Disability Pensions in the European Union

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I. Introduction

Disability is a complex, evolving and multidimensional concept. According to the World Disability report (2011), disability will be an even greater concern as its prevalence is on the rise due to ‘ageing populations’ as well as the ‘global increase in chronic health conditions such as diabetes, cardiovascular disease, cancer and mental health disorders.’ Survey results from Eurostat have shown that, ‘one out of seven’ individuals report a basic activity difficulty among EU countries as of 2011. People with disabilities often experience barriers in accessing services like health, education, employment, transport as well as information. (WB/WHO report, 2011). In addition to poor access to services, people with disabilities could also be hindered by poor design of disability pension systems, insufficient social and environmental support and/or poor coordination among health, employment and rehabilitation agencies. Efforts to remove these barriers would not only improve the well-being of people with disabilities but also lead to productive gains to GDP of countries.

In this paper, we look at the basic design features and fiscal costs of the sick pay, sick leave and disability pensions program in each of the Member States of the European Union. As will be seen, it is difficult to draw any policy conclusions or find much in the way of trends in the data. Nevertheless, we highlight the heterogeneity in practices across various countries through our analysis, suggest areas for additional analysis or research, and provide suggestions for strengthening disability pension systems in the future. We also include case studies for two countries (The Netherlands and Poland) to illustrate the characteristics of recent reforms and lessons learned.

For most purposes, in this paper, disability benefits refer to a combination of sick pay, sick leave and disability pensions payable from social insurance programs. The original intention was to limit the focus to disability pensions from national social insurance programs only. However, preliminary analyses made it apparent that a holistic analysis would require inclusion of sick pay and sick leave programs since most individuals enter the disability pension program through these programs, and much of the recent reforms in disability systems were focused on them. However, it does not include analysis of the design of disability pensions paid from the budget through social safety net programs, and it does not look at any benefits that might be paid to the disabled through minimum income, social assistance, unemployment insurance or other safety net programs.

In this paper, we will use the term ‘sick pay’ to refer to payments made directly to workers by employers, usually for short-term absences, although some countries are extending the sick pay period to longer time periods. This is not social insurance since it is not financed by payroll contributions. Rather, it is a risk that is normally self-insured by employers for a period ranging from 2 days to 2 years and is generally required by the country’s labor laws. Once sick pay benefits are exhausted, workers are eligible for ‘sick leave’ in countries where it is available. In this paper, sick leave (sometimes referred to as short-term disability) is a part of the country’s overall social insurance system and is financed via payroll contributions. The sick pay and sick leave policy and provisions in each country determine how quickly workers move from employer-provided sick pay into the social insurance system. Since sick pay and sick leave are entry points into the disability pension system, analysis of these programs is covered in this report.

Many countries in the European Union have focused on, and significantly reformed their old age pension programs, often by raising retirement ages, eliminating or reducing early retirement privileges and rights, reducing benefits and diversifying sources of retirement income. However, disability pensions have not yet received nearly as much attention in many countries, even though disability costs in social insurance systems have been rising and disability pensions are often used as a substitute for early retirement and unemployment benefits.
Most EU countries are witnessing increasing retirement ages and general population ageing. Since incidence rates for disability typically rise with age, disability pension costs would be expected to increase in most EU countries, even in well-run disability systems. The ongoing transformation in the global economy and labor markets also leave older workers with a higher chance of becoming unemployed due to elimination of existing jobs and limited opportunities to train for new ones.

Most countries maintain an extensive system of means-tested social safety nets for the poor and vulnerable, many of whom are disabled. Countries often offer old age and disability ‘assistance’ paid for by the social welfare system to individuals who lack sufficient contributions to qualify for disability pensions. In some countries, the social safety net system also includes supplemental “categorical” programs (e.g. caregiver allowance, child allowance, transport/fuel allowance, etc.) to further assist the disabled regardless of whether they are poor or not. A comprehensive look at all these sources of income (and services) for the disabled would cast an extremely wide net and is mentioned only briefly in this report.

At an even broader level, programs for the disabled also need to take into consideration: i) the education system, to detect disabilities at an early age and provide appropriate support; ii) the transportation system, to assure access to goods and services; iii) access to places of employment to facilitate continued participation in the labor force; and iv) conditions of employment to allow the disabled to work effectively. Ideally, the design of these programs should be integrated. A failure to detect clear patterns across disability systems of Member States in this report may be due, at least in part, to the narrower perspective adopted for this report.

Section II of this report discusses the social, financial, and demographic arguments for countries to focus increased attention now on the design, administration and financing of their sick pay, sick leave and disability pension programs. It also reviews the literature on current disability pension issues and highlights recent changes that certain countries in the EU have made to control their disability pension costs.

Section III discusses the basic terminology and issues in disability pensions. Section IV reviews the current practices of the EU countries in the areas of disability covered by the report. The Appendix to this report presents case studies of the reforms undertaken by The Netherlands and Poland (Appendix 1). Both serve as excellent examples of the different approaches that countries can and have taken to deal with rapidly increasing disability pension costs. In Appendix 2, we provide details on data sources that were used for the analysis and for creating the tables/figures shown in this report.

II. The Rationale for Increased Focus on Disability Pensions

2.1 Social Policy Rationale

More than one billion people, which is approximately 15% of the world’s population, experience some form of disability, and disability prevalence is even higher in developing countries. Of these, one-fifth, or between 110 million and 190 million people, experience significant disabilities (WB/WHO, 2011).

Persons with disabilities are more likely to experience adverse socioeconomic outcomes than persons without disabilities, such as less education, poorer health outcomes, lower levels of employment, and higher poverty rates. A country’s economic, legislative, physical, and social environment may contribute to the problem by creating or maintaining barriers to the participation of people with disabilities in economic, civic, and community life. Barriers include inaccessible buildings, lack of accessible transport, limited access to information and communication technology, and lower levels of services. (WB/WHO 2011)
Poverty may increase the risk of disability through malnutrition, inadequate access to education and health care, unsafe working conditions, a polluted environment, and lack of access to safe water and sanitation. Disability, on the other hand, could lead to an increase in risk of poverty through lack of employment and education opportunities, lower wages, and the increased cost of living associated with having a disability (WB/WHO report, 2011).

The United Nations Convention on the Rights of Persons with Disabilities (CRPD) promotes the full integration of persons with disabilities into society. The CRPD specifically references the importance of international development in addressing the rights of persons with disabilities. To date, 172 countries have ratified the CRPD, which carries the force of national law. In recent years, an increasing number of bilateral donors have developed disability policies to guide their international aid. In light of CRPD, the number of disability anti-discrimination laws and constitutional protections have increased significantly at the national level.

The 2030 Agenda for Sustainable Development (UN report, 2014) clearly states that disability cannot be a reason or criteria for lack of access to development programming and the realization of human rights. The Sustainable Development Goals (SDGs) framework includes seven targets explicitly referring to persons with disabilities and six additional targets on persons in vulnerable situations, which include persons with disabilities. The SDGs address essential development domains such as education, employment and decent work, social protection, resilience to and mitigation of disasters, sanitation, transport, and non-discrimination – all of which are important areas of work for the European Union, the World Bank and other UN members (international financial institutions). The New Urban Agenda specifically commits to promoting measures to facilitate equal access to public spaces, facilities, technology, systems, and services for persons with disabilities in urban and rural areas. (UN resolution 71/256, 2017). Consequently, there are compelling financial and social reasons why countries should focus more attention on disability pensions and related programs such as sick pay, sick leave, and social assistance.

From a social perspective, there are numerous international and European Union conventions and declarations of human rights which lay out responsibilities to assist people with disabilities. The primary documents are discussed briefly below.

2.1.1 United Nations Convention on the Rights of Persons with Disabilities
The Convention on the Rights of Persons with Disabilities is the first international legally binding instrument setting minimum standards for the rights of people with disabilities, and the first human rights convention to which the EU has become a party. The EC adopted the Convention on November 26, 2009 and it entered into force on January 22, 2011.

All the EU countries have signed the Convention; Finland, Ireland and the Netherlands have signed, but not yet ratified it. Twenty-three EU countries have also signed its Optional Protocol and 21 have ratified it. This means that the EU as well as those Member States that are parties to the UN Convention are committed to upholding and protecting the rights of persons with disabilities as enshrined in the UN Convention.

2.1.2 Sustainable Development Goals
The Sustainable Development Goals (SDG) represent a global commitment to 17 specific goals by 2030. Several of these goals are relevant to people with disabilities or to vulnerable groups (which includes people with disabilities). The relevant goals are briefly discussed below.

Goal 1: End poverty in all its forms everywhere. This includes implementation of social protection systems for all, including high coverage of the poor and vulnerable, protecting the economic and social
rights of the poor and vulnerable, and building the resilience of the poor and vulnerable to social and economic shocks.

Item 23 of the introduction to the SCDs explains that persons with disabilities often live in poverty or are vulnerable.

23. People who are vulnerable must be empowered. Those whose needs are reflected in the Agenda include all children, youth, persons with disabilities (of whom more than 80 per cent live in poverty), people living with HIV/AIDS, older persons, indigenous peoples, refugees and internally displaced persons and migrants.

**Goal 3. Ensure healthy lives and promote well-being for all at all ages.** This includes strengthening the prevention and treatment of alcohol and drug abuse [which are considered disabilities], and achieving universal health coverage.

**Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.** Children with disabilities often face difficulty in access to education and are thus excluded from mainstream education systems. It is important for schools to recognize disabilities and develop methods of accommodating individuals with physical and mental disabilities.

4.5 By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations

4.a Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all

**Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all**

8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value

**Goal 10. Reduce inequality within and among countries**

10.2 By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status

**Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable**

11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons

11.7 By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particularly for women and children, older persons and persons with disabilities

**2.1.3 European Pillar of Social Rights**

The European Commission is currently drafting its European Pillar of Social Rights. The preliminary outline published so far (EC, 2016a) addresses social protection in general, and has specific provisions regarding sick pay, sick leave, and disability.

The document notes that social protection is an investment in human capital and is key for reducing income inequality, which otherwise will have a negative impact on long-term growth. It also notes that it is just as important to have an AAA rating in social policy as it is to have AAA rated bonds.
Chapter III of the European Pillar of Social Rights deals with adequate and sustainable social protection. Item 12 notes that “Arrangements for sickness benefits and/or paid sick leave vary considerably in what concerns waiting days, duration, replacement levels and control mechanisms. Securing an adequate minimum replacement level of sickness benefits and encouraging rehabilitation and reintegration while, simultaneously, maintaining the financial sustainability of such schemes remains a challenge.” Item 12c states that “All workers, regardless of contract type, shall be ensured adequately paid sick leave during periods of illness; the participation of the self-employed in insurance schemes shall be encouraged. Effective reintegration and rehabilitation for a quick return to work shall be encouraged.”

Item 16 states that: “People with disabilities are at much higher risk of poverty and social exclusion than the general population. They face the lack of adequate accessibility in the workplace, discrimination and tax-benefit disincentives. The design of disability benefits can lead to benefit traps, for example when benefits are withdrawn entirely once (re-)entering employment. The availability of support services can also affect the capacity to participate in employment and community life.” Item 16a states that, “Persons with disabilities shall be ensured enabling services and basic income security that allows them a decent standard of living. The conditions of benefit receipt shall not create barriers to employment.”

2.1.4 European Commission Social Aquis

The European Commission website defines the acquis as “the body of common rights and obligations that is binding on all the EU member states. Candidate countries must accept the acquis before they can join the EU and make EU law part of their own national legislation. Adoption and implementation of the acquis are the basis of the accession negotiations.”

The social ‘aquis’ is relatively brief and has an indirect impact on the design of disability programs through its reference to the European Accessibility Act (EAA). Under this Act, disabled and older people will benefit from:

- More accessible products and services in the market
- Accessible products and services at more competitive prices
- Fewer barriers when accessing education and the open labor market
- More jobs available where accessibility expertise is needed

Around 80 million people in the EU are affected by a disability in some degree. It is estimated that this number will rise to 120 million people by 2020, due to ageing of populations. (European Commission, 2015) Accessibility is a precondition to ensure their full and equal participation in society. The EAA aims to improve the functioning of the internal market for accessible products and services by removing barriers created by divergent legislation.

