | 0.33***       | (0.07)        |
| Old-age ratio                               | 0.27***       | (0.05)        |

| 1.1 Supply-side                             |               |               |
| (intercept)                                 | 1.45***       | (0.06)        |
| Supply-side                                 | −0.16**       | (0.06)        |
| GDP/capita                                  | 0.27***       | (0.05)        |
| F/M ratio                                   | 0.35***       | (0.07)        |
| Old-age ratio                               | 0.28***       | (0.05)        |

| 1.2 Demand-side                             |               |               |
| (intercept)                                 | 1.45***       | (0.07)        |
| Employment incentives                       | 0.04          | (0.06)        |
| GDP/capita                                  | 0.22***       | (0.06)        |
| F/M ratio                                   | 0.24***       | (0.07)        |
| Old-age ratio                               | 0.25***       | (0.06)        |

| 2. Support measures                         |               |               |
| (intercept)                                 | 1.44***       | (0.07)        |
| Disability benefits                         | −0.11*        | (0.06)        |
| GDP/capita                                  | 0.26***       | (0.06)        |
| F/M ratio                                   | 0.32***       | (0.07)        |
| Old-age ratio                               | 0.28***       | (0.05)        |

| 3. Facilitation measures                    |               |               |
| (intercept)                                 | 1.46***       | (0.07)        |
| Total facilitation                          | 0.09          | (0.09)        |
| GDP/capita                                  | 0.20**        | (0.06)        |
| F/M ratio                                   | 0.19*         | (0.09)        |
| Old-age ratio                               | 0.25***       | (0.06)        |

| 3.1 Daily life                              |               |               |
| (intercept)                                 | 1.46***       | (0.07)        |
| Benefits in kind                            | 0.15          | (0.09)        |
| GDP/capita                                  | 0.18**        | (0.06)        |
| F/M ratio                                   | 0.16          | (0.08)        |
| Old-age ratio                               | 0.24***       | (0.06)        |

| 3.2 In work                                 |               |               |
| (intercept)                                 | 1.45***       | (0.07)        |
| Supported employment                        | −0.07         | (0.06)        |
| GDP/capita                                  | 0.25***       | (0.05)        |

(Continues)
3.2 Step 2: Specific disability policy indicators

Step 2 complements the preceding analyses by examining how disability-specific measures for activation, support, and facilitation relate to the employment chances of individual disabled persons. Again, we first tested these associations in separate multilevel models (Table 5).

### 3.2.1 Activation measures

Total extensiveness of disability-specific activation measures displayed a marginally significant, negative association to employment (similar to Step 1 and contrary to Hypothesis 1). Next, we again estimated separate models focusing on either supply-side or demand-side measures. Both revealed negative associations to employment (contrary to Hypotheses 2a and 2b); however, neither reached significance. Thus, these analyses again provide no support for the assumption that more active measures will increase the employment chances of disabled persons. However, they do support theorizing that such measures will be ineffective, due to persistent barriers to work (Barnes, 2000; Parker Harris et al., 2012).

### TABLE 3 (Continued)

| Variable        | Coefficient | Standard Error |
|-----------------|-------------|----------------|
| Gender          | −0.26**     | (0.01)         |
| Age             | −0.11***    | (0.00)         |

*p < .05.; **p < .01.; ***p < .001.; ′p < .10.

### TABLE 4 Combined multilevel logistic regression of general activation, support, and facilitation measures on probability of employment

| Estimation | Coefficient | Standard Error |
|------------|-------------|----------------|
| (intercept) | 1.19***     | (0.06)         |
| 1. Activation measures |                 |                |
| Supply-side | −0.13*      | (0.06)         |
| 2. Support measures |              |                |
| Disability benefits | −0.07       | (0.05)         |
| 3. Facilitation measures |            |                |
| Daily life   | 0.15*       | (0.07)         |
| Controls     |             |                |
| GDP/capita   | 0.21***     | (0.05)         |
| F/M ratio    | 0.27***     | (0.07)         |
| Old-age ratio| 0.28***     | (0.05)         |
| Gender       | −0.26***    | (0.01)         |
| Age          | −0.11***    | (0.00)         |

