



Policy makers' response to labour market issues – global insights and future challenges

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Foreword

This report presents the results from the research project “*Social Stability in Serbia Challenged? Pandemics, Economic losses, Inequality and Policy Responses*” (INEQ-RS-COVID-19), within the framework of Special Research Program on COVID-19, run by the Science Fund of the Republic of Serbia. This report summarises best practices of measures implemented during the COVID-19 pandemic to mitigate the negative impact of the pandemic. Based on the theoretical contributions and recent experiences, we derived general recommendations that could be used by policy makers in order to develop flexible and effective mechanisms and deal with potentially similar challenges in the years to come.

The writing of this report was carried out by a group of researchers from the Institute of Economic Sciences (IES), from Belgrade, Serbia. The research was conducted during the period January - June 2022, by Lara Lebedinski (senior researcher on the project) and Mihajlo Djukic (senior researcher). We are grateful for the support of Marko Vladislavljević (principal investigator and project coordinator), colleagues from the Institute for Evaluations and Social Analyses from Prague (Czech Republic) and Desanka Mihailovic Kovac (National Employment Service of the Republic of Serbia) who provided timely and valuable comments on initial versions of the report.

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Belgrade, July 2022

Authors

Executive Summary

The effects of the pandemic on the labour market and position of the vulnerable groups required immediate policy response aimed at preventing dramatic reductions of the number of employees resulting both from pandemic fears and necessary containment measures. Challenges raised by the crisis provided additional argument in support of developing contemporary active labour market policy (ALMP) systems capable of dealing with external shocks and specific labour market barriers faced by certain population groups. In that context, successful ALMP systems should have several important features including flexibility in developing interventions, high degree of collaboration with various stakeholders and high level of digitalisation. Specific characteristics of the Public Employment Services (PES) are gaining greater importance under the pandemic context. They include switching the focus from standardized to personalized services, from reactive to insight-driven, from public management to public entrepreneurship, and from budget cuts to mission productivity.

This report provides insight into global practices and interventions that policy makers worldwide implemented to deal with the pandemic shock spilling over to the labour market. There are several specific characteristics of the applied programmes as well as lessons learnt which could provide important inputs for the policy makers in Serbia. At first point, policy makers in Serbia should consider developing custom-based interventions targeting specific vulnerable population. This would require adding more flexibility to the PES mission including ensuring mandate for developing ongoing labour market interventions. Examples from Lithuania and Netherlands suggest that combining different institutional resources could be beneficial in order to tackle specific issues of the vulnerable population. In that context, establishing partnerships and more frequent collaboration with social support institutions, private and civil sector would be very important. Development of the specific targeted interventions in collaboration with other stakeholders could provide additional benefits and improve labour market outcomes. Finally, COVID-19 revealed importance of further strengthening PES capacities through speeding up digitalisation processes. This would acquaint PES with additional flexibility in terms of providing online services and meeting different requirements of the population target groups.

Introduction

COVID-19 pandemic was an external temporary shock which had adverse effects on the overall economic activity reducing the world output in 2020 by 3.1% (IMF, 2022). International Labour Organisation (ILO) estimates indicate that working hours losses in 2020 were around four times greater if compared to the global financial crisis. Global employment losses in 2020 amounted to 255 million jobs (around 8.8 percent of global working hours), while the negative effects were higher for women and young workers (ILO, 2021). Such a huge employment losses translated into rising inactivity reducing global labour force participation by around 2.2 percentage points in 2020.

The effects of the pandemic on the labour market and position of the vulnerable groups required immediate policy response aimed at preventing dramatic reductions of the number of employees resulting both from pandemic fears and necessary containment measures. Government measures were particularly important to minimise damage pandemic had on the most severely affected sectors (e.g. transport, accommodation services, etc.) and on the most vulnerable population groups (low-income, low-educated, youth or population employed in informal sector). Informal workers have been estimated to have three times as likely as formal workers to lose their jobs as a result of Covid-19 (ILO, 2021). Governments across the world thus, developed employment policy measures to support economic activity in the mostly hit sectors and reduce negative effects on the most vulnerable population subgroups. Holding the central position with regards to implementation of the active labour market policy measures, capacitated Public Employment Services (PES) represent important policy actor which could provide significant contribution to the stability of the labour market and improve the economic situation of those with the weakest position in the labour market.

This report summarises best practices of measures implemented during the COVID-19 pandemic to mitigate the negative impact of the pandemic. We first start by explaining certain features of successful PES which helped PES to respond better to the COVID-19 pandemic. These are general characteristics of agile and effective PES. One important task of PES is to provide successful programmes for vulnerable groups. Such programs are briefly described in the first part of the report. Moreover, given the relatively diverse organisation structure and functions of the PES across the world, we provide insights into different practise and mechanisms of the PES offices operating in various countries. Finally, the first part of the report provides discussion on the issues PES are facing in respect to adapting to evolving needs of the contemporary labour markets. The second part of the report provides guidance on success measures for pandemics. We divide the period of the pandemic into the initial phase, periods with high infections and maintained restrictions, recovery phase and the period after the pandemic has ended. The second part of the report summarizes PES experiences in dealing with challenges posed by the recent pandemic. Based on the theoretical contributions and recent experiences, we derived general recommendations that could be used by policy makers in order to develop flexible and effective mechanisms and deal with similar challenges in the years to come.

1. General features of an agile and effective Public employment service

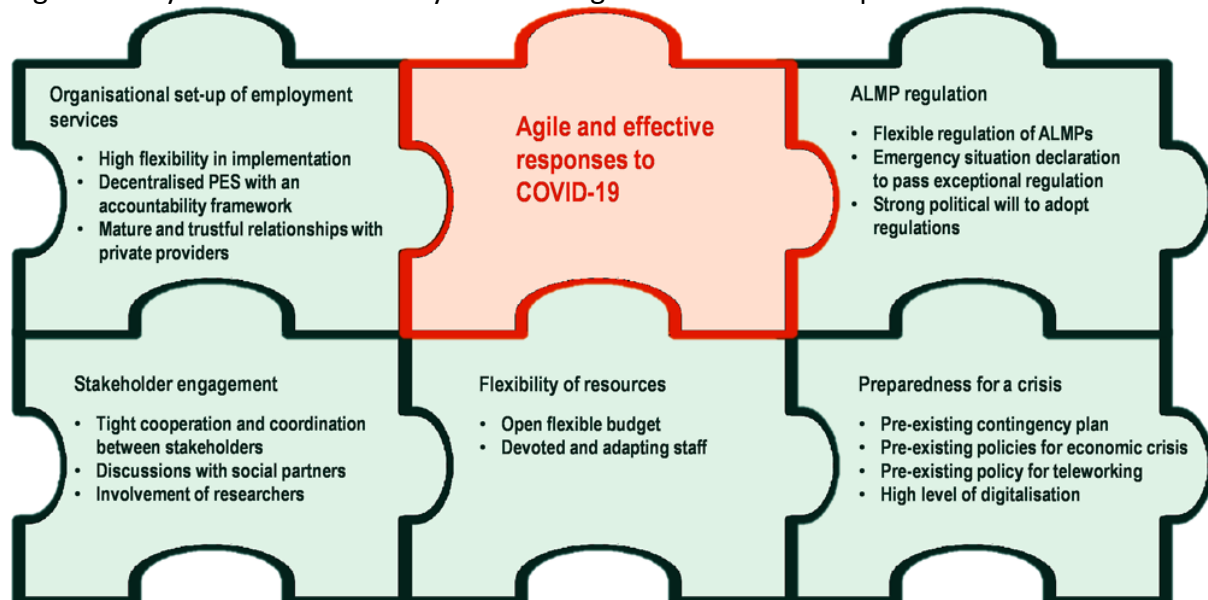
The COVID-19 pandemic was an unexpected and unique event in the recent history and it posed many challenges for the functioning of the labour market and the functioning of the PES. Countries which were successful in navigating the COVID-19 crisis had certain features of ALMP (active labour market policies) systems.