The EU and most of the Member States have ratified the UN Convention on the Rights of Persons with Disabilities (CRPD). As such they have committed to create a legislative framework for accessibility in line with Article 9 of the Convention. Accessibility is considered to be a wide concept that includes the prevention and elimination of obstacles that pose problems for persons with disabilities in using products, services and infrastructures.

Member States have started to legislate on accessibility independently, increasing regulatory fragmentation. The Commission tabled the Accessibility Act to help dismantle barriers between Member States due to different national accessibility requirements that are emerging. The Accessibility Act will establish European-wide functional requirements.
2.2 Financial Rationale

Over 15% of the world population (over one billion people) has some form of disability, and about 110-190 million have severe disabilities. In OECD countries, around 6 percent of the working age population receives disability benefits, and in some countries, up to 10-12 percent receive disability benefits – a higher rate than the rate of unemployment benefits prior to the 2008 crisis (OECD, 2010).

Concerns have been raised that granting disability pension benefits might increase economic incentives to remain out of the labor force. (OECD, 2001) The report argues that individuals who are unable to find a new job, are ineligible for social assistance/early retirement or are incapable of continued work (e.g. people working in blue collar jobs), often depend on passive labor policies like disability benefits. Many OECD countries have since started adopting ‘activation and active labor market policies’ to reduce misuse of disability benefits as mere income support. However, recent empirical analysis has shown that the ‘record of activating recipients of disability benefits into work is much less successful in all countries that have tried to go down this route.’ (Martin, 2015) Going forward, disability systems in the EU would need to ‘focus on design and implementation features associated with activation’ alongside being mindful of challenges associated with pursuing passive labor policies. (Martin, 2015)

According to the OECD report (2010), disability benefit take-up is a one-way street. The empirical evidence, though limited, suggests that individuals rarely return to the labor force once they start receiving disability pensions, even if they have remaining work capacity (OECD, 2009). In cases when they do leave disability benefits, they are far more likely to move onto another benefit. The need to address this dependence on disability benefits is urgent in light of the 2008 financial crisis. Long term unemployment or inactivity is also believed to have a negative impact on mental health of individuals thereby making it harder for them to return to the labor force. (OECD, 2010) Case studies on disability systems in Netherlands and Poland (See Appendix 1) has shown that ‘generosity, eligibility criteria as well as duration of sick pay’ influence the number of disability beneficiaries.

In OECD countries, average public spending on disability benefits is about 2% of GDP, and in some countries, as high as 4-5% (Norway, the Netherlands, and Sweden) (OECD, 2009). Since disablement rates increase sharply with age, as populations continue to age, the demand for disability benefits can be expected to grow. Disability at working ages has become one of the biggest social and labor market challenges. Consequently, it is imperative to put programs in place today to manage disability risks and costs before those costs go even higher in the future.

To control disability costs, a combination of the following may be necessary:

- **Prevent the onset of health conditions that may lead to disability.** Through rehabilitation and accommodation during the sickness phase, increase opportunities for disabled individuals to continue working. (See Appendix 1, Netherlands case study)

- **Manage the eligibility and approval rules and processes.** Move disability assessment/certification from the one solely based on medical status to the one based on functioning and performance. Strengthen rules, role and controls governing disability certification and decision making on awarding disability pensions. (See Appendix 1, Poland case study)

- **Balance between passive and active labor market policies.** Empirical evidence show that there does not exist a ‘silver bullet’ regarding labor market policies affecting the disabled. Countries need to find a balance between providing generous benefit payments (passive labor policies) and pushing for active labor market policies, to reduce moral hazard and remove barriers for individuals with remaining earning capacity.
• Focus on quality of rehabilitation and loosen limits on earnings of disabled, to encourage a quick return to the labor force. While most countries have agencies focusing on rehabilitation (e.g. ZUS in Poland, UWV in Netherlands), the quality of reintegration facilities offered by them needs to be improved. (See Appendix 1) In most systems, people on partial disability continue to work part-time or in low income jobs but they face penalties in the form of reduction in benefit payments dependent on earnings (e.g. in Poland). Kaplińska et. al call for the abolition of limits on earnings for disabled people, as these limits discourage people from returning to work.

Figure 1 shows the minimum level of incapacity for work required by countries in the European Union to qualify for receiving any disability pension (total or partial). There is wide variation in practices among the countries, with six countries (DK, IE, IT, LU, MT, UK) requiring ‘total disability’ for eligibility, while some have low levels (only 25%) of minimum incapacity.1 “Total” is normally a range of 70-100%, or a definition that is not directly related to incapacity to work. In Figure 1, those countries requiring total disability are shown as requiring a minimum incapacity of 100%. Some countries (e.g. CY, NL, PL) are slowly transitioning into assessing remaining earning capacity, instead of, or along with, work incapacity for determining eligibility. The way the percent of disability is determined undoubtedly varies among countries, so without further information on administrative practices it is difficult to draw conclusions about the disability assessment process based on the information in Figure 1 alone.

Figure 1: Minimum incapacity required to receive disability pension in the European Union

Figure 2 shows the prevalence rates for disability pensions in EU countries in 2008 and 2013 (the latest available figures for Greece and Poland are as of 2012). Hungary has 0.06% prevalence rate as of 2013, which would appear questionable. The prevalence rate is the percent of the working age population that is receiving disability pensions. For this analysis, we define the prevalence rate for each country as the total number of individuals receiving disability pensions divided by the working age population in the country, which is defined as those between the ages of 15 and 64. The disability pension prevalence rate

1 Poland is excluded from the graph as it assesses disability based on earning capacity instead of work incapacity. Further, the minimum level of incapacity in Poland is not defined in percentages or points. Incapacity is described as either "total" or "partial" based on assessment of earning capacity.
will likely be strongly impacted by the definition of disability in each country and the strictness of the initial eligibility determination and recertification criteria. Further research on this relationship is needed. It may also be impacted by country-specific issues, such as the war in Croatia in the 1990’s.

Rates in 2013 vary significantly by country from a low of 1% to a high of more than 11%. For more than half the EU countries, prevalence rates are in the 4-6% range. Another seven countries are below 4%, while four are between 6-8.5% and two are clear outliers with prevalence rates exceeding 10%. In Croatia, this is largely due to benefits payable to disabled war veterans from the Balkan conflicts in the 1990’s. This situation is unique to Croatia within the European Union.

Interestingly, there appears to be little correlation between those countries who have only total disability (no partial disabilities) and prevalence rates. Among the six countries with only total disability – Denmark, Ireland, Italy, Luxembourg, Malta and the United Kingdom – only Malta has low prevalence rates. Italy, Luxembourg and the United Kingdom have prevalence rates close to the mean, and Denmark has the highest prevalence of the group. For the three countries with the lowest percent incapacity to receive a disability pension – Latvia, Spain and Sweden – one has low prevalence, one medium and one high. This is just one of many illustrations of the difficulty of deriving policy guidance from this analysis. Country-specific issues likely explain these differences.

**Figure 2: Prevalence rates in 2008 and 2013**

![Prevalence Rates Chart]

*Source: Prevalence rate is calculated as ratio of ‘total persons receiving disability pensions’ (Eurostat database) to working age population (15-65) (UN population data) as of December 31, 2008 and 2013*

Figure 2 also show how prevalence rates have changed from 2008 through 2013. Once again, a very mixed picture emerges, with most prevalence rates remaining relatively flat, while a handful show clear uptrends or downtrends. Figure 3 examines the trends in prevalence rates in more detail.
Figure 3: Trend in prevalence rates, 2008-2013

Trend in prevalence rates

- Uptrend: 25%
- Flat: 46%
- Downtrend: 29%

Source: Prevalence rate is calculated as ratio of ‘total persons receiving disability pensions’ (Eurostat database) to working age population (15-65) (UN population data) as of December 31, 2008 and 2013.

The countries where there has been a clear uptrend in the prevalence rates are Belgium, Bulgaria, Denmark, Estonia, Latvia, Lithuania and Slovakia. Estonia, Latvia, and Lithuania were among the ‘world’s hardest hit economies’ due to the financial crisis in 2008. Nevertheless, the reasons for the uptrend (and the downtrends) needs to be further explored to see if any useful policy guidance can be derived from these findings.

Figure 4 shows costs for disability pensions from social insurance and means-tested social assistance as a percent of GDP for all EU countries in 2005 and 2013. Costs range from a low of less than 0.5% of GDP to a high of 2.5%. Prevalence rates, benefit generosity, eligibility criteria and administrative procedures all impact cost.

Many countries made significant changes to their programs during this period, so overall costs stayed stable or rose moderately for some of the EU countries. This finding could be a consequence of improved resilience in disability systems which made them better prepared to contain the fallout of the 2008 crisis. However, some EU countries witnessed a substantial increase in costs over this period (BE, BG, CZ, EE, IE, EL, ES, FR, SK, UK). As noted in the case studies of Netherlands and Poland, concerns over fiscal strains have started re-surfacing in their disability systems. Additional analysis would be needed to comment on the long-term effects of the crisis.

Please note that Figure 4 only captures expenditures on disability pensions only. Therefore, it could be the case that expenditures on sick pay, sick leave and disability allowances may have also gone up because of the 2008 crisis.

Figure 4: Disability pension as % of GDP in 2005 and 2013

Source: Total (means and non-means tested) expenditure on disability pensions as % of GDP (Eurostat database, spr_exp_pens). Data for Croatia as of 2005 is unavailable. Latest available data for Denmark and Hungary is as of 2012.

On average, most EU countries spend about 1% of GDP on disability pensions. When payments for sickness are included, the average is about 2% of GDP. Some countries spend less than 1% of GDP on disability pensions, while Croatia spends more than 2% of GDP on disability pensions alone.

Figure 5 shows the relative amounts spent on old age, disability, survivors and unemployment benefits in EU countries in 2013. This Figure shows how the proportion of social insurance spending on disability pensions varies among EU countries.

Figure 5: Expenditures on types of social insurance as % of GDP, 2013
The relative size of the “blue” region, representing spending on disability pensions, varies by country. In all countries, the bulk of the spending is for old age pensions. However, the relative spending on disability pensions is particularly high for Portugal, Denmark, the Netherlands, and Croatia. This shows that the countries who are spending the most on disability pension on an absolute basis are also the same countries spending the most relative to total spending on all social insurance programs.

Figure 6 shows total spending on disability pensions as a percent of expenditures on all social insurance programs for all EU countries combined from 2005 to 2014.
From this Figure, it appears that the proportion of total social insurance expenditures on disability pensions has declined. In 2005, disability pension expenditures were about 12% of total social insurance expenditures, but by 2014, this had declined to 8%. This result might be considered counter-intuitive since disability pension expenditures generally increase in poor economic times, and the 2008 financial crisis would have been expected to increase expenditures on disability pensions.

There are several plausible explanations for this decrease: i) many of the post-World War II baby boomers reached retirement age during this period so this may have pushed up the spending on old age pensions relative to disability pensions; ii) in many countries, disability pensioners are re-classified as old age pensioners once they attain the statutory retirement age so this may distort the relationship between old age and disability pension spending; and iii) combining the results of Figures 2 to 4 suggests that variations in the patterns of disability expenditures by country may be hidden when focusing on total EU-wide expenditures only.. Some countries may have experienced higher levels of disability pension spending because of the 2008 financial crisis, while others may have taken specific steps to reduce pension expenditures. This requires further research, and will be explored in more detail in the case studies section of this report.

2.3 Current issues and trends
A review of recent literature on disability pension in the European Union, including reports prepared by the European Commission, the OECD, and country-specific empirical papers, indicates the following trends and areas of focus in managing disability pension costs.

- **Viewing disability from a functional perspective rather than from a medical perspective.** See further discussion of this issue in section 3.1

- **Looking at disability on a continuum rather than disabled or not disabled.** The focus is gradually shifting to measuring work capacity (what someone can do) rather than incapacity (what they can’t do). There are various degrees of disability and the functional impact of the disability
depends on many environmental and social issues. Many individuals may not be able to perform their former job full-time, but they may be able to perform their former job on a part-time basis or perform some aspects but not others. Alternatively, they may be able to work in another job that may or may not be similar in functions to their former job. Even if the new job pays less, it may be possible to structure the program so there is still an incentive to work rather than depend entirely on disability benefits.