Variances

| Source          | Variance |               |
|-----------------|----------|---------------|
| Between countries | 0.04     |               |

AIC 125,998.3
BIC 126,093.2
Log-likelihood −62,989.2

*p < .05.; **p < .01.
TABLE 5  Separate multilevel logistic regressions (panelled) of specific activation, support, and facilitation measures (and subdimensions) on probability of employment

| 1. Activation measures          | Coefficient | Standard Error |
|---------------------------------|-------------|----------------|
| (intercept)                     | 1.45***     | (0.08)         |
| Total activation                | −0.16       | (0.09)         |
| GDP/capita                      | 0.29***     | (0.06)         |
| F/M ratio                       | 0.35***     | (0.09)         |
| Old-age ratio                   | 0.27***     | (0.06)         |

| 1.1 Supply-side                 | Coefficient | Standard Error |
|---------------------------------|-------------|----------------|
| (intercept)                     | 1.45***     | (0.08)         |
| Supply-side                     | −0.12       | (0.08)         |
| GDP/capita                      | 0.28***     | (0.06)         |
| F/M ratio                       | 0.31***     | (0.09)         |
| Old-age ratio                   | 0.27***     | (0.06)         |

| 1.2 Demand-side                 | Coefficient | Standard Error |
|---------------------------------|-------------|----------------|
| (intercept)                     | 1.47***     | (0.08)         |
| Demand-side                     | −0.07       | (0.07)         |
| GDP/capita                      | 0.27***     | (0.06)         |
| F/M ratio                       | 0.26**      | (0.08)         |
| Old-age ratio                   | 0.24***     | (0.06)         |

| 2. Support measures             | Coefficient | Standard Error |
|---------------------------------|-------------|----------------|
| (intercept)                     | 1.44***     | (0.08)         |
| Total support                   | 0.12        | (0.09)         |
| GDP/capita                      | 0.26***     | (0.06)         |
| F/M ratio                       | 0.15        | (0.09)         |
| Old-age ratio                   | 0.23***     | (0.06)         |

| 2.1 Generosity                  | Coefficient | Standard Error |
|---------------------------------|-------------|----------------|
| (intercept)                     | 1.48***     | (0.07)         |
| Generosity                      | 0.14        | (0.06)         |
| GDP/capita                      | 0.25***     | (0.06)         |
| F/M ratio                       | 0.23**      | (0.07)         |
| Old-age ratio                   | 0.23***     | (0.06)         |

| 2.2 Permanence                  | Coefficient | Standard Error |
|---------------------------------|-------------|----------------|
| (intercept)                     | 1.42***     | (0.08)         |
| Permanence                      | −0.05       | (0.07)         |
| GDP/capita                      | 0.27***     | (0.06)         |
| F/M ratio                       | 0.25**      | (0.08)         |
| Old-age ratio                   | 0.24***     | (0.06)         |

| 2.3 Restrictiveness             | Coefficient | Standard Error |
|---------------------------------|-------------|----------------|
| (intercept)                     | 1.45***     | (0.08)         |
| Restrictiveness                 | 0.09        | (0.08)         |
| GDP/capita                      | 0.27***     | (0.06)         |

(Continues)
Support measures

Total extensiveness of passive support measures showed a positive but nonsignificant association with probability of employment. Next, we estimated separate models focusing on benefit generosity, permanence, and restrictiveness. Generosity displayed a significant positive association with employment, whereas associations for restrictiveness and permanence were not significant. We thus observed no support for the assumption that more restrictive or temporary benefits promote employment (contrary to Hypothesis 3).

Facilitation measures

Total facilitation measures displayed no significant association to probability of employment. We subsequently estimated separate models focusing on facilitation in daily life, in regular work, or through segregated work.
in daily life showed a marginally significant, positive association with employment chances (consistent with Hypothesis 4a). Conversely, facilitation in regular work showed no significant association with this outcome (contrary to Hypothesis 4b). Instead, greater employment chances were associated with greater provisions for segregated work, outside the regular labour market.