According to a questionnaire administered by the OECD to its member countries, the respondents successful ALMP systems had the following features (see Figure 1):

- Decentralised system with a flexibility in implementation and accountability framework.
- Flexible ALMPs with the possibility to pass regulations in exceptional circumstances and strong political support
- Mature relationship with private providers of ALMPs
- High level of engagement with stakeholders (social partners, researchers, etc.)
- High level of digitalisation
- Flexibility of resources such as budget and adaptive staff
- Preparedness for crisis situations (pre-existing contingency plan, pre-existing policies for economic crisis and pre-existing policies for teleworking)

Once the COVID-19 crisis started, it was difficult to change the features of the system, but these are features of PES which can be implemented after that can help the PES to cope better with an emergency situation that might happen in the future.

Figure 1: Key features of ALMP systems for agile and effective responses to COVID-19

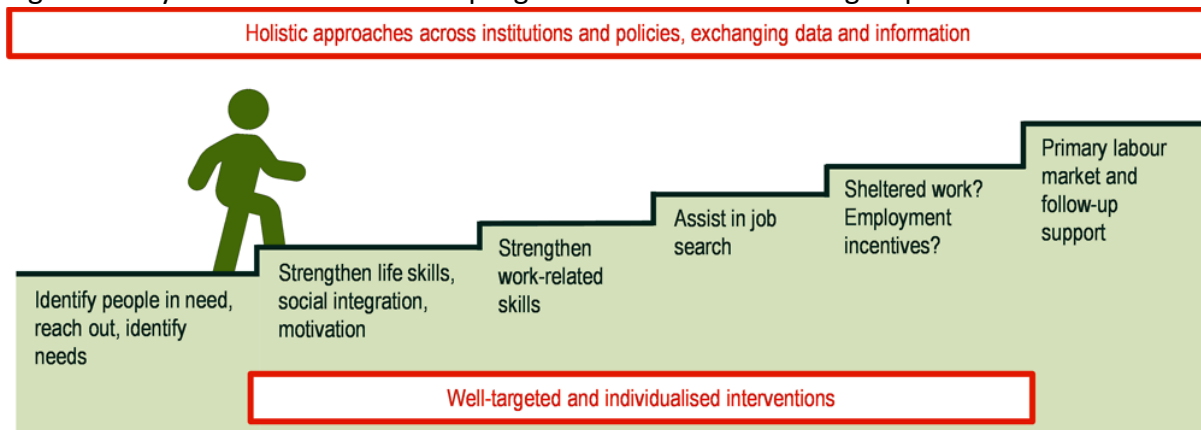


Source: OECD (2021)

Aside from the general features, a system needs to be established to target well vulnerable individuals both in good times, but even more importantly in times of crisis. Figure 2 shows a holistic approach across institutions and policies how to provide effective support to vulnerable groups. The first step is to identify the people in need of support and to determine their needs. A key element of this first step is to understand who are the vulnerable groups

and to understand which groups are not contacting PES and to find ways to reach out to them. In particular, individuals who are only marginally attached to the labour market should be sought and it should be explored whether existing ALMPs target their needs. In a second step, one needs to strengthen their life skills, social integration, motivation and afterwards their work-related skills. As a next step, the individual can be supported in her/his job search. If necessary options such as sheltered work or employment incentives (e.g. employment in social enterprise or public works) should be explored. The final goal is that the individual enters the primary labour market. Even when a vulnerable person enters the primary labour market, it might be required to provide continuous support to help the individual stay attached to the primary labour market (e.g. provision of social services and counselling).

Figure 2: Key features of successful programmes for vulnerable groups



Source: OECD (2021)

1.1. Contemporary issues in providing effective public employment services

PES approach in the following decades will strongly depend on the changes occurring in the labour markets. There are at least three important trends that should be taken into account when considering strategic approaches that PES will be adopting to tackle contemporary labour market issues. The first one refers to demographic changes and challenges related to ageing and consequent shrinking of the labour force. The second one is related to migration patterns resulting from removing barriers for labour mobility, unequal development across different regions or conflicts which cause emigration pressures from one country to another. The third one refers to technological changes and scientific progress which have impact on disappearance or reducing labour demand for certain jobs, changing the existing job requirements or creating new jobs as well as recruitment and engagement patterns. Tackling labour market issues resulting from spreading the COVID-19 pandemic and potential response to similar challenges in the following period will, to a certain extent, depend on the ability of PES to adapt to aforementioned issues.

Demographic challenges

Population ageing represents important challenge for the policy makers in some regions. In Europe, for example, ageing of the active population results in reducing labour force which has to be fulfilled through activation and/or employment of the unemployed population. On

the other hand, ageing has impact on the consumption trends since demand for some products and services will continue to grow (e.g. healthcare), indirectly contributing to increase in the labour demand in these sectors. The role of PES will be on facilitating labour market matches and using the potentials of older working population (PES Network, 2018). The crucial challenge in that context refers to efforts related to encouraging labour market participation and strengthening employability skills of individuals using custom-based approaches. Custom-based approach is also of vital importance when strengthening employability of the population at job risk due to COVID-19 spreading. Population at greater risk refers to the ones with obsolete skills being unable to easily to adapt to the new labour market context and rising requirements with regard to digitalisation.

Migrations

Migration flows result in changes of the labour force supply also posing different challenges for PES functioning worldwide. Immigration could be considered as an important source of labour which could reduce the gap between labour demand and supply and help reducing the workforce shortage. COVID-19 spreading reduces labour mobility thus offsetting positive effects of migration on the labour market. However, immigration may result in difficulties related to adapting to the labour market requirements in the country of settlement. Immigrants could increase the share of inactive population or population engaged in informal economy. On the other hand, emigrations may cause a lack of workforce in certain regions, especially in developing countries, representing additional challenge for PES mission. Contemporary views on migrations are not necessarily related to physical movement of workers, but also to remote working patterns, which represent important opportunity for workers not willing to change the place of living. Participation in the labour market in a globalised economy is therefore more dependent on the internet connection rather than place of living (Servoz, 2019). This is also important in case of limited labour movements as it was the case during the pandemic. Therefore, the PES role refers to facilitating participation of the working population in areas with excessive immigration or emigration pressures.