- Include people with disabilities in mainstream social safety net programs and supplementing with special programs rather than creating separate categorical programs for the disabled only. Since people with disabilities have a higher probability of being poor or vulnerable (WB, 2007), many of their needs can be met through basic social safety net programs which provide income support. Specific needs that are not met through these programs can be addressed through targeted rehabilitation programs.

- Focusing on controlling entry to the disability system through prevention and rehabilitation through the sick pay and sick leave programs rather than allowing rapid progression to disability pensions. Once someone has exhausted sick pay and sick leave and begun receiving disability pensions, it is likely they have been out of the workforce for several years. Once this occurs, the chances of returning the person to gainful employment is minimal. Therefore, it is important to focus on preventing individuals from leaving the workforce and rehabilitation and to assist individuals in rejoining the labor force (either part-time or in a different job) as soon as possible.

- Tightening eligibility conditions for disability benefits. In many countries, the “gatekeeping” arrangements for disability pensions may not be sufficiently robust. The whole area of “pathways to disability” is a subject that requires significant additional research (See case studies in Appendix 1).

- Improved management of disability benefits for those with mental illnesses. Many mental illnesses emerge during adolescence and these individuals are often not managed properly by the education system and their needs are often not recognized by employers. Consequently, some individuals are put on disability rolls at a young age, never enter or re-enter the labor market, and depend on disability benefits for life.

- Growing cases of addiction (alcohol, substance abuse) among the working age-population. Countries like Netherlands and Poland have started covering these addictions under disability (see Appendix 1 for details). As other EU nations follow suit, it is important to develop an understanding of ‘when to intervene, how to intervene and who needs to intervene’, to build a more mentally resilient workforce (OECD Mental Health and work report, 2015)

### III. Disability Primer

This section provides an overview of the issues involved in designing and administering a disability pension system and the impact that they have on disability prevalence rates, benefit levels and expenditures. In the Appendix to this report, case studies from two countries (The Netherlands and Poland), illustrate how these principles have affected design and driven reforms in those two countries.

#### 3.1 Defining disability

According to the Convention on the Rights of People with Disabilities, ‘disability is an evolving concept and disability results from the interaction between persons with impairments and attitudinal and environmental barriers that hinders their full and effective participation in society on an equal basis with
others. While this is the definition recognized by the Convention, each country has its own legal definition that determines eligibility for disability benefits.

In the past, disability was primarily viewed as a medical condition. Today it is recognized that in many cases, medical conditions alone do not stop individuals from participating in the labor force and in society. An existing medical condition might have limited or zero impact on earnings in some cases. Rather it is the functional limitations caused by the medical condition in a particular environment which determines the extent of the disability and the impact of the disability on work and earning capacity. For example, an individual in need of a wheelchair may be able to continue employment if public transportation is wheelchair accessible and if public buildings have ramps which allow easy access to the building. In some cases, the flexibility to work from home could also allow individuals to continue their job.

3.2 Disability pension prevalence rate
Disability pension prevalence is the percent of the working age population that is receiving disability pension benefits. This percentage is impacted by many factors including the eligibility conditions for disability, the size of the disability benefit, how the program is administered, environmental factors, the state of the economy, the availability of old age retirement benefits and many other factors. In general, higher prevalence rates are associated with higher costs, but this is not always the case. Some countries have high prevalence but low expenditures because the size of benefits are small, while other have low prevalence but high costs because the benefits are generous. These relationships are further illustrated in Section 4.

3.3 Disabilities due to mental illness
Traditionally most disability pension system have paid benefits based on functional disabilities (being blind, deaf/mute, lost limbs etc.) The last few decades have seen a rise in disabilities related to heart diseases, respiratory disorders, cancer and more recently due to mental illnesses and addictions. This evolving nature of the legal definition of disability in disability pension systems poses new challenges for disability assessment and rehabilitation.

More than one-third of new disabilities are due to mental issues. It is estimated that 20% of the working age population has a mental disorder and almost about 50% of all people will have a mental disability at some time in their life (OECD, 2012). The cost to society of mental health is estimated at 3-4% of GDP. The primary cost is due to loss of labor supply, higher unemployment and reduced productivity. It should also be noted that unemployment has been shown to be detrimental to mental health (OECD, 2012).

Mental disabilities are usually classified as either common mental disorders (CMD) or severe mental disorders (SMD). Those with CMD, such as anxiety attacks, phobias, depression and mild obsessive-compulsive behavior have 15-20% lower labor force participation than others, while those with SMD have nearly 50% lower labor force participation rates. Many of the CMD have onset in adolescence and early adulthood and have resulted in rising rates of disablement among young adults and often permanent exit from the labor market. Those with CMD mostly receive unemployment and social assistance benefits and a smaller number get disability pensions. However, about 50% of those with SMD receive disability pensions (OECD, 2012, 2015).

Unfortunately, those with mental illnesses are often pushed out of the workforce and into disability pensions. In many cases, these are youths who then remain out of the workforce on disability for their entire lives. With early intervention, many of these individuals could be kept in the work force and remain productive. However, this would require close coordination among primary care physicians, teachers, employers, psychologist and psychiatrists and others to identify and react to issues at an early stage. In some cases, small changes in the work environment would make it possible for those with CMD to remain
employed and productive, but it requires knowledge, understanding and flexibility from employers. Early intervention is important as those who are receiving disability pensions generally have less than a 2% chance of returning to the workforce (OECD, 2009).

3.4 Disability and poverty
Disability is believed to have a bi-directional link to poverty as disability may increase the risk of poverty and poverty may increase the risk of disability. (WB/WHO report, 2011) The onset of disability can lead to poverty through a multitude of channels e.g. higher probability of unemployment, lower wages when employed, additional health care costs, and material hardship for immediate family members. On the other hand, living in poverty can also lead to the onset of health conditions associated with disabilities. Access to health services, rehabilitation and information are additional barriers for those living in poverty. The World Disability report (2011) notes that despite the overwhelming evidence on the link between development and poverty, ‘efforts to promote poverty reduction have not always adequately included disability.’

3.5 Disability program design
The evolving nature of disability points to the need for flexibility in program design. The successful reduction in disability pension expenditure for Netherlands and Poland has been attributed to reforms in the design of disability pensions systems e.g. Gatekeeper Protocol, tighter eligibility conditions, introduction of appeals mechanism. (See Appendix 1 for further details) Marin et. al (2004) had posited that ‘high generosity of benefits and lack of monitoring’ may have eroded the willingness to work for individuals with remaining working capacity. While reforms to benefit systems have taken place in many developed nations, the ‘success of these reforms in reducing inflows and outflows’ to disability has been mixed. (OECD, 2009) Lessons learned from experiences of countries with different program designs would eventually help in developing a blueprint for disability pension design.

When analyzing plan design, it isn’t sufficient to examine disability pensions alone. Rather, it is important to look at the sick pay and sick leave systems as they serve as entry points into the disability system and an exit from the active workforce. A high percentage (50-90%) of disability pension beneficiaries were reported to be receiving sickness benefits first (OECD, 2009). Focusing on rehabilitation during the sickness phase (e.g. compulsory counselling sessions in Netherlands paid for by the employer during the two-year period of sick pay) could provide much needed assistance to people with disabilities while they are in the early stages of recovery from an accident or illness.

As retirement ages for old age pensions increase gradually, some studies estimate that a spillover effect would lead to an increase in disability beneficiaries from among the older aged people (Duggan et. al 2007; Mastrobuoni et. al 2009). This spillover effect could be a cause of concern for employers and the government. However, analysis by Staubli et. al (2013) using data from Austria (where early retirement age was increased from 60 to 62 for men and from 55 to 58.25 for women) found that ‘reforms had large spillover effects on unemployment insurance but negligible effects on disability insurance claims.’ The authors caution that the estimates only capture short run effects of the reform. Therefore, additional research using panel data should be used to understand the long run effects of changes in program design. The differences across studies point to the heterogeneity among countries and highlights the need to draft policies that consider the social, cultural and demographic composition of each country.

3.6 Pathways to disability pensions
It is also important to recognize the pathway by which individuals end up receiving disability pensions. Most of the time, there is a progression from actively working, to a period of acute illness during which the individual starts to receive sick pay from the employer for short-term absences, to receiving sick leave for longer term absences from work, and finally, transitioning into disability pensions. Another common
pathway is from unemployment to disability pension benefits (OECD, 2009). Unfortunately, the literature on the pathway leading from ‘illness or accidents to long term disability benefits’ is scarce. (OECD, 2009).

Similarly, little is known about the most typical routes off disability benefits, though evidence points to a low probability of return to work observed among disability pension recipients, even when they have significant remaining working capacity. (OECD 2009, SPC report 2012) According to the OECD report (2009b), the probability of returning to work after being granted a disability benefit is ‘below 2% annually across member countries.’ Therefore, a push for early intervention (preferably in the sickness stage), improvement in work incentives for current recipients and better coordination among agencies is required to integrate people with disabilities to the labor force.

3.7 Adapting disability programs

While knowledge and perspective on disability and disability pensions has changed, few countries have adapted their sick pay, sick leave and disability pension programs to move toward a more proactive approach to rehabilitating and activating disabled individuals. Countries in the European Union have started to act in response to this trend, but there is still a long way to go. Recent reforms include: i) tightened eligibility conditions (NL, PL); ii) longer waiting periods to receive benefits (AT, HR, PL, IT, LU, NL); iii) reduced replacement ratios; iv) more control at the sick pay level (AT, DK, RO, SE, FI, LU, NL); and v) greater efforts for a quick return to work. (SPC report 2012; MISSOC 2016)

Section IV and V of this paper will review current practices among Member States of the European Union regarding sick pay, sick leave and disability pensions. The case studies further discuss the innovative reforms used by Netherlands and Poland to reduce the number of individuals receiving disability benefits and bring them back into the labor market. These case studies highlight the success of reforms and also the existing and new challenges that disability systems face in these two countries.

IV. Sick pay and sick leave

Approximately 50% to 90% of those who will eventually become disability pensioners enter the broadly-defined disability system after receiving sickness benefits. Sick pay and sick leave covers those who are expected to be away from the labor force for only a short time. By adopting structural reforms like ‘early intervention’ during the sickness phase, some developed nations have brought down the rates of inflow into disability pensions. (OECD, 2012). Studies by Kivimaki et. al (2004, 2008) have shown that sickness leave length is an important risk factor for future disability pension. The authors recommend that the time lag between sickness absence and disability pensions should be used by employer, management and occupational health professionals to ‘intervene and potentially prevent early disability from occurring.’ It has also been found that sick leave length is a better indicator of future workability than spell frequency (Stapefield et. al, 2014). Therefore, employees with longer sick leave days should be engaged in homecare as a preventive action strategy.

In this section, the range of practices in the European Union for managing sick pay and sick leave are examined. As mentioned in the introduction, sick pay in this report refers to the period when a worker is absent from the labor force because of sickness and continues to be paid by the employer. Sick leave refers to that period after the exhaustion of benefits from the employer and before disability pensions become payable when benefits are first paid from the social insurance system. This may be referred to as extended sick leave, short-term disability or sickness benefit paid by social security, but the key distinction is that the payments during this period are made from the national social security system instead of the employer. In countries where payment of sickness benefits is largely the responsibility of the government, sick pay and sick leave are a continuum.

The key issues examined in this section are:
1. Maximum days of sickness benefits (sick pay plus sick leave) allowed
2. Maximum days of sick pay paid by employer
3. Percentage of wages paid to employee as sick pay by the employer
4. Minimum qualifying period for employee to be eligible for sick leave.

Figure 7 looks at the maximum number of days for which sickness benefits are paid (sick pay and sick leave combined, in the blue column) and the number of those days which are paid for by the employer (sick pay, in the orange column).