### 3.2.4 Comparing effects of activation, support, and facilitation measures

Lastly, we estimated a multivariate multilevel model that simultaneously included all significant predictors (Table 6). Total activation measures displayed a significant, negative association with probability of employment. Conversely, facilitation in daily life and through segregated work showed significant, positive associations with employment. No significant effect was observed for generosity of support.5

### 4 DISCUSSION

In line with the principles of the CRPD, a gradual transition to more activating disability policies is taking place in many European countries (Böheim & Leoni, 2018), as part of their transition to social investment (Hvinden, 2016). The present research investigated whether a social investment strategy, in terms of greater reliance on activation measures, may effectively translate to greater employment for disabled persons, in the present context of declining social protection. To do so, we conducted a quantitative, cross-sectional, comparative, multilevel analysis across 22 European countries. The results of this analysis revealed modest, but noteworthy effects of these measures, which provide useful, preliminary indications of how these developments may impact disabled persons.

**TABLE 6** Combined multilevel logistic regression of specific activation, support, and facilitation measures on probability of employment

| (Intercept)   | 1.45*** (0.06) |
|---------------|----------------|
| 1. Activation measures | | |
| Total activation | −0.17* (0.07) |
| 2. Support measures | | |
| Generosity | 0.01 (0.06) |
| 3. Facilitation measures | | |
| Daily life | 0.20** (0.07) |
| Segregated work | 0.15* (0.06) |
| Controls | | |
| GDP/capita | 0.22*** (0.05) |
| F/M ratio | 0.21** (0.08) |
| Old-age ratio | 0.27*** (0.05) |
| Gender | −0.28*** (0.01) |
| Age | −0.11*** (0.00) |
| Variances | | |
| Between countries | 0.04 |
| AIC | 119,466.8 |
| BIC | 119,570.7 |
| Log-likelihood | −59,722.4 |

*p < .05.; **p < .01.; ***p < .001.
Contrary to the logic of the CRPD, our analyses revealed no evidence that greater reliance on activation measures increases the access of disabled persons to work. Both when assessing general activation policy (Step 1) or disability-specific measures (Step 2), there were no indications that activation measures predict greater employment chances: in fact, they consistently showed significant negative associations to this outcome, especially measures targeting labour supply (the majority of activation measures in practice).

As to the effect of restricting social protection, our findings show a mixed picture. Lower expenditure on passive support did show positive associations with the employment chances of disabled persons; however, this result did not persist when tested simultaneously with activation and facilitation measures. Moreover, when separating different facets of passive support in disability-specific policy, greater generosity did not undermine employment, while restrictiveness and permanence were unrelated to this outcome. According to these findings, the relationship between employment and social protection therefore may be more complex than assumed by the logic that providing benefits to disabled persons disincentivizes work.

More generally, our findings highlight the role of persistent barriers in society and the labour market. Better employment chances were associated with measures for facilitation in daily life (but not in work), and with segregated, sheltered work. This suggests that for their integration in work, disabled persons continue to be dependent on employment opportunities outside of the regular labour market, and on assistance in everyday life.

In the following, we further scrutinize these findings and consider their implications for disability policy within the EU.

4.1 | Why social investment may not facilitate employment

Why might measures that address deficiencies in labour supply and demand not translate to greater employment for disabled persons? A first important reason may lie in their capacity to effectively overcome such deficiencies. It is unclear to what extent such measures effectively increase human capital or labour demand, or do so sufficiently to resolve deficiencies in skills or costs (Clayton et al., 2011). Moreover, effective programs may be inaccessible to those with the greatest need (e.g., due to creaming). Accordingly, barriers in supply and demand may persist and continue to impede access to work.

A second reason may lie in unintended side effects of activation policies (Benda, 2019). Specifically, possible beneficial effects of activation measures may be negated by lock-in effects (e.g., time in programs is not spent on job search) and displacement effects (e.g., subsidized new hires may replace existing disabled staff). Furthermore, outflow from activation programs need not entail transitions to work, but may also involve exit to other benefits or inactivity (Fevang et al., 2013). And moreover, because activation measures simultaneously target a range of other, nondisabled users (e.g., young, old, or long-term unemployed jobseekers), they may also result in greater competition. These processes may explain the observed negative effects of such policies in the present study.