Technological changes

Technological progress is well known determinant of supply and demand in the labour markets. Labour markets have always reacted to economic transformations following technological development. For example, due to automation, the share of agriculture employment in Europe reduced from 54% of the total labour force in 1840s (Crafts, 1989) to 17.5% in 1960 (Zobbe, 2001) in favour of manufacturing sector. Similarly, while demand for jobs in manufacturing sector has been reduced over the previous decades, employment in service sectors recorded significant increase. Although technological developments have often been associated with fears of losing jobs, in the long term it actually resulted with increase in productivity and creation of new jobs. The role of PES is however still very important in reducing short term labour market disruptions and managing potential risks related to labour transitions. Digitalisation, automation and artificial intelligence represent important “game changers” that are dramatically changing labour market functioning patterns over the last years including changes with regards to skill requirements for both existing and new jobs to be created in the future. Recent estimates indicate that 90% of jobs nowadays require IT skills (Servoz, 2019). McKinsey projected that by 2030, 75 million to 375

million workers (3 to 14 % of the global workforce) will need to switch occupational categories (McKinsey, 2017). Such changes put additional pressures for policy makers, particularly ones dealing with education systems and new forms of work. Technological solutions also changed the way employees are recruited and the mechanisms related to job applications. PES needs to adapt to changes related to platform economy models and new forms of work which created more opportunities for independent working as a form of self-employment. PES approach needs to be well balanced in order to use benefits that “gig economy” could bring to this type of jobseekers. Readiness of the PES to deal with COVID-19 issues was primarily determined on the extent to which PES adopted technological solutions and distant working patterns including ability to provide service online.

1.2. Public Employment Services – global experiences

PES’ scope of work significantly varies depending on the historical, geographical, institutional and political context of their work. The core areas of PES work include provision of services related to job placement, implementation of the active labour market policy measures and providing job-related information. Most of the PES worldwide simultaneously provide all of the aforementioned core activities. However, specific PES approaches and policy measures differ with regards to established policy priorities and the ways of implementation.

Comprehensive global assessment of the operational and institutional characteristics of 73 PES in 71 countries provides comparative perspective of different practices implemented by PES actors worldwide (IDB, 2015). It showed that most of the PES apply different measures related to job placement services for both job seekers and employers (eg. job search interviews, direct job offers of vacancies by agency staff, self-service access to job offers, etc.). Among the active labour market policies, the most frequently used ways of support refers to promotion of the labour market integration for youth, vocational guidance for youth and activities related to general labour market inclusion of disabled population. Self-employment schemes, support to long-term unemployed and wage subsidies for unemployed are much less present. Less than half of the PES worldwide implement programmes aimed at strengthening employability of older jobseekers (above 50 years old), promoting workers mobility and specialised social services for specific problems impeding labour market integration. Among the labour market information services, PES are in general very active in terms of data collection and dissemination at the national level. Data collection and dissemination at the local level is however less present. With regards to other types of support, management of the unemployment and social benefits is performed only by one third of the analysed PES worldwide, primarily those operating in the European context. Dominant organisational models include public agency institutional form responsible to the Ministry of Labour and the form of specific department organised under the Ministry of Labour which does not have independent status. Other institutional solutions are considered as specific cases rather than widely present organisational forms.

For the purpose of this research, the special attention will be paid to the European PES context defined by the European PES Network Strategy 2020 and beyond, and related documents. According to the PES 2020 and beyond strategy developing efficient national PES responsive to the future of work challenges requires developing a solid PES strategy and the use of labour market intelligence (European Commission, 2018). Developing a solid PES

strategy assumes participatory approach where employees, research institutions, customers and other important stakeholders play important role. German PES Strategy 2025 and Danish PES Strategy 2018-2021 are illustrative examples on the inclusive approach and coordination (European Commission, 2018). French PES initiated strategic restructuring which includes developing custom-based approach based on delivering specific services to needs specific needs of specific customers, adapting measures with regards to territorial priorities and greater reliance on performance management in respect of the principle “do better with less”. In overall, European PES focus should be redesigned with regard to following principles (Accenture, 2013):

1. From standardized to personalized services.
2. From reactive to insight-driven
3. From public management to public entrepreneurship
4. From budget cuts to mission productivity

Use of labour market intelligence could improve the effectiveness of the PES offices worldwide. Technological progress represents not only an issue, but also a huge opportunity for the policy makers. Use of big data and artificial intelligence may help PES in improving the quality of provided services and developing new services. Labour market information systems, profiling and matching may significantly benefit on the basis of greater data availability. Moreover, data availability could add additional value to monitoring and evaluation (eg. counterfactual evaluations, real-time assessments) as a learning component of the evidence-based policy making. Extending online profiling and activation proved to be very efficient in Netherlands where 80% of all job-seekers are now served electronically within the three months after registration, out of which 60% found a job at the end of the period (European Commission, 2018). The COVID-19 situation only accelerated digitalisation processes and latest information provided within the Assessment report on PES capacity produced by the EU Commission (2020) showed that in Sweden, the share of customers registering digitally has continued to increase from already high levels, and has accelerated with the COVID-19 pandemic, with 92.5% digital registrations in March 2020 and 93.7% in April 2020.

2. PES activities in a pandemic context

2.1. The main challenges for PES mission – distributional impact of COVID-19 pandemic

In order to develop effective policy measures, we should focus on the main challenges that COVID-19 pandemic put ahead of the policy makers engaged in providing labour market support. ILO analysis (ILO, 2021) detected six main areas critical to understanding the challenges that needs to be addressed, particularly considering uneven impact of the pandemic on different socio-economic groups. Obtaining complete picture of the magnitude of effects that COVID-19 had on household wellbeing, the effects on both income and post-support income should be taken into account. "Post-support labour income" refers to all income linked to work, including income transfers, in contrast with "labour income", which does not take into account income support measures.

- External shocks had immediate negative effects in terms of reducing working hours and employment. Countries that had fiscal space to implement large-scale job retention schemes and income subsidy programmes were successful in reducing negative effects and minimising fall of post-labour income.
- Job-retention schemes were less effective in improving the position of the youth workers that experienced larger reduction of the post-support income if compared to the rest of population. Therefore, protecting youth workers require more sophisticated support programmes provided by the PES.
- Income support measures proved to be less effective in protecting self-employed. PES needs to provide more specific measures to address challenges of the self-employed, particularly ones working in the informal sector, by dividing measures to incentivise their formalization and address income shocks they are exposed to as a consequence of the pandemic.
- Women experienced larger post-support labour income decrease than men in most of the countries, which confirms their weaker position in the labour market.
- PES role in supporting teleworking is particularly important for the low- and medium skilled jobs since the potential for teleworking among this population group is lower if compared to highly skilled workers.
- PES needs to encourage labour demand for low-paid jobs through developing targeted support mechanisms for the low-income workers and employers who employ this population groups as the job recovery within this group has been very slow.