**Figure 7: Maximum days of sickness benefits available and days paid for by employer**

[Bar chart showing maximum days of sickness benefits and days paid for by employer for various countries]

Source: MISSOC Comparative Tables Database (2016), Chapter III: Sickness benefits, Duration of the benefit

In general, the number of days paid for by the employer is rather short compared to the total sickness benefit period. The exceptions are Italy and the Netherlands, where the employer is responsible for paying throughout the entire ‘maximum sickness benefit’ period. However, in numerous other countries, employers are not responsible for any sick pay or for only the first few days. Since, sickness benefits were one of the first benefits to be introduced in social security (in Sweden, sickness benefits have been in place for 140 years now), it has historically been funded through social insurance as part of the country’s social security system. Even in the Netherlands, sick pay was mandated to be paid by employers only recently as part of a comprehensive set of reforms. (See Appendix 1)

The concept behind longer sick pay periods is to give the employer a stronger financial incentive to rehabilitate workers earlier in the sickness/disability benefit period and get them back in the labor force as quickly as possible. Since the financial cost of sick pay is with the employer, presumably, the employer will want to minimize its payments and this will incentivize rehabilitation. This incentive will only apply, however, if the sick pay period is relatively long. The downside of employer mandated sick pay is the imposition of higher costs on employers, which could in turn make them wary of hiring individuals with current or prior disabilities. The pros and cons of this perspective is discussed extensively in the case study of the Netherlands in the Appendix of this report.
The length of the sickness benefit period (sick pay plus sick leave) varies from a low of 122 days (about 4 months) in Lithuania to a maximum of 1,095 days (3 years) in Portugal. In two countries – Bulgaria and Slovenia – it appears there is no limit on the maximum number of days of sickness benefits. The length of the sickness period is important because after this period expires, workers will normally automatically be assessed for, and if approved, begin receiving benefits from the disability pension system.

To understand the impact of these provisions, it is also necessary to look at the percentage of salary that must be paid by the employer during the sick pay period. The higher the amount paid, the greater the cost to the employer and perhaps the less the incentive for the worker to quickly return to work. This information is shown in Figure 8. The orange line shows the percent of salary received as sick pay at the end of the sick pay period, while the blue bar shows the percent of salary received at the beginning of the sick pay period.

**Figure 8: Percent of salary paid by employer at beginning and end of sick pay period**

![Figure 8: Percent of salary paid by employer at beginning and end of sick pay period](image)

Source: MISSOC Comparative Tables Database (2016), Chapter III: Sickness benefits, Continued payment by employer

The percentage of sick pay stays the same for most countries during the entire duration. In some countries, it increases towards the end of sick pay period (SK, LV, BG) or decreases (AT, BE, HR, FI). In seven countries, the employer pays 100% of wages at the beginning of the sickness period. Another 11 countries pay between 60% and 80% of the worker’s wage at the beginning. Finally, Slovakia pays just over 20%. The countries missing from Figure 2 are ones which do not have sick pay schemes paid for by employers. Individuals in these countries only receive sickness benefits from the national social security system. The reduction in benefit towards the end of the sick pay-period could act as an incentive for the worker to return to work rather than remaining on sick pay or sick leave. Mandating doctor’s certificates (introduced in Poland during the reforms in 1997) is another commonly employed measure used to reduce absenteeism at work.

Sick pay is salary continuation by the employer, normally for short periods of absence from work, and in EU countries it is usually regulated by labor laws. In some cases, employers agree to top-up the wage payments beyond the legally required limits, based on collective agreements (e.g. in Netherlands employers pay anywhere between 70% to 100% based on collective agreement with the government).
(OECD, 2007). Sick pay is not social security, so receipt of benefits is generally not tied to months or years of contributions.

Sick leave, however, is generally considered part of the country’s social security system, and therefore, workers often need to contribute for a minimum period to be eligible for benefits. Figure 9 shows the minimum period that a worker must have contributed to be eligible for a sick leave benefit once sick pay benefits have been exhausted.

**Figure 9: Minimum days of contributions to qualify for sickness benefit**

![Bar chart showing minimum qualifying period (in days) to receive sickness benefit](chart.png)

Source: MISSOC Comparative Tables Database (2016), Chapter III: Sickness benefits, Conditions: Qualifying Period

Once again, there is wide variation in country practices from a low of zero days (no contributions required to be entitled to sick leave benefits) in 11 countries to a high of more than 250 days in Croatia, Ireland and Malta. Even though minimum qualifying conditions may be low, this does not necessarily mean that it is easier to receive sick leave payments in those countries, since most countries require a doctor’s certificate to receive sickness benefits. However, Knorring et. al (2007) based on a qualitative study in Sweden conclude that there exist problems in sickness certification, namely in areas of ‘society and the social insurance system, the organization of healthcare, the performance of other actors in the system, and the physicians’ working situation.’ The authors note that mere training of physicians, which has been the main intervention, without evaluating the process in its entirety could lead to inadequate actions from policymakers.

Figure 10 shows how the rate of sickness benefits changed in the period from 2008-2013 compared to the period from 2003-2008. For most countries, the rate of growth was negative or significantly lower after 2008 than before. Due to the crisis-driven structural reforms and budgetary restrictions, the sickness benefit per inhabitant decreased during the period 2008-2013 in Latvia (-0.4%), Greece (-7.2% per year), Ireland (-0.9%), Cyprus (-1.9%), Italy (-0.5%), Spain (-2.3%), Slovenia (-0.02%) and Hungary (-0.24%).

A second (larger) group of countries (AT, BG, DK, EE, FI, LT, MT, NL, PL, PT, RO, SE, SK, UK) is characterized by a significantly lower, but still positive average annual growth rate of the sickness benefit per inhabitant. In some countries, the growth rate remained positive but the decline of growth is huge (e.g. EE and LT).
A third (small) group of countries comprising Belgium, Germany, Luxembourg, France and the Czech Republic is characterized by a rather small growth rate over 2003-2008 and considerably higher growth rates after 2008. In other words, sickness benefits do not seem to be affected by the economic crisis in these countries. In this respect, one point must be noted: four of these countries are characterized as Bismarckian or ‘corporatist’ regimes (BE, DE, FR, LU) in which the social protection has been, at least historically, built and managed by tripartite social partners.

Figure 10: Average annual evolution rate of sickness benefits (purchasing poverty standards, pps) per inhabitant in two periods: 2003-2008 and 2008-2013

Source: SPC report, 2016

The discussion in this section shows that there is no solution to the design of sickness benefit systems that perfectly balances the needs of workers and protects the employer and/or social insurance fund against moral hazard and fraud. However, past experiences and empirical evidence suggest some possible policy actions.

- **There should be some period of sick pay financed by the employer.** The duration of the sick pay varies across countries and would depend on the political, social, economic and labor conditions of each country. If the sick pay period is long, the employer should be required to provide counseling or rehabilitative services to the concerned individuals. This provides an incentive for the employer to help the individual return to work. Netherlands has successfully adopted this approach, although the solution carries risks of negative labor market outcomes.

- **If the sick pay period is short, the employer should continue to pay full salary.** If the sick-pay period is longer, then initial and continued proof of illness should be required. The percentage of salary required to be paid by the employer could be reduced to ease the financial burden on the employer and incentivize individuals to comply with counseling and rehabilitation requirements and make every effort to return to work (OECD, 2007)

- **The period in which an individual is on sick leave and has been referred for disability assessment should be carefully coordinated.** Rehabilitation during this period is key to helping the individual get back into the labor force. (Kivimaki et. al 2004, 2008)
• *The design of the sick leave program should encourage return to work on a part-time basis.* Kaplińska et al argue that some element of obligation should be introduced, e.g. in the form of moderate benefit reductions for people refusing to participate in vocational rehabilitation, to incentivize rehabilitation.

• *The longer the sick pay and sick leave benefit period, the greater should be the focus on rehabilitation and retraining to get the individual back to work.* The probability of return to work reduces as length of time away from the labor market increases. Rehabilitation efforts should involve active coordination among health care, employment and social security agencies in this stage.

• *Individuals suffering from common mental disabilities (CMD)/depression should receive specialized counselling session and be protected against stereotyping by colleagues in the workplace.* Binding obligations on employers and an accommodating environment will help individuals with mental disabilities return to the workforce. A ‘return-to-work’ plan will also help assuage stress that may otherwise be a contributing factor to anxiety, addiction and other mental illnesses for these individuals. (OECD report on Mental Health and Work, 2015)

There is some limited evidence that countries with long sick pay and sick leave periods engage in rehabilitation efforts more than those with shorter sickness benefit periods. Unfortunately, complete data is not publicly available for all countries in the EU. However, for the countries that have self-reported their rehabilitation efforts (Austria, Finland, Luxembourg, Romania and Sweden), all but Romania have sickness benefit periods of 300 days or more. From a policy perspective, engaging in rehabilitation efforts at the earliest possible stage seems to offer the best opportunity to return individuals to the labor market, as illustrated in The Netherlands case study.

V. Disability pensions

For workers whose health conditions do not sufficiently improve during the sick leave period, at the end of that period, a medical doctor treating the patient (in some cases a medical board or commission deciding on sick leave) refers that patient to the disability pension administrative organization for disability certification. This presumes, of course, that the individual is or was in covered employment and has met the eligibility conditions, since old age, disability and survivor benefits are normally all part of the national pension system. This system is normally contributory and usually covers formal sector workers, may cover civil servants and the military (or they will have their own plan), sometime covers the self-employed, and rarely covers informal sector workers. There may also be individuals who are unemployed, and therefore not eligible for sick pay and sick leave, who may apply for disability pensions as well, should they consider themselves incapable of working.

The system usually requires a minimum period of contributions to be eligible for a disability benefit, and may also require a minimum period of contributions just prior to becoming disabled. Those who are not covered by the social insurance system may be eligible for disability pensions from the social assistance system, financed by the State budget. This section of the report is focused only on disability pensions payable from the contributory national pension systems.

In some social security systems (Denmark, for example), only non-occupational disabilities are covered by the pension system. In this case, occupational disabilities are typically covered by a separate work accident fund that is fully financed by employers or through a requirement that employers purchase mandatory insurance through the private sector. Typically, work accident coverage provides benefits for both medical expenses and for wage compensation.
The key issues examined in this section are:

1. Maximum number of years of contributions required to be eligible for a Disability Pension
2. Minimum qualifying period for a Disability Pension and how it varies with the age of the claimant at time of disablement
3. Categories of Partial Disability benefits
4. Disability Benefit calculation methodology
5. Comparison of the Disability Pension formula and the old age benefit formula
6. Relationship among prevalence rates, expenditures and estimated replacement ratios
7. Minimum monthly disability pensions
8. Number and amount of additional allowances (lump-sum and pension supplements) provided to disabled workers.

5.1 Eligibility – years of contributions required

This section examines the contribution requirements to be eligible for a disability pension. Since the disability pension is payable from the national social security system, participants are required to make contributions to the program. To be eligible for a benefit, a certain minimum number of years of contributions is typically required. In many cases, the required years of contributions varies with age. Those who become disabled at an early age would not have significant years of contributions, so if the years of required contributions didn’t vary with age, young workers might effectively be excluded from receiving benefits. By the time a participant is close to retirement age, the required years of contributions to be eligible for a disability pension is often higher for these participants than their younger counterparts.

Disability pensions may also require that the participant have made contributions in the last few years preceding the onset of disability. Since many participants enter disability pensions from sick leave, or unemployment, it is important for the system to either give service credit for this period, require those receiving sickness or unemployment benefits to contribute, require their employer to contribute, or require the sick leave or unemployment fund to make contributions on the participant’s behalf.

Figure 11 shows the maximum number of years of contributions required to be eligible for a disability pension. As years of contribution required increases by age, this graph can be interpreted as the number of years required for the older workers to qualify for a disability pension.

Figure 11: Maximum years of contributions to be eligible for a disability pension
Figure 11 shows that 18 countries require five years of contributions or less at any age to be eligible for a disability pension, and the highest requirement among any EU countries is 15 years of contributions. For countries with low years of contributions requirements, most older workers would be likely to meet the requirements. Spain and Slovenia have complex formulas without an easy to calculate maximum years of contributions requirement.

Table 1 shows a list of the EU countries where the qualifying period for a disability pension varies with age. In all other countries in the EU, there is a single age requirement. Not surprisingly, in those countries with a single age requirement, the number of years tends to be low, while for those that vary the years of contributions requirement with age, the maximum number of years tends to be higher.