A more general reason why extant activation measures may be ineffective for disabled persons is that they may be overly focused on individual barriers, and disregard structural barriers to employment in society and the labour market (e.g., able-bodied orientation of tasks, procedures, and environments; Barnes, 2000; Stone & Colella, 1996). By keeping such barriers in place, activation measures focusing on human capital and labour costs may fail to ensure greater access to employment.

Does that mean that social investment is ineffective for disabled persons? More research is needed to answer this question. To begin with, there are indications that extant activation measures may not meet the principles that are proscribed by the social investment strategy envisioned by the CRPD (e.g., focus on human capital development with the aim of achieving high-quality, sustainable employment in the regular labour market). In many countries, such measures serve to facilitate the transition from benefits to any type of work—often temporary, low-qualified jobs in practice. Moreover, it should be noted that in the CRPD, social investment is nested in a broader strategy that includes measures to counter discrimination (Article 5), to promote reasonable accommodation (Article 5), to
promote accessibility (Article 9), and to ensure adequate social protection (Article 28; see UN General Assembly, 2007). It is possible that within such a context, meaningful social investment may produce more favourable outcomes. In practice, however, concrete advances in these areas remain limited (Lang, Kett, Groce, & Trani, 2011; Gould, Leblois, Cesa Bianchi, & Montenegro, 2015). Our findings seem to imply that under these circumstances, activation instead may worsen the (already vulnerable) position of disabled persons (Cantillon & Van Lancker, 2013).

4.2 Addressing barriers in daily life and work

Consistent with the idea of barriers in society and the labour market, our findings suggest that measures that target or circumvent such obstacles may contribute to greater employment chances for disabled persons. This firstly applied for facilitation measures in daily life and in society (provisions for adaptations and support at home, reduced tariffs for public transport, etc.). Although these measures do not directly target employment, they seem to facilitate it indirectly, by creating conditions that enable disabled persons to work (Van Oorschot & Hvinden, 2000). To understand the nature of these processes, more research is needed. Nevertheless, these findings do imply that the creation of suitable (personal) circumstances may be an important (and underappreciated) precondition for enabling disabled persons to work.

Our findings also suggest that sheltered work may enable greater employment chances for disabled persons. This finding alludes to another important barrier to work: the accessibility of the regular labour market. Sheltered work bypasses important barriers in the regular labour market (e.g., able-bodied orientation and lack of demand) and thereby enables employment for those who are unable to overcome them. Although this may seem positive, it is offset by important deficiencies: sheltered work typically is low paid, stigmatizing, and costly, and thereby detrimental to empowerment and inclusion. Accordingly, it is being phased out in several European countries (Greve, 2009). The present findings seem to imply that care should be taken with this transition. Certainly, many disabled persons would benefit from integration in regular work, and it is possible that the (considerable) expenses on sheltered work would confer them even greater benefit when applied to this purpose. However, given that disabled persons continue to have difficulty in accessing regular employment, abolishing sheltered work in fact may undermine their inclusion, as illustrated by recent experiences in the Netherlands (Sadiraj, Hoff, & Versantvoort, 2018). Instead, the present findings point at the importance of creating inclusive labour markets, which ensure broad access to sustainable, high-quality, regular work.

A poignant question is why facilitation measures in work do not show similarly favourable results. At first glance, this seems inconsistent with the existence of barriers in the labour market, and with favourable evaluations of supported employment programs (Burns et al., 2007; Cimera, 2007). How can we understand this discrepancy? One important reason is that indicators of supported employment often may differ from the specific supported employment programs that have been proven to be successful. Indeed, in many countries, they may include programs that violate its key principles (e.g., by compromising voluntary participation; by failure to target regular, paid workplaces, or to provide ongoing in-work support; European Union of Supported Employment, 2010). Second, successful studies focus on specific, difficult-to-place target groups (i.e., mental illness and cognitive disabilities), who may not reflect disabled persons in general (the focus of the present study). As such, our findings should not be taken as definitive evidence that facilitation in work is ineffective. Rather, they should be complemented by targeted studies that separate different target groups and different types of in-work facilitation (e.g., individualized brokering, in-work training and support, and assistive technology and adaptations)—to illuminate who may benefit from which types of in-work facilitation.