In overall, PES role during the pandemic could be summarised within three phases, initial phase of the pandemic, measures implemented during the pandemic period and measures that should follow pandemic period (Figure 3).

2.2. Initial phase of the pandemic

There are several factors in the initial phase which require **adaption of the functioning of the Public Employment Service (PES) to the new circumstances**. First, in initial phase of the pandemic there is an increased inflow into unemployment due to lower economic activity

and the inflow into employment is reduced as companies postpone employment decisions during uncertain times. Second, the health guidelines (e.g. distancing) need to be respected and the business processes need to be adjusted in line with the measures. Third, each pandemic is an unpredictable and unique and in order to serve the clients adequately, the PES needs to develop a daily information system to follow closely the labour market situation.

Based on these factors, the experience from the COVID-19 pandemic has shown that the following changes were necessary to adapt the PES functioning:

- Digitalising processes, boosting remote channels, automating processes for clients and the back-office
- Simplifying processes for clients and staff
- Adapting processes to meet health guidelines on the premises
- Adapting communication to staff and clients
- Adopting new tools to increase the quality and timeliness of statistics and management information
- Reallocating staff, increasing staff numbers and training staff to increase PES capacity

These changes need to be made early in the pandemic so that the functioning of the PES is not jeopardised. The process such as client registration, application for active labour market programs (ALMP), counselling need to be moved online. Processes should be simplified so that a larger number of clients can be served. Additionally, processes which are repetitive can be automated and in this way the pressure on the PES can be reduced.

During pandemics special health guidelines need to be followed and at the beginning of each pandemic such adjustments are necessary so that the provision of services does not experience disruptions. This applies both to the provision of in-person services and to the necessary adjustments so that the workplace of employees of PES is safe. Special attention needs to be paid to the reallocation and development of PES staff. Depending on the labour market shock and the flow into unemployment, it might be necessary to hire new staff so that clients can be adequately supported. New health guidelines, the provision of most services online and the reallocation of staff might require additional retraining of the staff and training of new staff.

Each pandemic is specific and in order to be able to design policies and respond timely to the changes in the labour market, one needs to establish an information system where policy and decision makers can identify changes quickly and design responses and policies accordingly. All these adaptations and changes require an increase in expenses of PES and this advice was also followed by many countries during the COVID-19 pandemic.

After setting up a functioning PES system, the next step is to identify the vulnerable groups and vulnerable employees based on available data and based on past experience.

Vulnerable groups and vulnerable employment

Special attention needs to be paid to the groups that are generally considered to be vulnerable, and these are the following:

- **Youth:** Young people are particularly vulnerable as economic downturns can have long-term effects on their future employment and incomes. A large literature examines the impact of graduating during an economic downturn (Kahn 2010, Genda et al. 2010, Oreopolous et al. 2012, Raaum and Røed 2006) and it finds that individuals who graduate in these times experience a scarring effect due to poor initial firm-worker matching and skills depreciation. They can have lower earnings for up to 10 years compared to individuals who graduated in better times. Not only young people who enter the labour market are affected, but also those who had a job when the crisis hit can be affected if they did not secure yet a stable job. Young people work more often in sectors that are more affected by the crisis, such as tourism and trade (Verick, 2009) or they can be the first ones to get laid off in the presence of tenure based mandatory severance pay.
- **Women:** There are many reasons to be concerned about the position of women on the labour market during and after a pandemic. First in most countries there is already a gap in labour market participation and wages between females and males, and the COVID-19 experience has shown that in times of pandemics the burden of additional parental child care and household chores is mainly born by the women (Alon et al., 2020; Del Boca et al., 2020; Farré et al., 2020). Additional responsibilities of women could have a negative impact on the female labour supply.
- **Low educated workers:** There are several reasons to consider workers with low educational attainment to be more vulnerable during a pandemic. First, they are more likely to work in the informal sector which does not offer any employment protection and even when they have a formal contract, they are more likely to hold seasonal or temporary contracts in comparison to more educated workers. Second, aside from essential services, low educated workers are more likely to be working in sectors affected by shutdowns (e.g. tourism and hospitality, etc). Third, low educated workers have, on average, lower savings than skilled workers and even small income shocks can make them enter into poverty.
- **Poor regions** (e.g. Southern and Eastern Serbia): It is important to follow closely the labour market developments in poor regions as they might have low employment rates and more vulnerable jobs than richer regions. In the case of Serbia, Southern and Eastern Serbia (SES region) stands out in terms of low development and it requires monitoring in times of economic downturns.
- **Rural:** The rural population is considered to be potentially vulnerable because a large share of this population works in agriculture which can be disrupted in times of pandemics due to various restrictions (e.g. export/import restrictions, restriction on internal movements, etc.). Additionally, the rural population is generally low educated and holds only temporary or seasonal jobs with a low job protection which makes them more vulnerable to income shocks.
- **Other vulnerable groups:** People with disabilities and Older workers are also considered to be vulnerable. People with disabilities experience in general difficulties in accessing the labour market due either physical or mental disabilities. Older people are considered a vulnerable group because of the difficulties they face in finding employment if they lose their jobs.

Aside from vulnerable groups there are some employed groups which need to be closely monitored:

- **Informal employment:** this type of employment is generally considered to be low quality employment because it does not offer any job protection.
- **Temporary employment:** this type of employment is more vulnerable because of the predetermined length of the contract and no security that the contract will be renewed.
- **Employment in small enterprises or self-employment:** this type of employment is more exposed to economic shocks because such firms have greater credit constraints and are more exposed to weak consumer demand (Sahin, 2011; Kocchar, 2021).
- **Employees in sectors negatively affected by the pandemic:** one needs to identify sectors negatively affected by the pandemic and watch closely the employment in this sector. For instance, during the COVID-19 pandemic the tourism sector was negatively affected to constraints of both internal and international movements.

All vulnerable groups and those holding vulnerable employment need to be closely monitored through the information system of PES. Therefore, in the times of the crisis aside adjusting measures to assist unemployed and those who lost their jobs during the pandemic, PES should monitor workers who are under greater risk of job losses, as during the times of the economic crises caused by pandemic they could be under an even higher risk than usual. Monitoring of these three categories is required in order to obtain information relevant for developing evidence-based policies.

2.3. Measures during the pandemic

Public employment services are expected to require additional staff during the pandemic to facilitate the transition to online services, to respond to a higher inflow of unemployed at the height of the pandemic and to support the transition of workers from negatively affected to expanding sectors. This will require both the retraining of existing staff, and hiring of additional staff. Some countries have shifted public sector employees from other public institutions to PES and this can be a temporary solution to overcome staff shortages. If PES face capacity constraints, an alternative is to contract out publicly financed labour market services to external providers (e.g. counselling, case management of job seekers, etc.).