Table 1: countries where qualifying period varies with age

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<th>Country</th>
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<tr>
<td>Bulgaria</td>
<td>Lithuania</td>
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<td>Croatia</td>
<td>Slovakia</td>
<td>Slovenia</td>
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<tr>
<td>Spain</td>
<td>Czech Republic</td>
<td>Estonia</td>
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<tr>
<td>Sweden</td>
<td>Austria</td>
<td>Poland</td>
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Figure 12 examines how years of contributions to be eligible for a disability pension varies with age for the 12 countries listed in Table 1. As previously stated, it is common for plans to have a lower requirement for those who are young than those who are older. The specific age brackets vary greatly by country, so to simplify the analysis, the years of service required for specific age ranges are shown in Figure 12. The number in each “block” in Figure 12 shows the required years of contributions to receive a disability benefit for those who become disabled in each of the illustrated age ranges. For example, those who become disabled between ages 20 and 25 in Greece require two years of contributions to be eligible for a disability pension and those between ages 25 and 30 in Spain require five years of contributions.
Even within this group, the maximum number of years of contributions can be quite low – just 2 years in Croatia, for example. Only three EU countries require 10 or more years of contributions to be eligible for a disability pension. This may be necessary to assure continuity in coverage from sick pay to sick leave to disability pension benefits. As previously noted, the disability pension eligibility normally starts when the payment period under other sickness benefit programs ends.

**5.2 Eligibility – loss of working capacity**

The next issue addressed, is how much loss of working capacity does an individual need to be to be eligible for the disability pension and how is disability assessed. Some countries require the individual to be totally and permanently disabled. Usually this means 70% to 100% loss of earnings capacity and presumably with little to no chance of recovery, while others pay benefits to those with much less severe disabilities, albeit in a lower amount. (See Figure 1 in Section 2.2 of this report).

It is difficult to make categorical statements about what level of assessed incapacity is appropriate. If total and permanent disability is required to receive benefits, many workers who have significant loss of earnings may not be eligible to receive disability pensions. In this case, there may be no disability pensions payable to those who may not be totally disabled but who still have significant functional impairments. On the other hand, in countries where the required level of incapacity is low, many more may be eligible for disability pensions and the cost of the program may be higher. To address this dilemma, in some countries, private insurance companies have filled the gap by offering long-term disability policies that have more liberal eligibility conditions to cater to the needs of people with disabilities who don’t meet the eligibility conditions to receive a disability pension.

The incentive for people with disabilities to return to the labor force often depends on the eligibility conditions, the size of the benefit, and the activation requirements. If the disability benefit paid is small relative to the worker’s earnings prior to becoming disabled, but continues to be paid when the individual is employed (part-time or full time), it would incentivize individuals to return to work, even if at a more modest salary than prior to disablement. The effectiveness of the partial disability scheme will depend on many factors such as assessment of level of incapacity, part-time work requirements, the individual’s residual earning capacity and other design and administrative features.
Another related question for countries that pay benefits for partial disability is the number of different partial disability classifications. Figure 13 show the variations across the European Union. The amount of pension benefit generally varies depending on whether it’s total or partial as well as within different categories of partial disability. For example, Cyprus has ‘total disability and 3 categories of partial disability’. An individual with total disability receives 100% of the invalidity pension, individuals with 50% to 66.66% reduction in earnings capacity receive 60% of the invalidity pension, individuals with 66.67% to 75% reduction in earnings capacity receive 75% of the invalidity pension, and those with 76% to 99% reduction in earnings capacity receive 85% of the invalidity pension.

**Figure 13: Number of Categories of Disability**

![Categories of Partial Disability](source)

Figure 13 shows that there is wide variation in practice across the European Union. 18% (DK, IE, IT, LU, UK) of countries pay disability pension for total and permanent disability only. Another 39% pay for total disability and for partial disability. In 21% of countries, in addition to total disability, there are three categories of partial disability. Given all the factors that impact disability discussed earlier in this report, it is reasonable to ask whether it is possible to make a precise determination of the level of incapacity and place individuals into the correct category of partial disability.

### 5.3 Disability benefit formula paradigms

The previous graphs have looked at how eligibility to receive a disability pension is determined. It examined variations in the years of contributions and level of incapacity required to be eligible to receive a benefit. The next issue is how the amount of the benefit is calculated for those who are eligible.

There are three basic paradigms used by most countries to calculate disability pension benefits. In most cases, the benefit formula is closely related to the formula for calculating old age pensions, which means that it is based on two primary factors – the individual’s salary history and the number of years for which contributions were paid to the pension system.
The three most common paradigms are: i) calculate the benefit that would have been paid using the old age pension formula as if the individual had retired on the date of disablement; ii) calculate the old age pension the individual would have received if he/she had worked until the standard retirement age; and iii) flat amount as a percent of wages at time of disablement. A common variation for each of the first two methods is to pay a percent of the calculated old age pension, typically 60-80%, to offer an incentive for the individual to remain in the workforce until the standard retirement date to receive a higher old age pension benefit instead of the disability benefit. Another variation is to base benefits on the minimum wage or the economy-wide average wage rather than each person’s individual earnings history.

The first method can be referred to as the **accrued benefit method** because the benefit is based on what would have been paid if the person retired on the date of disablement. In making this determination, any minimum age requirements for an old age pension would not be applied, but as discussed earlier, a minimum period of contributions may be needed to qualify for the disability benefit. The benefit paid will be based on both salary history and years of contributions as of the date of disablement.

The main drawback of this method is that the calculated benefit will likely be very low for those who become disabled at a young age and will likely be insufficient by itself to meet the disabled individual’s needs, particularly for those who are totally disabled and will not return to the labor force. Some countries may have minimum disability pensions or benefits payable from another source, such as social safety nets, that would raise overall benefit levels. Consequently, it is difficult to state categorically that the total benefit payable from all sources will not be sufficient. But the calculated disability pension alone is unlikely to be sufficient.

The second method can be referred to as the **projected benefit method** because the calculation of the benefit assumes the worker would have continued to make contributions to the pension system until the standard retirement age if he or she had not become disabled. Under this method, salary history as of the disablement date is used in the calculation as in the accrued benefit method, but years of contributions for the benefit calculation is equal to the projected years of contributions the individual would have had if he or she had remained in the workforce until the standard retirement age. In some countries, such as Poland, the total years of additional projected service may be limited to a stated maximum. This helps solve the problem of adequate benefits for the younger disabled worker because the benefit will be much higher once projected future years of contributions are considered.

The final method, **flat percent of wage**, does not directly use the old age pension benefit formula in determining the amount of the disability pension. This generally occurs for one of two reasons: i) The disability benefit may be designed to provide a specified percentage of individual pay, economy-wide average pay, or the minimum wage to all eligible participants regardless of years of service; or ii) the old age benefit may be based on the value of individual fully funded or notional accounts, which may provide inadequate benefits to those who become disabled at young ages with low balances. This is the case in Poland, for example, which uses the notional defined contribution formula for old age benefits and a traditional defined benefit formula for disability benefits. This approach makes it much more difficult to manage the relationship between disability and old age pension benefits, and the relationship may change over time. If disability benefits are higher than old age benefits, participants will have an incentive to seek disability retirement benefits. This will be particularly problematic if the eligibility determination procedures are not sufficiently robust.

In many cases, the flat percentage of salary approach may be a projected benefit expressed in an alternate form. For example, if the defined benefit plan has an accrual rate of 1% per year of contributions and individuals are generally expected to have 40 years of contributions at retirement, the projected benefit would be 40% of pay. If the social security system wants to provide a disability benefit equal to 80% of the projected pension benefit, for example, this is roughly equivalent to paying 32% (40% projected
benefit x 80%) of salary to all members who are eligible for a disability pension. For this reason, this method could in many cases be thought of as a variation of the projected benefit method.

Figure 14 shows the distribution of disability benefit formulas by type in the European Union. It shows that those that use accrued length of service (LOS) and those that use projected LOS are roughly equal. Still, almost one-quarter of all EU countries have a formula that is independent of LOS, that is, different from the formula used to calculate old age benefits.

**Figure 14: Disability pension benefit formulas by type**

Table 2 below shows the allocation of the EU countries by type of formula. As can be seen, there is no clear pattern within the EU countries.

**Table 2: EU Countries by type of disability pension formula**

<table>
<thead>
<tr>
<th>Independent of LOS</th>
<th>Depends on LOS</th>
<th>LOS projected</th>
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</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>Austria</td>
<td>Cyprus</td>
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<td>Denmark</td>
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<tr>
<td>Spain</td>
<td>Czech Republic</td>
<td>Germany</td>
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</table>
Finally, in Table 3, the countries where disability pensions are a direct function of the old age pension formula and those where a different formula is used for disability pensions are shown. In several countries, detailed information on the benefit formula for disability has not yet been found. The Table shows that in most countries, the same formula is used. Two of the countries with a different formula are those that moved to NDC plans for calculating old age pensions (Latvia and Poland).

Table 3: Disability formula compared to old age pension formula

<table>
<thead>
<tr>
<th>Different from old age formula</th>
<th>Same as old age formula</th>
<th>Unsure</th>
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<tbody>
<tr>
<td>Hungary</td>
<td>Austria</td>
<td>Estonia</td>
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<tr>
<td>Latvia</td>
<td>Belgium</td>
<td>Greece</td>
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<td>Malta</td>
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<td>Spain</td>
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<tr>
<td>The Netherlands</td>
<td>Cyprus</td>
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<td>Poland</td>
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<td>Lithuania</td>
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<td></td>
<td>Luxembourg</td>
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</tbody>
</table>

Source: MISSOC Comparative Tables Database (2016), Chapter V: Invalidity, Benefits: Calculation method, pension formula or amounts
<table>
<thead>
<tr>
<th>Different from old age formula</th>
<th>Same as old age formula</th>
<th>Unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portugal</td>
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<td>Romania</td>
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<td>Slovenia</td>
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<tr>
<td>United Kingdom</td>
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</table>

Source: Social Security Throughout the World (2016)

### 5.4 Disability pension prevalence rates and expenditures in 2013

In Section 2.2, Figures 3 to 5, trends in prevalence rates and expenditures for disability pensions were examined. Figure 15 combines the information on prevalence rates and expenditures to look at the relationship. The expectation would be that those with low prevalence would have low expenditures and vice versa. The outliers would be those with low prevalence and high expenditures and those with high prevalence but low expenditures. The two red lines in the graph indicate the average prevalence and expenditures for all EU countries.

**Figure 15: Comparison of prevalence and expenditure rates, 2013**

Source: Expenditure on disability pensions as % of GDP and prevalence rates from Eurostat database

The primary countries with high prevalence but relatively low expenditures are Lithuania and Latvia. Estonia is also worth mentioning as it has the highest prevalence rates of any country, though its expenses are still moderate. The most noticeable countries with low prevalence but high expenditures are Portugal and the Netherlands, with the Netherlands being the more extreme of the two. Croatia also stands out in this Figure as it has high prevalence and by far the highest expenditures of any country in the EU. To
further understand the relationship between prevalence and expenditures, it is necessary to look at the level of benefits (replacement ratios) in each country.

5.5 Disability replacement rates

Benefit levels across countries are generally compared by looking at replacement rates, which is the ratio of the disability pension benefit at the time of disablement compared to the salary the individual was earning before becoming disabled. The higher the replacement ratio, the greater the extent to which the pension replaces the income the person was earning before disablement.

In the case of disability pensions, the size of the benefit can vary greatly depending on the age at disablement and the type of pension benefit formula being used in the country. For those becoming disabled at a young age, the replacement ratio will be much higher if the disability pension is based on projected service or is a flat percent of salary than if the disability pensions is based on accrued benefits only. For those who become disabled at older ages, there is likely to be less variation in benefit amounts as the three types of benefit formulas will produce more similar results than at younger ages. For this reason, replacement ratios are compared separately for those becoming disabled at younger and older ages.

There are two other important items that are not fully captured in the replacement ratio calculation – additional supplements and minimum disability pensions. The replacement ratios in figures 15 and 16 are calculated by applying the basic benefit formula only. Later in this section, additional information about supplements and minimum pensions are presented, though clearly more research is needed on the interaction between the basic benefit formula, minimum pension and supplements.