4.3 Strengths and limitations

An important strength of the present research is its quantitative, multilevel method. By using the 2011 Labour Force Survey, this method enabled us to examine relationships between activation measures and the employment of
disabled persons in a large sample, across 22 European countries. Doing so revealed modest but noteworthy associations that remained obscured in descriptive comparative analyses (Holland et al., 2011). Nevertheless, there are some limitations to this approach. For disabled persons, the survey only provides cross-sectional data; moreover, it is not certain whether the prevalence of activity limitation reported in the Labour Force Survey optimally captures differences in disability levels across countries. Future research should expand our model with other, longitudinal data sources, extending beyond the recession period, and should validate reported national disability statistics.

A second limitation concerns the variables that were included in our analysis. We recognize that beside measures for activation and support, many other variables may influence the employment chances of disabled persons. Our decision to focus on these measures in the present contribution was motivated by their central role in the CRPD and in retrenchment. Moreover, it reflects the fact that to our knowledge, no quantitative indicators exist for antidiscrimination legislation, enforcement of employment quota, or accessibility regulation. Nevertheless, we believe that future research would benefit from the development of an updated taxonomy of disability policy, which creates indicators for these factors (which currently do not yet exist), and in which recent policy developments are represented.

4.4 | Effective disability policies

Despite these limitations, what conclusions can be drawn for disability policy? Ultimately, it is likely that the inclusion of disabled persons will require a "smart mix" of policies, which focus on levelling individual and structural barriers so that sheltered work is no longer needed. If it is indeed the case that persistent barriers in daily life, society, and at work undermine the current social investment strategy, then this reasoning suggests that measures to reduce those barriers are necessary to promote inclusion. This may include specific measures to help disabled persons fit in society and the regular labour market (e.g., facilitation in daily life; antidiscrimination measures), but ultimately may demand more far-reaching reforms to open work and society to disabled persons—such as reversing the able-bodied orientation of the built environment, transport, communication, ideology, and culture (Barnes, 2000). Such a broad, multifaceted strategy is an important target of the CRPD (see also, UN General Assembly, 2007). On the basis of these preliminary findings, we conclude that policy makers would do well to accelerate its implementation.

Related to this, an important question is whether disabled persons may be better served by mainstream or disability-specific employment programs. Although the latter may be more attuned to their condition, the former may provide closer connections to the labour market, and equality with nondisabled jobseekers. On the basis of the current evidence, it seems that at present, specific measures - for facilitation in daily life and for sheltered work - enable greater access to work, whereas mainstream programs do not. As such, until broader barriers to participation have been mitigated, care should be taken in substituting specific measures with mainstream programs.

In conclusion, our study suggests that focusing on activation while reducing social protection may not be the best way to include disabled persons on the labour market, whereas facilitating them in their daily life is more promising. However, there are also other policies that may help disabled persons to overcome individual and structural barriers to participation, such as antidiscrimination legislation, employment quota, and accessibility measures. Including these policy measures in future research can help to further unravel the important question of how policy should be shaped to advance the position of disabled persons, in the labour market and beyond.

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CONFLICT OF INTEREST

There is no conflict of interest.
Aakvik, A. (2003). Estimating the employment effects of education for disabled workers in Norway.

**Endnotes**

1. See http://ec.europa.eu/eurostat/web/microdata/european-union-labour-force-survey.

2. Because our analysis will separate the effects of facilitation measures in work, supported employment was not included. When included, the results are identical.

3. Because the OECD’s indicators reflect a less recent period (1990–2007), we computed a revised index of benefits in kind, aggregating complete records within the corresponding period (2000–2007).

4. As a further robustness test, we estimated three supplementary models that included the predictors in pairs. The results consistently mirrored the multivariate model for supply-side activation measures and facilitation in daily life. Passive support displayed a significant effect only when paired with facilitation in daily life.

5. Again, robustness checks were conducted by estimating six additional pairwise models. The results consistently mirrored the multivariate model for both facilitation measures. Activation measures showed significant effects when paired with either facilitation measure (but not with generosity of support). Generosity of support only showed marginal effects when paired with activation measures or facilitation in daily life.

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