Maintained restrictions limiting economic activity

After the initial adaptation phase, the PES and the relevant policy makers can and should take a longer-term perspective and start to adjust their medium- and long-term strategies. In particular, the offer of ALMPs needs to be adjusted to the composition of jobseekers and it needs to support the recovery of enterprises and ensure matching of job seekers with new job openings. In particular, the offer and variety of labour market trainings should be increased in order to support the transition of worker from sectors which are shrinking to the expanding sectors. Targeting needs to take into account the groups and workers which were identified to be the most vulnerable using the statistics and experience from similar past events. In the presence of social distancing restrictions, the PES needs to design ALMPs so that reskilling and upskilling of beneficiaries facilitates the transitions across firms, sectors

and occupations. Also in this phase, additional financial resources will be required to prevent human capital depreciation and improve the employee-job matching process.

In this phase the following measures should be prioritized (all measures should be adapted to the health measures in place):

- **Job retention schemes:** Job retention schemes i.e. short-time work schemes have been a very important policy instrument to prevent lay-offs of workers in periods of lower economic activity. Through retention schemes, the government can directly subsidise hours not worked and in this way, companies can retain their workers at limited or not costs. Job retention schemes should be carefully used as they can have a lock-in effect and be an obstacle for job creation and job reallocation, especially during the recovery period. In the initial phase of the pandemic, job retention schemes can be made available to a wider number of firms and sectors, but in the medium-term they should be more restricted to sectors where activity can resume.
- **Labour market trainings** should be expanded in the short-term. Empirical evidence makes a strong case to invest in human capital in periods of low economic activity because this prevents human capital depreciation and the minimizes the deadweight loss. Countercyclical effects of the training occur in countries with higher public training expenditures, higher union density and employment protection, a lower share of indebted companies, higher R&D expenditures and lower product market regulation (Brunello and Bertoni, 2021).

Labour market trainings are expensive measures and skills assessment and anticipation exercises are required to take decision on adult learning investments. In this phase, the policy makers should have identified sectors that are expanding and they should help jobseekers and employers to move from sectors that were negatively affected to the expanding sectors. The offer of short-term trainings needs to support this process through offering vocational training, general and remedial training and internships. If there are employers in acute need of skilled labour, then tailored training programmes should be considered. High quality labour market trainings take time to be developed and expanding the capacities of high-quality programs can require time. This should be considered when expanding the labour market trainings because the quality should be of highest priority.

Subsidies to support labour demand should be limited in this phase because the labour market can be tight in this period and there can be reduced job-search efforts (Forsythe et al., 2020 and Hensvik et al., 2021). As a result, such investments can result in deadweight losses and subsidies should be postponed for periods with a higher economic activity.

In this phase higher expenditures for ALMPs are required both to support the general services of PES and to support the reallocation of labour from declining to growing firms (i.e. for financing reskilling and upskilling).

Recovery phase

In the recovery phase it might be necessary to increase expenses and in particular, in this phase one should focus on the employment subsidies. In this phase the following measures should be prioritized:

- **Subsidized private sector employment:** Hiring subsidies and start-up incentives should both be used to support employers in creating new jobs. Previous research has shown that hiring subsidies are more effective than other ALMPs in increasing participation labour market outcomes after economic downturns (Kluve, 2010). First, hiring subsidies should be temporarily used to support labour demand and economic recovery. They should target specific groups, groups that were identified as vulnerable, e.g. long-term unemployed, youth, older workers and those with disabilities. Subsidizing policy should be given primarily for new hires and not for already employed workers. Provided subsidies are often given in the form of reductions or waivers of social security contributions. Second, start-up incentives will be needed for an extended period to create jobs, in particular jobs in specific sectors and locations.
- **Additional support to vulnerable groups:** Once the economy starts recovering it is important to identify groups which are remain marginalised and excluded from the labour market. For these groups one needs to design cross-policy responses and intensive ALMPs (such as rehabilitation and supported employment), with financial support to those who remain unemployed in the long term.
- **Continuous delivery ALMP measures:** Once the unemployment starts falling, it is important to keep implementing targeted ALMP measures to increase the employability and skills of PES clients need to remain of high importance even when unemployment starts falling, considering that the most employable clients will be leaving the PES registers first.
- **Public works:** Public works are according to the empirical literature not effective in improving the employment opportunities of participants. However, they can still be considered together as part of a package with other measures (e.g. training or mentoring) to provide some complementary income to vulnerable groups and build public infrastructure, services and social capital (ILO, 2020).
- **Job search assistance programs** comprise job-search training, counselling and monitoring and are short-term, low cost and low performance programs. The provision of job search assistance programs should be intensified in this period. Delivery of these programs can be both on-site and online in this phase.

In order to support the recovery phase, the policy makers need to continue developing their skills assessment and anticipation, and skills profiling tools, as well as their career guidance systems, which can guide workers to the most efficient job transition (OECD, 2020[39]).

To the extent that cross-sectoral imbalances in labour and skill demand persist as economies open up, countries will also benefit from further developing their skill assessment and

anticipation, and skills profiling tools, as well as their career guidance systems, which can guide workers to the most efficient job transition (OECD, 2020).

Figure 3: Overview of measures

Phase	Measures
Initial phase of the pandemic	<ul style="list-style-type: none"> • Digitalising processes, boosting remote channels, automating processes • Simplifying processes for clients and staff • Adapting processes to meet health guidelines • Adapting communication to staff and clients • Adopting new tools to increase the quality and timeliness of statistics and management information • Reallocating staff, increasing staff numbers and training staff to increase PES capacity
Maintained restrictions limiting economic activity	<ul style="list-style-type: none"> • Job retention schemes • Labour market trainings
Recovery phase	<ul style="list-style-type: none"> • Subsidised private sector employment (hiring subsidies and start-up incentives) • Additional support to vulnerable groups • Continuous delivery ALMP measures • Public works • Job search assistance programs (counselling, skills assessment, and career advice)
Post-pandemic period	<ul style="list-style-type: none"> • Develop strategy how to improve on weaknesses identified during the pandemic • Develop further digital strategies • Explore use of artificial intelligence

Source: Authors'

2.4. Post-pandemic period

In the post-pandemic period, the PES should aim to support the labour market developments and to continue improving the functioning of PES taking into the experience from the pandemic.

The COVID-19 pandemic has shown that there are some areas which need further improvement in the post-pandemic period. Some potential avenues that can be pursued after the pandemic is over are the following:

- The COVID-19 pandemic has increased the digital penetration of services offered by PES and in the post-pandemic period PES should prepare their **digital strategies** and advance the offer of digital services. In the period after the pandemic, the PES should learn from the experience of offering digital services and it should aim to permanently offer some services online. Services such as registration and administration of benefits should be permanently offered online. However, there will always be clients which will require personal contact and this should be taken into account.
- Together with the digitalisation of services, the PES should explore the **use of artificial intelligence (AI) practices** and increased use of administrative datasets for decision making processes. Artificial intelligence practices can help PES to automate and improve some processes, such as identifying vulnerable groups, tailoring ALMPs to specific groups. The use of AI requires investment in data infrastructure and human capital and it should be gradually pursued.
- The COVID-19 had uneven impact on different socio-economic groups widening already present social inequalities. Job recovery of the low-skilled workers and other marginal groups proved to be very slow if compared to the rest of labour force suggesting that standard job-retention schemes were less effective in improving their position in the labour market. PES should invest more efforts in developing **targeted programmes aiming to address specific challenges of the marginal groups** including youth, women and population in rural areas.