Figures 16 and 17 are the same as Figure 15 except that a “tag cloud” has been applied. The relative sizes of the fonts used for each country indicate the relative size of the replacement ratios. In Figure 16, the font size indicates the relative size of the replacement ratios for those disabled at young ages and in Figure 17 the font size indicates the relative size of the replacement ratios for those disabled at older ages. Figure 16 helps explain, for example, why the Netherlands and Hungary, two countries with low prevalence rates, have high expenditures. In both countries, the disability pension replacement ratios are among the highest in Europe. But other mysteries are introduced. Why do countries like Luxembourg and Romania, with apparently generous benefits and low prevalence, have lower than expected expenditures? A deeper understanding of the underlying data and simulations under varying assumptions are needed to answer these questions.
Figure 16: Relative replacement ratios indicated by font size for each country, disabled at age 30 with 10 years of contributions

Scatter plot showing prevalence rates, expenses and replacement ratios, disabled young

Source: Expenditure on disability pensions as % of GDP and prevalence rates from Eurostat database
Figure 17: Relative replacement ratios indicate by font size for each country, disabled at age 50 with 30 years of contributions

Source: Expenditure on disability pensions as % of GDP and prevalence rates from Eurostat database.
5.6 Disability minimum pensions

Figure 18 shows the size of minimum disability pensions in the EU countries. Unfortunately, there is no readily available information about what percent of disability pensioners are receiving the minimum pension. This would depend on the size of the minimum pension, the generosity of the basic benefit formula, the general wage levels in the country, the number of years of contributions at time of disablement, the number of years of service required to be entitled to a minimum pension (if any), and whether the minimum pension is flat or increases with increased years of contributions. Nevertheless, it is an additional piece of information about the level of benefits in the EU. It appears there are six countries without a minimum benefit (including The Netherlands) and several of the countries with the highest replacement rates have low minimum benefits (Denmark and Hungary). This may be logical since countries with generous benefit formulas may have no need for a minimum pension, while those with less generous formulas may need minimum pensions to assure adequate benefits for the disabled, particularly those who are low paid or who become disabled at young ages.

Figure 18: Minimum disability pension in the EU (in Euros)

![Minimum flat monthly disability pension for single claimant (in euros)](chart)

Source: MISSOC Comparative Tables Database (2016), Chapter V: Invalidity, Benefits: Minimum pension

5.7 Disability supplements

Countries pay a bewildering number of disability supplements that can significantly add to the size of the disability pension. Some countries have up to a dozen different supplements that pensioners could potentially receive, but it is highly unlikely that anyone would qualify to receive all supplements. Some supplements are paid as lump sums, while others are paid as an annuity along with the basic disability pension. Figure 19 shows the number of different allowances by country split between lump sums and
annuities. The number inside of each box shows the number of annuity supplements and number of lump sum supplements in that country. Cyprus and Estonia are the record holders with 13 and 12 supplements respectively.

Figure 19: Disability Supplements by type in the European Unions

![Disability Supplements by type in the European Unions](image)

Source: MISSOC Comparative Tables Database (2016), Chapter V: Invalidity, Benefits: Other Benefits

Figure 20 shows the maximum monetary amount of additional supplements (in Euro) for someone who received all possible supplements, both lump sum and annuity. This is highly unlikely, but gives a sense of the relative size of the supplements.

Figure 20: Maximum supplement size by country

![Maximum supplement size by country](image)
Cyprus, Sweden and Estonia stand out for the large size of the supplemental annuities that are payable. Sweden and Cyprus pay substantial lump sums as well. For many countries, no annuity supplement is payable and even the lump sum amounts are not especially large.

These allowances are paid from many different agencies for a wide variety of purposes. The supplements fall into four broad categories and are used to: i) help disabled individuals get back to work (activation); ii) assist with health needs; iii) supplement living expenses; or iv) other miscellaneous payments. Figure 21 shows the most common types of supplemental disability benefits by category.

**Figure 21: Disability supplements by type**

<table>
<thead>
<tr>
<th>Category</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activation</td>
<td>• Subsidized Interest rate to establish a business&lt;br&gt;• Vocational training&lt;br&gt;• Study allowance</td>
</tr>
<tr>
<td>Health</td>
<td>• Care allowance&lt;br&gt;• Special allowance for blind&lt;br&gt;• Motor or sensory disability allowance&lt;br&gt;• Compensation for pain</td>
</tr>
<tr>
<td>Living expenses</td>
<td>• Gas/Fuel allowance&lt;br&gt;• Purchase of wheelchair/car&lt;br&gt;• Housing supplement&lt;br&gt;• Living alone allowance</td>
</tr>
<tr>
<td>Other</td>
<td>• Funeral grant&lt;br&gt;• Pension supplements for war veterans, POWs</td>
</tr>
</tbody>
</table>

**VI. Rehabilitation and recertification**

One of the most important aspects of any sickness/disability management program is interventions to return the disabled individual to the workforce, if possible (activation). The longer the individual is out of the labor force, the lower the chance of return. Many individuals can return to work with modifications in their work conditions to accommodate their disabilities or can return to work in a reduced capacity or in another position. Yet, on average, countries spend only 0.1% to 0.2% of GDP on rehabilitation efforts.

It is also important for the design of the sickness and disability programs to provide incentives and reward those who return to work, and robust systems are needed to regularly review sickness and disability claims to prevent error, fraud and corruption, identify those who no longer meet eligibility conditions, or because the health condition and the environment change over time. This section discusses the measures in place in the European Union to support recertification and rehabilitation. As much of this effort is cross-sectoral, it is often not implemented in a coordinated fashion.

Rehabilitation efforts are often not successful for several reasons. In many countries, little effort is made to rehabilitate. This is particularly true with mental disabilities, where youth may be put in disability status.
and remain there throughout their lifetime. In other cases, rehabilitation is complex because of the number of different agencies that are involved in the process. Figure 22 shows the number of distinct services provided to assist in rehabilitation or retraining in each EU country. It could be the case that some or all of these services are provided by one or more agencies. For example, in the UK individuals receive three distinct services: (i) preventive health care and medical rehabilitation from National Health Service; (ii) specialist support services like employment advice; and (iii) financial support for adaptation and adjustment. (MISSOC, 2016)

Figure 22: Number of services involved in rehabilitation

The agencies involved go by a variety of different names, but can generally be grouped into three categories. They are either part of the social insurance system, part of the health system, or part of the employment system. As can be seen from Figure 21, in many countries, agencies from all three areas are involved.

Figure 23 shows the groupings and the typical agencies within each group that are involved in the rehabilitation process.

Figure 23: Rehabilitation services provide by one or more agencies

Source: MISSOC Comparative Tables Database (2016), Chapter V: Invalidity, Return to active life: Rehabilitation, retraining
EU countries vary greatly in the degree and extent to which they require recertification of disability benefits. About half of all EU countries have relatively strict recertification requirements, where all disability pensioners must be reviewed periodically to continue receiving benefits. Other countries have little to no recertification process. For example, Belgium, Cyprus, the Czech Republic, Estonia, France, Germany and Ireland have very lenient recertification requirements.

To simplify the discussion, Figure 24 shows the number of countries that have strict or lenient recertification requirements. For those with strict requirements, the frequency of review in a 10-year period and the number of countries that have that frequency is shown. For example, there are 6 countries that conduct recertification only when there is a change in the status quo – whenever the person returns to gainful activity, there is a change in health status, or at the end of the initial disablement period. Unless this is accompanied by rehabilitation efforts, and unless there is excellent coordination by the employment and health services with the social insurance administrator, there are likely to be few who have a change of status.

Source: MISSOC Comparative Tables Database (2016), Chapter V: Invalidity, Return to active life: Rehabilitation, retraining
For the remaining countries with strict standards, disability is recertified on a time-bound schedule, ranging from 3 times in a 10-year period in three countries to 120 times (every month) in Slovakia. On average, a recertification takes place only once every 2-3 years. Some countries, such as Poland, adopt a different approach. Poland awards all disabilities for a fixed period. At the end of that period, all disability awards must be proactively renewed for another period.

VII. Policy Implications and Moving Forward

From existing literature and the information that has already been gathered and analyzed, the following policy directions can be suggested, but almost all require further analysis to confirm and improve the recommendations.

- **Focus on rehabilitation and re-entry to the labor force from the earliest possible stage.** It appears from the existing literature and the two case studies that it is far easier to bring individuals back into the labor force when they are receiving sick pay or absent for sick leave than when they are already receiving disability pensions.

- **Many countries have not yet moved from medical definitions of disability to functional-social-environmental assessments.** It seems that it is important to make this transition, as many who are considered medically disabled can work. Medical conditions do not necessarily translate into functional limitations on work or loss of income. It also seems more valuable to focus on work capacity rather than work incapacity – what someone can do rather than what they can’t do.

- **Special coordinated actions are needed to deal with mental disabilities,** especially those that are milder in nature and those that have onset early in life. Legal definitions of disability are more
likely to include coverage for mental disabilities and substance abuse than in the past. To truly make a difference, it appears greater coordination is needed among the schools, primary care physicians, psychologists and psychiatrists and employers. Too many individuals with mild mental disabilities and who can work with some accommodations seem to be receiving disability benefits and there seems to be limited attempts at rehabilitation.

- **Benefit design and the system of incentives built into the system should help prevent workers from going out on sick leave and encourage those who are not totally disabled to return to employment.** It appears that the design of many activation programs discourages rather than encourages work, primarily by stopping disability benefits completely when someone returns to work regardless of their earnings level. It would appear that more ‘carrots’ and less ‘sticks’ are needed in the design of activation programs. Disability pensions and unemployment benefits also seem to be used as a substitute for early retirement.

- **Impact evaluation studies are needed to determine what interventions have been successful in optimizing sickness benefits and disability pensions.** Greater collaboration is also needed among academics and practitioners to help countries establish evidence-based policies and identify best practices.

Recent reforms in countries like The Netherlands and Poland illustrate many of these principles. These reforms include a combination of ‘carrots and sticks’. The reforms: i) place more emphasis on control at the sick pay level; ii) provide greater financial incentives to employers to focus on rehabilitation during the sick pay period and returning people with disabilities to the labor force quickly; iii) reduce benefits to lessen incentives to seek disability pensions rather than old age pensions, social assistance or unemployment benefits; iv) tighten disability pension eligibility conditions; v) require more frequent review of disability pensions in pay status; and vi) improve systems for detecting error, fraud and corruption.

The analysis presented in this report also shows many apparent inconsistencies, and suggests areas where more research is needed.

- **Improvements are needed in the completeness and accuracy of data sets for analyzing experience with disability pensions.** MISSOC, ILO and Social Security Throughout the World have some information that is missing, contradictory or obsolete. Also, the methodology used to classify information is inconsistent across countries. Disability pensions may be reclassified as old age pensions at retirement. Survivors of disability pensioners may be grouped together with all other survivors. Temporary disability benefits may be classified under pensions, social assistance or health benefits. It is important to develop consistent standards for classifying disability benefits so administrative data can be relied on for analysis.

- **More detailed analysis of the pathways and causes of disability is needed.** This includes a clear separation of occupational and non-occupational disability definitions, benefits and means of finance, accident versus sickness claims, and underlying cause of disability (non-communicable diseases, mental disabilities, etc.). Occupational disabilities often receive higher benefits, receive medical care from different facilities, and have different criteria for assessing disability than non-occupational.

- **More information is needed on the ‘pathway’ to disability for those who ultimately receive disability pensions whether through sick leave, unemployment or other routes, and the administrative procedures for the different pathways.**
• **Rehabilitation and recertification.** Effective monitoring and evaluation to determine the best means of rehabilitation and recertification. It is important to evaluate outcomes for different methods of incentivizing employment. For example, are disability employment quotas and penalties effective or not? Similarly, information is needed about the optimal frequency for recertification, the best organization or organizations to coordinate rehabilitation services, etc.

• **Partial disability practices** vary significantly among countries in terms of the number of categories of partial disabilities, the administrative procedures to assign disabilities to the various categories, the rules for coordinating disability benefits and earnings from employment, etc.

Much of the additional information that needs to be obtained is likely not available from public sources and will require consultations in each country with key stakeholders and institutions responsible for setting policy and administering existing programs.

Focusing more attention on the management of disability benefits is important to society. People with disabilities have significantly lower labor force participation and many of those who exit from the labor force have residual working capacity. More than one-third of new disablements are for mental disabilities and many of these individuals can work with modifications in their working conditions and more attention from the education and health system. This is a waste of human capital, and imposes a high social and financial cost on society.