2.5. PES responses to the COVID-19 pandemic – international experiences

COVID-19 pandemic severely disrupted labour markets particularly affecting the most vulnerable workforce and the population employed in the sectors that were substantially hit by the health crisis – e.g. tourism, transport, culture, etc. Given the overall scope of the general activities provided by PES, the policy responses could be summarized within the two group of activities – active labour market policy measures and provision of income compensation for the employees working in the hardest-hit sectors. As elaborated in more details within previous sections, applied measures were different with regards to the phase of the pandemic. Another important aspect of the policy response refers to challenges which specific containment measures had on regular PES activities and measures that were planned regardless the pandemic.

COVID-19 pandemic created additional challenges in terms of ensuring continual provision of the regular PES services respecting lock-down burdens. Although digitalization of the services provided by PES has been initiated long before the pandemic, lockdowns forced accelerated transformation of the PES organizational structure towards transition to the online regime. From 2 April to 28 May 2020, World Association of Public Employment Services (WAPES) together with its partners, the International Labour Organization (ILO), the Inter-American Development Bank (IDB) and SOCIEUX+, carried out a joint survey aiming to assess the responses with regards to crisis, exchange information and detect future challenges that need to be addressed (Socieux, 2021). Research indicated that around 80% of the PES worldwide has successfully switched to online regime of providing services for job seekers (registration, counselling, compensations, etc.). As for the self-employed and entrepreneurs, around two

third of the respondents confirmed using online modality of providing compensation and counselling services, whereas personalized support is still dominantly provided via phone (62%) or face to face (34%). Swedish PES represents a good example of transition to digital provision of services, with a 93.7% of customers registration recorded in April 2020 (European Commission, 2020). Teleworking has become dominant way of conducting activities by most of the interviewed PES. Around half of interviewed PES officers confirmed that PES adopted service continuity plans to ensure that services are provided in a timely manner. Service continuity plans included slight changes of the organization structure, particularly in terms of staff relocation and recruitment of new employees.

2.5.1. Measures during the pandemic

Following the pandemic onset, PES started slightly redesigning their strategic priorities and introducing new measures in order to adapt to the new policy environment. In order to minimize external shocks, the ultimate focus switched to providing support to companies and protecting current employees. Since the inflow of the unemployed to the registers became stronger, PES tended to provide support to companies in order to maintain their working capacities. In Hungary, Czech Republic and Bulgaria, PES introduced a short-time working schemes also supporting re-employment of people that lost jobs due to pandemic. Polish PES introduced a set of new measures including (European Commission, 2020):

- co-financing an employee's remuneration costs and an employee's social security contributions with the private employers;
- co-financing the cost of conducting business activity with private employers;
- a loan to cover the costs of business activity;
- co-financing the costs of remuneration and social security contributions for
- employees of non-governmental organisations;
- protection of workplaces.

With regards to new forms of work, recent research confirmed vulnerable position of the workers employed in new forms of work such as freelance work, temporary work arrangements and "gig economy", particularly in case of massive layoffs. However, use of digital technologies may also represent opportunity for the people detached from the labour market. PES position could be particularly important in providing personalized support and facilitating adaptation of the unemployed to the new forms of work (European Parliament, 2020).

During the pandemic period, the main goal of the policy makers was to avoid massive layoffs. For that purpose, Governments used to apply different forms of job retention schemes. Some policy makers applied non-selective measures. The main eligibility criteria for receiving support referred to maintaining the same number of employees as it was the case during the pre-crisis period. Other Governments decided to provide support only to the sectors that were considered particularly vulnerable to the crisis shock. Applying this approach was more difficult in terms of management and administration, meanwhile avoiding situation that support goes to the unaffected business sectors.

Job retention schemes

PES in Belgium and Denmark introduced mechanisms to support employers, while Latvian PES provided support to seasonal workers particularly focusing on the agriculture workers. Measures introduced at the national level were developing taking into account specific national contexts. For example, Croatian PES temporarily suspended other active labour market policy measures prioritizing ones related to seasonal workers (European Commission, 2020a) which are important for tourism that accounts for considerable share of the Croatian GDP. Policy makers in Croatia targeted employers who recorded a decrease in income providing subsidies of approximately 500 EUR per worker. Priority support sectors included tourism and administrative and auxiliary service activities - Travel agencies, travel organizers (tour operators) and related activities; Urban and suburban ground transportation of passengers. In order to qualify for the support, enterprises were required to provide evidence of a decrease in income and retention of the number of workers compared to 2019 (Government of the Republic of Croatia, 2020).

Similarly, Netherlands introduced temporary measures, the amount of which corresponds to the drop in sales. The Ireland introduced a compensation scheme for 'lost' working hours due to austerity measures, while Slovenia and Denmark subsidized wages for jobs that were completely suspended due to the pandemic.

Measures for strengthening employability

In Belgium, Government introduced support for participation in additional education programs through financial incentives which included higher amounts of unemployment benefits for the training participants. The goal was to encourage participation in training and strengthening employability activities. The target group included unemployed over 30 years old without qualifications or with "outdated qualifications". Unemployed people who do not attend additional training are entitled to 80% of the allowance, while those who attend upskilling programs receive 110% of the allowance during the training period. The programme provided support for about 400 unemployed in 2020 and about 1,500 in 2021. The risks related to the measure are reflected in the potential demotivating effects for the population looking for a job or the desire to find any job as soon as possible and, accordingly, lacking time to attend additional training (European Commission, 2022).

Over the period May-August 2020, Lithuania provided support for the self-employed who want to change their activity due to the negative effects of the pandemic. The main goal was to prevent entering the status of unemployed person and facilitating the transition to more propulsive activities. Online registration through the platform was required. Target group were self-employed people at risk of job loss. About 1,600 applicants participated in the first programme cycle. The overall implementation budget was about 10 million EUR. Potential risks were related to providing good monitoring and specifying eligibility criteria with an aim to avoid the "first come - first serve" approach (European Commission, 2021).

"Rebound Brussels" was a support program provided by the Belgium Government ("Rebound Brussels") developed for people who lost their jobs in the Brussels region due to the bankruptcy of their employer after July 1, 2020. The programme envisaged mandatory

participation for the population over 45 years with the possibility of losing social security benefits for a period of 6 weeks to a year. This type of measure also had an important social component which included providing administrative and informational support for participation in the program. The employment component referred to individualized approach in strengthening skills, career counseling, participation in trainings, workshops, and similar activities (TraceBrussels, 2020).