In the absence of careful management, disability prevalence rates and expenditures can be expected to rise due to population aging, increasing retirement ages, and economic transformations that reduce jobs and job opportunities for the elderly. As illustrated in this report, countries are beginning to act to reform sick pay, sick leave and disability pension programs. It is important for others to learn from their experience and make modifications now before costs spiral out of control.

Consequently, this paper should be viewed as a starting point for further analysis of the effectiveness, efficiency and outcomes of sickness, unemployment, social assistance, pensions and other benefits and services provided to people with disabilities, with the goal of helping people with disabilities remain in the labor force and maximize their productivity and contribution to society and to themselves.
Appendix 1: Case Studies

In this section, country-specific case studies are used to illustrate how two countries – The Netherlands and Poland – have modified their sickness and disability programs to improve outcomes and reduce costs.

Case Study 1: Netherlands

The Netherlands witnessed a rapid increase in the share of individuals receiving disability benefits from 4% of all insured individuals in 1960 to about 12% by the 1980’s. The generosity of Netherlands’ disability scheme (WAO), which integrated the general disability benefit scheme and the work injury scheme, was a contributing factor to this rapid increase. Spending on the disability program was at its peak in 1990, amounting to 4.2% of Netherland’s GDP. While reforms were initiated in 1982 and 1987, it was not until 1994 that rates of new disabilities (DI flow) began to drop, only to start rising again after 1997. In 2002, the total number of disability benefit recipients (DI stock) approached one million, 800,000 of which were under the employees’ scheme (Figure 1 below). Had the inflow rates continued at that pace, the number of disability benefit recipients under the employees’ scheme would have risen to 1.2 million, or 17% of the working population, by 2040 (Van Sonsbeek, 2011). Experts believe that reforms in the Netherland’s disability system were responsible for the decrease in DI inflow from around 100,000 new disability pensions in 2002 to less than 20,000 by 2005 (Figure 1). The fiscal burden of disability programs, captured by the disability prevalence rate (disability pension recipients as a share of the working age population) was 2.4% in Netherlands in 1970. These rates continued to grow rapidly until 1990, after which disability prevalence rates fell over the remainder of the decade.

Despite the success of reforms in reducing expenditure and prevalence rates, the DI inflow rates as well as the number of applications for disability benefits started showing an uptrend following the 2008 financial crisis (UWV report, 2011). Spending on disability benefits as of 2013 is 50% higher than the OECD average of 1.1%.

Figure 1: Disability stock (left axis) and inflow (right axis), 1968-2010;

Source: Van Sorsbeek et.al (2013)

Reforms and the current status

Post-2002, the Netherlands government undertook systemic reforms in sickness and disability benefits as well as rehabilitation efforts to curtail rising expenditures. The reforms, aimed at reducing expenditures,
focused on a ‘shift of responsibilities to employers, a tightening in benefit eligibility and generosity, strong emphasis on early interventions and privatization of public schemes’ (OECD 2008, Koning 2009).

The reform in sickness benefits involved increasing sick pay from one to two years (commonly referred to as privatization of sickness benefits) and mandating employers to provide for rehabilitation of workers during the sickness period under the Gatekeeper Protocol. These reforms were based on evidence from studies which have shown that it is far easier to incentivize individuals with impairments to stay in the labor market than incentivizing existing disability beneficiaries to return to work. (Van Sorsbeek et al 2013) Currently, when an employed person becomes sick, the employer is obligated to pay 70% of earnings for a maximum of 104 weeks (two years) and pursue an active absenteeism policy through counseling. During the first 104 weeks under sick pay, responsibility for reintegration activities lies with the employer.

As part of ongoing reforms in the disability system, in 2006 The Netherlands replaced the inefficient WAO disability scheme with the Work and Income Act (WIA). The primary aim of WIA is to ‘promote return to work’. After an individual has received two years of pay, he/she is eligible to apply for a disability pension benefit under WIA (there is no sick leave in the Netherland’s system). The WIA consists of two statutory provisions: IVA for both ‘wholly and permanently’ incapacitated (at least 80% incapacity for work and earning capacity of less than 20% of former earnings) and WGA for ‘partially incapacitated’ (at least 35% incapacitated). Beneficiaries under IVA receive 75% of the full daily wage. For Individuals under WGA, the employer is responsible for rehabilitation of the employee. If re-employed, individuals receive 70% of the difference between the (maximum) daily wage and their work-related income. Partly disabled beneficiaries who are eligible for long-term disability benefits are legally obliged to cooperate in reintegration activities. The Employment Insurance Agency (UWV) is responsible for monitoring reintegration activities of the disabled and has contracted 60 private reintegration institutes to assist disabled individuals.

The Netherlands also mandated experience rating of premiums. Employers are required to pay disability contributions which reflected the rates of disability in the firm. Post-2002 reforms also included a wave of reassessments of the stock of benefit recipients from 2004 to 2009 under new, stricter criteria.

The Netherlands also provide flat benefits to handicapped youth under the WAJONG scheme. However, as of 1 August 2004, it abolished WAZ, which was used to insure self-employed people and professionals. Currently, self-employed persons need to take out private insurance if they want to insure against the risk of occupational disability.

Effect of reforms

These reforms have played an important role in the transition of the Netherland’s disability system from an ‘out of control disability program’ (Burkhasuer et. al 2008) to being one of the prime examples of effective policy reform to the disability scheme (Prinz and Tompson, 2009). Spending on the disability program decreased substantially, from 4.2% of GDP in 1990 to 2.0 % in 2013 (MISSOC, 2016). Van Sonsbeek & Gradus (2013) attributed 63% of the decline in disability inflows between 1999 and 2010 to four key reforms. The authors associated “13% reduction in inflows to experience rating of premiums, 25% to the gatekeeper protocol, 4% to stricter eligibility under WGA, and 21% to the introduction of the WIA scheme.” Despite the success of reforms in reducing expenditures over the last decade, some of the reforms raise concerns on fiscal sustainability as well as coverage and adequacy of benefits for the disabled.
The ‘privatization of the sickness scheme’ has led to concerns about ‘substitution effects in an increasingly complex system of distinct social protection benefits’ (SPC report, p25). The rise in temporary employment contracts in recent years are considered signs of ‘negative spillover’ effects of reforms in sickness insurance. The transfer from temporary to permanent work in the Netherlands continues to be low, around 25% a year, which limits the ability of the disabled individual to claim benefits and rehabilitation assistance from the employer (UWV report, 2011). Experts have argued that under experience rating, some employers might face ‘excess pressure’ if premiums become too high for them to afford. This could in turn threaten the sustainability of the program (Gradus, 2013).

The higher incapacity threshold for partially disabilities under WIA (at least 35% incapacity) relative to WAO (at least 15% incapacity), poses a risk that some individuals who are denied benefits will be unable to find work due to their disability. De Jong (2012) argues that the average benefit has gone down over the last decade due to ‘statutory benefit cuts, more stringent eligibility standards, and changes in the profile of the enrollees.’

Out of a total of 345,000 WAO beneficiaries who were re-examined as part of the reforms, in 20% of the cases benefits were terminated, 14% had a benefit reduction, 6% had an increase in degree of disability and the remainder were unchanged. In total, the reassessment operation saved the government about 375 million euros between 2004 and 2009. However, one-third of individuals whose disability benefits were terminated started receiving unemployment benefits within 18 months, highlighting that reassessment alone does not increase participation in gainful employment. (Van der Burg et. al, 2010).

Despite the continued focus on rehabilitation by UWV the ‘effect of reintegration policy of Netherlands is unclear’ (OECD, 2007). While UWV monitors placement results of the privatized reintegration services, it knows little about the quality of services provided in the context of individual reintegration plans, which now comprise some 70% of all reintegration services. The OECD report (2007) notes that rehabilitation did help disabled individuals find employment. However, a large number of jobs were temporary contracts, which made the prospect of continued employment highly unstable for these individuals.

New concerns
Currently, there exists an imbalance between employment protection and employer incentives to strengthen job retention, which prevents employers from hiring disabled individuals. The SPC background report (2016) raises concerns about an ‘increase in presenteeism’, i.e. going to work while in poor health, due to tighter eligibility conditions for sickness benefits. Koopmanschap et al. (2013) estimated that presenteeism contributes between 14% and 73% of the total direct and indirect costs to companies. While part time sick leave was initially considered a good practice for absenteeism, recent studies show that prevention and comprehensive health programs are more effective in tackling the issue of presenteeism (EHS today, 2016).

The government is focusing much of its efforts on rehabilitation of disabled youth, but it continues to face challenges in reintegrating “Wajongers” into the labor market. Although 80% of the Wajong population working at a regular employer were given support of some kind, only 0.5% of the Wajong population entered the labor force due to “recovery” in 2010 (UWV report, 2011). At the end of 2011, the program had 207,000 beneficiaries. At current inflow rates, the number of individuals receiving WAOJONG benefits is estimated to grow to 400,000 by 2040, raising concerns over the fiscal sustainability of the program (Burkhasuer, 2014).
There have also been higher rates of unemployment among disabled due to employer reluctance to hire disabled individuals (OECD 2007). This effect is compounded by shifting demographics in the Netherlands, with labor participation of people over age 55 increasing from 34% in 2000 to 49% in 2010. Older people apply for disability benefits more frequently and reintegration of older workers also poses challenges.

Another pressing concern for Netherlands is the rise in mental ill health among the working age population. The total estimated costs of mental ill health in the Netherlands reached 3.3% of GDP in 2010, mainly through indirect costs like lost employment and productivity instead of direct health care costs. The self-employed and unemployed individuals who suffer from mental ill health barely receive any social protection in the current system. Many physicians report that they have limited knowledge of mental disorders, which makes early detection and prevention difficult. The separation of health care and employment support leads to a mismatch between the ‘needs of the people suffering from mental ill health and services provided’ (OECD, 2015).

The percentage of people with moderate or severe mental health problems is 30-50% higher in the Netherlands than in other OECD countries. The OECD report (2014) hypothesizes that the higher incidence of mental illness is in part due to widespread use of part-time employment. However, there is a need for further analysis to determine the reason behind the higher incidence of mental illness in The Netherlands. The OECD (2015) report calls for reforms in rehabilitation of mentally ill individuals to include prevention efforts, early identification and early action along with better integration of institutions. The budget cuts after the 2008 crisis pose a challenge for carrying out these reforms.

What remains to be done?
Concerns about fiscal sustainability, coverage and adequacy of benefits continue to emerge as employers try to circumvent their individual liability, and as emerging health concerns (mental illness, pain and suffering, etc.) rise to the forefront. The interconnection between unemployment and the health sector is even more crucial as cases of mental illness continue to rise. While recent reforms in Netherlands have led to a massive decline in disability prevalence rates, it is important to evaluate the effect of reforms to make sure they do not lead to ‘negative spillovers’ in the future. Roles need to be clearly assigned and newly implemented practices monitored continuously. Better collection of data on disability by gender and age needs to be a priority of social insurance agencies. It is also important to track long term labor market outcomes of individuals to evaluate the sustainability of reforms.

There are still a substantial number of risk groups for whom sustainable solutions have yet to be found, especially adolescents with mental disability, temporary workers not covered by employer responsibilities for sick pay, and self-employed and unemployed individuals. If policy makers are successful in providing sustainable solutions for these groups, the Dutch disability system may become the blueprint for sustainable disability reforms.

Sickness benefits, disability benefits and rehabilitation are three key components of the Dutch disability system which have all witnessed reforms in the recent past. In the next three sections, we provide details on the recent reforms and a discussion of potential challenges for each of the components.

Case Study 2: Poland
In the early nineties, Poland witnessed high expenditures for sickness and disability benefits largely due to poor labor market outcomes, high unemployment and a disability evaluation system which was based
on biological incapacity instead of capacity to work. While the public old-age pension system in Poland witnessed profound changes in 1993, 2011, 2012 and 2014, the disability benefit scheme remained unchanged. This led to a divergence in old age and disability benefit formulas. The Polish government attempted reforms to unify the old age and disability benefit formulas in 2008 and 2010. However, the government’s efforts failed due to strong opposition in light of forecasts of a significant drop in average disability benefits if the reforms were to be adopted.