2.5.2. Measures in the post-pandemic period

In order to deal with challenges that pandemic left in the labour market, policy makers were developing different programmes which included general job preservation programmes targeting population with greater obstacles to find job or at greater job risks, and specific active labour market measures.

General job preservation programs have proven to be less effective in lower paid occupations, youth and self-employed (less protected by contracts and lower dismissal costs). As an illustration, decline in working hours among young people in OECD countries amounted to 26%, compared to 15% for the rest of the population. Similarly, the decrease in working hours in lower-paid jobs in OECD countries was 28%, and in high-paid jobs about 18%. For that reason, the general conclusion of the research indicates that specific support measures targeting vulnerable groups are needed.

COVID-19 additionally jeopardized position of the most vulnerable groups that are already facing various employment obstacles, out of which indebtedness and mental health issues were particularly amplified during the current crisis. In that context, the role of PES could be beneficial in terms maintaining effective collaboration with other actors such as social service, health service, etc. PES that already developed interinstitutional cooperation mechanisms proved to be better prepared for the issues occurred during the pandemic period. Individual Placement and Support (IPS) model applied in several countries (e.g. Belgium), was introduced to provide employment support to clients with disabilities. In order to provide support to vulnerable youth, Finish Government implements one-stop-shop model policy facilitating multisector support including health workers, outreach officers, and education counsellors (OECD, 2021).

Active labour market policy measures gained particular importance in a post-pandemic context. The aim of the applied measures was mainly on quicker reintegration of the vulnerable groups. The overall characteristics of the applied measures include greater focus on vulnerable groups (e.g. focus on vulnerable sectors - Greece, focus on people with a greater number of barriers to entering the labor market in cooperation with social service providers – Slovenia. Additionally, applying active labour market measures included increase in the budget. In Portugal budget for active labour market measures grew by 30% compared to 2018, while in Hungary increased by 21%. Budget increase has been often followed by additional employment in most of the PES in response to growing needs and challenges.

In order to facilitate greater mobility of the workforce across sectors, in Netherland Government established “transition teams” combining resources of the social support centers, PES, local administration, private and civil sector. Focus on people at risk of long-

term unemployment (measure of prevention or shortening the period of unemployment). The main focus was on population employed in sectors "in decline" due to the pandemic, and provision of opportunities to acquire skills for the needs of employers in "growing" sectors. The key difference compared to standard measures refers to combining the integrated and personalized approach (European Commission, 2022a).

In order to mitigate the impact of the crisis and reintegrate the population at risk of long-term unemployment, Austria implemented a pilot experiment providing a job-guarantee scheme (ILO, 2021a). Austria implemented small-scale intervention aimed at to tackle long term unemployment issue in the city of Marienthal. It was the support for the private employment service provider targeting local citizens unemployed for at least 9 months before the beginning of program implementation. Participants received 8 weeks long training, specifically designed to meet their needs. During the training, participants were supported to find job through regular labour market. In case not successful in finding regular job, they were offered a job specifically created by the local service provider, mainly in local projects implemented by the social enterprises. Innovative component of the project refers to its voluntary dimension, since training participation was not mandatory, targeting participants aiming to re-enter labour market. The overall cost per participants was projected not to exceed 30,000 EUR, the average annual amount of unemployment benefits. Participants were guaranteed a job for the three years period and continuously supported to find a private sector employment that would be also supported during the first year.

3. Concluding remarks and policy recommendations

Research analysis provides important insights into main challenges PES are facing in order to deal with contemporary labour market issues including ones related to spread of COVID-19 pandemic. It showed that reforming PES and the efforts made to support digitalization and provision of online services before pandemic paid off during the pandemic period. PES that already started developing capacities to operate under online regimes of work were better prepared to deal with challenges occurring in the COVID-19 context. PES activities over the crisis period were largely characterized by attempts of doing “business as usual” using different online models of support whenever possible. Over the 2020, containment measures however, prevented continual provision of regular support services, at least during the periods of lock-down. In 2021, most of the services were provided according to the plans.

In order to deal with labour market issues resulting from pandemic, Government provided different types of support programmes including job retention programmes and active labour market policy measures particularly focusing on strengthening employability of the negatively affected population and labour force employed in the hardest-hit sectors. Important distinction among the applied measures refers to their selectivity. Although being easier for management and monitoring, non-selective measures were more costly, and their application could be questionable since the support is also being received by population groups that were not particularly affected by the pandemic shock. Therefore, many Governments aimed at providing selective support based on different indicators. The most widely used indicators include percentage change of sales or working hours in comparison with pre-crisis period.

Government applied different types of support programmes including ones in the pandemic and post-pandemic period. Non-selective job preservation measures proved to be less effective during the pandemic. Only minority of the PES applied specific measures targeting vulnerable population and population at greater risk of job lose. This type of measures gained more attention in the post-pandemic context coupled with rising budgets for conducting active labour market policy.

Important type of measures provided by several policy makers include support to employees that lost job or at greater job risk due to specific nature of the business activity they are conducting. Interesting examples of this type of interventions include “Rebound in Brussels” in Belgium that envisaged support for unemployed who lost job due to employer bankruptcy and support for self-employed aiming to switch to another business sector.

Active labour market measures are gaining popularity due to noticeable necessity for supporting vulnerable population groups and their quicker reintegration into the labour market. Such measures often rely on strengthening employability of the long-term unemployed persons and using the potentials of the rising business sectors. Innovative approach used in Netherlands based on developing “transition teams” providing support in the field could be stated as an illustrative example of this practice.

Global experiences in dealing with pandemic consequences in the labour market provide some interesting lessons for the policy makers in Serbia. Policy makers in Serbia applied non-selective approach in preventing massive layoffs. Despite previous research confirmed

specific vulnerability of the certain population subgroups (youth, low-educated and low-paid), there have not been developed interventions aimed at improving labour market position of these subgroups. Apart from general job retention programmes, there were no new interventions being set out. The only innovative intervention refers to “My First Salary” programme, although its realization was planned regardless pandemic. Therefore, analysed global experiences indicate that introduction of the specific interventions targeting youth and low-educated population, particularly population with outdated skills could be beneficial in the Serbian context. Refocusing from the job search activities to strengthening specific skills should be continued. Additionally, in the case of similar external shocks taking place, policy makers in Serbia should be prepared to provide greater support to informal sector and population at greater job risks.

Literature

Accenture (2013). Delivering Employment Services for the Future. Executive Brief and Research Report. Available at:

https://www.accenture.com/_acnmedia/Accenture/Conversion-Assets/DotCom/Documents/Local/it-it/PDF_2/Accenture-Delivering-Employment-Services-for-the-Future.pdf

Alon, T., Doepke, M., Olmstead-Rumsey, J., & Tertilt, M. (2020). *The impact of COVID-19 on gender equality* (No. w26947). National Bureau of economic research.