Figure 1: DI stock (left axis) and inflow (right axis) in Poland

![Graph](https://via.placeholder.com/150)

Source: Responses to World Bank questionnaire

The average disability pension as of 2014 was 1536.32 PLN, which is 46.4% of the average wage and 75.2% of the average old age pension. The total number of disability pensioners per 100 insureds has gone down from 15 in 2005 to 7.1 in 2014. This can be seen in Figure 1, where the stock of disability pensioners has been decreasing. However, the inflow of disability pensioners has been rising in recent years. In 2014, 33,500 males and 18,000 females were granted disability pensions. The largest number of accepted applicants were in the 55-60 age group for both males and females. The average age at which disability pensions were granted is higher for men (52.9 years) than women (49.5 years). (World Bank Questionnaire, Poland)

Reforms and their current status

In 1999, as part of the reform process to control rising expenditures on sickness benefits, ZUS required doctors working in the healthcare system to issue sickness absence certificates. This reform is believed to have been instrumental in reducing absenteeism. Currently, sickness insurance is compulsory for persons who are covered by the compulsory pension and disability insurance.

Major reforms on disability assessment and definitions were legislated in 1997 and 2005. Under the 1997 reforms, the Social Insurance Institution (ZUS) took over the responsibility of medical examinations for assessing disability. The assessment of disability was also changed from health detriment to work incapacity. The 2005 reforms were aimed at strengthening disability assessment by introducing the ‘second instance of the decision makers.’ In addition to the initial medical assessment by a ZUS doctor, the medical commission confirmed or rejected the first instance decision of the ZUS appointed doctor.

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3 The old age scheme was converted from a traditional defined benefit system into a notional defined contribution (NDC) scheme in 1999
The 2005 reforms also included reclassification of disabled individuals as old age pensioners once the statutory retirement age is reached. This reclassification did not reduce disability benefits or overall expenditures. It just shifted disability expenditures from the disability fund to the old age pension scheme. This simultaneously improved the finances of the disability fund and hurt the finances of the old age fund. Jablonowski et. al. (2014) conclude that the reforms in 1997 and 2005 are largely responsible for the reduction in disability beneficiaries from nearly ‘2 million in 2005 to 1.3 million in 2010’.

The two most striking features that were introduced during the 2005 reform of the Poland’s disability assessment process were that individuals were now required to be recertified at least once every five years and inability to work was to be determined based on earnings capacity instead of biological assessment. Therefore, assessment of disability in Poland currently involves differentiation based on (a) level of incapacity to work (total/ partial/ inability to live independently) and (b) expected period for which the individual will be unable to work (permanent/temporary/training pension).

Poland also started, as part of its reform process, pursuing active reintegration policies by mandating quota systems, requiring a comprehensive assessment by ZUS medical doctors, establishing an appeals mechanism and enacting laws to protect the interests of disabled individuals. Employers with 25 or more employees are currently subject to a hiring quota of 6% for disabled persons. In case of noncompliance with the quota, employers face a penalty of 40.65% of average wages for each disabled person that should have been hired. The penalties thus collected are invested in the National Rehabilitation Fund (ANED, 2009).

The doctor-assessors in ZUS are required to carry out a comprehensive assessment including the ‘degree of impairment of the body and the possibility of restoring the necessary skills through treatment and rehabilitation, the ability to perform the current job or undertake other work and the desirability of vocational retraining, taking into account the type and nature of the work performed to date, age, education level, etc.’ The decision of the doctor can be appealed to the ZUS medical board within 14 days from the date of delivery of the assessment.

Effect of reform
Poland witnessed a remarkable reduction in disability expenditures during the period 1999-2009. The spending for disability benefits decreased from 3.6% of GDP in 1995 to 1% of GDP as of 2013 (Eurostat, 2016). In 2013, a moderate level of 5% of the working age population received disability benefits. The total number of disability beneficiaries (DI stock) decreased from 2.7 million in 1997 to 1.03 million in 2014. The number of new beneficiaries (DI inflow) was reduced from 155,000 in 1997 to 51,500 in 2014. The requirement to issue sickness certificates led to a decline in absenteeism and had its intended effect of reducing sickness expenditure (Krajewski, 2014).

The tighter eligibility criteria introduced in 2005 is believed to have significantly reduced the possibility to become a fake disability pensioner. In his assessment of the disability system in Poland, Jablonowski et. al, (2014) reported that roughly 6% of decisions issued by the ZUS assessment doctors were questioned. After being re-analyzed by the medical board, 25% of the cases were granted an increased disability status, 1% of the cases saw a decrease in disability status while the rest remained unchanged (Jablonowski et. al, 2014).

Mussida et. al use empirical data from Poland for the years 2007-10, to estimate the effect of short term and medium term disability on employment probabilities. They find evidence of lower labor force participation rates among the disabled that is especially acute for individuals with severe disabilities.
Individuals diagnosed with moderate disabilities in the last 12 months witness a 5.8% lower probability of being employed. However, this probability drops to 2.7% if individual was diagnosed with a disability in the last 12-24 months. A similar pattern is observed for individuals suffering from severe disability. Individuals diagnosed with severe disability in the last 12 months witness a 14.4% lower probability of being employed. However, this probability drops to 10.6% if individual is diagnosed with a disability in the last 12-24 months. The reduction in probability of being unemployed over time led the author to conclude that the implementation of labor policies for disabled individuals was assisting in the return of disabled individuals to the workforce.

New concerns
Mussida et. al (2012), estimates that disabled women have a 7.2% lower probability of finding employment in Poland relative to disabled men. The author’s analysis point to the continued vulnerability of females and individuals with severe disabilities face with regard to employment opportunities.

While ZUS provides both vocational and medical rehabilitation for the disabled, the high percentage of cardiovascular diseases, movement system disorders and respiratory diseases (see Figure 2 below), the prevalence rates of which increase with age, make medical rehabilitation an important responsibility for ZUS in light of the changing demographics of Poland. (Kaplnska et. al; Jablonowski et. al 2014) A rise in the prevalence of mental illness and substance abuse also poses an additional cause of concern for Poland. In 2014, approximately 12% of new disability pensions in Poland were granted due to mental illness and a total of 248 new disability pensions were granted for alcoholism. Recent studies have shown that mental illnesses often occur at relatively young ages. In Poland, the group aged 35-54 shows the highest prevalence rates for mental illnesses and the average duration in disability is estimated to be higher for individuals who suffer from mental illness. Jablonoswki et. al (2014) included this observed trend in their simulations and estimated that all else constant, if 50 percent of new disability beneficiaries are diagnosed with mental illness it would lead to a 60% increase in disability expenditures.

Figure 2: Structure of disability pensions by type of illness/disease in 2014

Source: Response to World Bank questionnaire
Roed (2012) uses existing empirical evidence to show that partial disabilities are often triggered by job loss. The author believes that industrialized countries like Poland lack programs to ‘deal with partial disabilities and an accompanying strategy to ensure that the labor market is open to persons with such disabilities.’ Therefore, the 2008 global crisis might lead to a ‘challenging disability problem for Poland’. The author recommends using a “mild” activation strategy in disability insurance to prevent the 2008 crisis from causing a long-lasting decline in labor force participation. This strategy (for example, opportunities to participate in paid activation, termination of passive benefits accompanied by lower or more conditioned follow-on benefits), would effectively counteract problems of moral hazard in social insurance by making it less attractive for individuals with ‘low work motivation rather than lack of job opportunities’.

The rapid ageing process in Poland that triggered reforms in old age pensions had already put pressure on disability expenditure. This fiscal strain is exacerbated due to the continued difference in old age and disability benefit formula as well as relatively generous disability benefits. (Jablonowski et. al 2014) Recent analysis by the World Bank that has not yet been published shows that the average new disability benefit will exceed the average new old age benefit starting in 2020 (World Bank, 2017). Analysis also shows that the average newly disabled male (female) persons up to the age of 41 (51) years could count on receiving the minimum pension only if the NDC formula was adopted for calculating disability pensions. The study estimates that older age groups would also fall under the threshold of the minimum pension, over time. This discrepancy in benefit formulas would lead to disability beneficiaries recording higher adequacy ratios than many old age pensioners who were full-time employees or self-employed and made contributions for their entire career. Therefore, there is a pressing need for a harmonization of the disability and old-age benefit formulas to prevent creation of pressure on the disability system stemming from the more generous benefits it pays (Gora, 2013; Jabłonowski et. al, 2014).

The impact on the disability system of the recently legislated increase in legal retirement ages to 67 and the abolishment of early retirement is analyzed by Jablonowski et. al (2014). Revenues are estimated to increase by 5% in 2020 and by 11% in 2050, as contributors pay for a longer period into the disability pension system. However, expenditures are estimated to rise by 28% in 2020 and by 58% in 2050 compared with what they would have been if retirement ages were not increased. The authors believe at least a portion of this rise in expenditure would be due to a higher inflow into disability pensions since early retirement channels would no longer be available.

While the increase in retirement age was reversed effective October 1, 2017, it is likely that as some time in the future the government of Poland will have little choice but to pursue a policy of increasing retirement ages once again. Until then, the impact on disability pensions that is discussed above will be deferred.

What remains to be done?
Poland’s disability system has undertaken reforms in the past which have helped curtail rising public expenditure on disability. However, demographic changes, increasing prevalence of mental illness, divergence in the old age and disability benefit formulas, lack of effective monitoring and evaluation and challenges regarding rehabilitation pose new concerns for its disability system.

There is agreement among experts that Poland should strengthen its vocational rehabilitation by supplying high quality services, adopting a more targeted approach in providing these and promoting lifelong learning. To incentivize rehabilitation, some element of obligation should be introduced, e.g. in the form of moderate benefit reductions for people refusing to participate in vocational rehabilitation.
Kaplińska et al calls for the abolition of the earnings limit for disabled people, as these limits discourage people from returning to work. ZUS should take a proactive role in overcoming stereotypes among employers regarding the lower efficiency of disabled and elderly workers. There is disagreement among experts on whether the quota system is best suited to reintegrate disabled individuals or if Poland should shift towards rights-based employment policies. There is a similar lack of policy convergence in relation to sheltered employment.\textsuperscript{4} Poland is one of the few OECD countries where sheltered employment has been decreasing (Mussida; ANED, 2009). Further impact evaluation studies are needed so that evidence based policies can be crafted in the future.

While Poland has ratified the UN Convention on the Rights of Persons with Disabilities, monitoring of implementation is still missing. The 2009 ANED report calls for including 'clear targets for the level of employment of disabled people, which would help in creating a focal point for achieving optimum results in relation to the labor market strategy.' These targets should be sensitive to challenges faced by victims of substance abuse and mental illness.

To keep the Polish disability system fiscally sustainable while ensuring coverage and adequacy of pension benefits, Poland needs to unify the disability and old age benefit formulas, re-evaluate rehabilitation criteria in the face of the changing composition of prevalent diseases, pursue evidence based policies to avoid policy disagreement and learn from experiences of similar countries in the EU.

\textsuperscript{4} Sheltered employment is a setting in which people with severe disabilities receive services and training to develop work-related skills and behaviors. In Poland, sheltered work is a pathway for persons who were not able to transition into the open labor market after Occupational Therapy Workshops and Vocational Rehabilitation Facilities.
Appendix 2: Data sources

The following sources were used for the data and Figures shown in this report.

- MISSOC, the ‘Mutual Information System on Social Protection’, promotes the exchange of information on social protection among the EU Member States, Iceland, Liechtenstein, Norway and Switzerland. It is a central knowledge and information base for public authorities, professional users and European citizens

- Social Security Throughout the World, Europe 2016. This is a joint publication of the United States Social Security Administration and the International Social Security Institute (ISSA). Information on program designs for social insurance and social assistance programs for each country it updated every two years for each of four regions on a rolling basis

- Social security administrator websites. Information was retrieved directly from the Web sites of the organization responsible for administering the national social security system in each country

- Reports from OECD and the European Commission

- Peer reviewed journal articles on disability systems in The Netherlands and Poland

- Questionnaire on disability pensions in Poland, which was developed by the authors and was completed by Agnieszka Chlon-Dominczak, PhD (Educational Research Institute, Poland)

Unfortunately, in some cases, needed information was not available from these sources or information from two different sources was contradictory. To resolve these inconsistencies and obtain additional information, it would be necessary to contact responsible individuals within organizations in each country, which was beyond the scope of this study. Consequently, there is missing information for some countries that is noted in several parts of this report.
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