Brunello, G., Bertoni, M. (2021). Human Capital During Recessions. EENEE Analytical Report No.43 Prepared for the European Commission. Available at: https://eenee.eu/wp-content/uploads/2021/05/EENEE_AR43.pdf

Crafts, N. F. R. (1989). The industrial revolution: economic growth in Britain, 1700–1860. In *New directions in economic and social history* (pp. 64-75). Palgrave Macmillan, London.

Del Boca, D., Oggero, N., Profeta, P., & Rossi, M. (2020). Women's and men's work, housework and childcare, before and during COVID-19. *Review of Economics of the Household*, 18(4), 1001-1017.

European Commission (2018). The future of work: Implications and responses by the PES network. PES network Working Paper. Available at: <https://www.pesnetwork.eu/download/pes-network-the-implications/>

European Commission (2020). Assessment Report on PES Capacity. Available at: <https://www.esap.online/docs/119/european-network-of-public-employment-services-assessment-report-on-pes-capacity>

European Commission (2020a). COVID-19 - Guidelines of the Commission on seasonal workers in the EU. Factsheet on practical examples and best practices

European Commission (2021). Measure to support self-employment for those changing their economic activity. Available at: <https://ec.europa.eu/social/main.jsp?catId=1206&langId=en>

European Commission (2022). Your Talent Counts. Available at: <https://ec.europa.eu/social/main.jsp?catId=1206&langId=en>

European Commission (2022a). COVID-19 Regional labour market transition teams. Available at: <https://ec.europa.eu/social/main.jsp?catId=1206&langId=en>

European Parliament (2020). The Future of Work - Implications for Public Employment Services in the EU. IPOL, Policy Department for Economic, Scientific and Quality of Life Policies. Directorate-General for Internal Policies. Available at: [https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/658205/IPOL_BRI\(2020\)6582_05_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2020/658205/IPOL_BRI(2020)6582_05_EN.pdf)

Farré, L., Fawaz, Y., González, L., & Graves, J. (2020). How the COVID-19 lockdown affected gender inequality in paid and unpaid work in Spain.

Forsythe, E., Kahn, L. B., Lange, F., & Wiczer, D. (2020). Labor demand in the time of COVID-19: Evidence from vacancy postings and UI claims. *Journal of Public Economics*, 189, 104238.

Genda, Y., Kondo, A., & Ohta, S. (2010). Long-term effects of a recession at labour market entry in Japan and the United States. *Journal of Human resources*, 45(1), 157-196.

Government of the Republic of Croatia (2020). Employment incentives. Available at: <https://gov.hr/en/employment-incentives/856>

Hensvik, L., Le Barbanchon, T., & Rathelot, R. (2021). Job search during the COVID-19 crisis. *Journal of Public Economics*, 194, 104349.

IDB (2015). The World of Public Employment Services. Challenges, capacity and outlook for public employment services in the new world of work. Available at: <https://publications.iadb.org/publications/english/document/The-World-of-Public-Employment-Services.pdf>

ILO (2020). The role of public employment programmes and employment guarantee schemes in COVID-19 policy responses, <https://www.ilo.org/wcmsp5/groups/public/--->

ILO (2021). ILO Monitor: COVID-19 and the world of work. Seventh edition Updated estimates and analysis. January 25, 2021. Available at: https://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/documents/briefingnote/wcms_767028.pdf

ILO (2021a). Public Employment Initiatives and the COVID-19 crisis. A compendium of Infrastructure Stimulus, Public Employment Programs (PEP), Public Works programs case studies. Available at: https://www.ilo.org/global/topics/employment-intensive-investment/publications/WCMS_818473/lang--en/index.htm

IMF (2022). World Economic Outlook, January 2022, available at: <https://www.imf.org/en/Publications/WEO/Issues/2022/01/25/world-economic-outlook-update-january-2022>

Kahn, L. B. (2010). The long-term labour market consequences of graduating from college in a bad economy. *Labour economics*, 17(2), 303-316.

Kochhar, R. (2021). The self-employed are back at work in pre-COVID-19 numbers, but their businesses have smaller payrolls. *Pew Research Centre*. <https://www.pewresearch.org/fact-tank/2021/11/03/the-self-employed-are-back-at-work-in-pre-covid-19-numbers-but-their-businesses-have-smaller-payrolls/> (accessed on 11/11/2021). [ed_emp/documents/publication/wcms_746368.pdf](https://www.pewresearch.org/fact-tank/2021/11/03/the-self-employed-are-back-at-work-in-pre-covid-19-numbers-but-their-businesses-have-smaller-payrolls/).

Kluge, J. (2010). The effectiveness of European active labor market programs. *Labour economics*, 17(6), 904-918.

McKinsey (2017). Jobs lost, jobs gained: workforce transitions in a time of automation, McKinsey Global Institute December 2017

OECD (2020), "Skill measures to mobilise the workforce during the COVID-19 crisis", OECD Policy Responses to Coronavirus (COVID-19), OECD Publishing, Paris, <https://dx.doi.org/10.1787/afd33a65-en>.

OECD (2021), OECD Employment Outlook 2021: Navigating the COVID-19 Crisis and Recovery, OECD Publishing, Paris, <https://doi.org/10.1787/5a700c4b-en>.

OECD (2021a), Building inclusive labour markets: Active labour market policies for the most vulnerable groups. Available at: <https://www.oecd.org/coronavirus/policy-responses/building-inclusive-labour-markets-active-labour-market-policies-for-the-most-vulnerable-groups-607662d9/>

Oreopoulos, P., Von Wachter, T., & Heisz, A. (2012). The short-and long-term career effects of graduating in a recession. *American Economic Journal: Applied Economics*, 4(1), 1-29.

PES Network (2018). EU Network of Public Employment Services Strategy to 2020 and beyond.

Raaum, O., & Røed, K. (2006). Do business cycle conditions at the time of labor market entry affect future employment prospects?. *The review of economics and statistics*, 88(2), 193-210.

Sahin, A., Kitao, S., Cororaton, A., & Laiu, S. (2011). Why small businesses were hit harder by the recent recession. *Current Issues in Economics and Finance*, 17(4).

Servoz, M. (2019). The future of work? Work of the future! On how artificial intelligence, robotics and automation are transforming jobs and the economy in Europe. European Commission, available at: https://skills4industry.eu/sites/default/files/2019-05/AI%20-%20The%20Future%20of%20Work_Work%20of%20the%20Future.pdf

Socieux (2021). Joint survey "PES are swinging into Action in response to the Covid-19 pandemic, conducted by AMSEP/ILO/IDB/SOCIEUX+ from April to May 2020, Available at: http://socieux.eu/wp-content/uploads/2021/08/pess_are_swinging_into_action_in_response.pdf

TraceBrussel (2020). Rebound Brussels. Available at: <https://tracebrussel.be/nieuws/reboundbrussels>

Verick, S. (2009). Who is hit hardest during a financial crisis? The vulnerability of young men and women to unemployment in an economic downturn.

Zobbe, H. (2001). The economic and historical foundation of the common agricultural policy in Europe (No. 1322-2016-103553).

